# Implementation Guidelines for Preliminary Seismic Assessment of Important Cultural Properties (Buildings)

(Approved by the decision of the Director for the Architecture Division,
Cultural Properties Protection Department,
Agency for Cultural Affairs on April 8, 1999)
(Revised on June 12, 2012)

These are revised guidelines were designed to present specific methods to conduct the Preliminary Seismic Assessment according to the "Guidelines for Preliminary Seismic Assessment of Important Cultural Properties (Buildings)" published in April 1999, as specified in 11-HoKen No. 27, "Owners' Manual for Assessing the Seismic Safety of Important Cultural Properties (Buildings)" issued by the Director for the Architecture Division, Cultural Properties Protection Department, Agency for Cultural Affairs on April 8, 1999. The assessment sheet is attached at the end of these guidelines.

The mathematical formulas, numerical values, etc., cited in this manual are based on the results of research that existed at the time of this writing. Therefore, further revisions may follow as more research results are reported.

**Section 1. General Rules**

(1) Scope

With regard to the locational environment, structural properties, and state of preservation of Important Cultural Properties (buildings), a Preliminary Seismic Assessment shall be conducted by the owners, chief administrators, and administrative organizations (hereinafter referred to as owners) to understand the seismic issues of the building.

When necessary, the Education Committee of the local municipality (including associations and special districts) can be asked to assist with the Preliminary Seismic Assessment. In addition, because part of the assessment will include technical information, it would also be desirable to enlist the aid of experts, such as general architects and conservation architects.

The objects of Preliminary Seismic Assessments shall be wooden buildings that are listed in "Guidelines for Assessing the Seismic Resistance of Important Cultural Properties (buildings) 3." Even if it is difficult to apply these guidelines to some of the targeted buildings, it would still be desirable to conduct a Preliminary Seismic Assessment of such buildings using the evaluation data, items, etc., that can be applied.

(2) Assessment

With regard to the items related to the locational environment, structural properties, and state of preservation, the assessment shall involve scoring based on a simple methodology in order to gain an understanding of the seismic issues of the building.

The description method is shown in "1. Name of buildings" and "2. Individual Assessment Items" in "Section 2. Assessment Procedure".

It should be noted that when there are special specifications to which none of the choices may apply, a score shall be assigned based on the purpose of the assessment items.

(3) Judgment

Based on the assessment, a judgment shall be made by referring to the following standard categories in order to make a final decision about the Preliminary Seismic Assessment.

1) The Important Cultural Properties (buildings) appear to have nearly adequate seismic resistance.
2) Measures (including minor temporary reinforcements) must be taken to restore Important Cultural Properties (buildings) to its original structural soundness, or measures must be taken to revise management and utilization methods.
3) There is a high possibility major repairs (including reinforcements) or reviews of utilization methods will be necessary, Basic Seismic Assessment shall be conducted as soon as possible.

It should be noted that the Preliminary Seismic Assessment is always a simple, preliminary assessment. Thus, just to be safe, it would be desirable to conduct a Basic Seismic Assessment for cases where a) or b) above is determined to apply to the building.

For information about making judgments, please refer to "3. Judgment" in "Section 2. Assessment Procedure".

(4) Understanding the management and utilization methods

Fill out a list of seismic items that require greater detail for the management and utilization of Important Cultural Properties (buildings) in their present state.

For information about how to fill out the list, please refer to “Section 3. Procedure for Understanding the Management and Utilization Methods”

(5) Preliminary Seismic Assessment sheet

The items and information described above shall be compiled into a report of the Preliminary Seismic Assessment.

The assessment sheet shall be based on the form, and the following materials shall be attached:

1) Geological map of the surrounding area with the location of the building in question clearly marked
2) Simplified floor plan showing the arrangement of walls and pillars
3) Photographs showing the state of distortion, insect damage, and deterioration of main structural members

**Section 2. Assessment Procedure**

1. Name of building

(1) Name

1) In these guidelines, the names of Important Cultural Properties (buildings) listed in the official gazette are used.

2) If there is a name for the utilized facility, it is noted in parentheses.

(2) Location

(3) Name of owner(s)

1) If the owner is a local public organization or corporation, the name and position of the assessor are noted in parentheses.

2) If a representative of the owner made the assessment, the representative's name and affiliation are noted in parentheses.

