

THE DANISH ROYAL THEATRE

General Information & Technical Specifications



THE OPERA HOUSE

Main Stage & Takkelloftet



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WELCOME TO THE OPERA HOUSE

The Opera House was inaugurated in 2005 and was donated by the A.P. Møller and Chastine Mc-Kinney Møller Foundation. It was designed by the architect Henning Larsen. The Opera House has two stages: the Main Stage and Takkelloftet. This document provides general information for the entire Opera House, but the technical specifications for each stage are described separately.

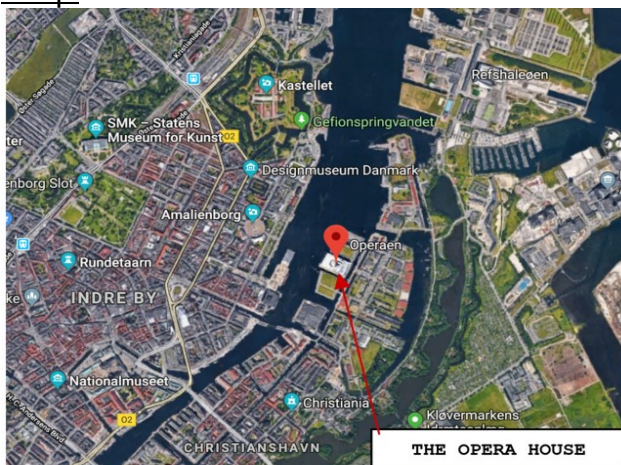
We hope you will take the time to read the following pages, as they may provide answers to the most basic questions before your visit. The information in this document serves as guidelines, and availability will depend on the theatre's own repertoire. Therefore, we encourage all our guests to maintain close communication with our staff both before and during their visit to The Royal Theatre.

We look forward to a good collaboration and hope you have a pleasant experience as a guest at the Opera House.

Address

The Royal Danish Opera
Ekvipagemestervej 10
1438 København K

Map

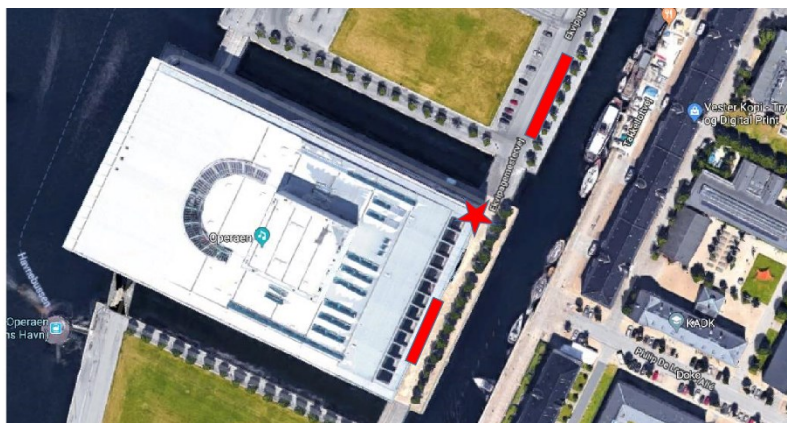


GENERAL INFORMATION

Parking & load-in

Parking at the Opera House is very limited.

It is possible to park 3 trucks or buses: 2 on the east side and 1 in the loading dock. A 32-amp power connection is available.



The loading dock is located at the northeast corner of the building. Two trucks can be loaded/unloaded simultaneously. A crane is available for loading and unloading, with a reach extending from the ramp to the wood and metal storage areas. The maximum weight capacity is 500 kg per crane.

Stage Entrance

The stage entrance is located at the southeast corner of the building. Our friendly security and reception staff will let you in here. It is important to send a guest list to your contact person in advance.

Backstage Area and Dressing Rooms

For the Main Stage, most dressing rooms are located on the third floor, and most can accommodate up to three people (a few can accommodate between 6 to 9 people). All dressing rooms have a private shower and toilet.

For Takkelloftet, there are a few dressing rooms near the backstage area; please check for availability.

Catering

The Opera House presents challenges for tour catering, but there are good opportunities to find a solution with the Opera House's cafeteria.

Smoking

National law prohibits smoking in public areas, including performance and backstage facilities. A dedicated smoking area will be available inside the venue.

Foyer

Merchandise set-up is possible

Internet

Free Wi-Fi: *KGLSPOT*. No password needed.

Crew (In-house)

For external productions, staffing is arranged with the stage management and depends on the nature of the specific event. Please note that rigging crew is not included, and all work after 11:00 PM is considered overtime.

Rehearsal Rooms

The theatre has several rehearsal rooms.

