

KYOTO CONCERT HALL

KYOTO, JAPAN
1995

NAGATA
ACOUSTICS

Acoustics Consultant:	NAGATA ACOUSTICS, Inc.
Architect:	Arata Isozaki & Associates
Owners:	City of Kyoto
Sound & Communications:	NAGATA ACOUSTICS, Inc.
Construction Cost:	16,700 Million JPY

The Kyoto Concert Hall was planned as the 1,200 years' memorial facility of this ancient metropolis, and was opened in 1995. Two concert spaces are contained in the building: the Main Hall with 1833 seats, the home of Kyoto Symphony Orchestra (KSO), and the Ensemble Hall with 500 seats.

The shape of the Main hall comes under the category of "shoe-box", with two steps of asymmetrical balconies surrounding both the main audience floor and the stage. The focused points of the room acoustical design are as follows:

A heavy ceiling of 80 mm thick concrete and light timber floor with wooden sleepers supports for getting effective low frequency reflections from the ceiling.

Random micro-shaping elements on the lower sidewalls and the ceiling for uniformly distributing reflections. The diffusing effect of the elements was confirmed by 1/10 scale model study.

Highly absorptive audience seats to minimize the discrepancies in reverberation times between occupied and unoccupied.

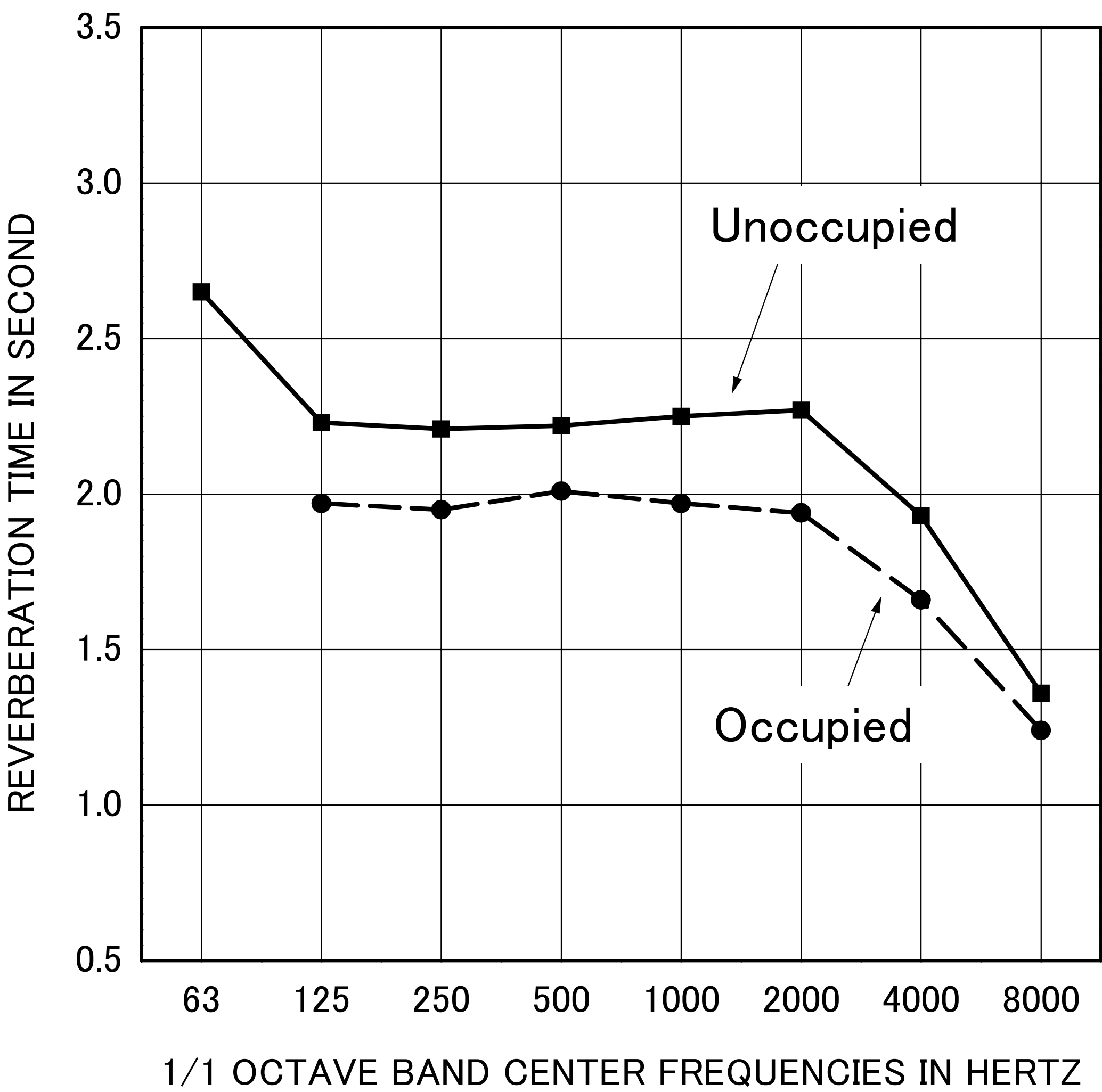
Electric powered orchestra risers divided into 21 blocks, which permits a stepwise orchestra arrangement, including string sections.