(4) Address of owner(s)

2. Individual assessment items

After a survey is made of the following items, the appropriate item is chosen and the scores (numbers in parentheses for each item) and special notes are recorded, then the required simplified plans are created and a photographic record made.

(1) Items related to locational environment

1) Regional categories

Past earthquake records are used to classify the regions where the buildings are located into degrees of expected damages from an earthquake based on previous degrees of earthquake damages, state of seismic activity, and miscellaneous seismic conditions. These regions are classified into the following 4 categories (see Table 1) in accordance with Article 88, Paragraph 1 of the Enforcement Order of the Building Standard Law and regional classifications stipulated in Public Notice No. 1793 of the Ministry of Construction (1980) based on the relevant provisions in the Law.

| | |
|---|---|
| (i) Regions corresponding to IV | (15) |
| (ii) Regions corresponding to III | (10) |
| (iii) Regions corresponding to II | (5) |
| (iv) Regions corresponding to I | (0) |

Table 1. Classifications of regions

| Classification | Prefectures, Cities, Towns |
|---|---|
| I | Regions other than II - IV |
| II | Prefectures of Akita, Yamagata, Niigata, Shimane, Okayama, Hiroshima, Ehime, Kochi, Miyazaki<br>In Hokkaido, cities of Sapporo, Hakodate, Otaru, Muroran, Kitami, Yubari, Iwamizawa, Abashiri, Tomakomai, Bibai, Ashibetsu, Ebetsu, Akabira, Mikasa, Chitose, Takikawa, Sunagawa, Utashinai, Fukagawa, Furano, Noboribetsu, Eniwa, and Date; counties of Sapporo, Ishikari, Atsuta, Hamamasu, Matsumae, Kamiiso, Kameda, Kayabe, Yamakoshi, Hiyama, Nishi, Kudo, Okushiri, Setana, Shimamaki, Suttsu, Isoya, Abuta, Iwanai, Furuu, Shakotan, Furubira, Yoichi, Sorachi, Yubari, Kabato, Uryu, Yufutsu, Abashiri, Shari, Tokoro, Usu, and Shiraoi: and towns of Higashikagura, Kamikawa, Higashikawa, and Biei in Kamikawa County (Kamikawa-Shicho)<br>In Aomori, cities of Aomori, Hirosaki, Kuroishi, Goshogawara, and Mutsu; and counties of Higashitsugaru, Nishitsugaru, Nakatsugaru, Minamitsugaru, Kitatsugaru, and Shimokita<br>In Fukushima, cities of Aizuwakamatsu, Koriyama, Shirakawa, Sukagawa, and Kitakata; and counties of Iwase, Minamiaizu, Kitaaizu, Yama, Kawanuma, Onuma, and Nishi-Shirakawa<br>In Toyama, cities of Uozu, Namerikawa, and Kurobe; and county of Shimoniikawa<br>In Ishikawa, cities of Wajima, and Suzu; counties of Fugeshi, and Suzu<br>In Tottori, cities of Yonago, Kurayoshi, and Sakaiminato; and counties of Tohaku, Saihaku, and Hino<br>In Tokushima, counties of Mima, and Miyoshi<br>In Kagawa, cities of Takamatsu, Marugame, Sakaide, Zentsuji, and Kanonji; and counties of Shozu, Kagawa, Ayauta, Nakatado, and Mitoyo<br>Prefectures of Kumamoto and Oita (excluding region in III) |
| III | Prefectures of Yamaguchi, Fukuoka, Saga and Nagasaki<br>In Hokkaido, cities of Asahikawa, Rumoi, Wakkanai, Monbetsu, Shibetsu, and Nayoro; and counties of Nakagawa (Kamikawa-Shicho), Mashike, Rumoi, Tomamae, Teshio, Soya, Esashi, Rebun, Rishiri, and Monbetsu; towns of Takasu, Toma, Pippu, Aibetsu, Wassamu, Kenbuchi, Asahi, Furen, and Shimokawa in Kamikawa County (Kamikawa Shicho)<br>In Kumamoto, cities of Yatsushiro, Arao, Minamata, Tamana, Hondo, Yamaga, Ushibuka, and Uto; and counties of Hotaku, Uto, Tamana, Kamoto, Ashikita, and Amakusa<br>In Oita, cities of Nakatsu, Hita, Bungotakada, Kitsuki, and Usa; and counties of Nishikunisaki, Higashikunisaki, Hayami, Shimoge, and Usa<br>Kagoshima Prefecture (excluding Naze City and Oshima County) |
| IV | Okinawa Prefecture |