Please inquire about availability with your contact person.

TECHNICAL SPECIFICATIONS, MAIN STAGE

Audience Capacity

The Main Stage has a total capacity of 1,710 seats, including 56 standing places. It is possible to accommodate 4 wheelchairs.

The lighting console is usually placed in row 18 of the stalls (audience seats will be removed).

See Appendix #1 for the seating plan.

Stage Dimensions

Maximum depth: 23 m

Maximum width: 29.1 m (Note the width of the proscenium, see below)

Height: 29.5 m (height of the stage tower)

See Appendix #2 for the stage plan.

The stage, backstage, side stages, and Rehearsal Stage 1 are all on the same level.

The stage is constructed of four movable stage wagons, each measuring 16.0 x 4.0 m. These are used to transport set pieces and stage elements between the backstage and side stages. Additionally, there is a 2 m wagon, which is usually located in front of Elevator 1.

Usage depends on availability; please contact the Stage Manager.

Proscenium

Height: 8–12.0 m

Width: 12.5–15.85 m

If a proscenium opening of more than 16.0 m is desired on the architectural proscenium, this must be discussed with the Stage Manager.

Revolving Stage

The use of the revolving stage for guest productions is very limited and should be coordinated with the Stage Manager. Note: The maximum weight capacity is not the same across the entire revolving stage.

Diameter: 15 m

Edge speed: 1 m/s

Position accuracy: ± 1.3 mm - Repetition accuracy: ± 1.3 mm

Trapdoors

There are 44 possible locations for trapdoors and 4 lifts for them.

The trapdoors are arranged in 4 rows, with 11 trapdoors in each row.

The trapdoors can be combined with one or two others. "Sliding" trapdoors can also be installed. There are 4 sliding trapdoors, and each takes up the space of three regular trapdoors.

Width: 1.0 m

Depth: 1.0 m

Maximum load: (dynamic) 250 kg / (static) 600 kg

Stage Elevators

There are 4 stage elevators, consisting of one main elevator, which can travel from -5.0 m to +5.0 m. The secondary elevator can travel from -5.0 m below the main elevator to -2.1 m. These elevators can move in the same direction simultaneously.

The elevators can either move separately or up to a maximum of 4 at the same time. This is controlled by a computer. The stage elevators each measure 16 m x 4 m.

Orchestra Pit (Elevated Orchestra Pit)

The orchestra pit is divided into two sections, which can be raised and lowered together or independently: from -1.0 m to +1.0 m.

The first section of the orchestra pit can be raised to stage level. Under the pit, there are chairs that can be assembled in parts or used for the entire pit.

Fly System

86 fly bars, each measuring 22.0 meters in width, are spaced 0.2 meters apart.

Lifting height: 0.5–29.5 meters

Maximum weight capacity per fly bar (evenly distributed): 800 kg

Maximum point load per fly bar: 250 kg

Speed at 800 kg: 1.2 m/s

Speed at 400 kg: 1.8 m/s

There are 24 movable point hoists/rigging points—all point hoists can be controlled from the control panel and can be synchronized.

Lifting height: 0.5–29.5 meters

Maximum weight capacity: 500 kg

Speed at 500 kg: 0.9 m/s

Speed at 250 kg: 1.8 m/s

For information on the maximum weight capacity when multiple point hoists are operated simultaneously, please consult the Stage Manager.

All fly bars and point hoists are controlled from a control panel located in the gallery or at the stage. Availability of fly bars and hoists depends on the current productions and theatre schedules.

Note: All our fly bars are made of aluminum profiles designed for daily repertoire use.

External production lights and curtains often cannot be hung directly and may require a sub-hang rig.

In addition to the 86 electric fly bars, there are 2 side fly bars on each side of the stage.

Lifting height: 0.5–29.5 meters

Maximum weight capacity per sidebar (evenly distributed): 800 kg

Speed at 800 kg: 1.2 m/s

Speed at 400 kg: 1.8 m/s

Backdrop and Masking

Black backdrop

5 sets of masking: 5 legs and 5 borders.

PVC canvas (available upon request)

Red front curtain

Black flat curtain as a front curtain.

Safety/Fire Curtain

For safety reasons, there must be clear access for the fire curtain to descend.

Nothing may be placed under the fire curtain, although cables can run underneath.

Platforms/Risers

Various 2 m x 1 m platforms are available in different heights. Please inquire with your contact person for availability.

LIGHTING, MAIN STAGE

See Appendix #3 for the standard lighting plot.

The lighting console can be placed in row 18 of the stalls (audience seats can be removed).

