

Acoustics Consultant:	NAGATA ACOUSTICS, Inc.
Architect:	NIKKEN SEKKEI
Owners:	Sumida Ward
Sound & Communications:	NAGATA ACOUSTICS, Inc.
Construction Cost:	¥ 19,960 Million JPY

Sumida Triphony Hall opened in October 1997. The Hall is near JR Kinshi-cho railway station, located in the eastern part of Tokyo. The building contains two halls, the main hall with 1801 seats as the home of the New Japan Philharmonic (NJP), and the recital hall with 252 seats, as well as three rehearsal rooms.

The main hall has a rectangular shape with a sloped ceiling rising at 12.5 degrees toward the back of the hall in parallel to the main floor and with two layers of balconies around the main audience area. Reflecting panels were hung over the stage to improve the ensemble conditions for players. At first, 24 panels were hung 11.5m above the stage, but now 9 panels are set. The room shape was studied using computer simulations and the details of the ceiling and the wall were studied by use of a 1/10th-scale model. An organ with 66 stops was installed at the front of the hall.

The recital hall is a typical shoebox shape.

Another acoustical concern was the isolation of noise and vibration caused by railway traffic running adjacent to the south side of the building site. To achieve sufficient vibration isolation to assure that the noise level in concert halls would be below NC-15, vibration-isolating rubber sheets 100mm thick were embedded in the underground outer wall of the south side of the building. The vibration insulating structures were also adopted at parts of the main hall and throughout the Recital Hall.

Since the opening programs, many concerts have been held, mainly by NJP. The acoustical impression is that the orchestra sounds very natural and honest, and definition of each instrument's sound is also clear.

BUILDING DETAILS AND ACOUSTICS DATA

Location 1-2-3 Kinshi, Sumida-ku, Tokyo
130-0013, Japan

Tel 03-5608-5404

Seating Capacity 1,801

Room Volume 18,450 CM

Surface Area 5,980 SM

Stage Area 230 SM

Reverberation Time (Mid-Frequency)

Unoccupied 2.1 sec

Occupied 2.0 sec

Finishing Materials

Ceiling : 2-3 layers of gypsum board (12 mm x 2-3)

Stage Wall : Wooden surfaced gypsum board
+ 3-4 layers of gypsum board (12 mm x 3-4)

Side Wall : Wooden surfaced gypsum board
+ 2-3 layers of gypsum board (10 mm x 2-4)