2) History of damage

If the building in question was damaged by disasters such as earthquakes, floods, or landslides during the past 100 years, the occurrence or non-occurrence of damage is classified into the following categories. A record is made of any damage that has occurred:

(i) None (15)
(ii) Some (5)

3) Active faults

The existence or non-existence of an active fault within a radius of 5 km from the building is denoted as follows after referring to geological maps or geographical websites prepared by public works offices:

(i) None (15)
(ii) Exists or unknown (5)

4) Soil condition

Soil type is classified according to the degree of seismic damage that could be expected. Geological maps are used to classify foundations of ground formed before the Pleistocene epoch as (i), ground formed by the sedimentation of weak soils such as humus and mud as (iii), and miscellaneous ground as (ii).

(i) Good (20)
(ii) Somewhat poor (10)
(iii) Extremely poor (0)

5) State of soil improvement

The state of soil improvement is classified into the following categories based on the degree of seismic damage that could be expected owing to the structural conditions of the site.

(i) Cut ground/untouched land (20)
(ii) Embankments, unknown (10)
(iii) Reclaimed land (rivers, marsh, ponds) (0)

6) Surrounding topography

Local topography is classified as follows based on the degree of damage that could be predicted using the topography of the area adjacent to the building.

(i) Generally flat (15)
(ii) Adjoining a marsh or a pond (10)
(iii) Adjoining a steeply sloped area (5)

(2) Items related to structural characteristics

1) Items related to size and shape

A. Total floor area

When damage occurs to a building, it can be expected that the degree of damage will depend on the size of the building. Therefore, total floor area is used as an index to signify scale. The area of each floor (hereafter, "floor area") is the area encompassed by walls and pillars on the outer periphery. Floor area is divided into the following categories. Note that in the case of two-tiered Buddhist halls, two-tiered gates, floor area is calculated for the second story whether or not there is an actual floor.

(i) Less than 100 $m^2$ (25)
(ii) From 100 $m^2$ up to but excluding 250 $m^2$ (20)

(iii) From 250 $m^2$ up to but excluding 500 $m^2$ (10)
(iv) 500 $m^2$ or more (5)

B. Eaves height

When damage occurs to a building, it can be expected that the degree of damage will increase with the height of the building. Therefore, the height of the eaves, which is easy to survey, is used as an index for the height of the building. Excluding penthouses, the height of the eaves on the top floor (hereafter, "eaves height") is measured from the bottom of the first floor pillars to the maximum height of rafters under thatched roofing, and is divided into the following categories. Special notations are made for the number of floors and whether or not there is a penthouse.

(i) Less than 3 m (25)
(ii) From 3 m up to but excluding 6 m (20)
(iii) From 6 m up to but excluding 9 m (10)
(iv) 9 m or higher (5)

C. Ratio of eaves height to length or width, whichever is shorter

The ratio of the eaves height derived in the previous section to the shorter side of the first floor (the length or the width, whichever is shorter) is derived as an index to show the stability of a building. These ratios are divided into the following categories:

(i) Less than 0.5 (25)
(ii) From 0.5 up to but excluding 1 (20)
(iii) From 1 up to but excluding 2 (10)
(iv) 2 or greater (5)

D. Shape of building

As another index to show the stability of a building, the horizontal and vertical shapes of the building in the plan and elevations are judged to be typical or atypical based on the criteria in Figure 1 and divided into the following categories:

(i) Both shapes are typical (25)
(ii) Shape in the plan is atypical (15)
(iii) Shape in the elevation is atypical (5)

