



National Kaohsiung
CENTER_{FOR THE} ARTs

WEI WU YING 

衛武營 國家藝術文化中心

國家表演藝術中心 National Performing Arts Center

OPERA HOUSE

Production Technical Information

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Last updated:2019/08/28

0 General Information

0-1 National Kaohsiung Center for the Arts (WEIWUYING)

CENTER FOR THE ARTS, ARTS FOR THE PEOPLE, National Kaohsiung Center for the Arts will become one of the important theatre complexes of the international art field. It include four performance blocks, the 2,260-seat Opera House, the 2,000-seat Concert Hall, the 1,254-seat Play House and the 470-seat Recital Hall.

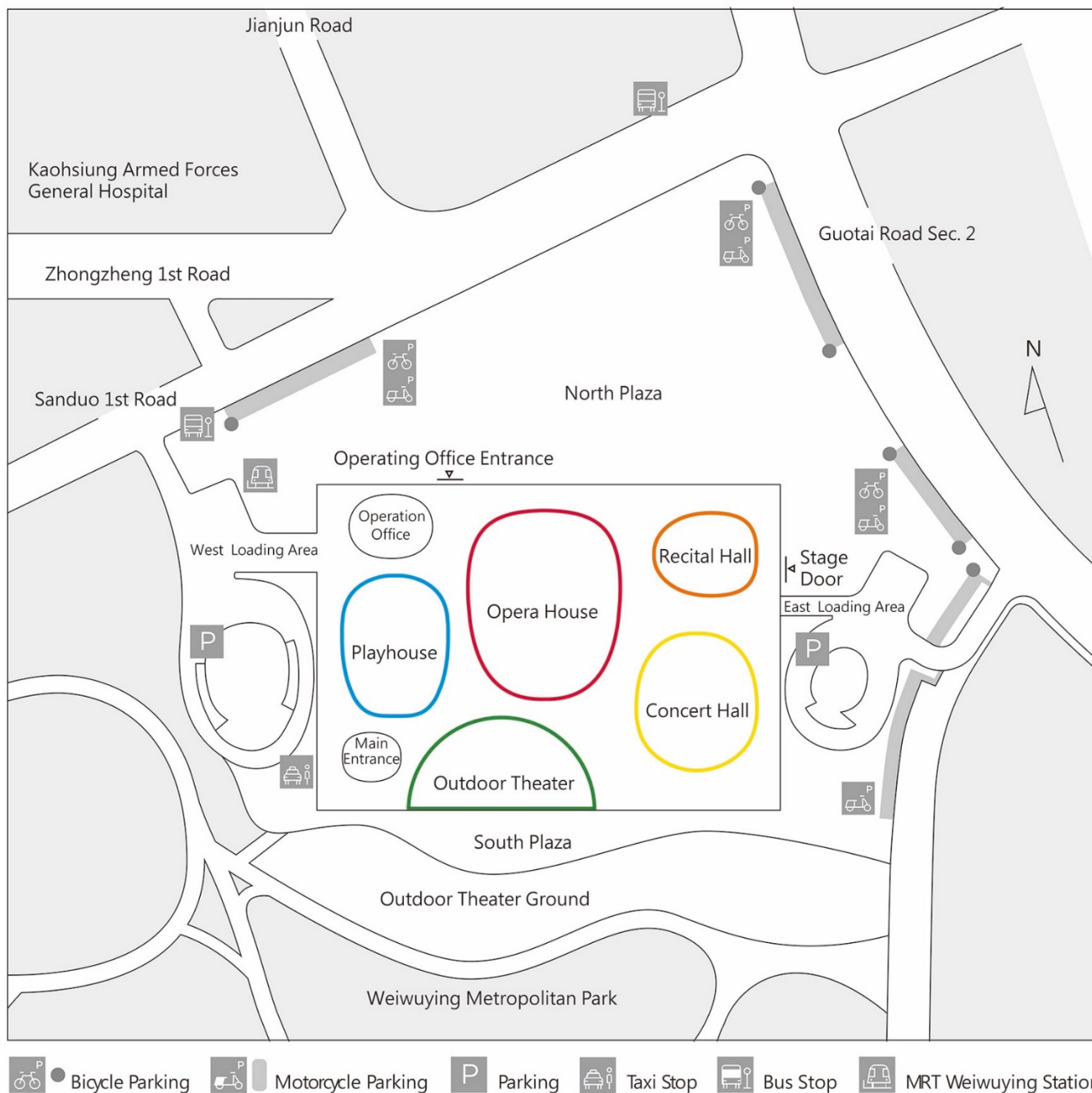


0-2 Opera House

The Opera House is a large-scale stage mainly used for operas, major drama productions, dances, and interdisciplinary performances. It is the largest such facility in Taiwan. The mechanical equipment of the stage is fully automated, whereas the seats are arranged in a horseshoe shape. The Opera House is the first opera house in Taiwan to have a mainframe computer aiding the operation.



0-3 Traffic Information



0-4 Contact Information

National Kaohsiung Center for the Arts (Weiwuying)

No.1, Sanduo 1st Rd., Fengshan Dist., Kaohsiung City 83075, Taiwan

+886 7-262-6666

service@npac-weiwuying.org

0-5 Stage door

Ground floor access is from the north and east side of building. Enter from Operating office entrance on Sanduo 1st Road or Stage Door on Guotai Road.

Basement Level 1 access is from Sanduo 1st Road entrance for Opera House and Playhouse ,Guotai Road entrance for Concert Hall and Recital Hall.

Working pass will be required for entry.

0-6 Auditorium / Seating

觀眾席次

| Area | Capacities |
|------------------------------------|--------------------------------------|
| 1F | 698 seats (include 2 working seats) |
| 1F Pit area | 110 seats (Row P1~P4) |
| 1F Box | 16 seats |
| 1F Wheelchairs | 14 seats |
| 2F | 542 seats(include 2 working seats) |
| 2F Control Area Elevation Platform | 16 seats (Row L~M, No.1~8) |
| 3F | 534 seats(include 2 working seats) |
| 4F | 462 seats |
| Total Capacity | 2236 seats |

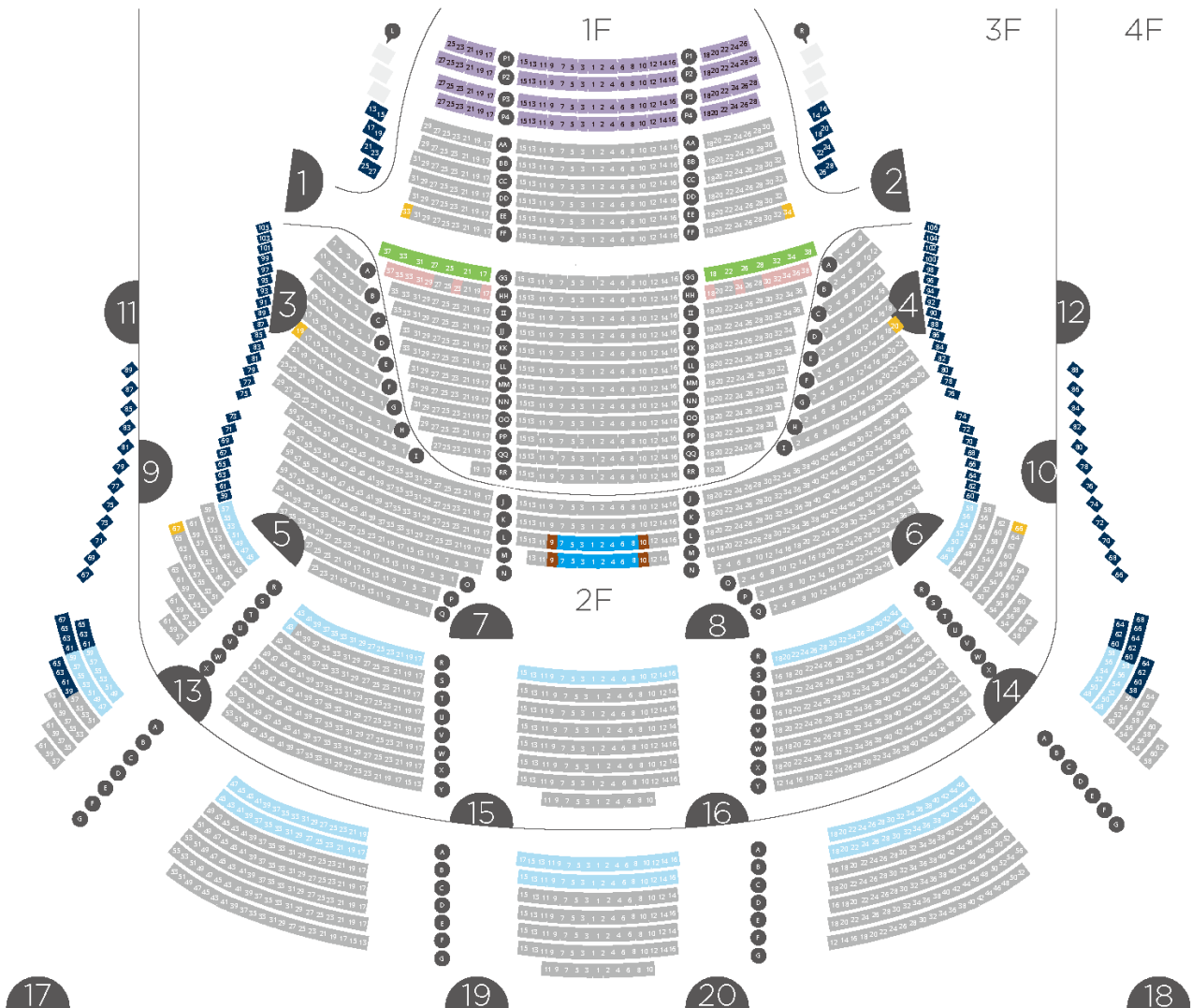


Figure 0.1- Opera House Seating plan

Opera House Set Up Equipment Recommended Seat

| Set Up Equipment Seat | Reserved Seat | Notes |
|------------------------------|--|--------------|
| 1st Floor RR row Seat 1、2 | 1st Floor QQ row Seat 1、2 1st Floor RR row Seat 3、4 | |
| 1st Floor RR row Seat 19 | 1st Floor QQ row Seat 19、21、23、25、27 | |
| 1st Floor RR row Seat 20 | 1st Floor QQ row Seat 20、22、24、26、28 | |
| 2nd Floor A row Seat 7 | 2nd Floor A row Seat 5 2nd Floor B row Seat 7、9、11 | |
| 2nd Floor A row Seat 8 | 2nd Floor A row Seat 6 2nd Floor B row Seat 8、10、12 | |
| 2nd Floor M row Seat 1、2 | 1st Floor L row Seat 1、2 1st Floor M row Seat 3、4 | ° |

歌劇院一樓化妝室位置圖

Opera House 1F Dressing Room Map



- 1162 團隊辦公室 - 01
Company Office - 01
- 1166 團隊辦公室 - 02
Company Office - 02
- 1027 組裝工廠
Scene Shop
- 1171 排練室 - 01
Rehearsal Room - 01
- 1065 服裝製作室 - 01
Costume Shop - 01
- 1063 洗衣房 - 01
Laundry Room-01
- 1058 貴賓室
VIP room

- 1062 化妝室 - 01
Dressing Room - 01
- 1112 化妝室 - 02
Dressing Room - 02
- 1114 化妝室 - 03
Dressing Room - 03
- 1116 化妝室 - 04
Dressing Room - 04
- 1118 化妝室 - 05
Dressing Room - 05
- 1120 化妝室 - 06
Dressing Room - 06
- 1122 化妝室 - 07
Dressing Room - 07
- 1124 化妝室 - 08
Dressing Room - 08
- 1126 化妝室 - 09
Dressing Room - 09
- 1128 化妝室 - 10
Dressing Room - 10
- 1130 化妝室 - 11
Dressing Room - 11
- 1132 化妝室 - 12
Dressing Room - 12
- 1134 化妝室 - 13
Dressing Room - 13

■ 出入口 Entrance
 ■ 飲水機 Water Dispenser
 ■ 醫護室 Infirmary
 ■ 洗手間 Restroom
 ■ 樓梯 / 電梯 Stairs / Elevator
 ■ 現在位置 You Are Here