Upper Wall : Concrete

Floor : 15 mm wooden board on concrete

Seat : Upholstered

Miscellaneous : Acoustic curtain, Reflecting panel

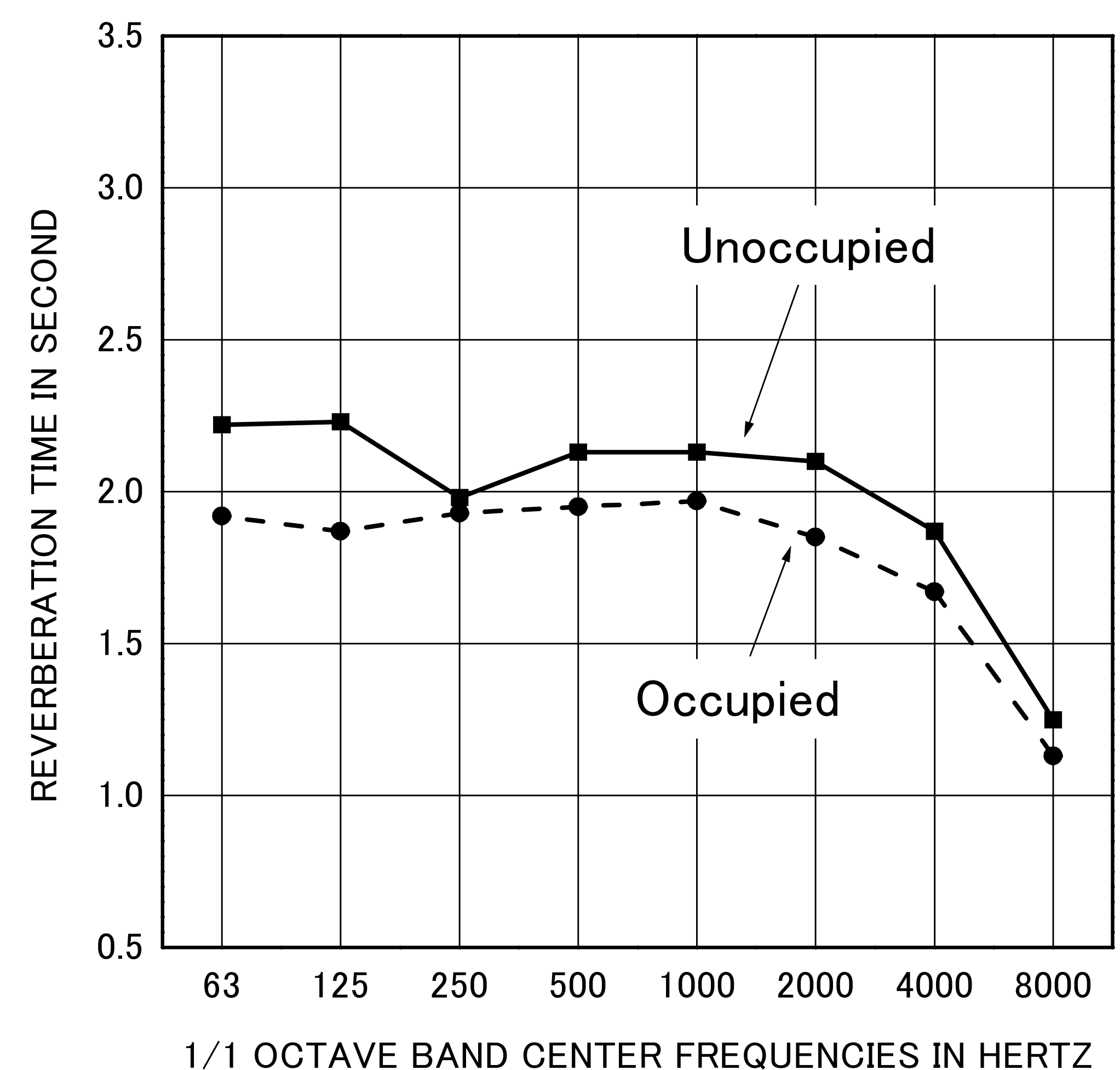
Organ : 66 stops (Yehmlich Orgelbau, Germany)

Noise Level : NC-15

Other Facilities : Recital Hall (252 seats)

