

# Atlas of Details



## Jørn Oberg Utzon. Sydney Opera House 1958-1973

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URL: <https://www.detailsinsection.org/archives/projects/sydney-opera-house>

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Atlas of Details is a research project to demonstrate how insightful a section can be, in order to represent the complexity of the architectural artifact, since it allows the simultaneous perception of materiality and form, of building envelope and interior spaces. Atlas of Details is a project by The Formwork, an association established by professors and PhD candidates with diverse academic backgrounds (history, architectural design, technology, preservation) working at the IUAV University in Venice and at the Milan Politecnico. For more information about the Atlas of Details and The Formwork, please contact [info@theformwork.org](mailto:info@theformwork.org).

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# Jørn Oberg Utzon

# Sydney Opera House

1958-1973

**Text**

Althea Andreoni  
IUAV Venezia

**Drawings**

Althea Andreoni  
IUAV Venezia

**Architect**

Jørn Oberg Utzon

**Name of the building**

*Sydney Opera House*

**Site**

Sydney (NSW, Australia)

**Client**

New South Wales Government (Premier John Joseph Cahill)

**Contractors**

Ove Arup and Partners, Consulting Engineers

**Engineer**

Ove Nyquist Arup (1895-1988)

**Other actors**

Peter Hall (architect, third phase);  
Civil & Civic (base structure);  
Hornibrook (roof structure);  
Höganäs (tiles);  
Concrete Industries (Monier)(pavings);  
Cremer, Gabler (acoustics);  
Waagner-Biro (stage);  
Hornibrook (contractors, third phase)

**Competition**

1956

**Building permit**

1957

**Start of construction works**

1958

**Project variations**

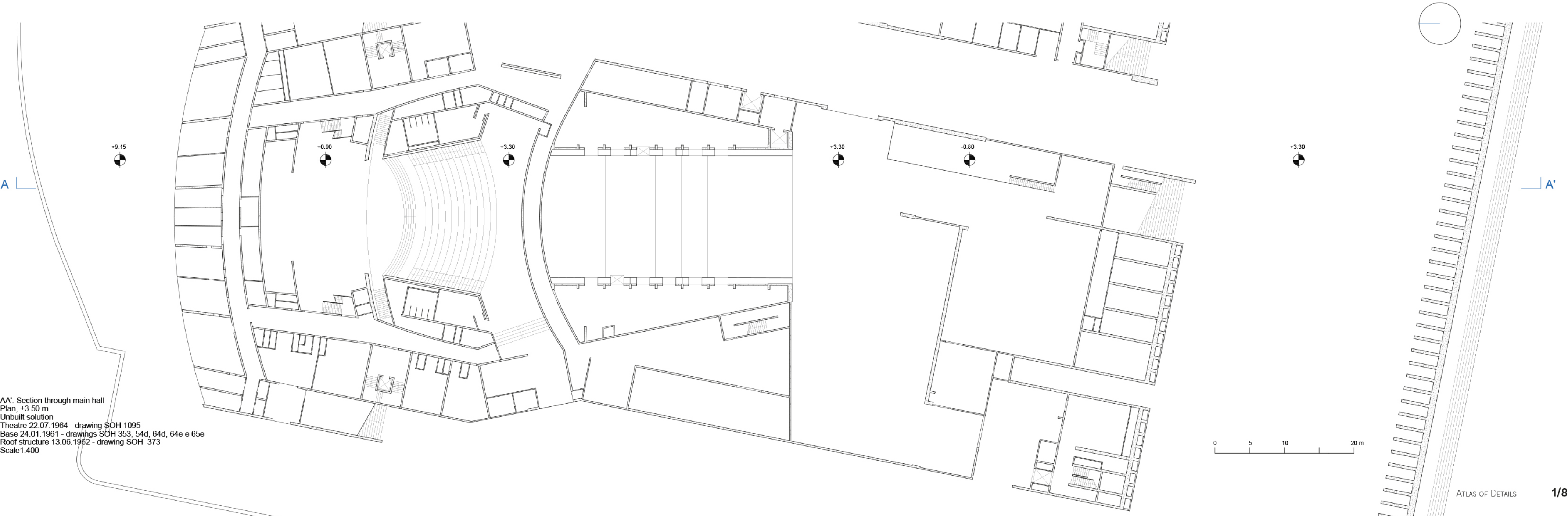
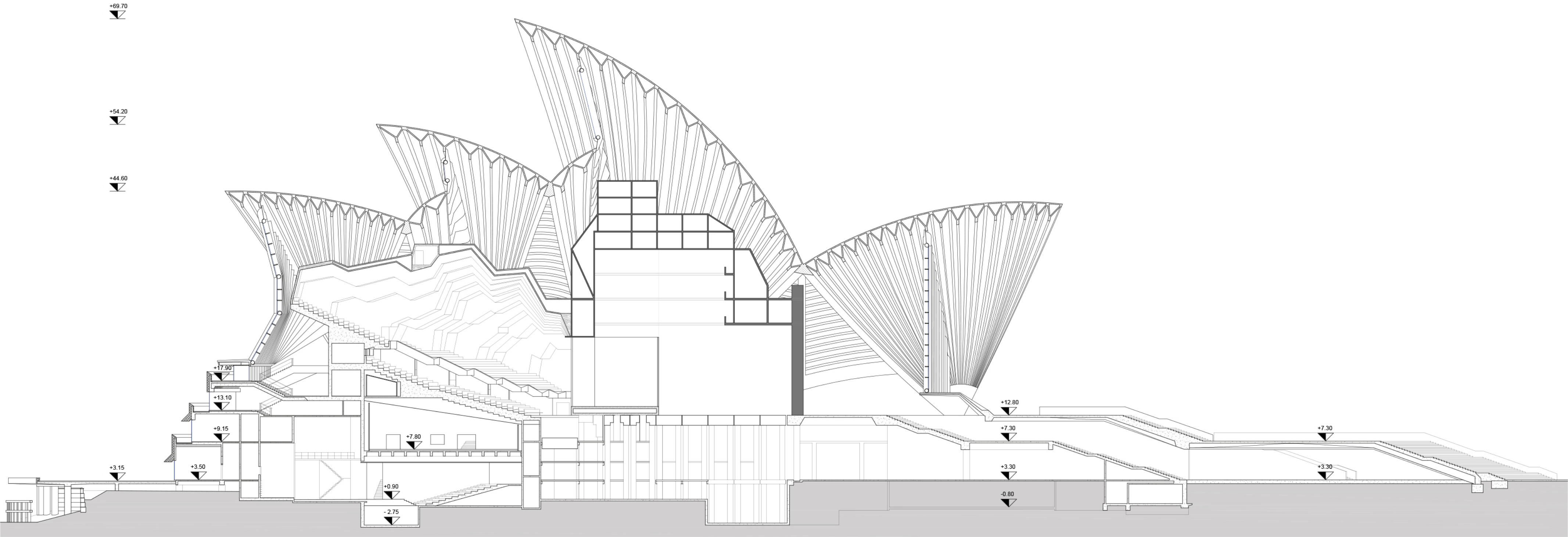
First variation (1958);  
Second variation (1966);  
Utzon dismissed (1966)