Standard Rig

The Opera House has a standard lighting rig included in the rental. All units are fixed and cannot be moved or reconfigured. *The original PDF file can be requested from your contact person.*

FOH (Front Of House)

The lighting is controlled from an MA Lighting grandMA2 console located in the operator room at the back of the auditorium on the first balcony. If you have your own lighting console, an FOH position can be set up in row 18 of the stalls (audience seats must be removed). There are no cable connections between the FOH position and the stage, so if needed, the production must provide their own cables. All lighting control operates via the sACN network.

Additional Lighting

Any equipment beyond the standard rig must be provided by the production.

No equipment can be mounted directly onto our fly bars; everything must be underslung on trusses. The production is responsible for providing their own trusses and rigging equipment.

Before the show day, a rigging plan with weight specifications must be submitted by the production and approved by the Opera House.

Smoke

The use of smoke effects on stage is permitted, but the production must provide their own smoke machines.

Follow Spots

4 x RJ Cyrano 2,5 kW HMI.

Power Supply

The following power connections are available on stage:

SR Foreground:	2 x CEE 3x16Amp
	2 x CEE 3x32Amp
	1 x CEE 3x63Amp
SL Foreground:	2 x CEE 3x16Amp
	2 x CEE 3x32Amp
	1 x CEE 3x63Amp
SR Background:	2 x CEE 3x16Amp
	2 x CEE 3x32Amp
	1 x CEE 3x63Amp
	2 x CEE 3x125Amp
	1 x PowerLock 3x400Amp
SL Background:	2 x CEE 3x16Amp
	2 x CEE 3x32Amp
	1 x CEE 3x63Amp
	2 x CEE 3x125Amp
	1 x PowerLock 3x400Amp

See Appendix #5 for power specifications.

SOUND, MAIN STAGE

Sound Equipment

The control room is a closed space located at the back of the balcony.

To experience the true acoustics, a large "window" (110 cm x 360 cm) can be lowered to a height of 50 cm, and the mixer can be moved approximately 60 cm forward. In some cases, the mixer can be relocated to the back of the auditorium.

Mixer

The system features a Stagetec Avatus mixer surface and a Nexus star router. The Nexus system is built around the Stagetec Nexus star router and consists of 7 DSP cards (40-bit), which provide up to 800 channels of processing depending on the configuration. Our standard DSP setup includes 200 fully processed inputs and 128 fully processed outputs.

Nexus I/O:

128 mic preamps (32-bit) (all mic inputs have 4 splits with independent gain)

64 D/A converters

196 channels of Dante I/O

256 channels of MADI I/O

36 channels of AES/EBU I/O

We have 3 Avatus mixer surfaces connected to the Nexus via a network. Each surface can be used simultaneously in mirror mode or independently, with its own solo/PFL.

Surface 1: Avatus S with 36 faders, located in the sound booth on the first balcony.

Surface 2: Avatus E with 36 faders, which can be freely placed but is often used in row 18 of the stalls.

Surface 3: Avatus C with 12 faders and no meter bridge, which can be freely placed.

Auditorium Speaker System

D&B Sound System Setup with Positioning via DS100 and TiMax

Main System:

5 positions, each consisting of 4 AL90 speakers.

Each side of the AL90 positions includes a V-sub, totaling 6 V-subs.

The system is suspended 9.6 meters above the floor, measured from the bottom speaker, aligning with the third balcony. The system can be retracted into the ceiling when not in use.

Front Fills:

There are 6 fixed 44S speakers embedded in the stage floor. These can only be used when the orchestra pit is lowered. 11 additional 44S speakers can be mounted on the stage edge or placed directly on the stage floor. These are used when the orchestra pit is raised, and extra rows of seats (A to F) are in place.

Effect Subwoofer:

1 FX-sub located on the canopy above the orchestra pit.

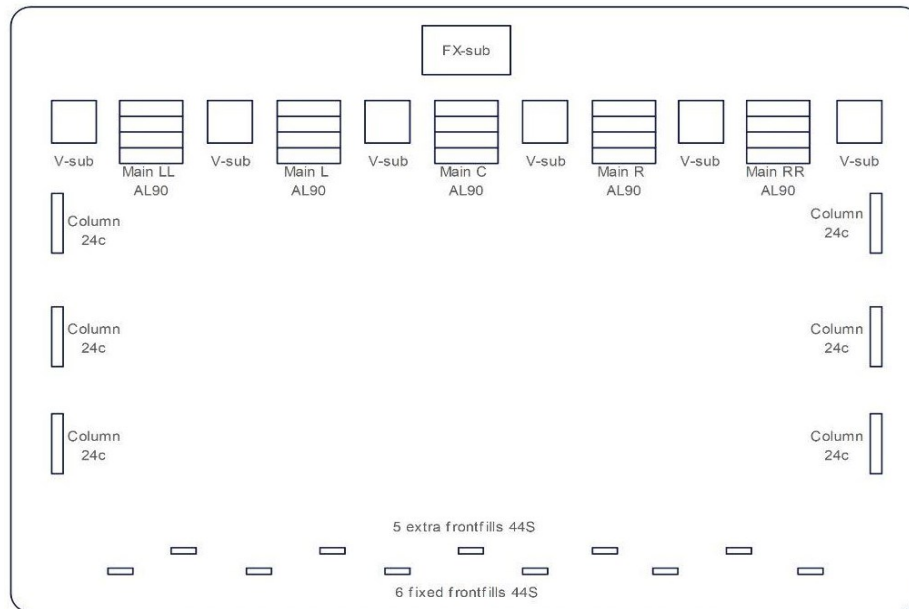
LR Column Speakers:

6x 24C column speakers are positioned SL and SR alongside each balcony in the proscenium arch. This setup is not part of the localization system but is typically used when the main system is retracted and amplification is still required, or in tandem with the main system as a traditional LR setup.

Delay/Surround Speakers:

Delay speakers are installed on all balconies. Currently, only the third balcony is equipped with d&b 44S speakers; the first and second balconies will be upgraded in 2025. Surround speakers are located on the back row of all balconies, with 5 discrete outputs per balcony. These speakers will also be upgraded to d&b models in 2025.

Drawing of the speaker setup:



Effect Processor:

Waves SoundGrid with the full Waves package, fully integrated with the Stagetec Avatus cue system.

Eventide H8000 effect processor.

TC Electronic TC4000 reverb.

Audio Recording:

It can record up to 192 channels via MAD1 and can be used for virtual soundcheck.

Audio playback:

Qlab with up to 64 channels via Dante. 2x CD/USB players.

The fast setup consists of:

Watchout v6 with 7 dongles, scalable outputs.

MadMapper v5 with 2 outputs.

Furthermore, access to 2x disguise servers is available.

Video recording:

The fast setup consists of:

Panasonic BS1H full-frame, total recording up to 5.9K.

Panasonic BGH5 MFT, zoom recording up to 5.9K.

Camera robot for zoom camera.

TECHNICAL SPECIFICATIONS, TAKKELLOFTET

Audience Capacity

The Takkelloftet is designed as a black box stage.

Currently, there is an audience setup with a capacity of 180 seats, and there is only one ticket category.

Stage Dimensions

The room itself is 18 meters long and 16 meters wide.

With the current audience setup, the stage dimensions are:

10 meters between the balconies.

12 meters from the front row to the back wall.

6.9 meters from the floor to the grid.

4.65 meters height under the balconies.

See Appendix #4 for the stage drawing.

Fly System

7 fly bars are distributed across the stage.

Maximum load capacity per fly bar is 400 kg (maximum point load is 120 kg).

18 point hoists are distributed across the stage.

Maximum load capacity per point hoist is 250 kg.

Backdrop and Masking

1 piece of split backdrop, 6x7 m.

1 piece of PVC for front projection, 7x10 m.

1 piece of PVC for rear projection, 7x10 m.

10 legs for under the balconies, 4.3x2 m each.

3 borders, 10x2 m each.

Lightning

12 Fresnel lights, 1.2 kW each.

12 Robert Juliat profile spots as high side lights.

6 Robert Juliat profile spots as front lights.

7 ETC Source4 as low front lights.

1 MA1 full-size lighting console.

8 booms on each side, each equipped with 2 ETC Source4 and 2 Par64.

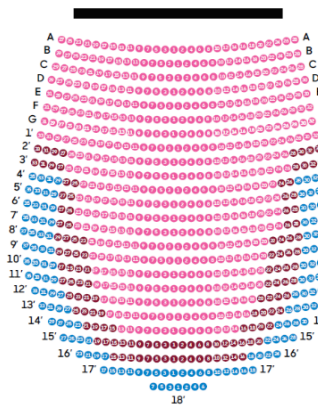
Sound

6 x L'acoustics 108M

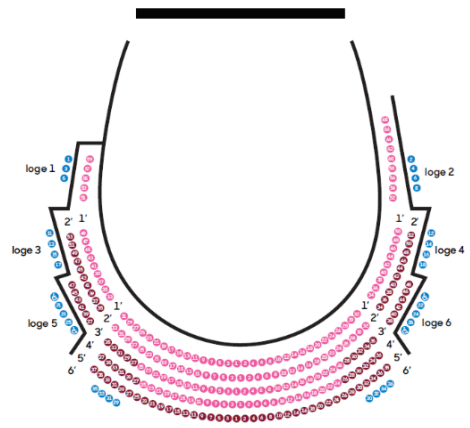
1 x Midas M32R Live - digital mixer, 16/8 analog - 32/32 Dante

