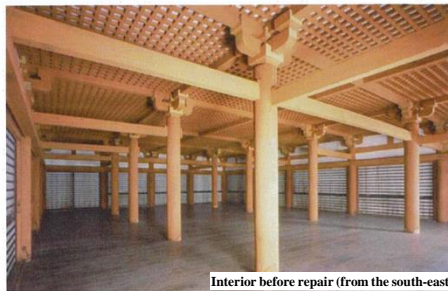




Front side before repair (from the south-east)



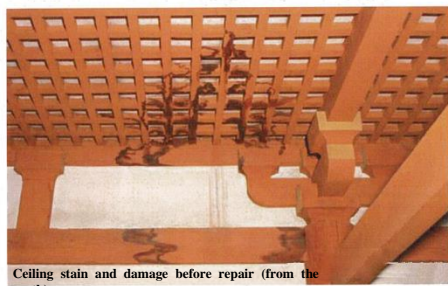
Interior before repair (from the south-east)

The Raido is a 9.1m (distance spanned by the longitudinal members) x 7.28 m (distance spanned by the transverse members) gable-roofed building with an open design, where many of the fittings are latticed shutters.

When a stage is installed in front of the Yumedono for a *bugaku* (court dance and music) or a Buddhist service, the Raido serves as a seating space for the audience.



Facade before repair (from the south)



Ceiling stain and damage before repair (from the south)



Tile roofing base damage before repair (from the north)

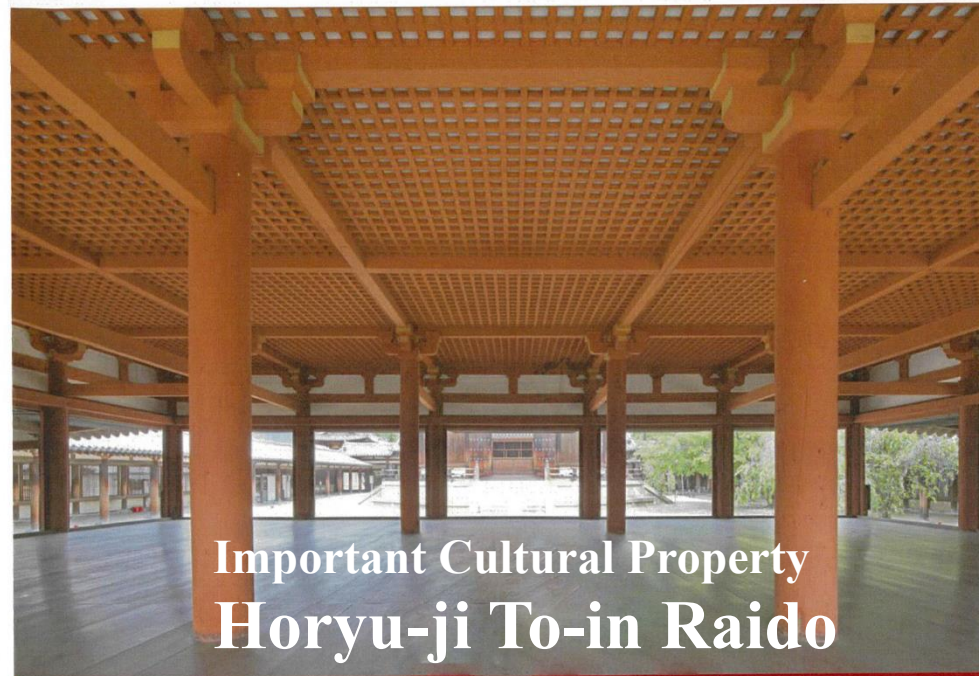
## History of the construction and repair

The Raido is located at the centre of the south side of the corridor, where the inner gate of the To-in Garan used to stand. It originates from the 21.21m (length) x 6.36m (width) building of the two cypress bark roof buildings mentioned in the ancient texts of *To-in Shizaicho*. In another historical document, *To-in Engi*, it is noted that this building was a 12.73m worship hall at the time of the repairs undertaken between 859 to 876. It probably served as both a gate and a worship hall.