**End of construction works**

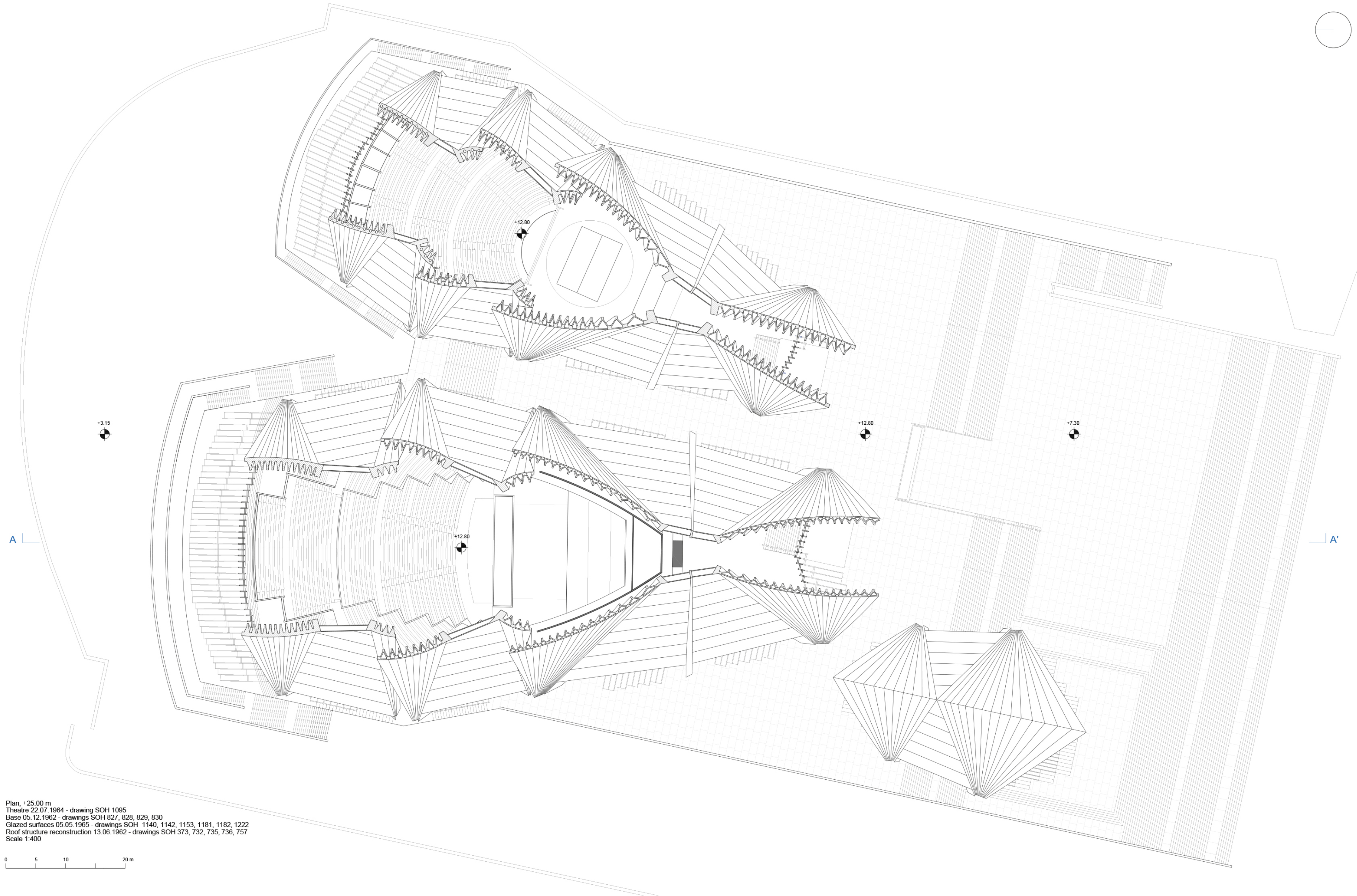
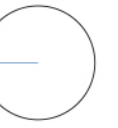
1973

**Construction system**

Tile-coated reinforced concrete shell with prefabricated ribs.







Plan, +25.00 m  
Theatre 22.07.1964 - drawing SOH 1095  
Base 05.12.1962 - drawings SOH 827, 828, 829, 830  
Glazed surfaces 05.05.1965 - drawings SOH 1140, 1142, 1153, 1181, 1182, 1222  
Roof structure reconstruction 13.06.1962 - drawings SOH 373, 732, 735, 736, 757  
Scale 1:400