Figure 0.2- Opera House Plan

歌劇院地下一樓化妝室位置圖

Opera House B1F Dressing Room Map

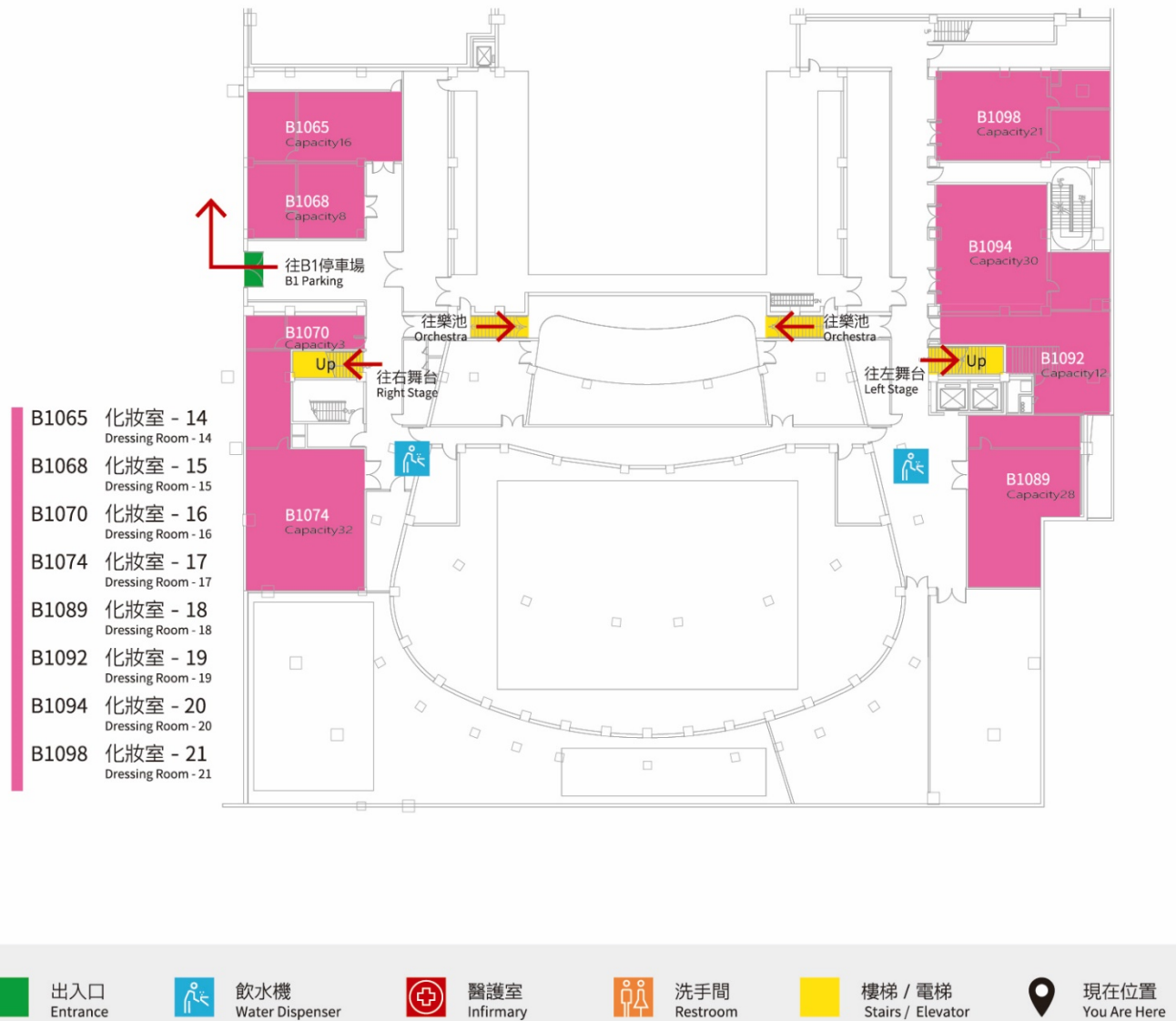


Figure 0.3- Opera House B1 Plan

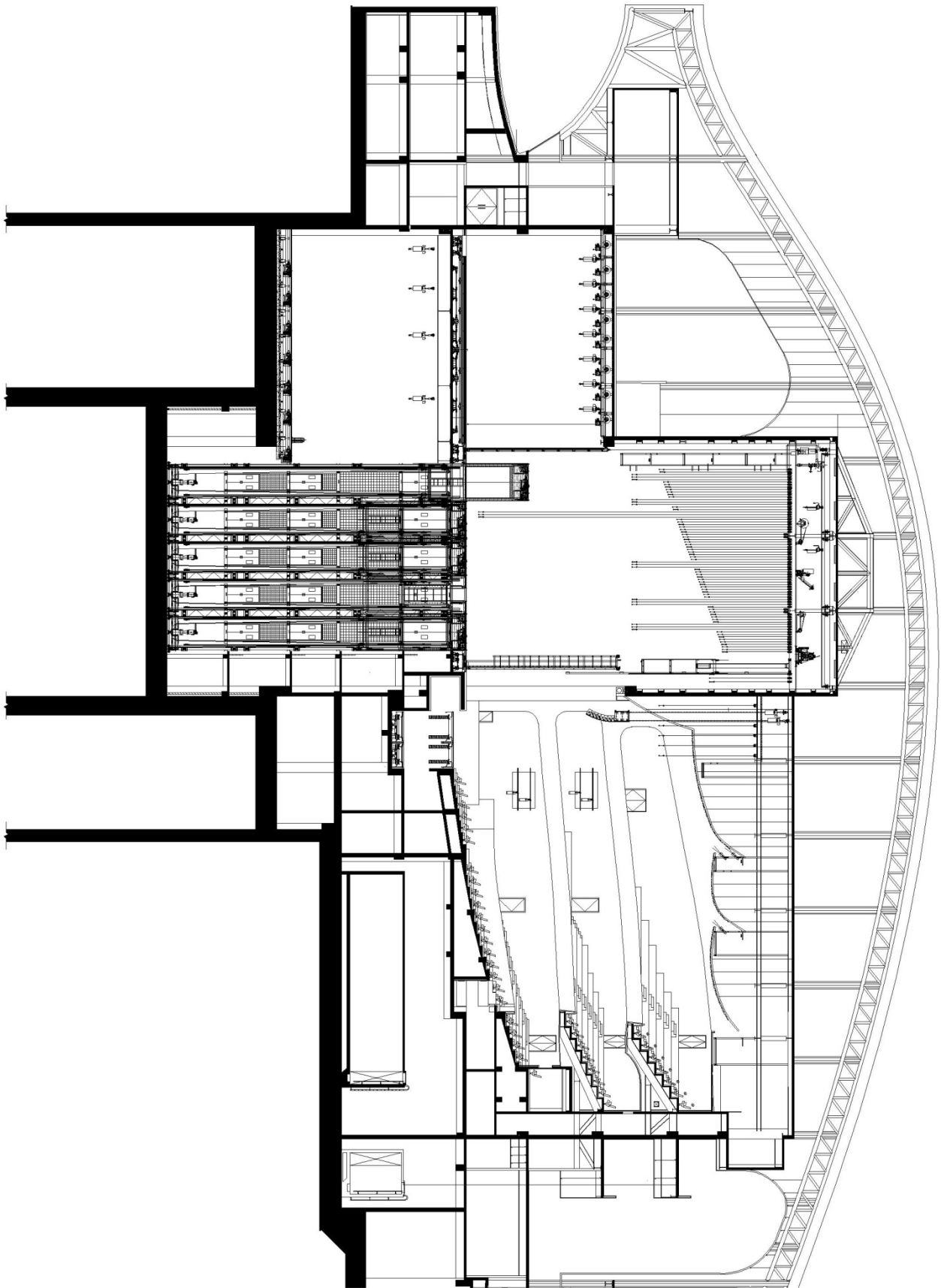


Figure 0.4 Opera House Section

1 Stage

1-1 Stage

1-1-1 Floor

Black painted composite wood stage floor, the production scenery can secure to the deck by screws but no nails in part of stage area. Please contact the technical service for more detail.

1-1-2 False proscenium

The False proscenium consists of movable tormentor and liftable light bridge.

Building Proscenium size: 20m (width) x 12.6m (height)

Movable tormentor opening: 12m to 20m

Lighting bridge elevation: +0.05m to +13m

Apron to PL: 1.2m

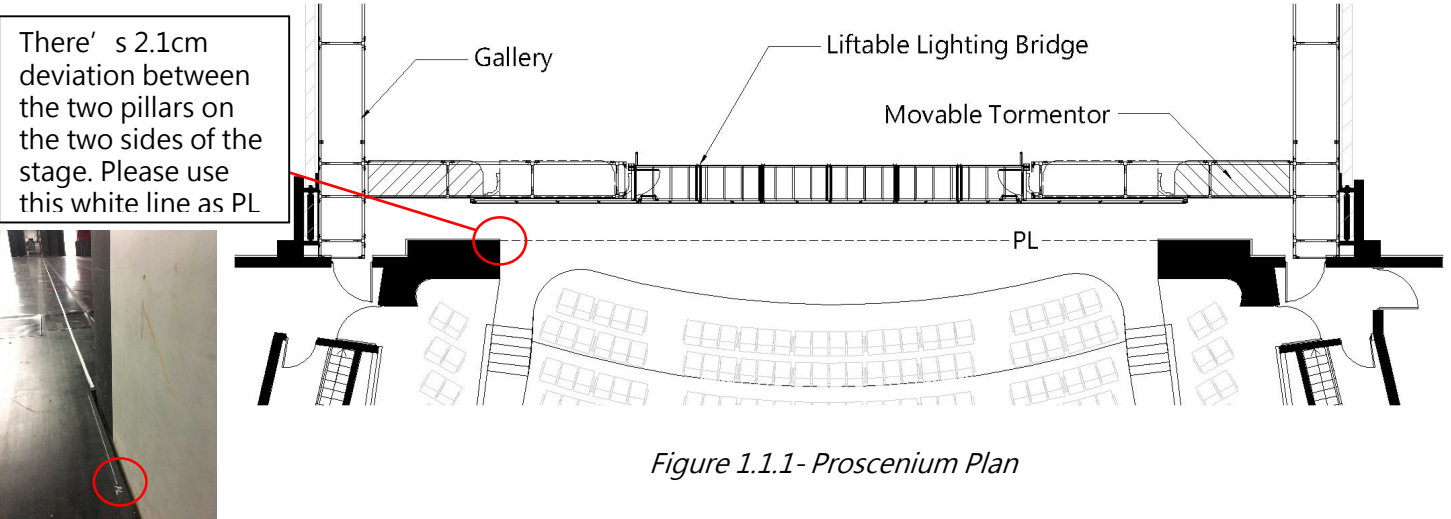


Figure 1.1.1- Proscenium Plan

1-1-3 Stage Dimensions

Main stage: 31.9m (width) x 19.2m (depth) x 25.8 (height) (From stage floor to underside of grid)

Rear stage: 24m (width) x 16.5m (depth) x 11m (height)

Side stage: 17.1m (width) x 19.2m (depth) x 10.7 (height)