APPENDIX #1: SEATING PLAN, MAIN STAGE

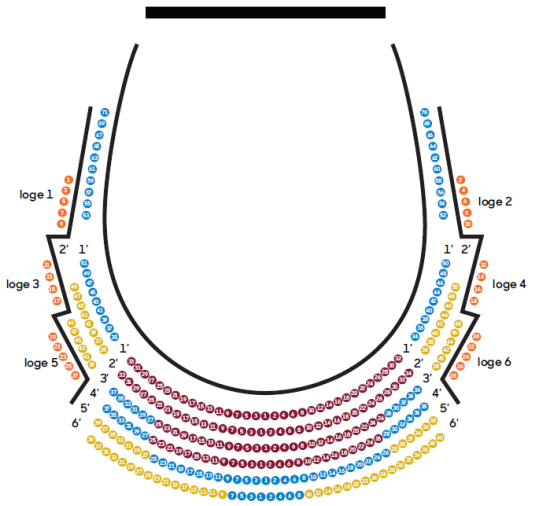
Operaen, Store scene
Parket



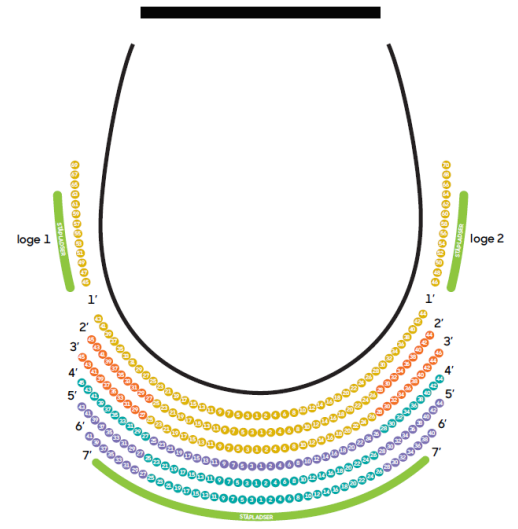
Operaen, Store scene
1. Balkon