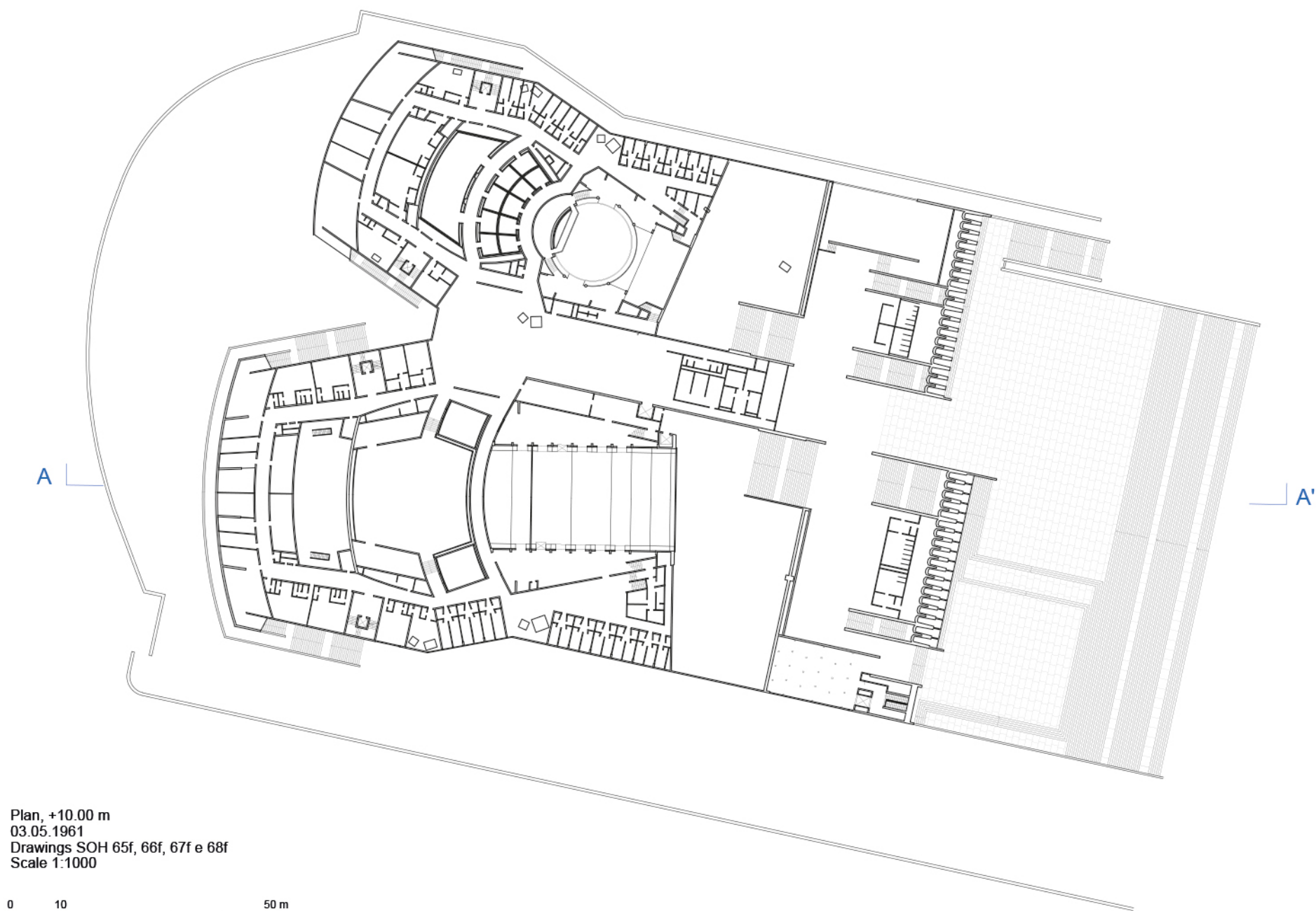
0 5 10 20 m





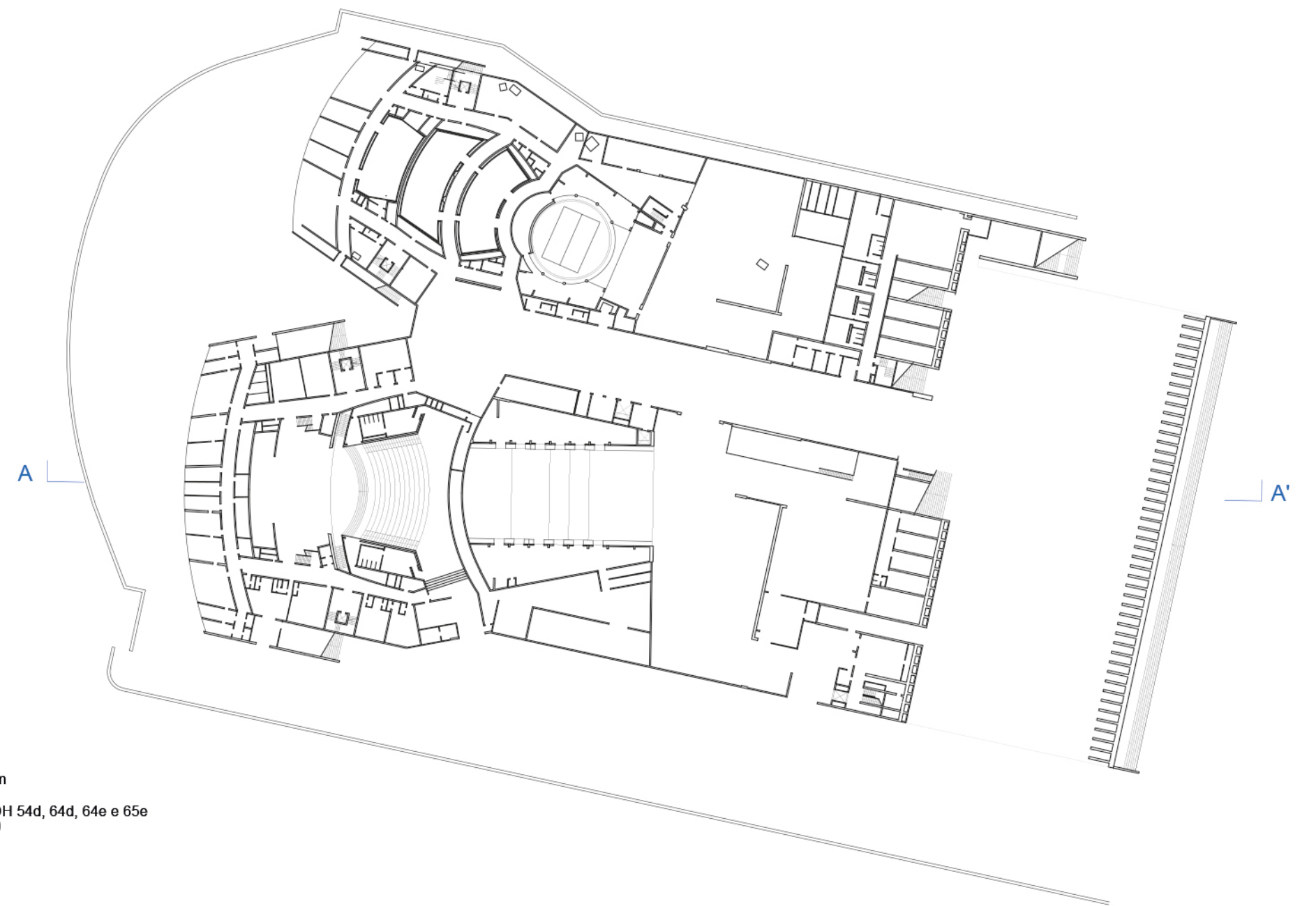
General site plan  
01.05.1964  
Drawing SOH 1090  
Scale 1:10000