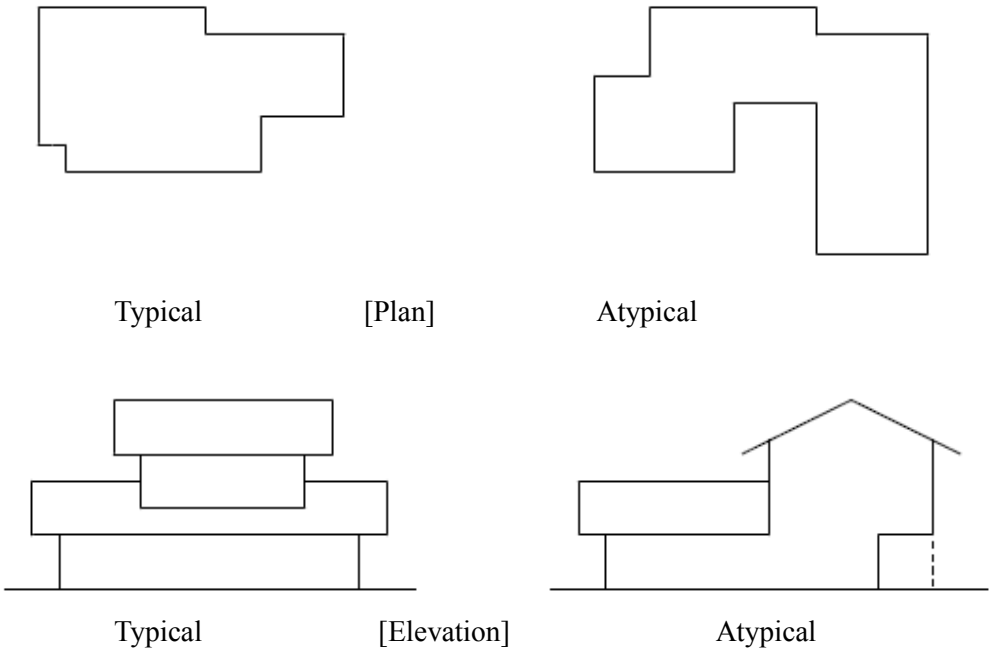



Figure 1. Shapes of buildings

2) Items related to framework structures

A. Arrangement of earthen walls

a. The arrangement of earthen walls as seismic resistance elements is shown in simplified plans (see Figure 2)

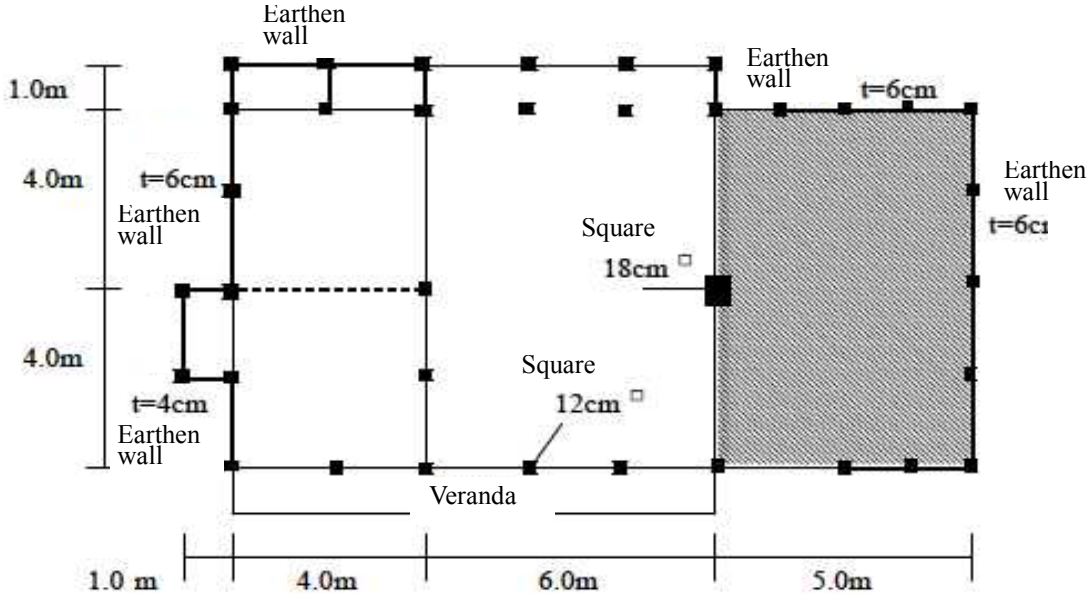



Figure 2. Simplified plan of the arrangements of walls and pillars (t: thickness)

b. Regarding the outer walls of the 1st floor, the ratio of the length of earthen walls to the total