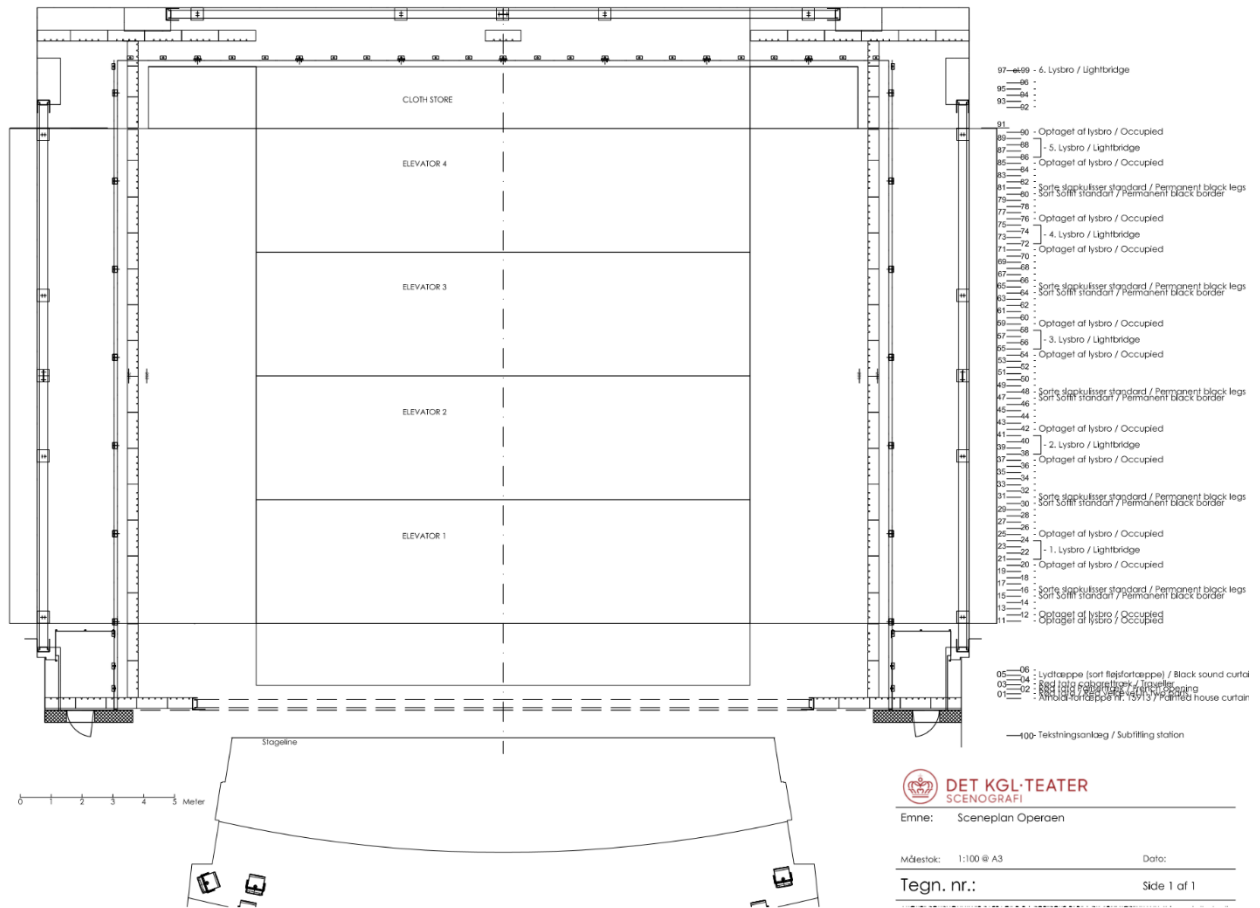
Operaen, Store scene
2. Balkon



Operaen, Store scene
3. Balkon



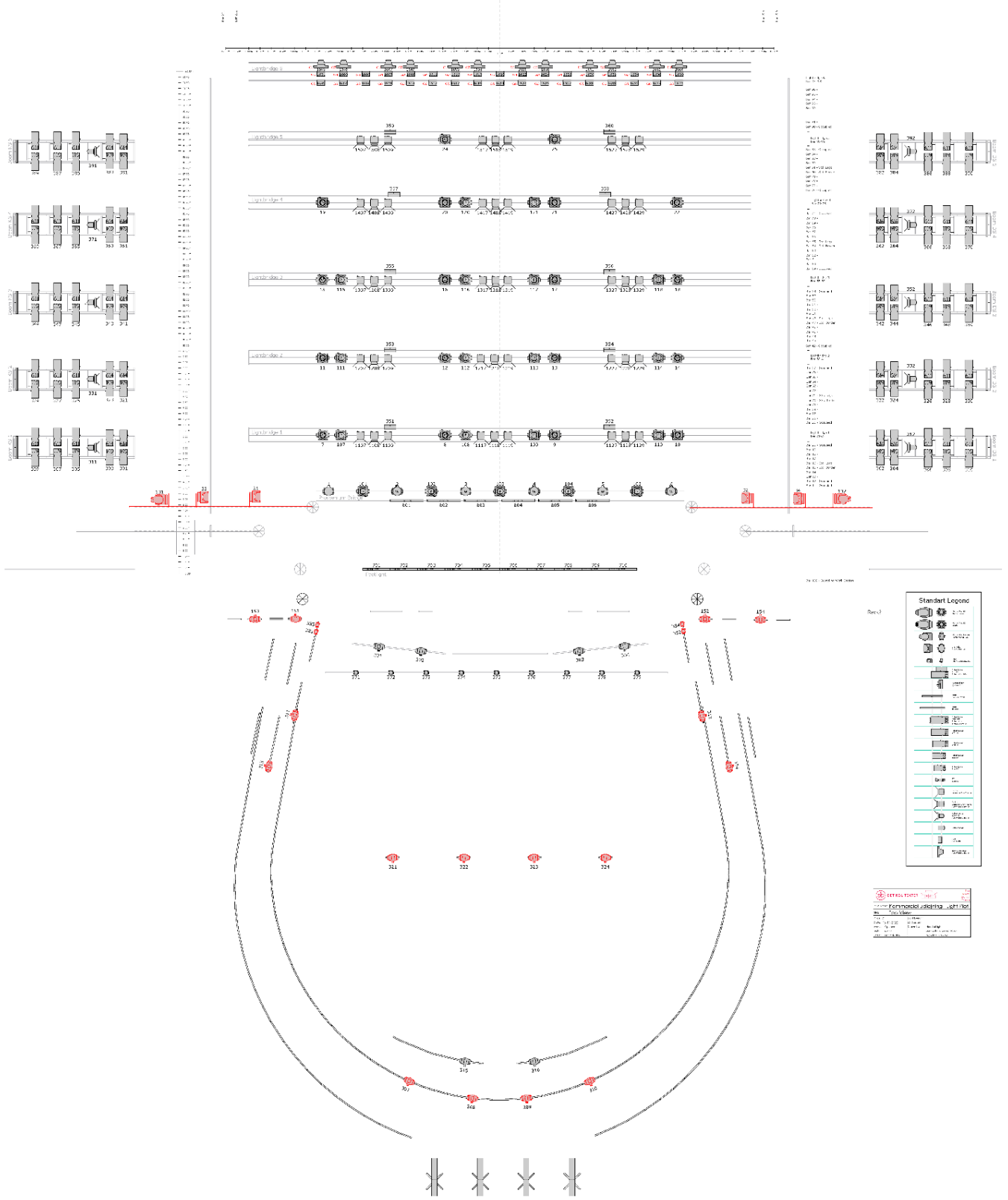
APPENDIX #2: STAGE PLAN, MAIN STAGE