0 100 500 m

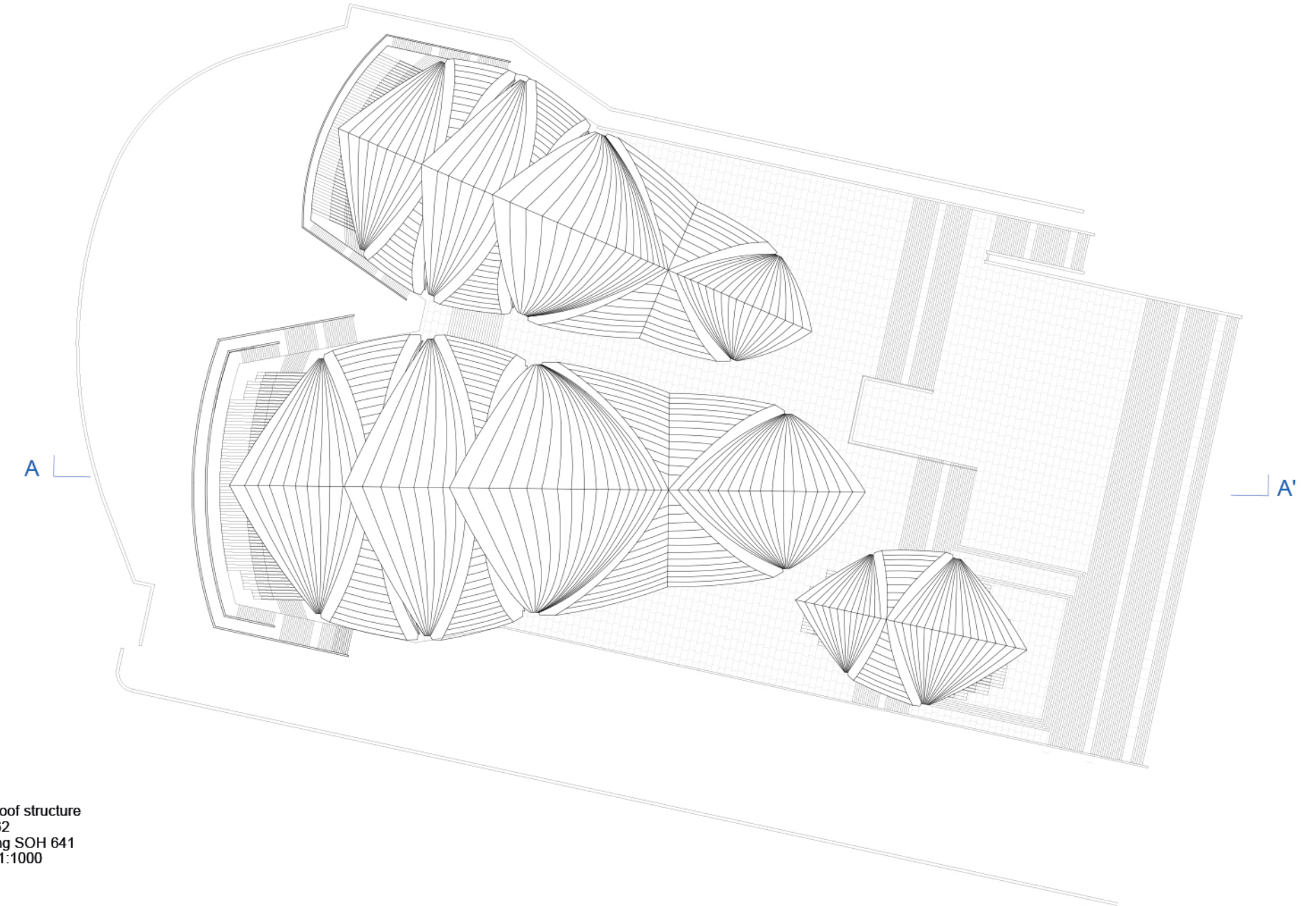


Plan, +10.00 m  
03.05.1961  
Drawings SOH 65f, 66f, 67f e 68f  
Scale 1:1000

0 10 50 m



Plan, +3.50 m  
02.11.1960  
Drawings SOH 54d, 64d, 64e e 65e  
Scale 1:1000



Plan, roof structure  
02.1962  
Drawing SOH 641  
Scale 1:1000



+44.60

+42.70

+34.80

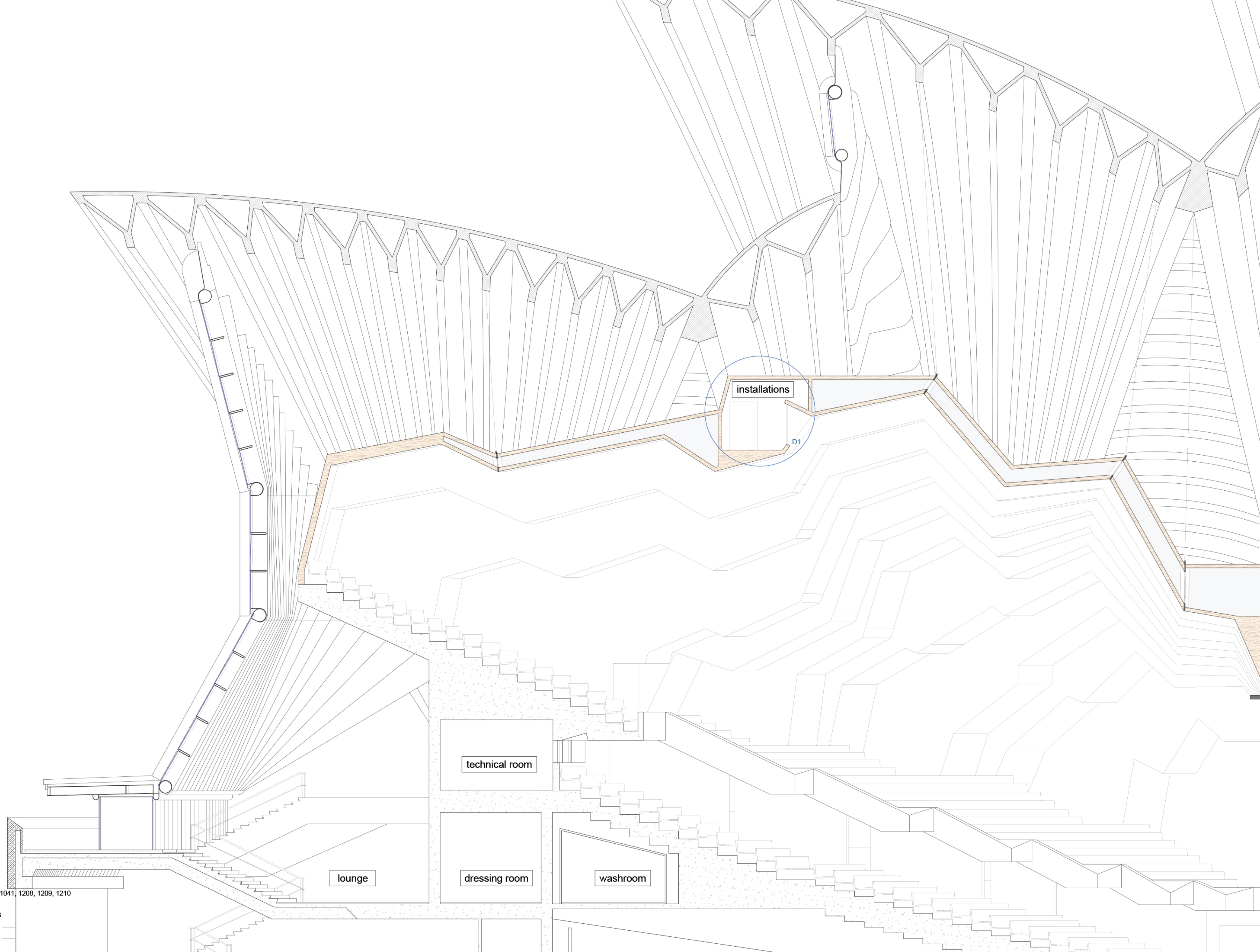
+29.70

+20.70

+17.90

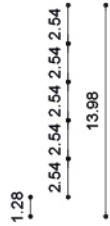
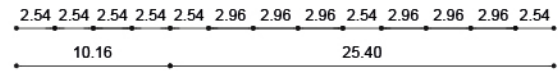
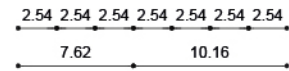
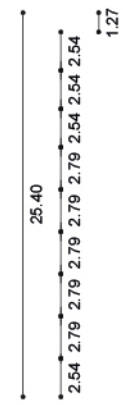
AA'. Section through main auditorium  
Unbuilt solution 12.03.1965 - drawings SOH 1041, 1208, 1209, 1210  
Theatre 22.07.1964 - drawing SOH 1095  
Base 24.01.1961 - drawing SOH 353  
Roof structure 13.06.1962 - drawing SOH 373  
Scale 1:100