Total Cost : ¥ 19,960 Million JPY

Total Floor Area : 20,066 SM

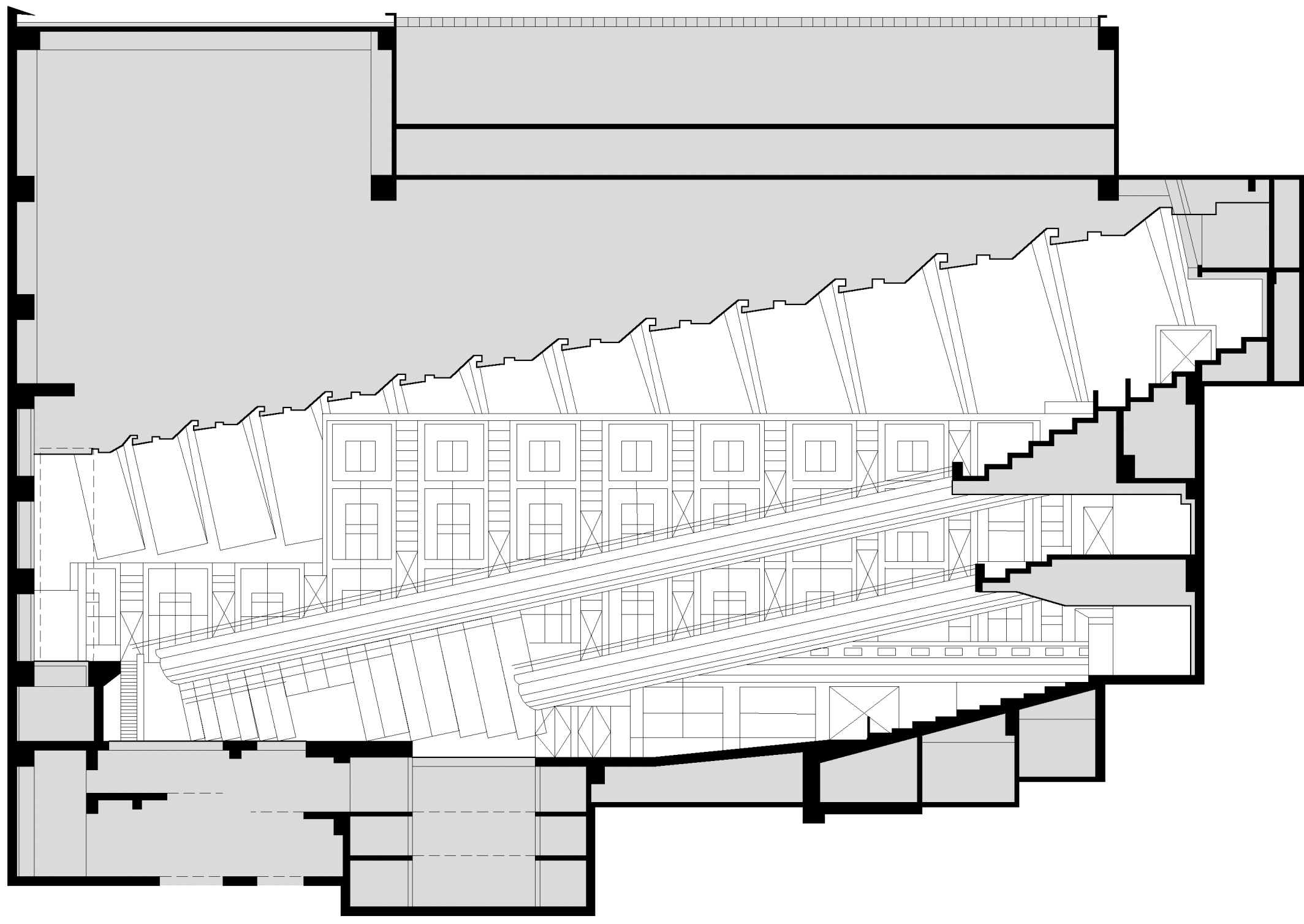


REVERBERATION TIME