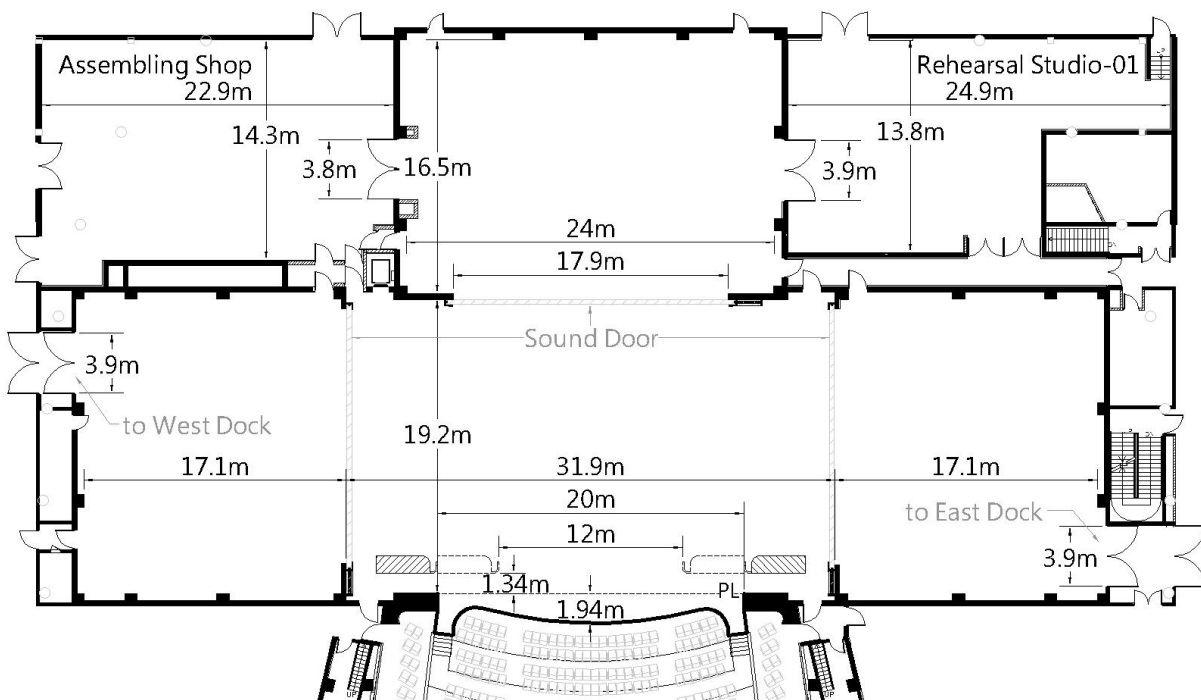


Figure 1.1.2- Stage Plan

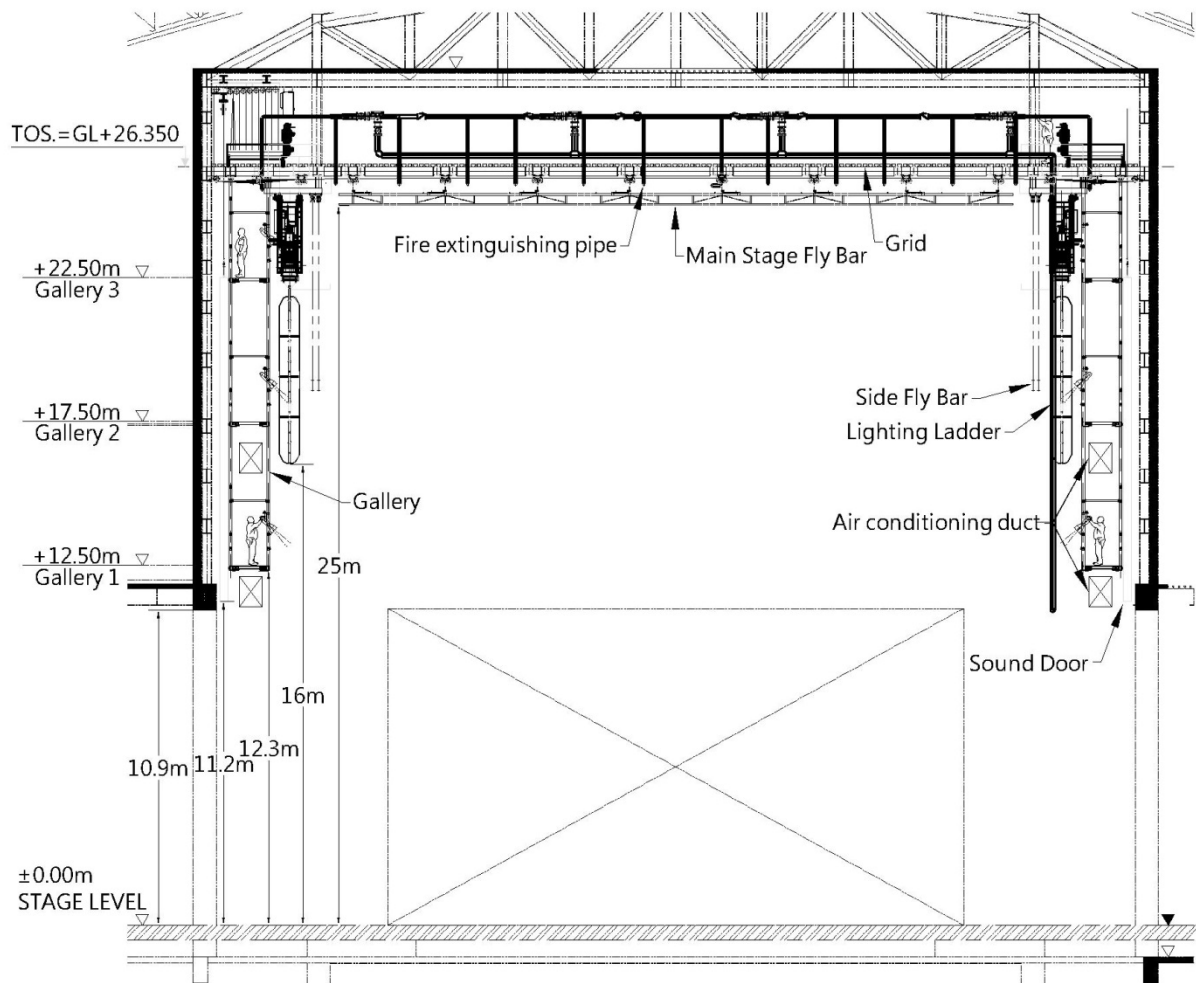


Figure 1.1.3-Stage Elevation

1-1-4 Sound Door

There are three stage sound door between main stage, side stage and rear stage, which can be adjusted according to the performance requirements.

1-1-5 Rehearsal studio -01

There is a separate rehearsal studio connected to the rear stage area.

Size : 24.9 m (width) x 13.8 m (depth) x 10.4 m (height)

Door size(to rear stage) : 4 m (width) x 3.4 m (height)

1-2 Stage Mechanical

1-2-1 Orchestra Pit Elevation Platform

Amount: 2 rows, arc shape platform

OP1, 18.6m (width) x 2.49m (depth), 43.2 m²

OP2, 18.6m (width) x 1.98m (depth), 37.5m²

Elevation: -5m to ±0m (stage surface)

Capacity

Dead load : 750kg/ m²

Live load : 500kg/ m²

Speed : 6m/min

Important : No staff riding when orchestra pit lifting, please enter and exit from the entrance of orchestra pit.

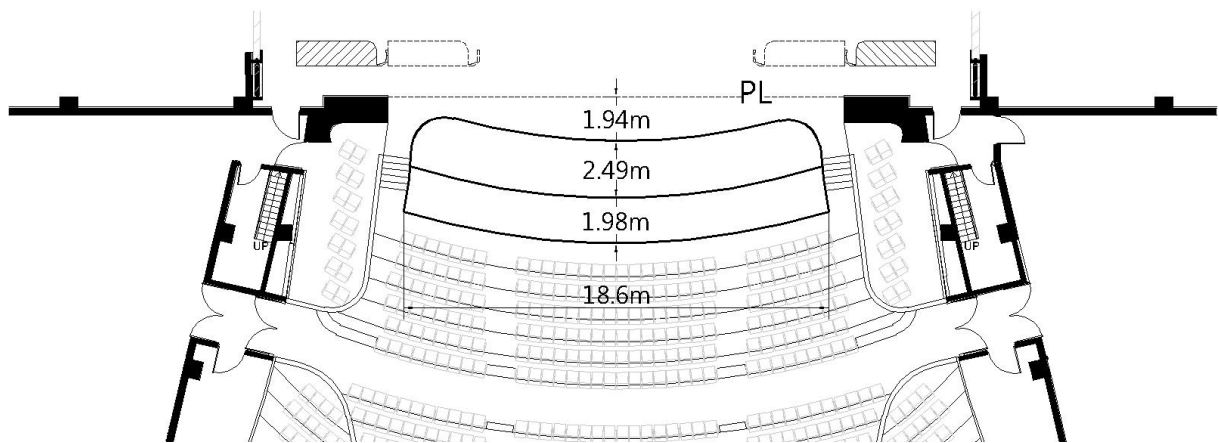


Figure 1.2.1.1- Orchestra Pit Elevation Platform location plan

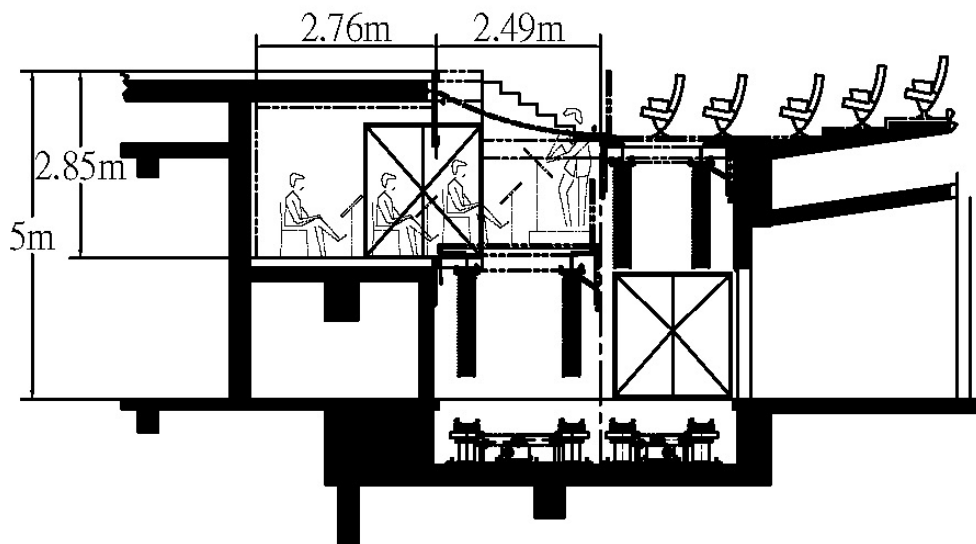


Figure 1.2.1.2- Orchestra Pit Section

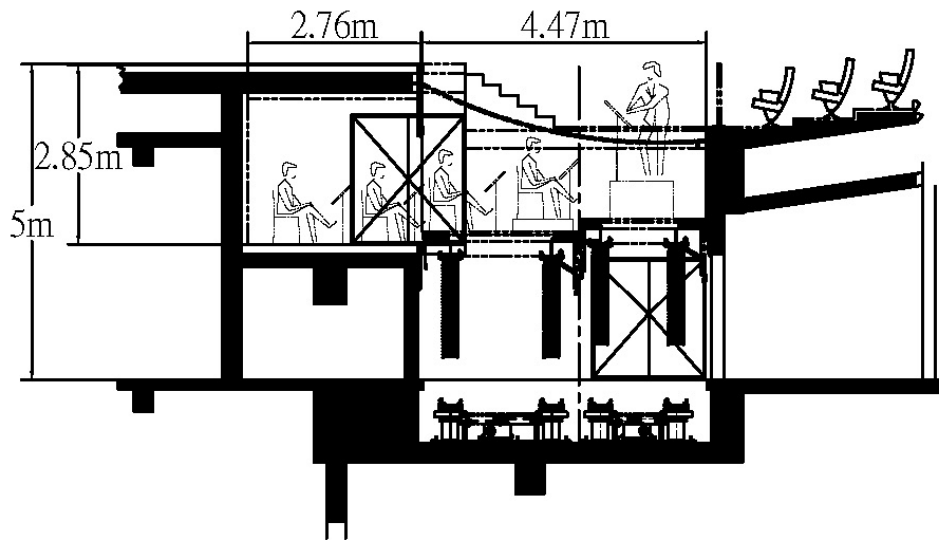


Figure 1.2.1.3- Orchestra Pit Section

1-2-2 Auditorium Control Area Elevation Platform

16 Seats, No.1~8, Row QQ ~RR

For large equipment, please enter the platform from B1 floor.

Size: 4.2m (width) x 1.9m (depth), 8 m²

Elevation: -4m (B1) to 2.8m

Capacity

Dead load : 500kg/ m²

Live load : 250kg/ m²

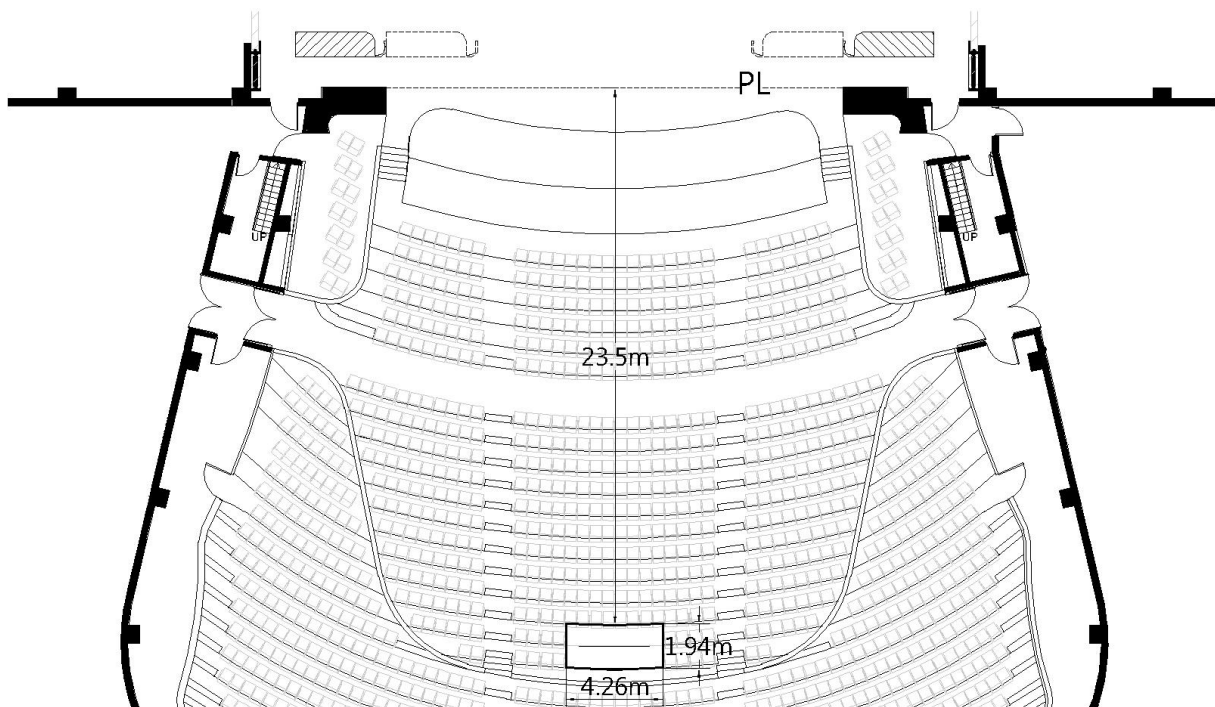


Figure 1.2.2.1- Auditorium Control Area Elevation Platform location plan

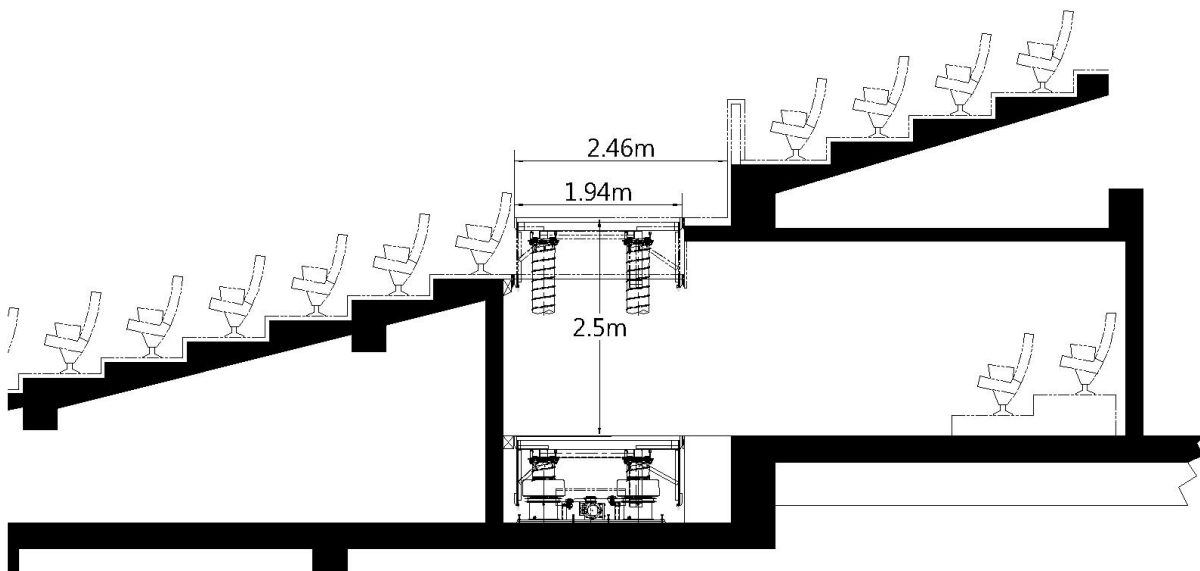


Figure 1.2.2.2- Auditorium Control Area Elevation Platform location plan

1-3 Fly

1-3 Controller

Wagner Biro CAT190 x 2, CAT192 x 1, CAT120R x 2

1-3-1 Fly bars

24m (length), 4.8cm (diameter), +0.5cm to 24.6m, 74sets

1-3-2 House Curtain

guillotine / traveller , 27m (length)