0 1 4 m

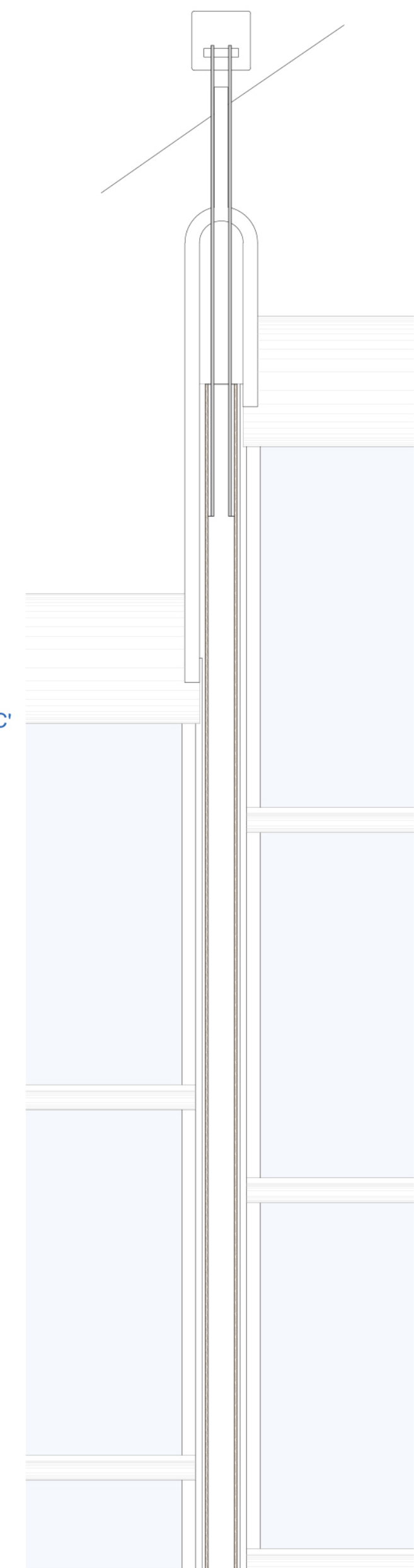
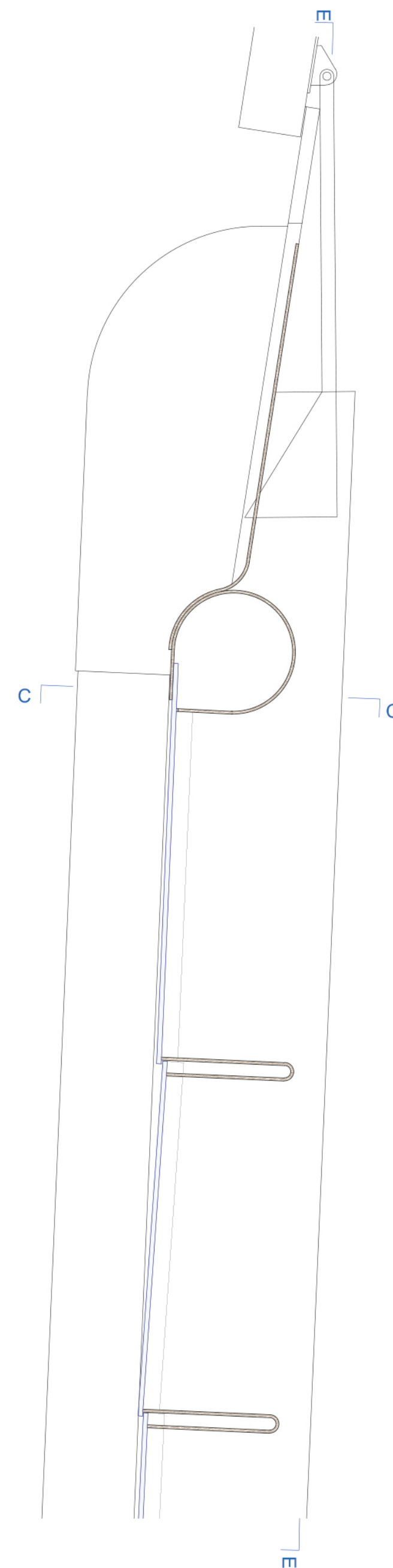