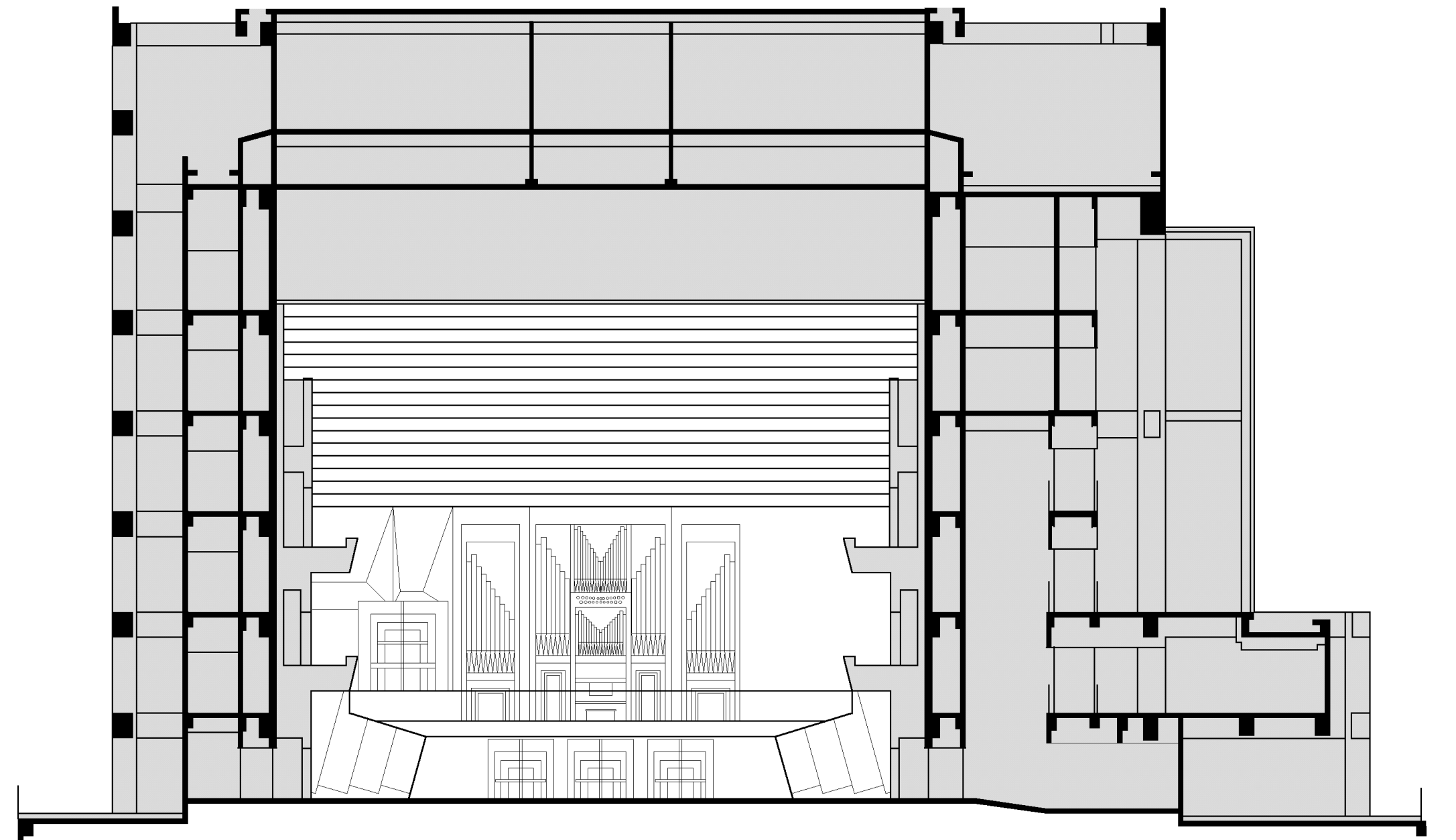
SUMIDA TRIPHONY HALL

TOKYO JAPAN
COMPLETION DATE

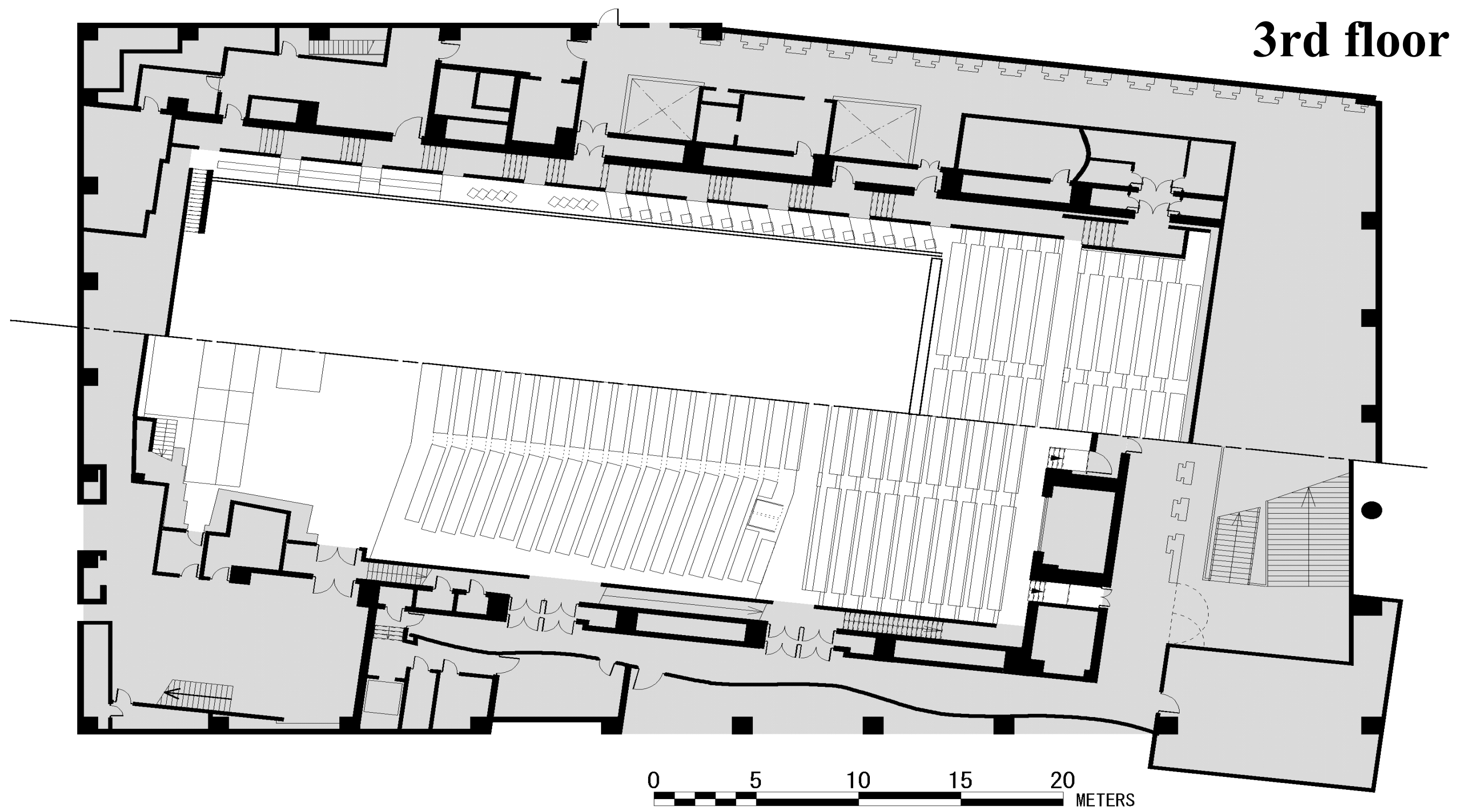