Distance to PL: 0.6m

1-3-3 Side Fly Bar (2 on both side)

14.8m (length), 4.8cm (diameter), +0.05m to 24.6m, 4 sets

Distance to CL: 12.4m / 12.6m

1-3-4 Stage Front Fly Bar

27m (length), 4.8cm (diameter), +0.05m to 25m, 2 sets

Distance to PL: 0.25m / 0.95m

Safe load

0.5 m/s² : 750kg

1.0 m/s² : 500kg

2.0 m/s² : 350kg

1-3-5 Rear Stage Fly Bar (load 500kg)

21m (length), 4.8cm (diameter), +0.5m to 12m, 8 sets

Lifting speed : 1.2 m/s

Distance to PL: 21.05m / 23.05m / 25.05m / 27.05m / 29.05m / 31.05m / 33.05m / 35.05m

Safe load

1.2 M/ S² : 500 kg

1-3-6 Auditorium Fly Bar

20m (length), 4.8cm (diameter), 5 sets

AFB01 +0.05m to 12.5m

AFB02 +0.0m to 15.7m

AFB03 +0.05m to 16.5m

AFB04 +0.05m to 16.5m

AFB05 +0.05m to 16.5m

Distance to PL: -1.40m / -3.15m / -3.95m / -4.75m / -5.55m

Safe load

0.5 M/ S² : 1,000 kg

2.0 M/ S² : 350 kg

1-3-7 Lighting Ladder (6 on both side stage)

Size : 6.2m (height) x 0.69m (width) x 0.72m(depth)

Distance to CL: 13.4m

Safe load

0.5 M/S² : 750 kg

1.0 M/S² : 500 kg

2.0 M/S² : 350 kg

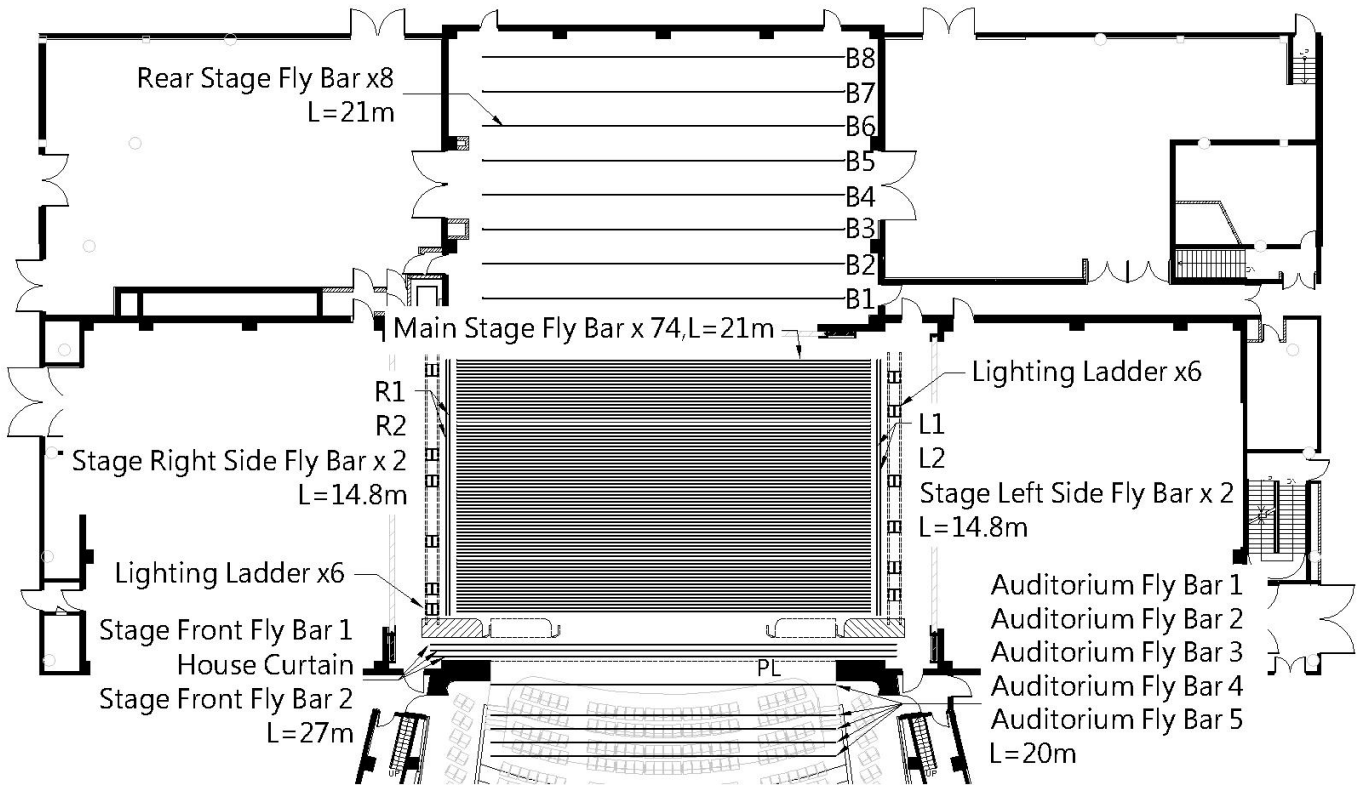


Figure 1.3.1- Rigging Plan

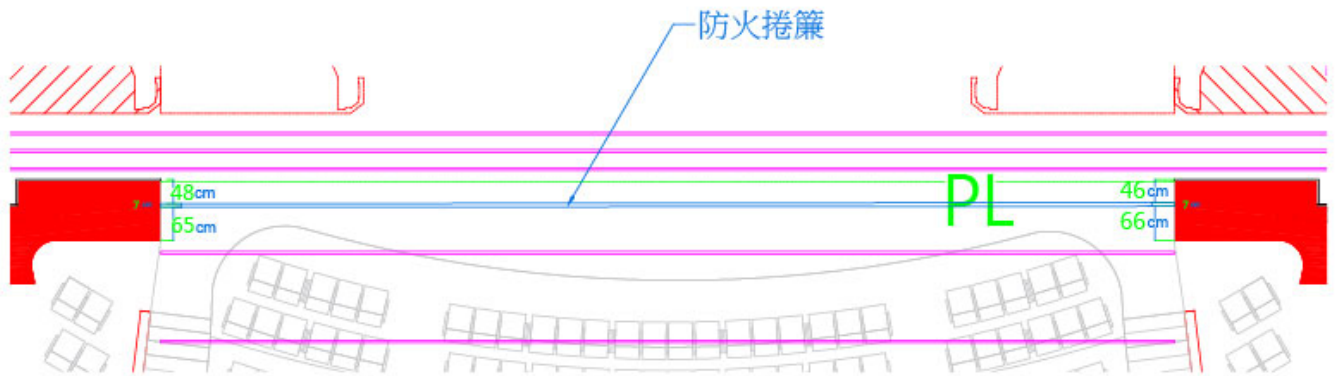


Figure 1.3.2- Fire Curtain

1-4 Hoisting

1-4-1 Point Hoist (load 250kg)

8 sets, winch line length 31.2m, lifting speed: 0 to 1.8m/s

Operation range: available for using on grid area. Boundless except for Fly Bars operation space.

1-4-2 Chain Hoist with Trolley (load 1000kg, fixed speed: 9.6m/min)

Grid: 10 sets, operation length 30m (Boundless except for Fly Bars operation space)

Side stage: 8 sets, operation length 12m

Rear stage: 14 sets, operation length 12m

1-4-3 Chain Hoist for House Speakers (load 1000kg, fixed speed: 9.6m/min)

Speakers on both sides of the auditorium are fixed in the suspended hall

4 sets, operation length 30m, lifting speed: 9.6m/min

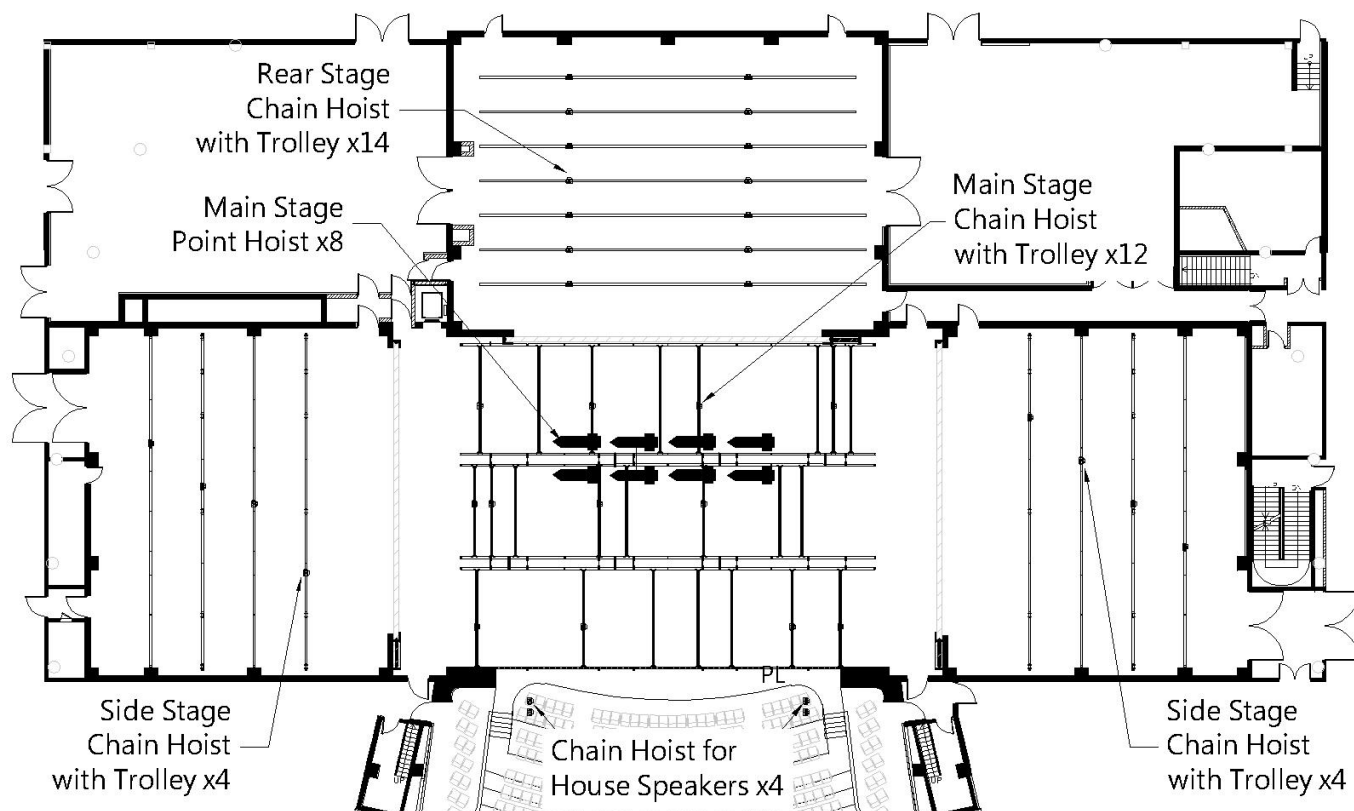


Figure 1.4.1- Hoisting plan

1-5 Curtain and Others

| Item Number | Product Name | Quantity | Notes (Unit: Meter) | Paid Item |
|-------------|--|----------|--|-----------|
| 01 | House Curtain | 1 pair | 13 x 12.9 ShowTex –Paris CS(Black) | |
| 02 | Border | 6 | 4.5 × 24 ShowTex –Bellini | |
| 03 | Border | 6 | 3 × 24 ShowTex –Bellini | |
| 04 | Leg | 24 | 12 × 4.5 ShowTex –Bellini | |
| 05 | Leg | 12 | 12 × 3 ShowTex –Bellini | |
| 06 | Tab | 10 | 12.3 × 3 ShowTex –Bellini | |
| 07 | White Scrim | 1 | 10.5 × 24 ShowTex –GobelinTulle | |
| 08 | Black Scrim | 1 | 10.5 × 24 ShowTex –GobelinTulle | |
| 09 | Cyclorama (Rear Projection Screen) | 1 | 11.5 × 24 ShowTex – Retro Screen Grey plus | |
| 10 | Cotton Cyclorama | 1 | 11.5 × 24 ShowTex –Cyclo 270 | |
| 11 | Black Backdrop | 2 | 12 × 22 ShowTex –Bellini | |
| 12 | Hydraulic Lift Platform | 1 | (Shared with Playhouse) | * |
| 13 | Wooden Floor 2m*1m | 152pc | 1.Shared with Playhouse 2.Area (installation area adjustable) 20m x 16m, built-up, portable with latch, wooden plywood with high density mitigation block, 3.7 cm (depth),point load 1000kg, average shock-absorbing ability 65 % | |
| 14 | Wooden Floor 1m*1m | 16pc | | |
| 15 | Black Dance Floor For Wooden Floor only | 8 rolls | 1.Shared with Playhouse 2.20m (length) x 2m (width) x 2mm (depth) | |
| 16 | Black and Gray Dance Floor | 20 rolls | 1.Shared with Playhouse 2.20m (length) x 2m (width) x 1.7mm (depth) | |
| 17 | Black and White Dance Floor | 20 rolls | 1.Shared with Playhouse 2.24m (length) x 1m (width) x 1.8mm (depth) | |
| 18 | Black and Gray Dance Floor | 20 rolls | 1.Shared with Playhouse 2.22m (length) x 0.95m (width) x 1.8mm (depth) | |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