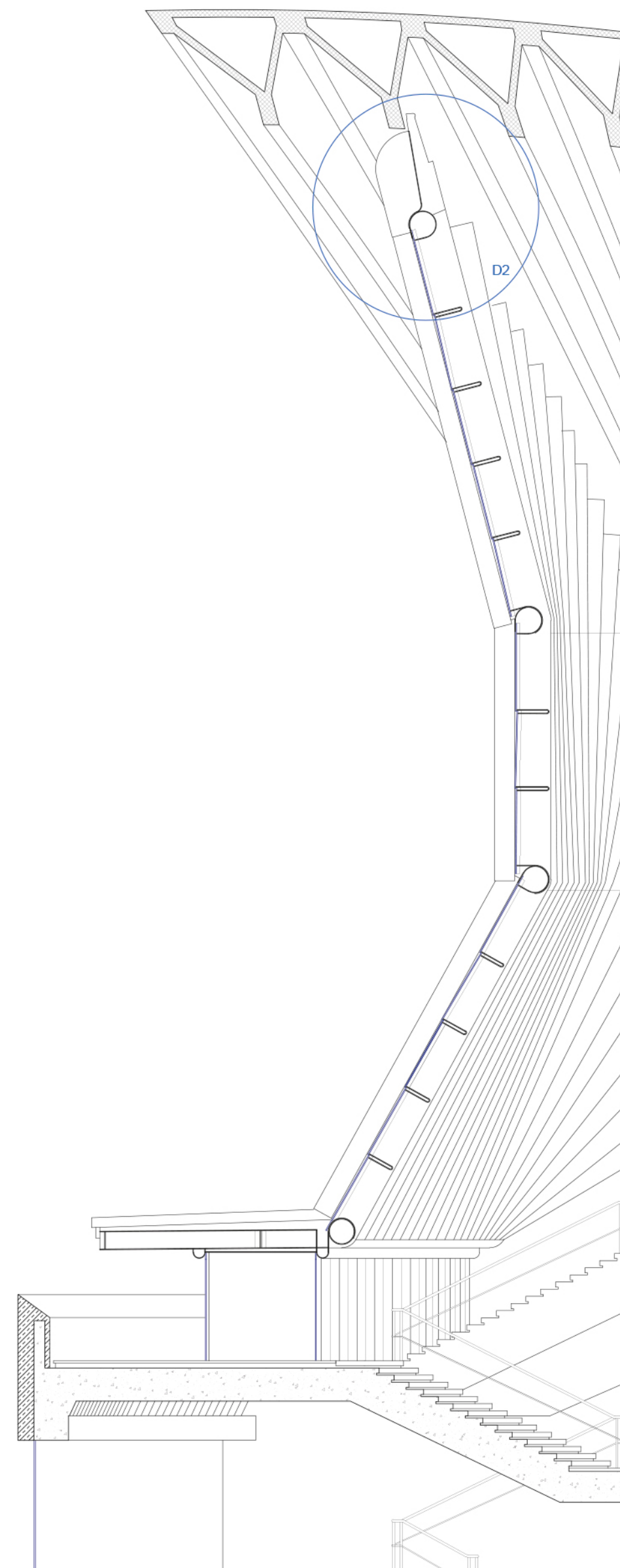
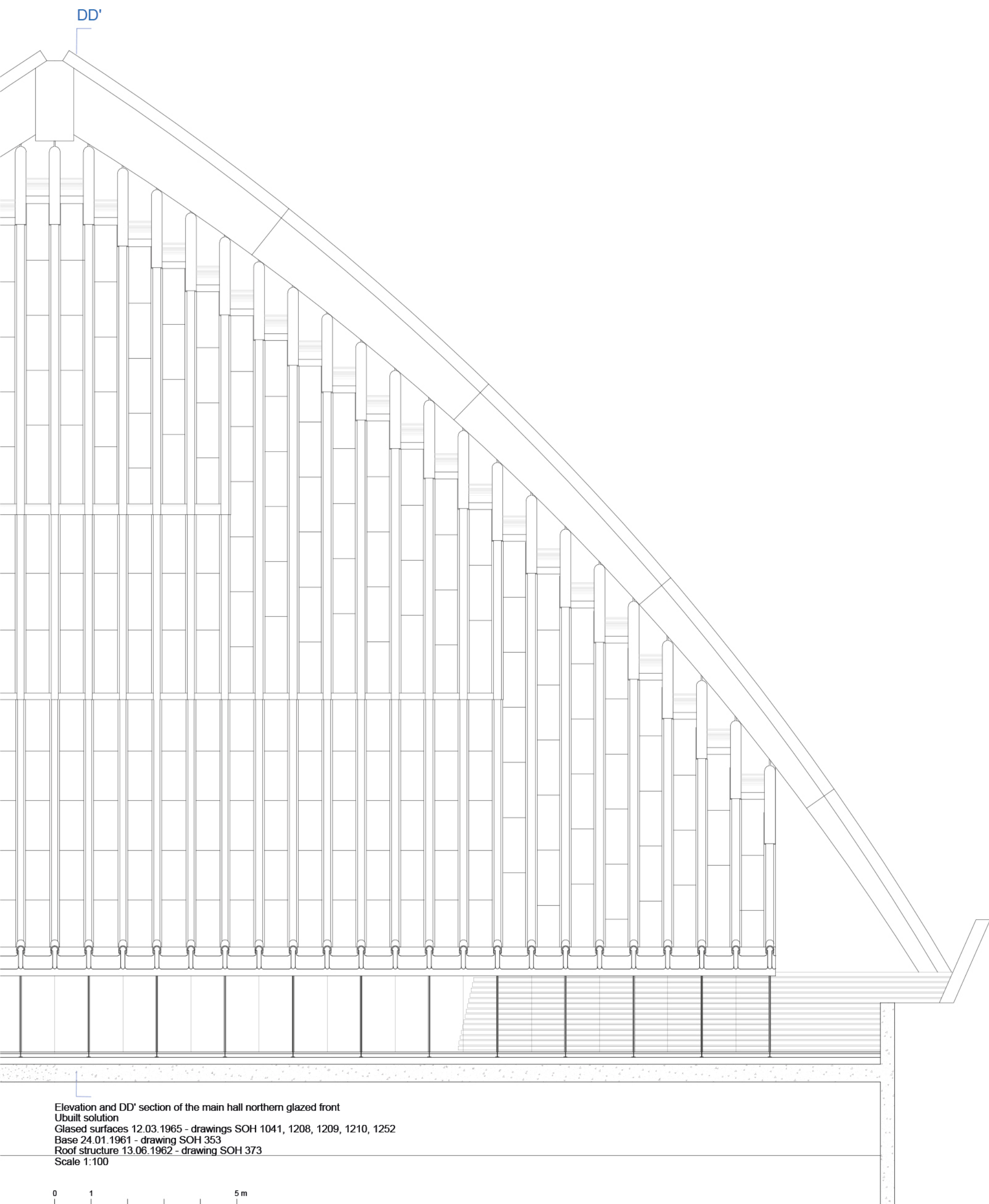