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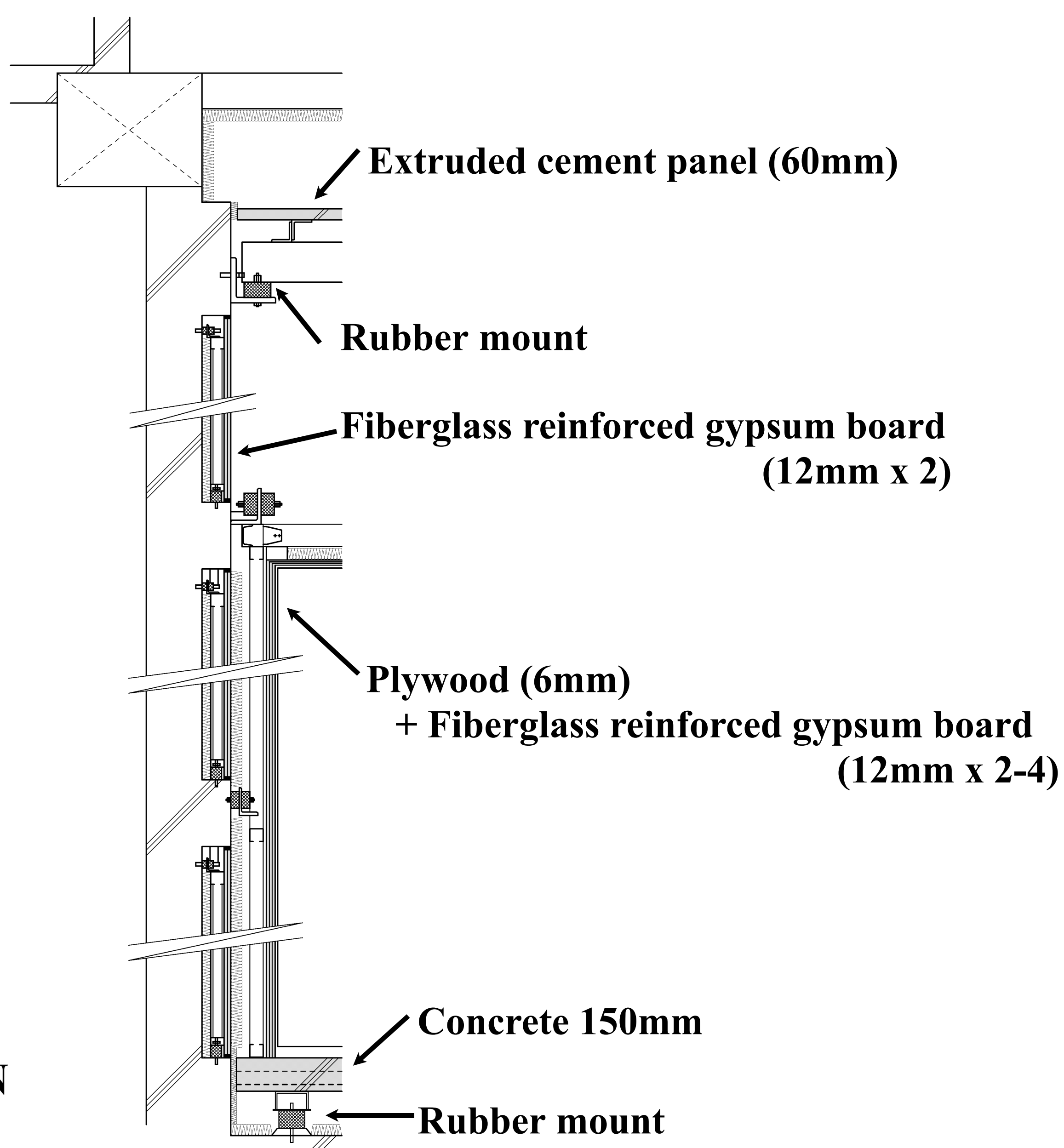
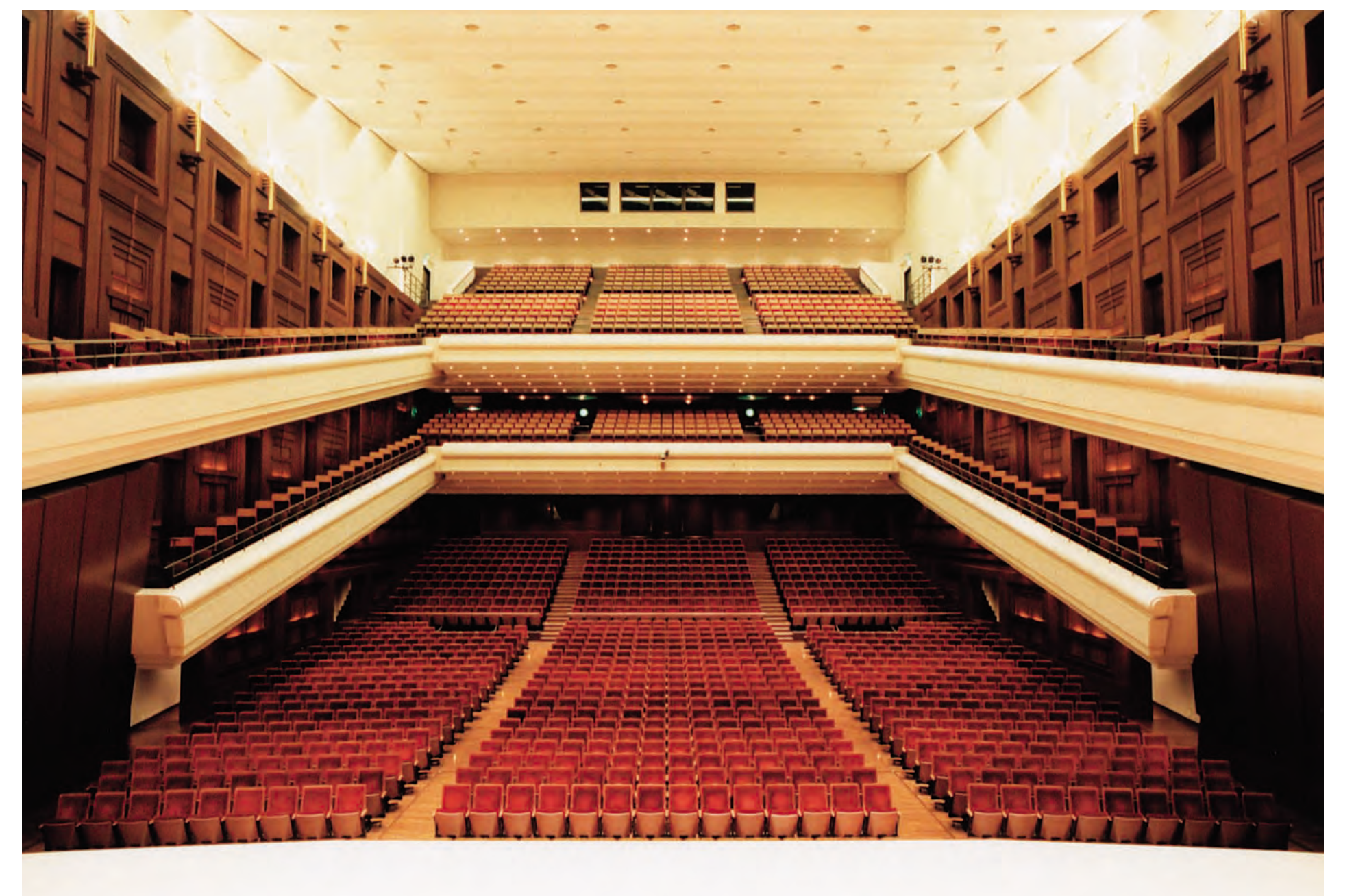
LONGITUDINAL SECTION



TRANSVERS SECTION



PLAN



SECTION



CURTAIN

VIBRATION INSURATING STRUCTURE OF RECITAL HALL