1-6 Fly Bar List

| Bar Number | Distance to PL | Content | Size(length) unit=cm | Note |
|------------|----------------|-----------------------------|-----------------------|--------------------------------|
| | -555 | Auditorium Fly Bar #5 | 2000 | |
| | -475 | Auditorium Fly Bar #4 | 2000 | |
| | -395 | Auditorium Fly Bar #3 | 2000 | |
| | -315 | Auditorium Fly Bar #2 | 2000 | |
| | -140 | Auditorium Fly Bar #1 | 2000 | |
| | -48 | Fire Curtain | | |
| 0 | 0 | Plaster Line | | |
| | 25 | Stage Front Fly Bar #1 | 2700 | |
| | 60 | House Curtain (Black color) | 2700(1300hx1290w*2) | guillotine / traveller |
| | 95 | Stage Front Fly Bar #2 | 2700 | |
| 1 | 285 | | 2400 | |
| 2 | 305 | | 2400 | |
| 3 | 325 | | 2400 | |
| 4 | 345 | | 2400 | |
| 5 | 365 | | 2400 | |
| 6 | 385 | | 2400 | |
| 7 | 405 | | 2400 | |
| 8 | 425 | | 2400 | |
| 9 | 445 | | 2400 | |
| 10 | 465 | | 2400 | |
| 11 | 485 | | 2400 | |
| 12 | 505 | | 2400 | |
| 13 | 525 | | 2400 | Do not provide for temporarily |
| 14 | 545 | | 2400 | |
| 15 | 565 | | 2400 | |
| 16 | 585 | | 2400 | |
| 17 | 605 | | 2400 | |
| 18 | 625 | | 2400 | |
| 19 | 645 | | 2400 | |
| 20 | 665 | | 2400 | |
| 21 | 685 | | 2400 | |
| 22 | 705 | | 2400 | |
| 23 | 725 | | 2400 | |
| 24 | 745 | | 2400 | |
| 25 | 765 | | 2400 | |
| 26 | 785 | | 2400 | |
| 27 | 805 | | 2400 | |
| 28 | 825 | | 2400 | |
| 29 | 845 | | 2400 | |
| 30 | 865 | | 2400 | |
| 31 | 885 | | 2400 | |
| 32 | 905 | | 2400 | |
| 33 | 925 | | 2400 | |
| 34 | 945 | | 2400 | |
| 35 | 965 | | 2400 | |
| 36 | 985 | | 2400 | |
| 37 | 1005 | | 2400 | |
| 38 | 1025 | | 2400 | |
| 39 | 1045 | | 2400 | |
| 40 | 1065 | | 2400 | |
| 41 | 1085 | | 2400 | |
| 42 | 1105 | | 2400 | |
| 43 | 1125 | | 2400 | |
| 44 | 1145 | | 2400 | |
| 45 | 1165 | | 2400 | |

| 46 | 1185 | | 2400 | |
|------------|----------------|-----------------------|-----------------------|--------------------------------|
| 47 | 1205 | | 2400 | |
| Bar Number | Distance to PL | Content | Size(length) unit=cm | Note |
| 48 | 1225 | | 2400 | |
| 49 | 1245 | | 2400 | |
| 50 | 1265 | | 2400 | |
| 51 | 1285 | | 2400 | |
| 52 | 1305 | | 2400 | |
| 53 | 1325 | | 2400 | |
| 54 | 1345 | | 2400 | Do not provide for temporarily |
| 55 | 1365 | | 2400 | |
| 56 | 1385 | | 2400 | |
| 57 | 1405 | | 2400 | |
| 58 | 1425 | | 2400 | |
| 59 | 1445 | | 2400 | |
| 60 | 1465 | | 2400 | |
| 61 | 1485 | | 2400 | |
| 62 | 1505 | | 2400 | |
| 63 | 1525 | | 2400 | |
| 64 | 1545 | | 2400 | |
| 65 | 1565 | | 2400 | |
| 66 | 1585 | | 2400 | |
| 67 | 1605 | | 2400 | |
| 68 | 1625 | | 2400 | |
| 69 | 1645 | | 2400 | |
| 70 | 1665 | | 2400 | |
| 71 | 1685 | | 2400 | |
| 72 | 1705 | | 2400 | |
| 73 | 1725 | | 2400 | |
| 74 | 1745 | | 2400 | |
| | 2105 | Rear Stage Fly Bar #1 | 2100 | |
| | 2305 | Rear Stage Fly Bar #2 | 2100 | Do not provide for temporarily |
| | 2505 | Rear Stage Fly Bar #3 | 2100 | |
| | 2705 | Rear Stage Fly Bar #4 | 2100 | |
| | 2905 | Rear Stage Fly Bar #5 | 2100 | |
| | 3105 | Rear Stage Fly Bar #6 | 2100 | |
| | 3305 | Rear Stage Fly Bar #7 | 2100 | |
| | 3505 | Rear Stage Fly Bar #8 | 2100 | |
| Bar Number | Distance to CL | Content | Size(length) unit=cm | Note |
| | 1240 | Side Fly Bar #1 | 1480 | |
| | 1260 | Side Fly Bar #2 | 1480 | |
| | 1240 | Side Fly Bar #1 | 1480 | |
| | 1260 | Side Fly Bar #2 | 1480 | |

2 Lighting

2-1 Lighting instrument

Important : control signal were the network system.

| Item | Model Number | Position | Specifications | Quantity | Frame Size | Paid Item |
|--|---|---|----------------------|----------|------------|----------------------------|
| Lighting Control Console | GrandMA 2 Light | Control Booth | | 1 | | |
| | | Auditorium | | 1 | | |
| Dimmer System | State Automation Solution | | 220V 3kW/Circuit | 1008ch | | |
| | | | 220V 5kW/ Circuit | 48ch | | |
| Ellipsoidal Reflector Spotlight | Selecon SPX 5° | 1st. Catwalk | 750W | 14 | 245x245mm | Do not provide Gobo holder |
| | | 2nd. Catwalk | | 14 | | |
| | | 3rd. Catwalk | | 12 | | |
| | Strand Leko Lite 10° | 1st. Catwalk | | 24 | 305x305mm | Do not provide Gobo holder |
| | | 2nd. Catwalk | | 24 | | |
| | | 3rd. Catwalk | | 10 | | |
| | Selecon SPX 14° | Lighting Box2/L | | 6/6 | 158x158mm | |
| | | Lighting Box2/R | | 6/6 | | |
| | Selecon SPX 15°-35° | Lighting Box1/L | | 6/6 | 305x305mm | |
| | | Lighting Box1/R | | 6/6 | | |
| | Strand Leko Lite 10° | | | 10 | | |
| | Selecon SPX 14° | | | 15 | 158x158mm | |
| | Selecon SPX 19° | | | 80 | | |
| | Selecon SPX 26° | | | 80 | | |
| Selecon SPX 36° | | 50 | | | | |
| Selecon SPX 15°-35° | | 5 | | | | |
| 2KW Fresnel Spotlight 8" | Selecon Arena Theatre 8" Fresnel 7°-60° | | 2kW | 80 | 245x245mm | |
| HMI Fresnel Spotlight 12" | ARRI D40 HMI Fresnel | | 4kW | 6 | | * |
| Parabolic Aluminized Reflector Spotlight | Kupo PL-64LB | Lamp : W x 16 、 Mx32 、VN x 16 、 N x32 | 1kW | 96 | 254x254mm | |
| Cyc Light | Selecon Aurora CYC | | 1kW | 12 | 305x315mm | |
| Ground Row | Selecon Aurora GroundRow | | 1kW | 12 | | |
| Strip Light | Selecon PL TR2 RGB Striplights | | | 12 | | * |
| Long Throw Follow Spot | Lycian M2 Model 2060 2.5 | 3rd. Catwalk | 2.5kW | 3 | | |
| Fog Machine | Antari F-5D | | | 4 | | * |
| Haze Machine | Antari HZ-500 | | | 4 | | * |
| Effect Fan | Antari AF-4 | | | 8 | | * |

*Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.*

2-2 Accessories

| Item | Specifications | Size | Quantity |
|--------------------------|--|---|----------|
| Barn Door | 2kW Fresnel | | 40 |
| Iris | For Selecon Ellipsoidal Reflector Spotlight | | 80 |
| Gobo Holder | For Selecon Ellipsoidal Reflector Spotlight | B Size | 100 |
| Power Distribution Box | 8CIR CEE Form Female Plug  | | 60 |
| Multi-Cable | 16pin Multi-Cable | 5m | 40 |
| | | 10m | 40 |
| | | 15m | 30 |
| Ex-Cable | CEE16A | 1.5m | 80 |
| | | 2m | 100 |
| | | 3m | 80 |
| | | 5m | 70 |
| | | 10m | 50 |
| | | 15m | 50 |
| Y-Cord | CEE16A Parallel Cord | | 100 |
| Portable Sidelight Tower | Boom Base & Pipe | Boom Base : 45cm(W)x60cm(L) Pipe:300cm | 12 |

| Key | Legend | Quantity | Brand and Model |
|-----|-----------------------------|----------|-----------------------------|
| | Ellipsoidal 5° | 40 | Philips Selecon SPX 5° |
| | Ellipsoidal 10° | 58 | STRAND LEKO LITE 10° |
| | Ellipsoidal 14° | 24 | Philips Selecon SPX 14° |
| | Ellipsoidal 15°-35° | 24 | Philips Selecon SPX 15°-35° |
| | 2.5kw Long Throw Followspot | 3 | Lycian M2 Model 2060 2.5 |