Stage floor of 40 mm thick HINOKI, a kind of Japanese cypress, which was selected through audition tests using 14 stage floor samples of various combinations of timber and substructures.

“Like all first-rate halls, Kyoto blends a sense of intimacy with monumentality. The room is warm enough to feel comforting, spare enough to defer to the primacy of the music.” Paul Goldberger, architecture critic, The New York Times, wrote July 2, 1995.

BUILDING DETAILS AND ACOUSTICS DATA

Location	1-26, Hangi-cho, Shimogamo Sakyo-ku, Kyoto, 606-0823 Japan
Tel	075-711-298
Seating Capacity	1,833
Room Volume	20,000 CM
Surface Area	6,300 SM
Stage Area	245 SM
Reverberation Time (Mid-Frequency)	
Unoccupied	2.2 sec
Occupied	2.0 sec
Finishing Materials	
Ceiling	: concrete 60 mm, fiberglass reinforced concrete 30 mm
Wall	: wooden surfaced gypsum board on concrete, fiberglass reinforced concrete 30 mm
Floor	: 65 mm flooring joist supported
Seat	: Upholstered
Miscellaneous	: orchestra risers (21 parts)
Organ	: 90 stops (Kleis Orgelbau, Germany)
Noise Level	: NC - 15
Other Facilities	: Recital Hall (500 seats)
Total Cost	: 16,700 Million JPY
Total Floor Area	: 3,590 SM