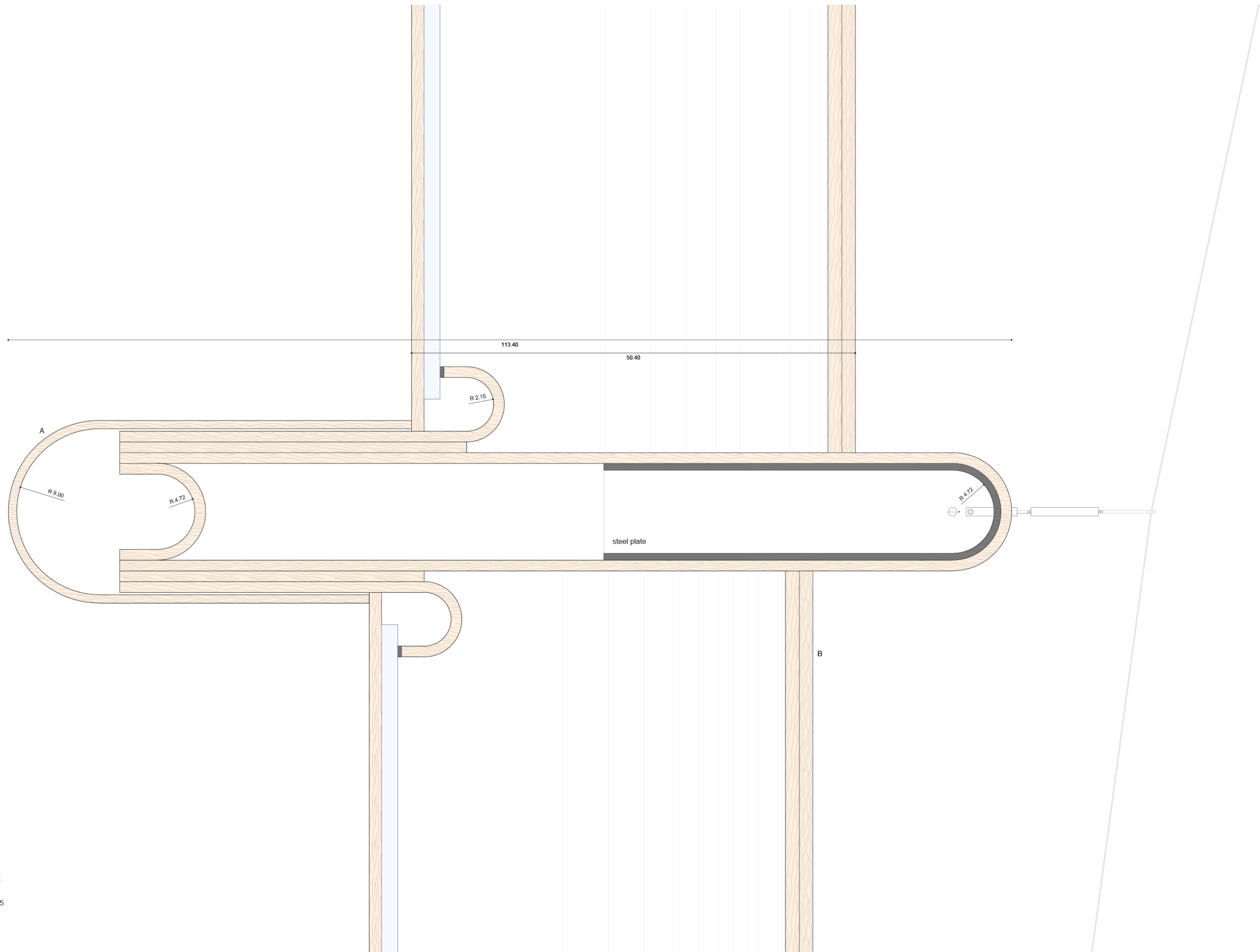
D1. Detail, main hall roof  
Laminated timber structure, glued to form a tubular element  
Unbuilt solution  
22.11.1965  
Drawing SOH 1380  
Scale 1:5







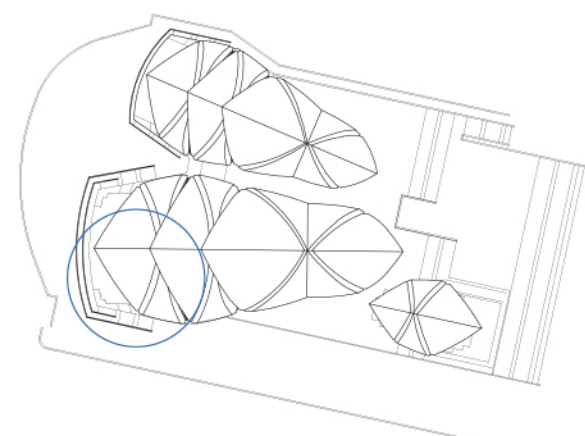
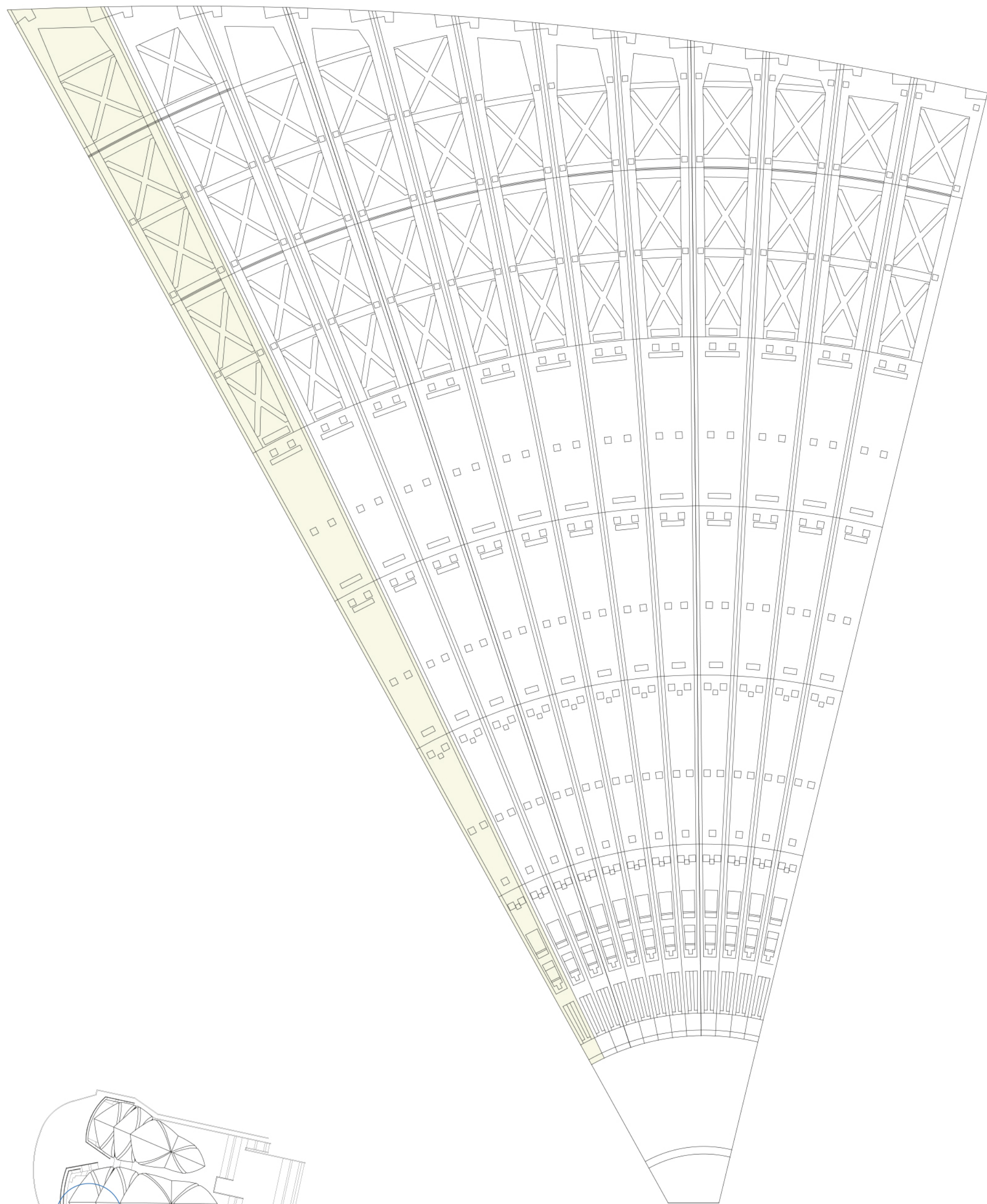
D2 detail, EE' section  
 Unbuilt solution  
 01.07.95  
 Drawings SOH 1208, 1209, 1231, 1232, 1233 e 1234  
 Scale 1:20