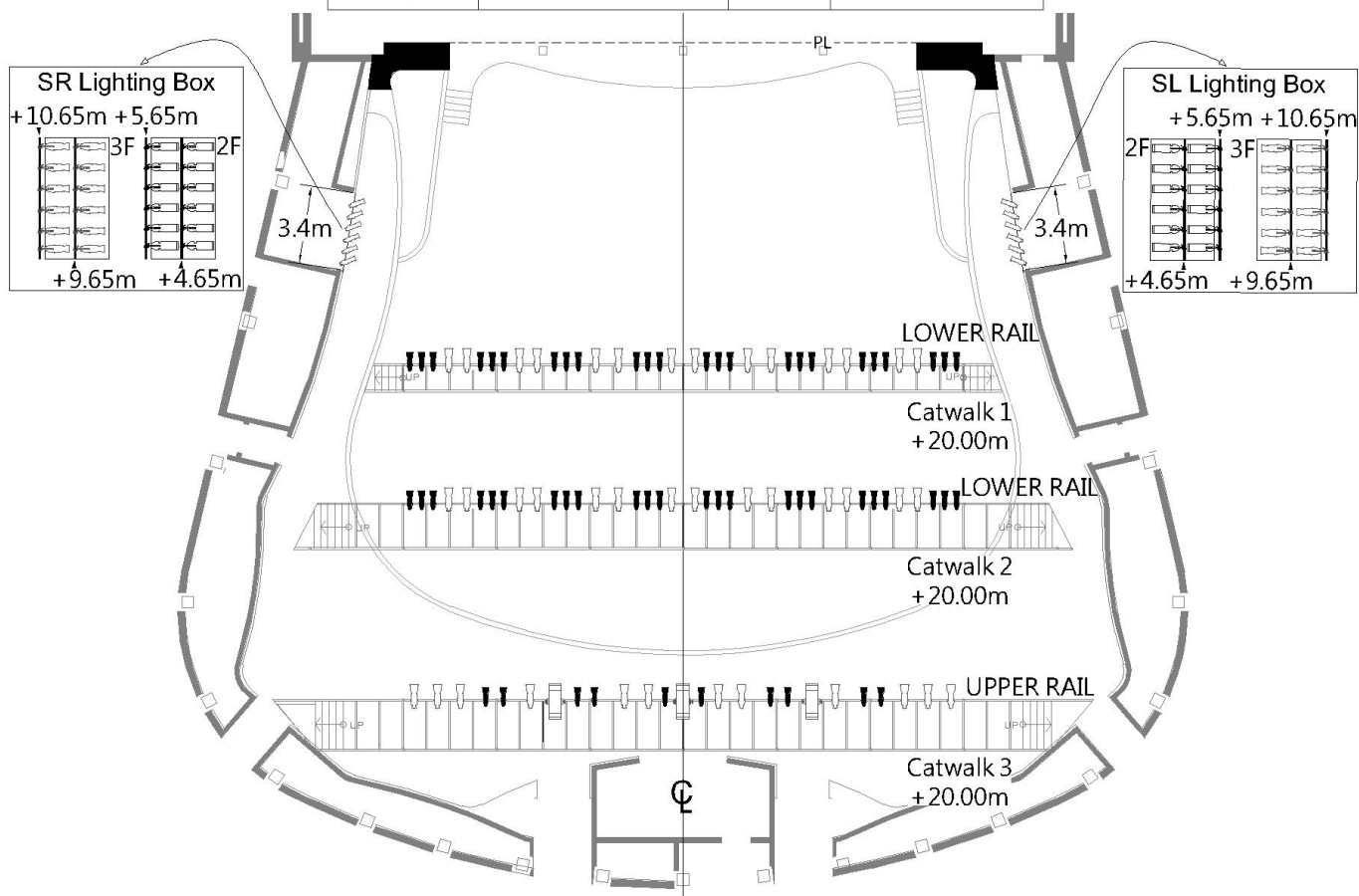


Figure2.1-FOH Lighting Plot

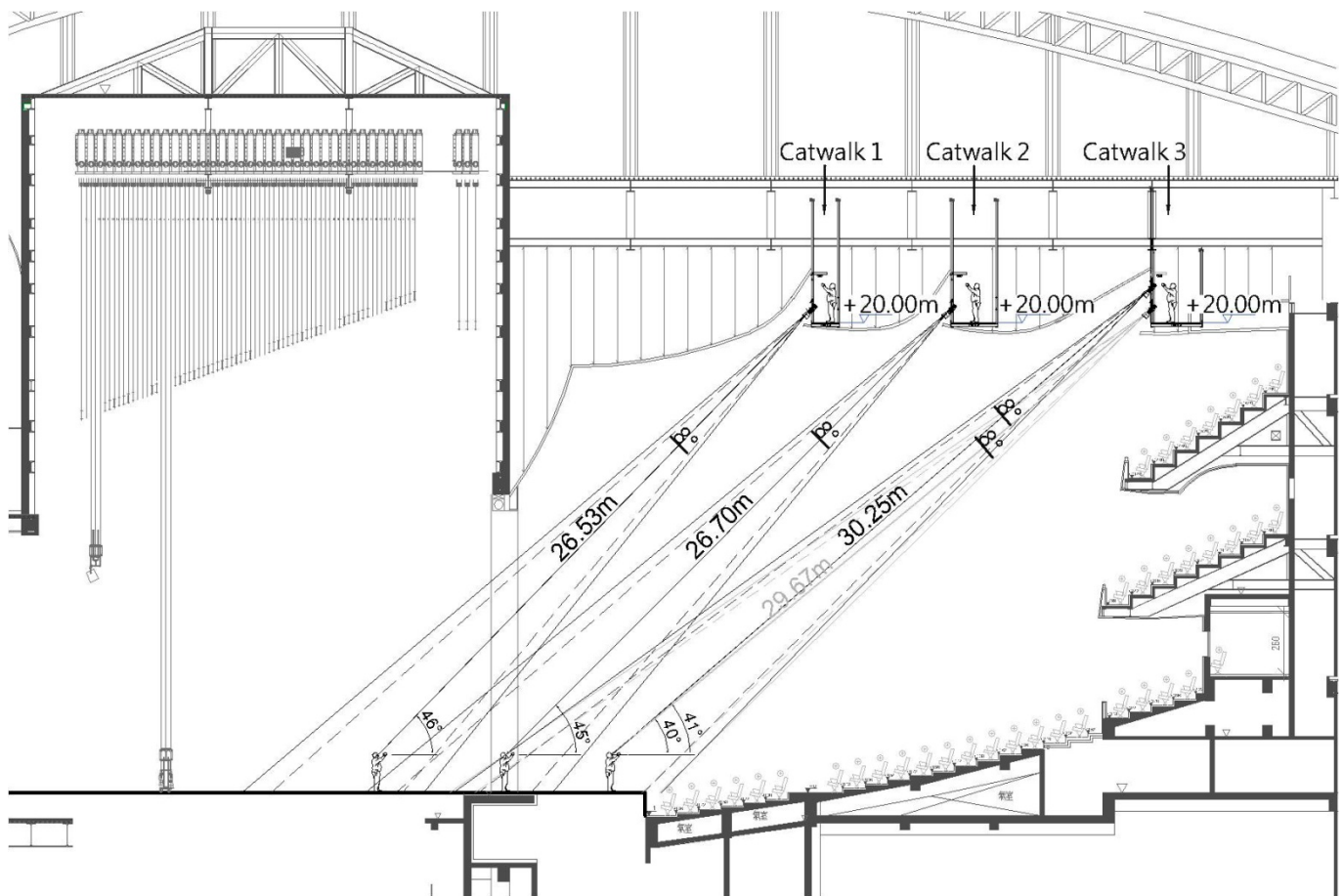


Figure 2.2- Lighting Section

2-3 Lighting Circuit

2-3-1 Stage area

| Area and Position | Dimmer Circuit No. | Load | Network Circuit No. |
|-------------------------------|--------------------|-----------|---------------------|
| Down Stage/L | 017 ~ 024 | 3kW | LN09 ~ 14 |
| | 025 ~ 032 | | |
| Down Stage/R | 033 ~ 040 | 3kW | LN15 ~ 20 |
| | 041 ~ 048 | | |
| Floor/L | 049 ~ 056 | 3kW | LN21 ~ 22 |
| | 065 ~ 072 | | LN25 ~ 26 |
| | 081 ~ 088 | 3kW | LN29 ~ 30 |
| | 097 ~ 104 | | LN33 ~ 34 |
| | 113 ~ 120 | 3kW | LN37 ~ 38 |
| Floor/R | 057 ~ 064 | 3kW | LN23 ~ 24 |
| | 073 ~ 080 | | LN27 ~ 28 |
| | 089 ~ 096 | 3kW | LN31 ~ 32 |
| | 105 ~ 112 | | LN35 ~ 36 |
| | 121 ~ 128 | 3kW | LN39 ~ 40 |
| Stage Lift 1 | 129 ~ 136 | 3kW | LN41 ~ 42 |
| Stage Lift 2 | 137 ~ 144 | 3kW | LN43 ~ 44 |
| Stage Lift 3 | 145 ~ 152 | 3kW | LN45 ~ 46 |
| Stage Lift 4 | 153 ~ 160 | 3kW | LN47 ~ 48 |
| Stage Lift 5 | 161 ~ 168 | 3kW | LN49 ~ 50 |
| Rear Stage/L | 169 ~ 176 | 3kW | LN51 ~ 52 |
| | 177 ~ 184 | | |
| | 201 ~ 208 | 3kW | LN55 ~ 56 |
| | 209 ~ 216 | | |
| Rear Stage/R | 185 ~ 192 | 3kW | LN53 ~ 54 |
| | 193 ~ 200 | | |
| | 217 ~ 224 | 3kW | LN57 ~ 58 |
| | 225 ~ 232 | | |
| Above Rear Stage Cable Reel | 233 ~ 240 | 3kW | LN61 ~ 62 |
| | 241 ~ 248 | 3kW | LN63 ~ 64 |
| | 249 ~ 256 | 3kW | LN65 ~ 66 |
| | 257 ~ 264 | 3kW | LN67 ~ 68 |
| | 265 ~ 272 | 3kW | LN69 ~ 70 |
| | 273 ~ 280 | 3kW | LN71 ~ 72 |
| | 281 ~ 288 | 3kW | LN73 ~ 74 |
| 289 ~ 296 | 3kW | LN75 ~ 76 | |
| Adjustable Proscenium Stage/L | 297 ~ 300 | 3kW | |
| | 301 ~ 304 | | LN77 ~ 78 |
| | 305 ~ 308 | | |
| | 309 ~ 312 | | |
| Adjustable Proscenium Stage/R | 313 ~ 316 | 3kW | |
| | 317 ~ 320 | | LN79 ~ 80 |
| | 321 ~ 324 | | |
| | 325 ~ 328 | | |
| Rear Stage Backwall | 329 ~ 332 | 3kW | |
| | 333 ~ 336 | | |
| Up Lighting Bridge | 369 ~ 372 | 3kW | |
| | 373 ~ 376 | | |
| | 377 ~ 380 | | |
| | 381 ~ 384 | | |
| | 385 ~ 388 | | LN101 ~ 104 |
| Down Lighting Bridge | 389 ~ 392 | | |
| | 393 ~ 396 | 3kW | |
| | 397 ~ 400 | | |
| | 401 ~ 404 | | LN105 ~ 106 |
| | 405 ~ 408 | | |
| | 409 ~ 412 | | LN107 ~ 108 |

| | | | |
|-----------------------------|------------|------------|-------------|
| | 413 ~ 416 | | |
| 3 Floor- Gallery S.L. | 473 ~ 476 | 3kW | |
| | 477 ~ 480 | | LN117 ~ 118 |
| | 481 ~ 484 | | |
| | 485 ~ 488 | | |
| 3 Floor- Gallery S.R. | 489 ~ 492 | 3kW | |
| | 493 ~ 496 | | LN119 ~ 120 |
| | 497 ~ 500 | | |
| | 501 ~ 504 | | |
| 3 Floor- Gallery Rear Stage | 505 ~ 508 | 3kW | LN121 ~ 122 |
| | 509 ~ 512 | | |
| 4 Floor- Gallery S.L. | 513 ~ 516 | 3kW | |
| | 517 ~ 520 | | LN127 ~ 128 |
| 4 Floor- Gallery S.R. | 521 ~ 524 | 3kW | |
| | 525 ~ 528 | | LN129 ~ 130 |
| 4 Floor- Gallery Rear Stage | 529 ~ 532 | 3kW | LN131 ~ 132 |
| | 533 ~ 536 | | |
| Stage/L Ladder1 | 561 ~ 568 | 3kW | LN139 ~ 140 |
| Stage/L Ladder2 | 569 ~ 576 | 3kW | LN141 ~ 142 |
| Stage/L Ladder3 | 577 ~ 584 | 3kW | LN143~ 144 |
| Stage/L Ladder4 | 585 ~ 592 | 3kW | LN145~ 146 |
| Stage/L Ladder5 | 593 ~ 600 | 3kW | LN147~ 148 |
| Stage/L Ladder6 | 601 ~ 608 | 3kW | LN149~ 150 |
| Stage/R Ladder1 | 609 ~ 616 | 3kW | LN151~ 152 |
| Stage/R Ladder2 | 617 ~ 624 | 3kW | LN153~ 154 |
| Stage/R Ladder3 | 625 ~ 632 | 3kW | LN155~ 156 |
| Stage/R Ladder4 | 633 ~ 640 | 3kW | LN157~ 158 |
| Stage/R Ladder5 | 641 ~ 648 | 3kW | LN159~ 160 |
| Stage/R Ladder6 | 649 ~ 656 | 3kW | LN161~ 162 |
| Cyclorama | 753 ~ 760 | 3kW | |
| | 761 ~ 768 | | LN179~ 180 |
| | 769 ~ 776 | | |
| Stage Grid Area | 777 ~ 784 | 3kW | LN181~ 182 |
| | 785 ~ 792 | | |
| | 793 ~ 800 | 3kW | LN183~ 184 |
| | 801 ~ 808 | | |
| | 809 ~ 816 | 3kW | LN185~ 186 |
| | 817 ~ 824 | | |
| | 825 ~ 832 | 3kW | LN187~ 188 |
| | 833 ~ 840 | | |
| | 841 ~ 848 | 3kW | LN189~ 190 |
| | 849 ~ 856 | | |
| | 857 ~ 864 | 3kW | LN191~ 192 |
| | 865 ~ 872 | | |
| | 873 ~ 880 | 3kW | LN193~ 194 |
| | 881 ~ 888 | | |
| | 889 ~ 896 | 3kW | LN195~ 196 |
| | 897 ~ 904 | | |
| | 905 ~ 912 | 3kW | LN197~ 198 |
| | 913 ~ 920 | | |
| | 921 ~ 928 | 3kW | LN199~ 200 |
| | 929 ~ 936 | | |
| 937 ~ 944 | 3kW | LN201~ 202 | |
| 945 ~ 952 | | | |
| 953 ~ 960 | 3kW | LN203~ 204 | |
| 961 ~ 968 | | | |
| Auditorium Fly Bar1 | 969 ~ 976 | 3kW | LN205~ 206 |
| Auditorium Fly Bar2 | 977 ~ 984 | 3kW | LN207~ 208 |
| Auditorium Fly Bar3 | 985 ~ 992 | 3kW | LN209~ 210 |
| Auditorium Fly Bar4 | 993 ~ 1000 | 3kW | LN211~ 212 |

| | | | |
|----------------------|-------------|-----|------------|
| Auditorium Fly Bar5 | 1001 ~ 1008 | 3kW | LN213~ 214 |
| Down Stage/L | 1009 ~ 1014 | 5kW | |
| Down Stage/R | 1015 ~ 1020 | 5kW | |
| Rear Stage/L | 1021 ~ 1026 | 5kW | |
| | 1033 ~ 1038 | 5kW | |
| Rear Stage/R | 1027 ~ 1032 | 5kW | |
| | 1039 ~ 1044 | 5kW | |
| Rear Stage Backwall | 1045 ~ 1050 | 5kW | LN59~ 60 |
| Down Lighting Bridge | 1051 ~ 1056 | 5kW | |