The original PDF file can be requested from your contact person.

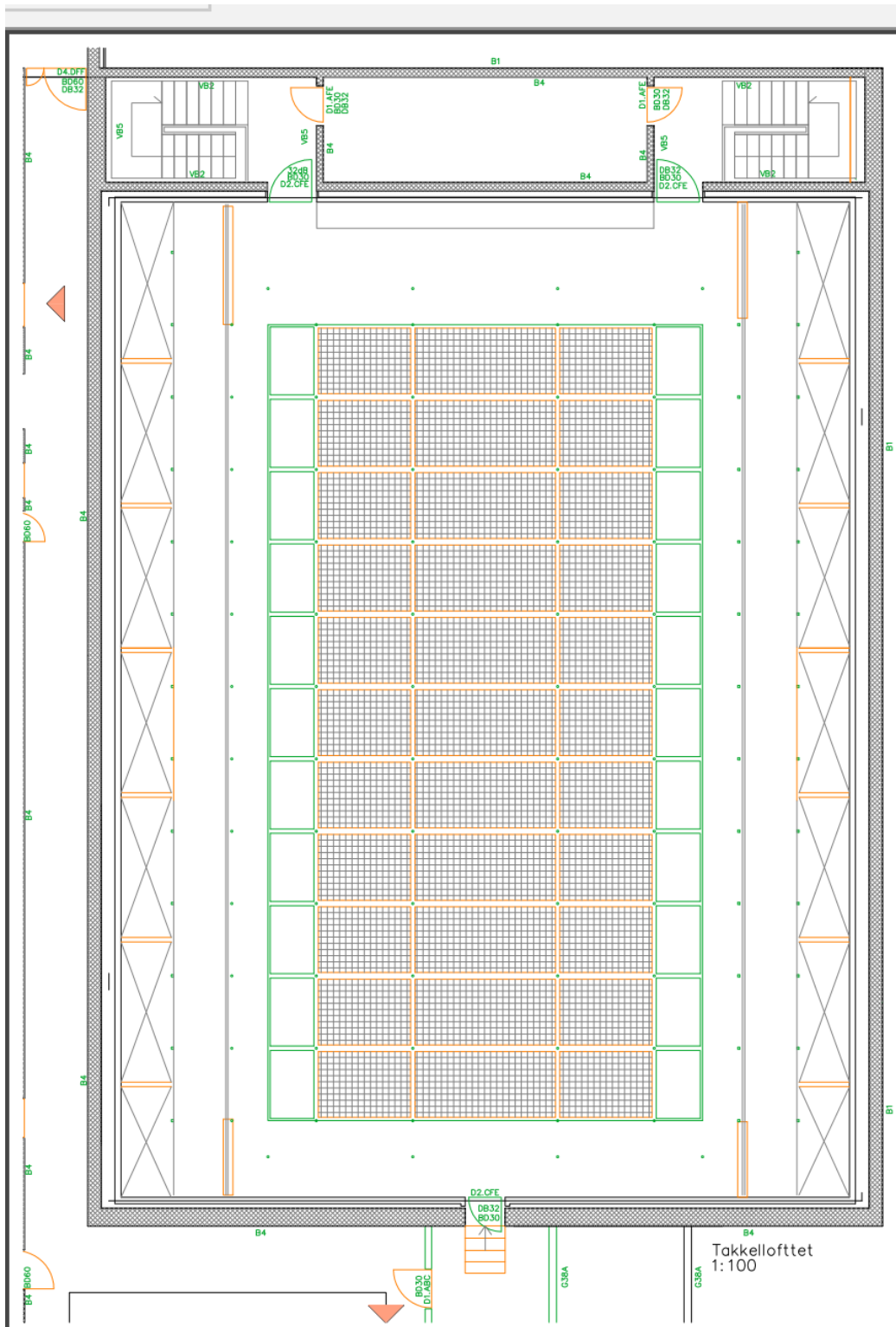
The PDF is drawn at a 1:100 scale and printed on A3 paper. Additional drawings are available.