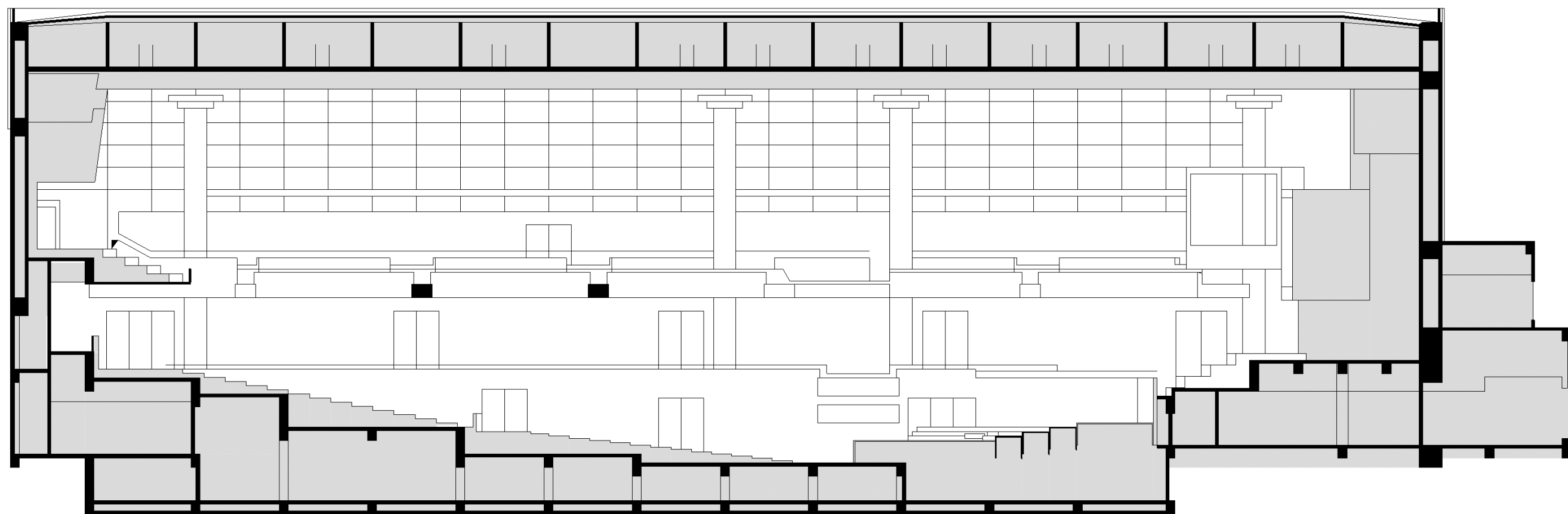


REVERBERATION TIME

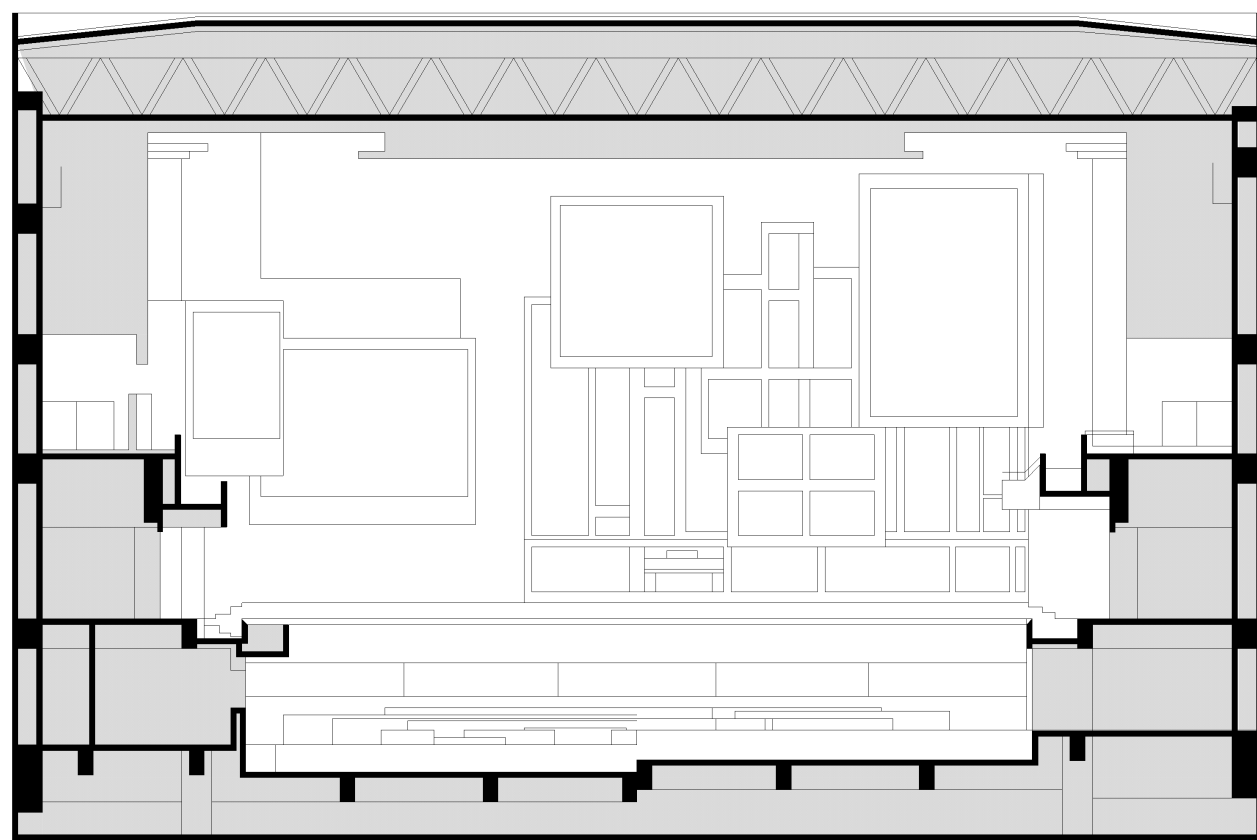
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