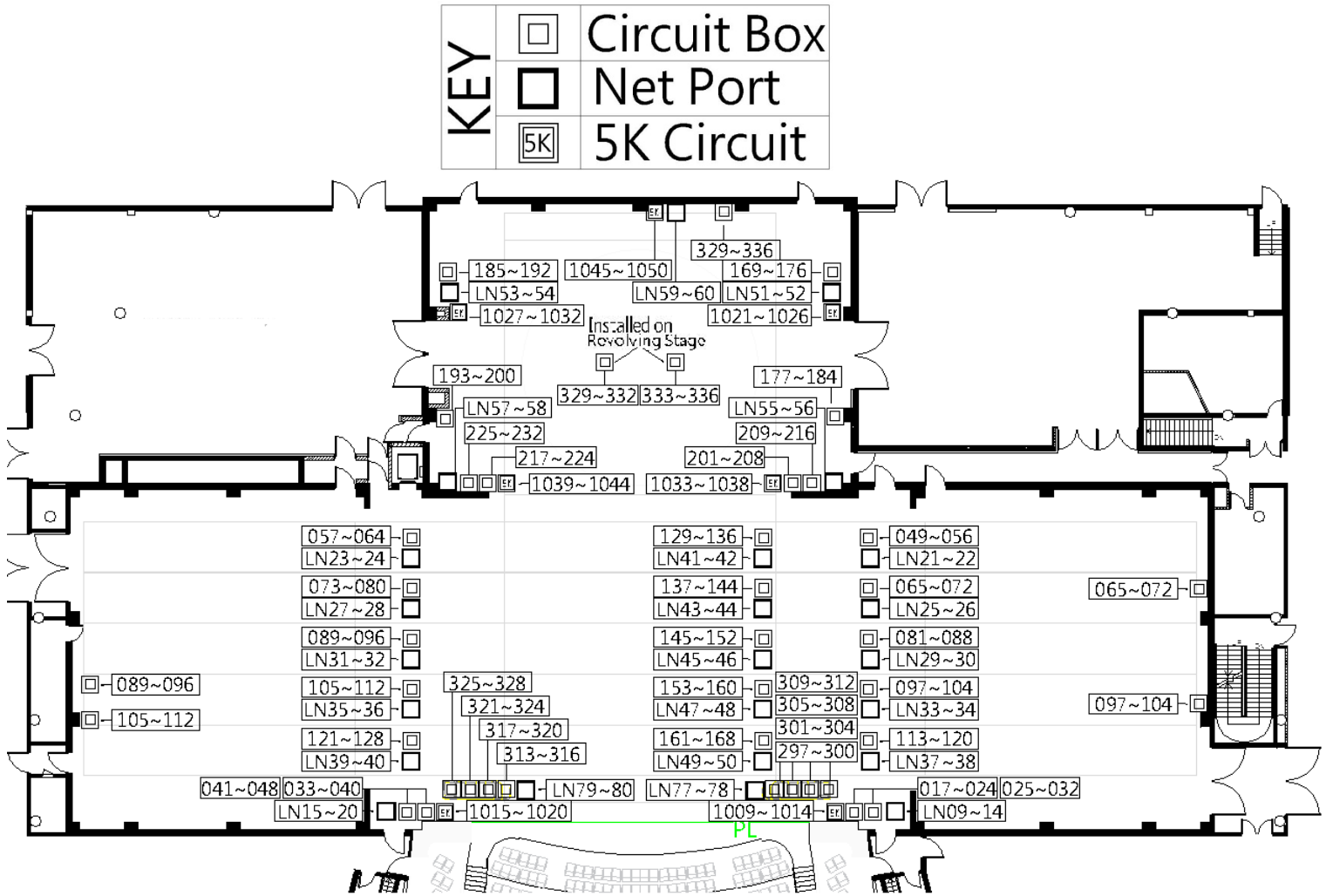


Figure 2.3.1.1- First Floor Lighting Circuit Layout

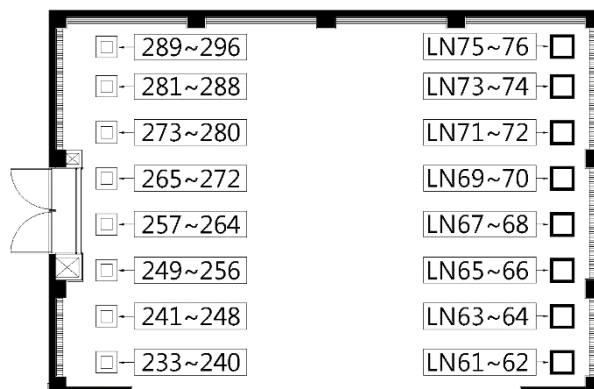


Figure 2.3.1.2- Above Rear Stage Cable Reel Lighting Circuit Layout

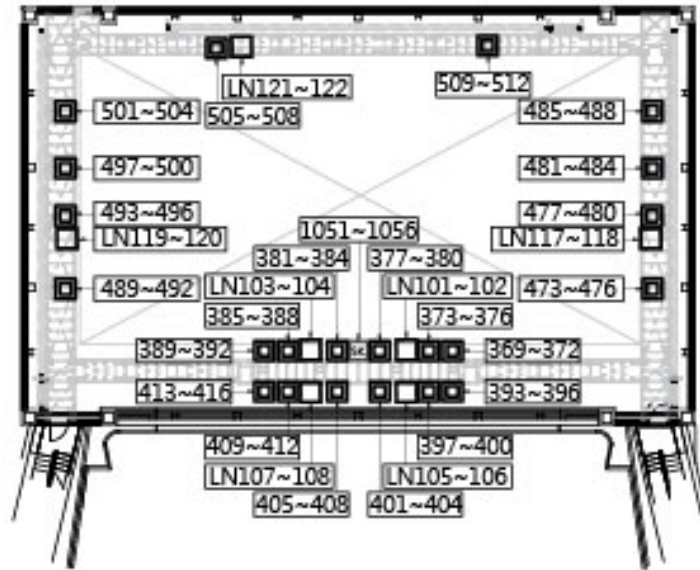


Figure 2.3.1.3- The Third Floor Gallery and Lighting Bridge Circuit Layout

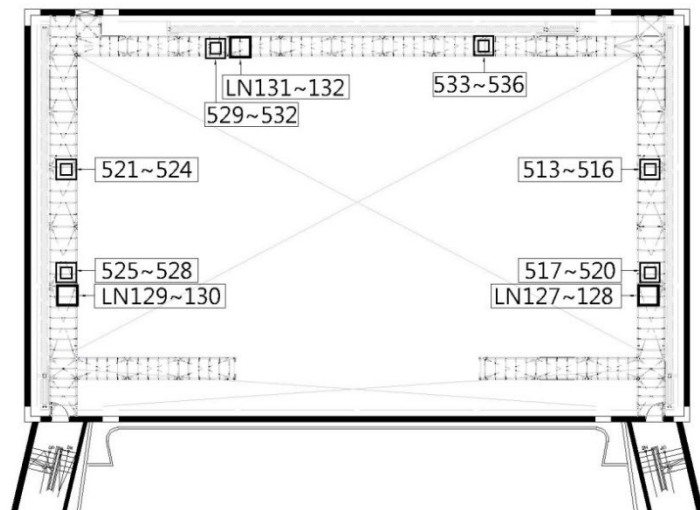


Figure 2.3.1.4- The Fourth Floor Gallery Lighting Circuit Layout

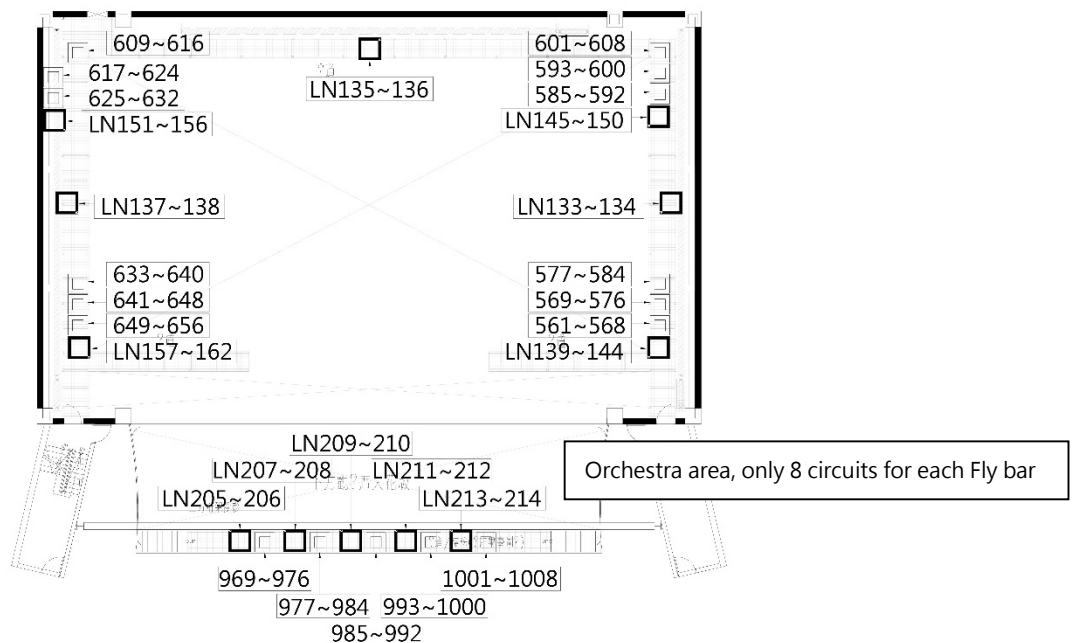


Figure 2.3.1.5-Orchestra Pit Overhead and R1F Gallery Lighting Circuit Layout

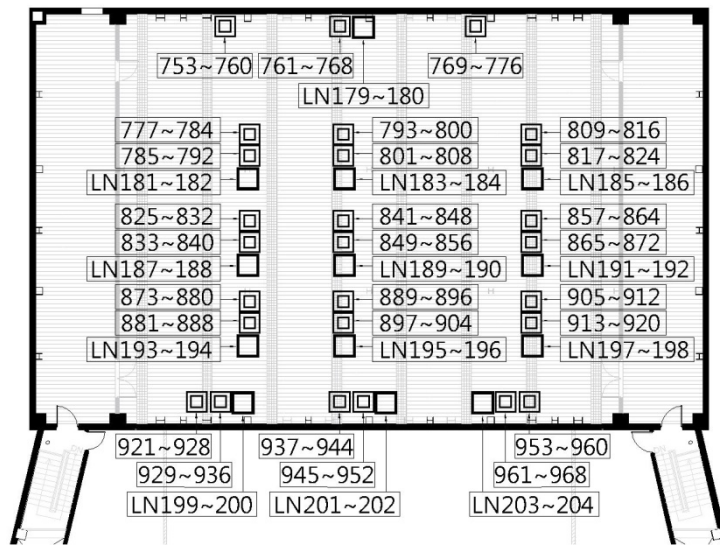


Figure 2.3.1.6- Grid Area Lighting Circuit Layout

2-3-2 Front of House

| Area and Position | Dimmer Circuit No. | Load | Network Circuit No. |
|-------------------------|--------------------|------|---------------------|
| Orchestra Pit Lift 1 | 001 ~ 004 | 3kW | LN01 ~ 02 |
| | 005 ~ 008 | | LN03 ~ 04 |
| Orchestra Pit Lift 2 | 009 ~ 012 | 3kW | LN05 ~ 06 |
| | 013 ~ 016 | | LN07 ~ 08 |
| 2 Floor-Lighting Box/L | 337 ~ 340 | 3kW | LN85 ~ 86 |
| | 341 ~ 344 | | |
| | 345 ~ 348 | | |
| | 349 ~ 352 | | |
| 2 Floor- Lighting Box/R | 353 ~ 356 | 3kW | LN87 ~ 88 |
| | 357 ~ 360 | | |
| | 361 ~ 364 | | |
| | 365 ~ 368 | | |
| 3 Floor- Lighting Box/L | 417~ 420 | 3kW | LN109 ~ 110 |
| | 421~ 424 | | |
| | 425~ 428 | | |
| | 429 ~ 432 | | |
| 3 Floor- Lighting Box/R | 433 ~ 436 | 3kW | LN111 ~ 112 |
| | 437 ~ 440 | | |
| | 441 ~ 444 | | |
| | 445 ~ 448 | | |
| 2 Floor-Balcony Rail | 449 ~ 451 | 3kW | |
| | 452 ~ 454 | | |
| | 455 ~ 457 | | |
| | 458 ~ 460 | | LN115 ~ 116 |
| | 461 ~ 463 | | |
| | 464 ~ 466 | | |
| | 467 ~ 469 | | |
| | 470 ~ 472 | | LN113 ~ 114 |
| 3 Floor-Balcony Rail | 537 ~ 539 | 3kW | |
| | 540 ~ 542 | | |
| | 543 ~ 545 | | |
| | 546 ~ 548 | | LN125 ~ 126 |
| | 549 ~ 551 | | |
| | 552 ~ 554 | | |
| | 555 ~ 557 | | |
| | 558 ~ 560 | | LN123 ~ 124 |

| | | | |
|--------------|-----------|-----|-------------|
| 1st. Catwalk | 657 ~ 660 | 3kW | |
| | 661 ~ 664 | | |
| | 665 ~ 668 | | LN163 ~ 164 |
| | 669 ~ 672 | | |
| | 673 ~ 676 | | |
| | 677 ~ 680 | | |
| | 681 ~ 684 | | LN165 ~ 166 |
| | 685 ~ 688 | | |
| | 689 ~ 692 | | |
| 2nd. Catwalk | 693 ~ 696 | 3kW | |
| | 697 ~ 700 | | |
| | 701 ~ 704 | | LN167 ~ 168 |
| | 705 ~ 708 | | |
| | 709 ~ 712 | | |
| | 713 ~ 716 | | |
| | 717 ~ 720 | | LN169 ~ 170 |
| | 721 ~ 724 | | |
| | 725 ~ 728 | | |
| 3rd. Catwalk | 729 ~ 732 | 3kW | |
| | 733 ~ 736 | | LN171 ~ 172 |
| | 737 ~ 740 | | |
| | 741 ~ 744 | | |
| | 745 ~ 748 | | LN173 ~ 174 |
| | 749 ~ 752 | | |