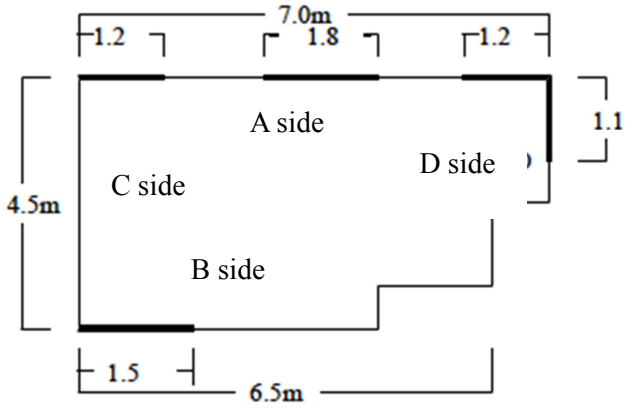
length of the side is derived for each side(see Fig. 3) and divided into the following categories:

(i) Earthen wall length on all 4 sides is 1/5 or more (20)

(ii) There is one side where earthen wall length is less than 1/5 (10)

(iii) There is at least one side where there is no earthen wall (5)

(iv) There are no earthen walls on the outside (0)




In the case of the figure on the left,
Side A: (1.2＋1.8＋1.2) ÷ 7.0 = 0.58
Side B: 1.5 ÷ 7.2 = 0.21
Side C: 0
Side D: 0.9 ÷ 4.5 = 0.20
Because Side C is 0, Category (iii) above would apply

Figure 3. Ratio of earthen wall length to total length of each side

B. Arrangement of pillars

a. The arrangement of pillars of the 1st floor is shown in the previously mentioned simplified plan (see Figure 2).

b. The following categories describe the balance between the interior and exterior pillars.

(i) Both interior and exterior arrangements are orderly (15)

(For example: Cases in which the pillars are arranged in an orderly fashion both interior and exterior)

(ii) Either interior or exterior arrangement is disorderly (10)

C. Ratio of total cross-section area of pillars to floor area

a. The main pillars on the first floor are shown in the simplified plan, and the main cross-section dimensions are listed (see Fig. 2).

b. In order to determine whether the number and diameters of pillars relative to the floor area are sufficient for seismic resistance, the results of the previous surveys are used to obtain the ratios of total cross-section area of pillars to floor area on the first floor. These ratios are categorized as follows:

(i) 0.01 or more (15)

(ii) From 0.005 up to but excluding 0.01 (10)

(iii) Less than 0.005, or unknown (5)

D. Connections between pillars at the foundation-level

In order to determine whether the perimeter pillar of the main sections (excluding eaves,

etc.) is integrated where the pillars and the foundation come together, the structural types are used to derive the following categories. In the case of complex structures, the scores are adjusted and a special notation is made.

(i) Pillars built on the ground sill (15)

(ii) Pillars built on the foundation stones, and connected with *nageshi* (non-penetrating tie beams) (10)

(iii) Unconnected pillars built on the foundation stones (5)

E. Connections between pillars at the floor level

Structural types are used to determine whether the outer pillars of the main structure (excluding the eaves) are connected with each other at the floor-level (or equivalent, if there is no floor), and classified as follows. In the case of complex structures, the scores are adjusted and a special notation is made.

(i) Pillars built connected with penetrating and non-penetrating tie beams (10)

(ii) Pillars built connected with either penetrating or non-penetrating tie beams (5)

(iii) Unconnected pillars (0)

F. Ceilings

To determine the ease with which deformation of horizontal plane occurs, the ceilings of main rooms of the 1st floor are classified into the following categories. In the case of complex structures, the scores are adjusted and a special notation is made.

(i)Ceilings consisting of strong materials such as sleepers and joists (15)

(ii) Ceilings consisting of medium materials such as battens and wooden boards(10)

(iii) Ceilings consisting of weak materials such as bamboo lathing, or no ceiling (5)

G. Size of foundation stones

To determine whether the pillars might fall out from the foundation stones if a building is moved, the size of foundation stones for main pillars is classified into the following categories:

(i) Space around the pillar is at least 1/2 of the pillar diameter (10)

(ii) Space around the pillar is at least 1/3 of the pillar diameter (5)

(iii) There is almost no space around the pillar (0)

3) Items related to roof structure

A. Roof frame

To determine the ease with which deformation of horizontal plane could occur, the roof frame types of main parts are classified into the following categories. A special notation is made when the structure has at least one stone or brick chimney.