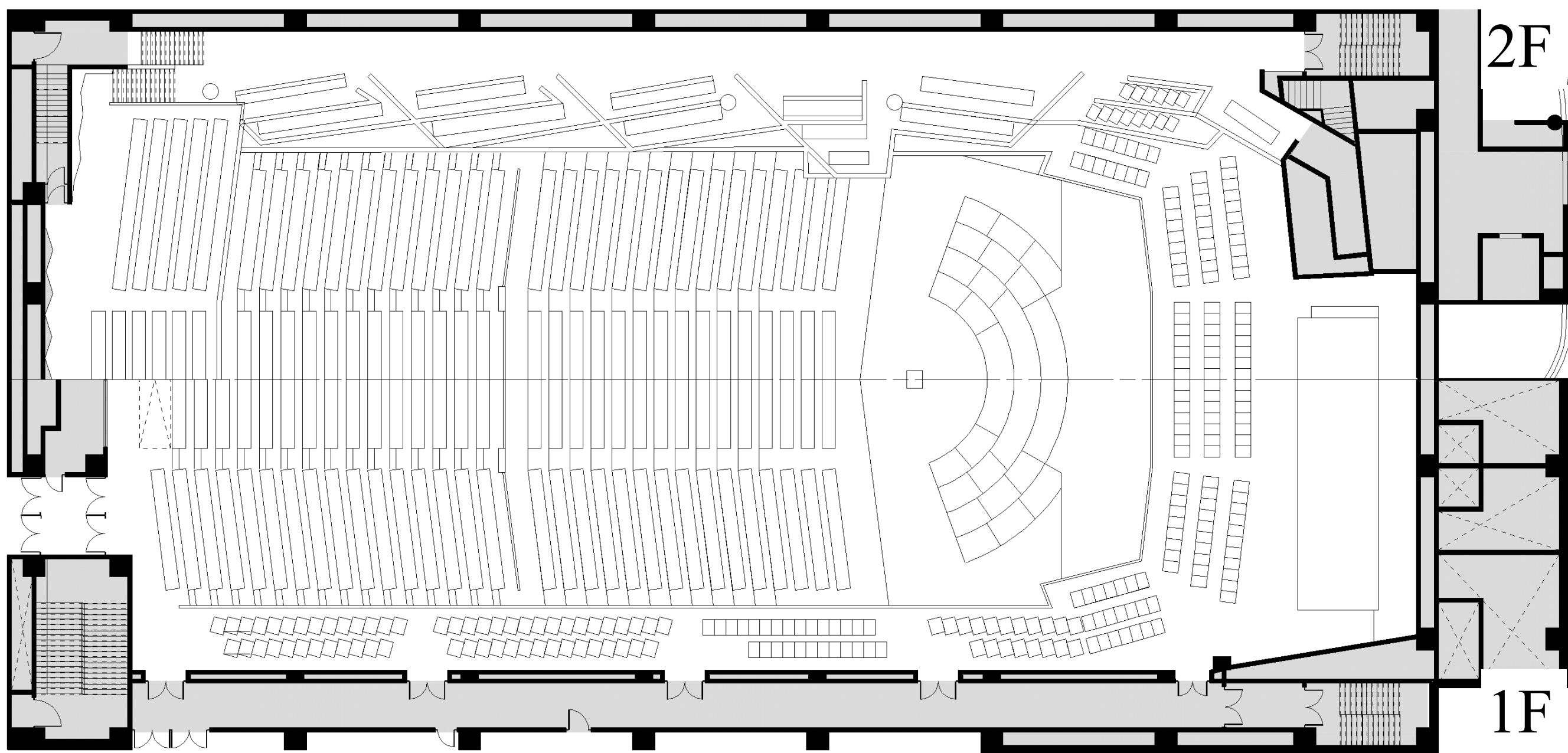
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LONGITUDINAL SECTION



TRANSVERS SECTION



0 5 10 15 20 METERS

PLAN



Recital Hall