Great glazed surfaces mullion  
D2, plan detail, main hall upright  
Unbuilt solution  
10.11.1965  
Drawing SOH 1209, 1341 e 1365

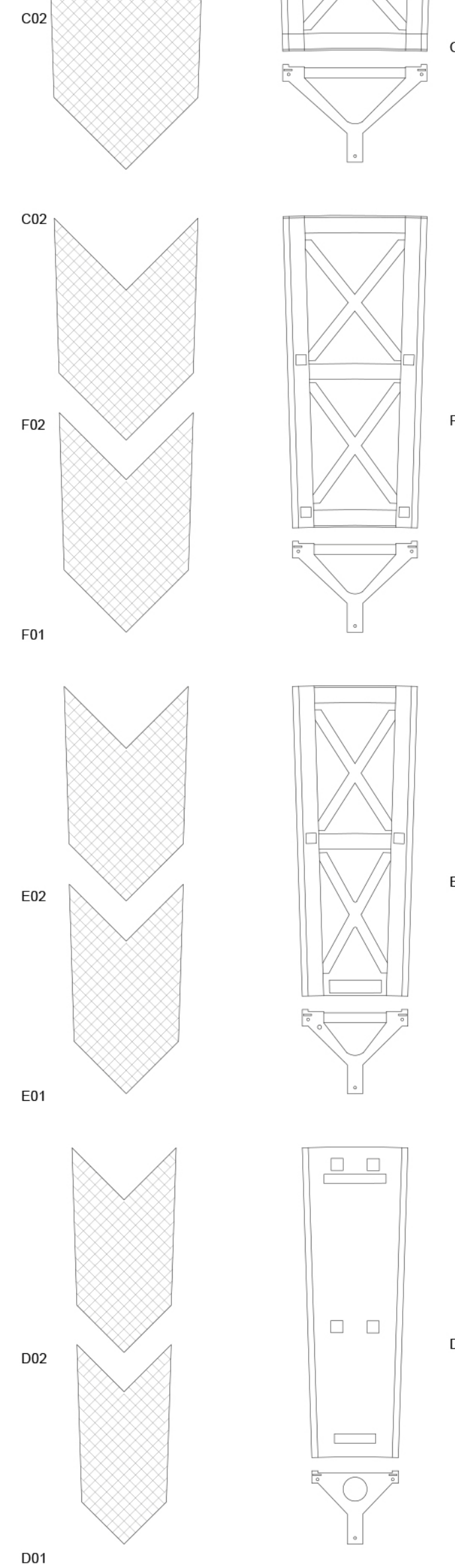
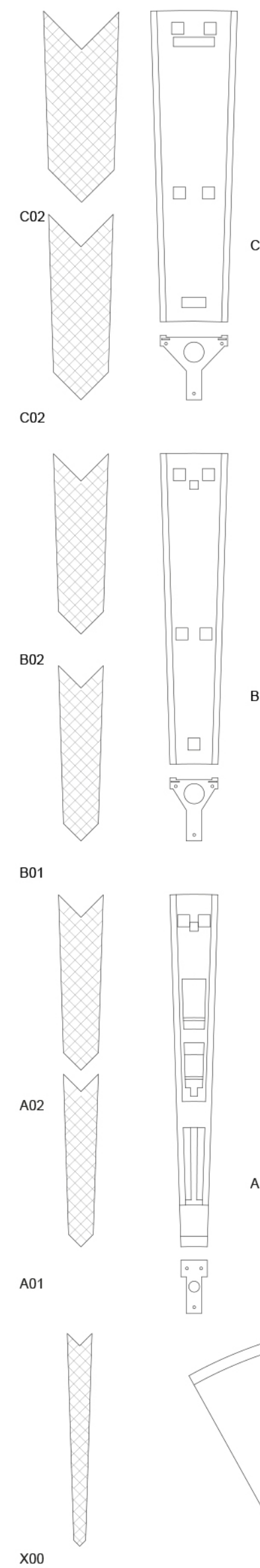
laminated timber 12.5 mm  
A - laminated timber 9.5 mm  
B - bent timber 16 mm  
Scale 1:5





Development of the main hall north shell structure  
04.07.1963  
Drawing SOH 892  
Scale 1:100

0 1 5 m



Abacus, structural elements and roof tiles  
06.11.1961  
Drawings SOH 551, 953 and 1078  
Scale 1:75