(i) Roof frame consisting of truss (25)

(ii) Roof frame consisting of beams and struts (20)

(iii)Roof frame consisting of only rafters (10)

B. Roof sheathing

To determine the ease with which horizontal displacement could occur, roof sheathing is classified into the following categories:

(i) Boarding, bamboo lattice (25)
(ii) Layered wooden boards or unknown (10)
(iii) Split bamboo lathing (0)

C. Roofing materials

Roofing materials of main sections are classified into the following categories based on roof load observations:

(i) Metal or wooden board roofing (25)
(ii) Cypress bark roofing, wooden shingle roofing, pantile roofing (without bonding soil) (20)
(iii) Pantile roofing (with bonding soil), reed roofing (15)
(iv) Clay tile roofing (5)

D. Ratio of area which include floor and eaves to floor area

As an index to denote the balance between roof load and framework, the ratio of area which include floor and eaves to the area of the top floor is derived and classified as follows. Here, eaves are limited to the main structure and do not include hoods.

(i) Less than 1.2 (25)
(ii) 1.2 or greater, but less than 1.4 (15)
(iii) 1.4 or greater (5)

(3) Items related to the conservation condition

1) Differential subsidence

Differential settling is classified as follows based on visual observations. Special notation is made about the state of subsidence.

(i) None (25)
(ii) Some (15)
(iii) Noticeable (5)

2) Rotting and insect damage in main structural members

A survey is taken of rotting and insect damage in main structural members such as beams, and the results are classified as follows. In the cases of (ii) and (iii), special notations are made about the locations of rotting and insect damage, and photographs are attached to provide visual information about the state of damage.

(i) None (25)
(ii) Some (15)
(iii) Noticeable (0)

3) Deformation of main structural members

The results of a visual survey that is made of deformation of main structural members such as pillars and beams are used to choose one of the following items. In cases where the distortion angle of pillar is about 1/60 or more, there is noticeable vertical settlement of pillars, beams and main structural members have signs of breakage, they are classified as (iii). In the cases of

categories (ii) and (iii), special notations are made of the locations of the distortion, and photos are attached to provide visual information on the state of distortion. Special notations are made in cases where the interior of a wooden structure contains a brick chimney, where defects are found in the joint areas of main structural members, or when other types of partial structural defects are found.

(i) None (25)
(ii) Some distortion (15)
(iii) Noticeable distortion (5)

4) History of major repairs

As an index to indicate the soundness of a building, the time that has elapsed since the last major repairs were undertaken is classified into the following categories. The term "major repairs" refers to repairs made by disassembling or half-disassembling main structural members, and does not include partial restoration such as re-thatching roofs and whether repairs are necessary at present. If major repairs have never been made, the years since major repairs are equal to the number of years that have elapsed since construction. If seismic reinforcement was made during the repair, a special notation is made of the details.

(i) Less than 100 years since major repairs (25)
(ii) From 100 years up to but excluding 200 years since major repairs (15)
(iii) 200 years or more since major repairs (5)

3. Judgment

The scores of all items in parentheses in 2 above are totaled, and a judgment is made based on the three standard divisions shown below.

It should be noted that the scores are provisional estimates that are made to get an idea of the problem points associated with improving seismic resistance, items that should be improved, and so on. As a result, it is necessary to make a more holistic judgment by considering the individual features of the buildings.

1) Important Cultural Properties (buildings) appear to have almost adequate seismic resistance. (Generally, buildings with a score of 60 or higher for all items)
2) Measures are needed to restore the original structural soundness of the important cultural property (including simple temporary reinforcements) or to revise the management and/or utilization method (generally, buildings with a score of less than 60 for items related to conservation condition).
3) It is probably necessary to make major repairs (including reinforcement) to the Important Cultural Properties (buildings) or review the utilization method, and a basic assessment should be made as soon as possible (generally, buildings for which at least 1 of the items related to structural characteristics has a score of less than 60).

In addition to judgments, opinions about the assessment can be written in the Judgment column.

## Section 3. Procedure for Understanding the Management and Utilization Methods

Items for seismic resistance that require special attention, such as management system and method of utilization of the Important Cultural Properties (buildings) in its current state, shall be notated.

The following are items related to seismic resistance measures. Items that are considered necessary for the investigation of seismic resistance measures shall be notated.