The original 12.73m (distance spanned by the longitudinal members) x 3.64m (distance spanned by the transverse members) inner gate was rebuilt as a 9.1m x 5.45m building (length amounting to 9.1m of the centre part of the inner gate) in the Heian Period, and the south aisles were extended in 1172, making the area 9.1 x 7.28 metres in size. The current Raido was rebuilt in 1231 in the Kamakura Period, based on this renovated building. A further 0.91m and 1.06 m were added to the south-north ends and east-west ends of the building, respectively, in the Kangi Era (1229-1232).

After its reconstruction, we know that repair projects were undertaken in 1436, 1446, 1601-05, 1698, 1868 and 1934-35. The repairs of 1601-05 are thought to have been extensive.

The Raido was disassembled and repaired in 1934-35, during which time the floor, gable ornamentation, eaves and other parts were restored to their original state based on the survey results.



# Important Cultural Property Horyu-ji To-in Raido

## Guided Tour at Conservation Site

24 October (Sat) – 25 October (Sun) 2020

Organiser: Nara Prefecture  
Cooperation: Horyu-ji Temple

The Raido (Worship Hall) stands at the centre of the south side of the Horyu-ji To-in Corridor. We have been replacing the tile roofs since April 2019. This is the first repair in 84 years, since the previous one in 1935. We have completed the repairs to the roof base and would like to show the public the current status of the hall.

## Previous steps of the conservation and repair work

The repair policy was discussed while carrying out damage surveys, detailed measurement surveys, foundation surveys, etc., and then the appropriate construction work was conducted for conservation purposes.

### Construction of the scaffolding roof

- Designing of the scaffolding roof
- Construction of the scaffolding roof
- Construction of the roof tile storage hut



### Pre-dismantling survey

- Survey of the roof tile damage
- Measurement survey of the roof and eaves



### Dismantling of the roof

- Numbering of the roof tiles prior to dismantling
- Dismantling of the descending ridge and main timber ridge
- Removal of the semi-cylindrical roof tiles and flat roof tiles



### Survey during dismantling; Repair of the structural members

- Roof tile survey  
Hammering test, measurement survey, photography, survey of marks, inscriptions and traces, etc.
- Survey of damage to sheathing roof boards, members of the tile roofing base, etc.
- Repair of the structural members



### Tile roofing base work

- Removal of damaged parts
- Repair of the removed parts



## Roof Tiles of Horyu-ji To-in Raido

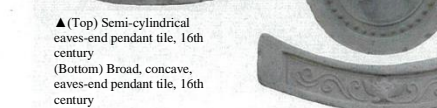
This was used as a sample for the complementary roof tiles used in the 1934-35 repair project.



▲(Top) Semi-cylindrical eaves-end pendant tile, 14-15th century  
(Bottom) Broad, concave, eaves-end pendant tile, 12-13th centuries



▲(Top) Semi-cylindrical eaves-end pendant tile, 14th century  
(Bottom) Broad, concave, eaves-end pendant tile, 14-15th centuries



▲(Top) Semi-cylindrical eaves-end pendant tile, 16th century  
(Bottom) Broad, concave, eaves-end pendant tile, 16th century

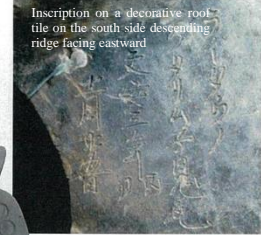


▲(Top) Semi-cylindrical eaves-end pendant tile, 17-18th century  
(Bottom) Broad, concave, eaves-end pendant tile, 17-18th centuries

▲Decorative roof tile on the south side descending ridge facing eastward, 14-15th centuries



◀Decorative roof tile on the main timber ridge facing eastward, 14-15th centuries



Inscription on a decorative roof tile on the south side descending ridge facing eastward

Some of the decorative roof tiles on the main timber ridge facing eastward, and on the south side descending ridge facing eastward, have inscriptions indicating the manufacture date. They are from the 14-15th centuries.

The Raido has a *hongawarabuki*-style roof (where semi-cylindrical roof tiles are placed on flat roof tiles), including approximately 16,000 roof tiles. Our survey identified roof tiles from various periods, including the Heian Period, Kamakura Period, Muromachi Period, Edo Period and Modern Period (Meiji, Taisho and Showa Eras).

### Sectional view of the Raido transverse beams

#### structural members