APPENDIX #3: STANDARD LIGHT PLOT, MAIN STAGE



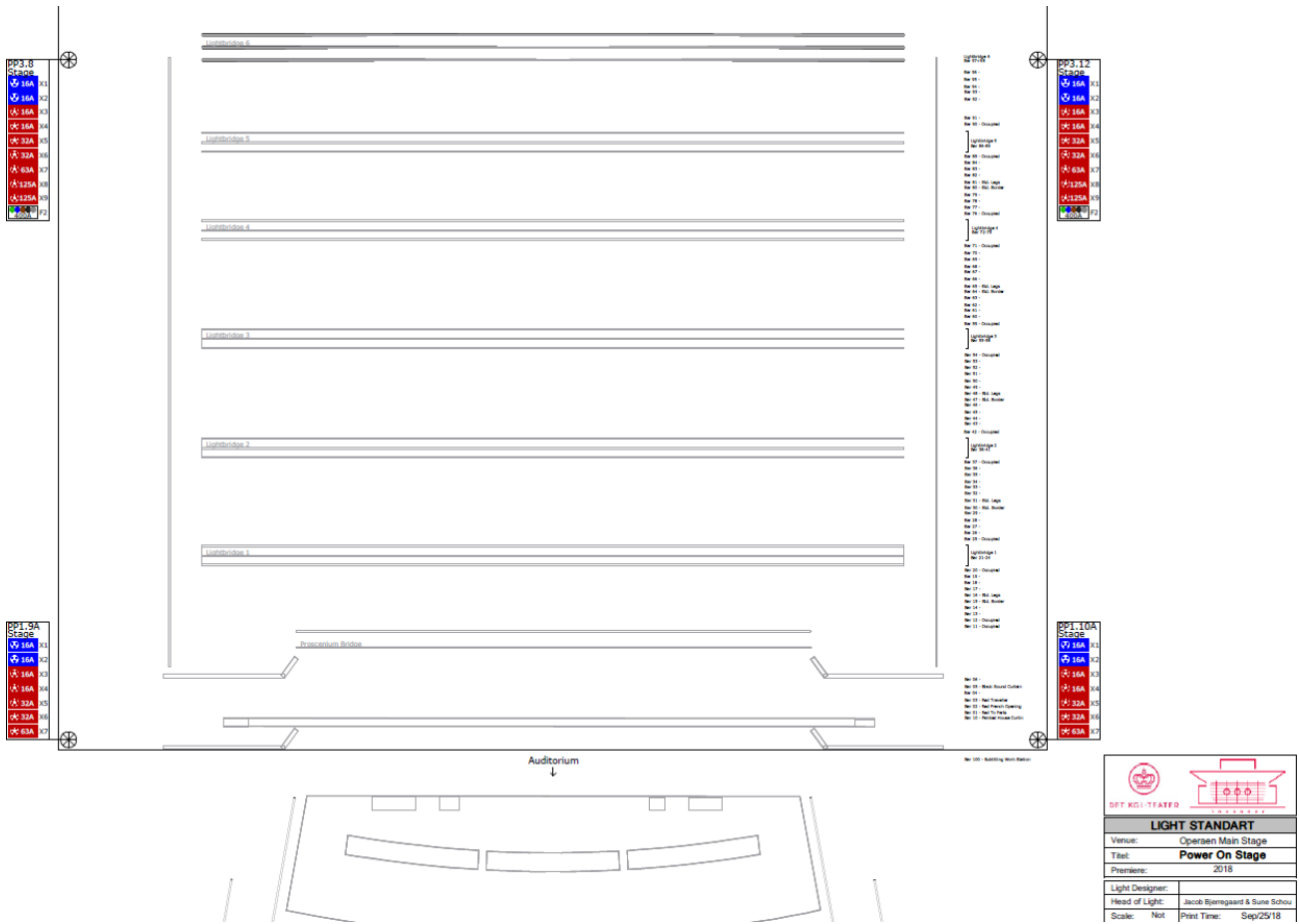
The original PDF file can be requested from your contact person.

APPENDIX #4: STAGE PLAN, TAKKELLOFTET



The original PDF file can be requested from your contact person.

APPENDIX #5: POWER SUPPLY



The original PDF file can be requested from your contact person.