### Management system

Whether a manager is stationed at the site, whether there are regular patrols, and whether there is a communication system in place shall be notated.

### Utilization

(i) Type of use (Residence, Storage, Office, Open to Public, Public Facility, Other)
(ii) Entry into the interior (Regularly, Occasionally, Never) (Daytime and Nighttime, Daytime only)
(iii) Number of people entering the building (General public, Authorized personnel only) (Many, Few)
(iv) Length of stay in the building (Inhabited, Daytime use only)
(v) Evacuation to outside (Easy, Difficult)
(vi) Entrance is restricted (Completely, Partially, No)
(vii) Danger is clearly indicated (Yes, No)

(Form)

**Preliminary Seismic Assessment Sheet**

Year Month Day

1. Name of building, etc.

| Name of building | Location |
|---|---|
| Name of owner | Address(es) of owner(s) |

2. Assessment by item (circle the applicable categories and total the score)

| Item being assessed<br>Score | | Special notations |
|---|---|---|
| (1) Items related to land | | |
| 1) Location | | |
| (i) Region IV | 15 | |
| (ii) Region III | 10 | |
| (iii) Region II | 5 | |
| (iv) Region I | 0 | |
| 2) History of damage | | If some, please note the state of damage |
| (i) None | 15 | |
| (ii) Some | 5 | |
| 3) Active faults | | |
| (i) None | 15 | |
| (ii) Exist or are unknown | 5 | |
| 4) Soil condition | | |
| (i) Good | 20 | |
| (ii) Somewhat poor | 10 | |
| (iii) Extremely poor | 0 | |
| 5) State of soil improvement | | |
| (i) Cut ground/unimproved land | 20 | |
| (ii) Embankment sites/unknown | 10 | |
| (iii) Reclaimed land (rivers, marsh, ponds) | 0 | |
| 6) Surrounding topography | | |
| (i) Generally flat | 15 | |
| (ii) Adjoining a wetland | 10 | |
| (iii) Adjoining a steeply sloped area | 5 | |
| Total | [ ] | |

| (2) Items related to structural characteristics | | |
|---|---|---|
| 1) Items related to size and shape | | |
| A. Total area | [ $m^2$] | |
| (i) Less than 100 $m^2$ | 25 | |
| (ii) From 100 $m^2$ up to but excluding 250 $m^2$ | 20 | |
| (iii) From 250 $m^2$ up to but excluding 500 $m^2$ | 10 | |

| | | |
|---|---|---|
| (iv) 500 $m^2$ or more | 5 | |
| B. Eaves height [ $m^2$] | | |
| (i) Less than 3m | 25 | |
| (ii) From 3m up to but excluding 6 m | 20 | |
| (iii) From 6 m up to but excluding 9 m | 10 | |
| (iv) 9 m or higher | 5 | |
| C. Ratio of eaves height to length of frontage or depth, whichever is shorter [ m/ m] | | |
| (i) Less than 0.5 | 25 | |
| (ii) From 0.5 up to but excluding 1 | 20 | |
| (iii) From 1 up to but excluding 2 | 10 | |
| (iv) 2 or greater | 5 | |
| D. Shape of building | | |
| (i) Horizontal and vertical shapes are both typical | 25 | |
| (ii) Shape in plan is atypical | 15 | |
| (iii) Shape in elevation is atypical | 5 | |
| Total [ $m^2$] | | |
| 2) Items related to framework structures | | Please show wall arrangement in the simplified plan |
| A. Arrangement of earthen walls | | |
| (i) Earthen wall length on all 4 sides is 1/5 or more | 20 | |
| (ii) There is one side where earthen wall length is less than 1/5 | 10 | |
| (iii) There is at least one side where there is no earthen wall | 5 | |
| (iv) There are no earthen walls on the outside | 0 | |
| B. Arrangement of pillars | | Please show pillar arrangement in the simplified plan |
| (i) Both interior and exterior arrangements are orderly | 15 | |
| (ii) Either interior or exterior arrangement is disorderly | 10 | |
| C. Ratio of total cross-section area of pillars to floor area [ $m^2$/ $m^2$] | | Please show cross-section size of main pillars in the plan above. |
| (i) 0.01 or greater | 15 | |
| (ii) From 0.005 up to but excluding 0.01 | 10 | |
| (iii) Less than 0.005, or unknown | 5 | |
| D. Connections between pillars at the foundation-level | | |
| (i) Pillars built on the ground sill | 15 | |
| (ii) Pillars built on the foundation stones, and connected with *jinageshi* (non-penetrating tie beams) | 10 | |
| (iii) Unconnected pillars built on the foundation stones | 5 | |
| E. Integration of pillars | | |
| (i) Uses both penetrating and non-penetrating tie beams | 10 | |
| (ii) Uses either penetrating or non-penetrating tie beams | 5 | |
| (iii) Uses neither penetrating nor non-penetrating tie beams | 0 | |
| F. Ceilings | | |
| (i) Ceilings consisting of strong materials such as sleepers and joists | 15 | |
| (ii) Ceilings consisting of medium materials such as battens and wooden boards | 10<br>5 | |
| (iii) Ceilings consisting of weak materials such as bamboo lathing, or no | | |

| | |
|---|---|
| ceiling | |

| | |
|---|---|
| G. Size of foundation stones | |
| (i) Space around the pillar is 1/2 the pillar diameter or greater 10 | |
| (ii) Space around the pillar is 1/3 the pillar diameter or greater 5 | |
| (iii) Almost no space around the pillar 0 | |
| Total [ ] | |
| 3) Items related to roof structure | |
| A. Roof frame | |
| (i) Roof frame consisting of truss 25 | |
| (ii) Roof frame consisting of beams and struts 20 | |
| (iii) Roof frame consisting of only rafters 10 | |
| B. Roof sheathing | |
| (i Boarding, bamboo lattice 25 | |
| (ii) Layered wooden boards or unknown 10 | |
| (iii) Split bamboo lathing 0 | |
| C. Roofing materials | |
| (i) Metal or wooden board roofing 25 | |
| (ii) Cypress bark roofing, wooden shingle roofing, pantile roofing (without bonding soil) 20 | |
| (iii) Pantile roofing (with bonding soil), reed roofing 15 | |
| (iv) Clay tile roofing 5 | |
| D. Ratio of eaves area to floor area [ $m^2$/ $m^2$] | |
| (i) Less than 1.2 25 | |
| (ii) 1.2 or greater, but less than 1.4 15 | |
| (iii) 1.4 or greater 5 | |
| Total [ ] | |

| | |
|---|---|
| (3) Items related to the conservation condition | |
| 1) Differential subsidence | State of subsidence |
| (i) None 25 | |
| (ii) Some 15 | |
| (iii) Noticeable 5 | |
| 2) Rotting and insect damage in main structural members | Location(s) of damage |
| (i) None 25 | |
| (ii) Some 15 | |
| (iii) Noticeable 0 | |
| 3) Distortion of main structural members | Locations of distortion, structural defects |
| (i) None 25 | |
| (ii) Some distortion 15 | |
| (iii) Noticeable distortion 5 | |
| 4) History of major repairs [Full-scale repairs made in year] | Description of existing reinforcement |
| (i) Less than 100 years since major repairs 25 | |

| | | |
|---|---|---|
| (ii) From 100 years up to but excluding 200 years since major repairs | 15 | |
| (iii) 200 years or more since major repairs | 5 | |
| Total | [ ] | |

3. Judgment

In addition to judgments, opinions about the assessment can be written in the Judgment column.

| |
|---|
| |

Please note that if result of the judgment is any of (i)～(iv), then assistance for the necessary improvement measures can be requested from the Education Committee of the local municipality.

4. Understanding management and utilization methods

Please circle the answers in parentheses that apply, or write the answer in the **[ ]**

| |
|---|
| A. Management system<br>(i) Is there a full-time manager? (Yes, No)<br>(ii) Are there regular rounds? (Yes, No)<br>(iii) Is there an emergency contact system? (Yes, No) |
| B. State of utilization<br>(i) Type of use (Residence, Storage, Office, Open to Public, Public Facility, Other ( ))<br>(ii) Entry into the interior (Regularly, Occasionally, Never) (Daytime and Nighttime, Daytime only)<br>(iii) Number of people entering the building (General public, Authorized personnel only) (Many, Few)<br>(iv) Length of stay in building (Inhabited, Daytime only)<br>(v) Evacuation to outside (Easy, Difficult)<br>(vi) Entrance is restricted (Completely, Partially, No)<br>(vii) Danger is clearly indicated (Yes, No) |