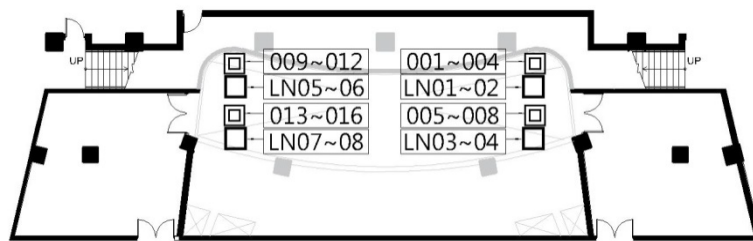


Figure 2.3.2.1- Orchestra Pit Lighting Circuit Layout

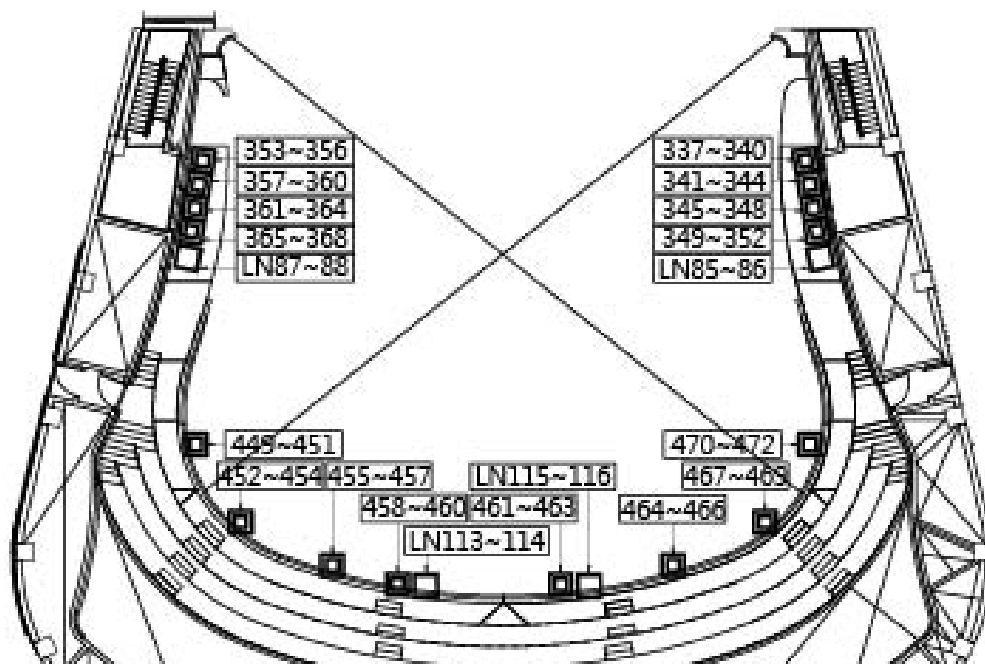


Figure 2.3.2.2- The Second Floor Apron and Lighting Box Lighting Circuit Layout

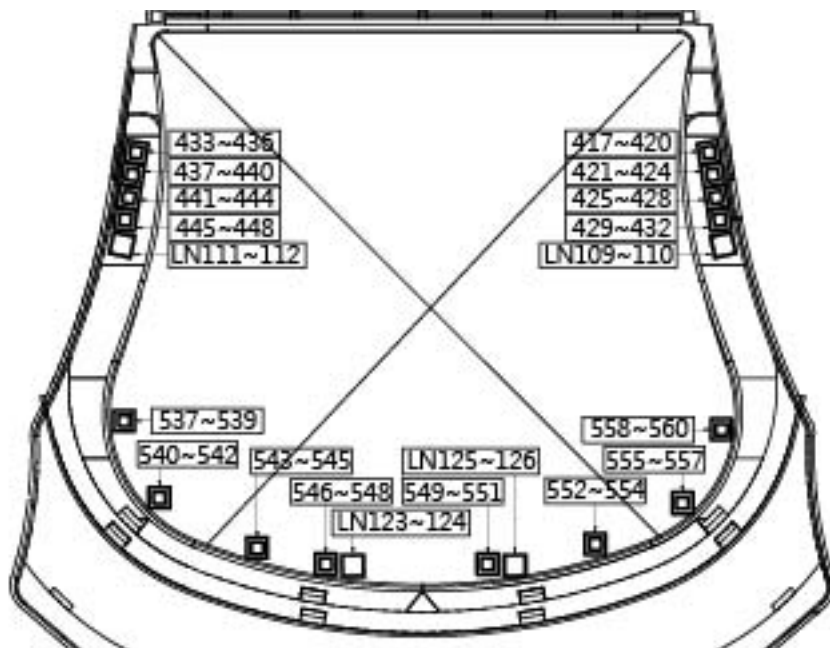


Figure 2.3.2.3- The Third Floor Apron and Lighting Box Lighting Circuit Layout

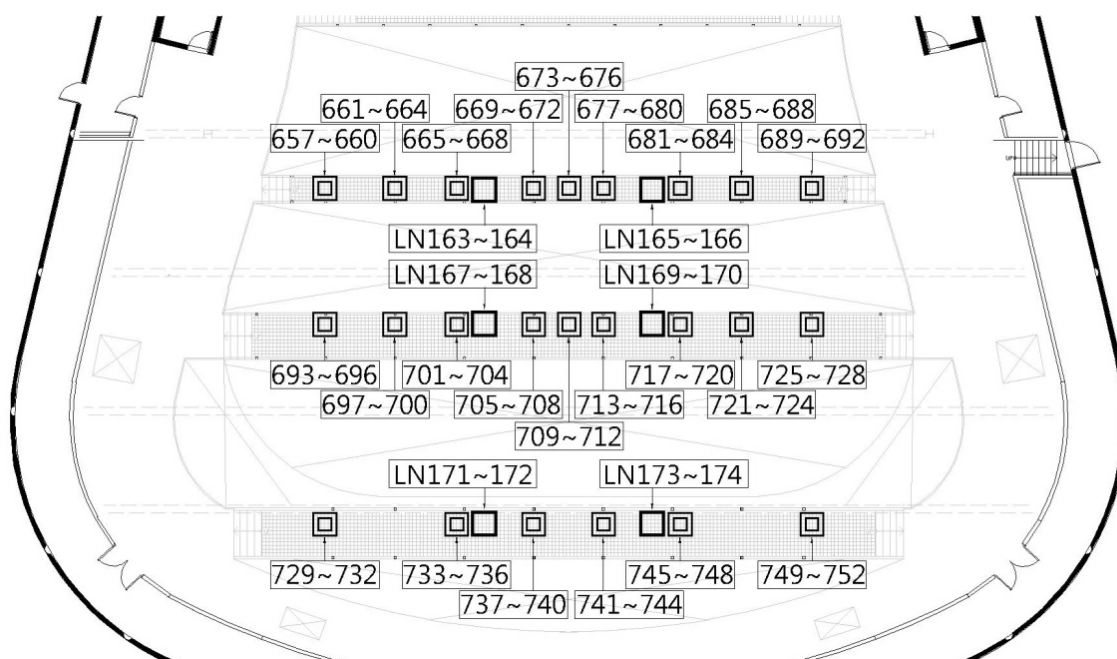


Figure 2.3.2.4- Catwalk Lighting Circuit Layout

2-4 Portable Lift

Brand and Model: Snorkel UL-40 (rechargeable)

Maximum height: 12.1m

Maximum weight: 136kg

Quantity: 2

2-5 Additional Power Supply

| Function | Position | Specifications | Quantity |
|----------|------------------------------------|--|-----------|
| Stage | Down Stage Left / Right | 3 ϕ 4W+G 380V/220V /60Hz (CEE 125A/3P+N+PE) | 3 / 3 |
| Light | | 3 ϕ 4W+G 220V/120V /60Hz (Camlock 250A) | 3 / 3 |
| Sound | | 3 ϕ 4W+G 220V/120V /60Hz (Camlock 100A) | 1 / 1 |
| Stage | Up Stage Left / Right / Rear Stage | 3 ϕ 4W+G 380V/220V /60Hz (CEE 125A/3P+N+PE) | 2 / 2 / 2 |
| Light | | 3 ϕ 4W+G 220V/120V /60Hz (Camlock 250A) | 2 / 2 / 2 |



Figure 2.6 - Additional Power Supply

2-6 Working Light / Auditorium light / Blackout

Work lights

Work lights provided white and blue light mode, and the control switch is located on the stage manager' s Desk.

Lighting area: Stage,Rear Stage lower floor, stage Traps room, Main Stage Elevation Platform double-deck level (include machine pit), Orchestra Pit, Gallery, Lighting Box, Lighting Bridge, Stage Grid area, Cat walk and Auditorium control Elevation Platform machine pit.

Auditorium lights

Auditorium lights consists houselights and step lights, which can be separately controlled and dimmed. The control panel is located on the stage manager' s Desk and lighting control room.

Blackout

In accordance with government Fire Services Act, there are many of emergency lights in the venue. We cannot extinguish the emergency lighting for any performance, there will be the minimal lighting levels in the auditorium and backstage areas.

3 Audio/Video-Systems

3-1 Audio Facilities

| Item | Quantity | Brand and Model | Paid Item |
|----------------------------------|----------|--|-----------|
| Digital mixer (movable) | 1 | Soundcraft Vi4 | * |
| Array main speaker | 2 | Kling & Freitag SEQUENZA 10W*8 Kling & Freitag SEQUENZA 10B*2 | |
| Left and right channel speakers | 2 | Kling & Freitag SEQUENZA 10B*1 Kling & Freitag SEQUENZA 10W*3 | |
| Digital speaker | 6 | Renkus-Heinz ICONYX IC16/8RII | |
| Movable speaker | 2 | Kling & Freitag CA1515-9 | |
| Movable Subwoofer | 2 | Kling & Freitag SWi118E LabGruppen PLM10000Q | |
| Stage front speaker | 12 | Renkus-Heinz CFX 41 | |
| Auxiliary speaker 1F | 46 | Soundtube CM600i | |
| Auxiliary speaker 2F | 52 | Soundtube CM600i | |
| 12" Active Stage Monitor Speaker | 2 | Renkus-Heinz PN121/9 | |
| 15" Active Stage Monitor Speaker | 2 | Renkus-Heinz PN151/9 | |
| 12" Active Stage Monitor Speaker | 12 | Renkus-Heinz PN121M/12 | * |
| 6.5" Active Monitor Speaker | 8 | Renkus-Heinz PN61 | * |
| Dual Channel Equalizer | 6 | BSS FCS960 | * |
| Digital I/O fiber module | 2 | Studer D21M | |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-2 Control Room

| Item | Quantity | Brand and Model | Paid Item |
|---------------------------------|----------|-----------------------------|-----------|
| Master Digital Mixer | 1 | Studer Vista 9 M2 QS | |
| Digital I/O fiber module | 1 | Studer D21m | |
| CD Player | 1 | Tascam CD-500B | * |
| CD-R Play | 1 | Tascam CD-RW 901 MKII | * |
| Dual channel digital effects | 3 | Eventide Eclipse V4 | |
| Multi-track recording equipment | 1 | JoeCo BBR1D+2.5" USB 1TB HD | * |
| Dual-track disk recorder | 1 | Tascam DA 3000 | * |
| Active monitor speakers | 2 | Dynaudio BM12 MkIII | |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-3 Stage Manager' s Console

The stage manager' s console is equipped with a near-field monitor speaker, stage video monitors ,synchronous show screens with lighting and flying system controller ,communication system and live announcements to individual space in backstage.

3-4 Machine Room

| Item | Quantity | Brand and Model | Note |
|-----------------------------------|----------|---------------------------------|------|
| Digital Audio Management Platform | 1 | Studer D21M (Studer Score Live) | |
| Audio Control Manager Switch | 1 | HP 1410-8 | |
| Digital I/O fiber module | 1 | Studer D21M | |

3-5 Microphone

| Item | Quantity | Brand and Model | Paid Item |
|---|----------|---------------------------------|-----------|
| Voice coil microphone | 6 | Audio Technica AE4100 | * |
| Condenser microphone | 4 | Audio Technica AE5400 | * |
| Voice coil microphone | 12 | Audio Technica ATM250 | * |
| Cardioid condenser microphone | 8 | Audio Technica AT4021 | * |
| Gradient Condenser Microphone | 4 | Audio Technica BP4073 | * |
| Cardioid Condenser Boundary Microphone | 4 | Audio Technica U851R | * |
| Stage reception Microphone | 2 | DPA 4017B / DPA UA 0836 Holders | |
| Hypercardioid Condenser microphone | 8 | AKG CK63-ULS+C480B | * |
| Cardioid condenser microphone | 8 | AKG CK61-ULS+C480B | * |
| Wireless microphone | 8 | Sennheiser SKM500G3+MME865 | * |
| Mini wireless microphone | 16 | Sennheiser SK500G3+MKE2 | * |
| Single channel wireless microphone receiver | 24 | Sennheiser EW500G3 | |
| wireless microphone wave antenna | 2 | Sennheiser AD3700 | |
| Wave antenna distributor | 3 | Sennheiser ASA1 | |
| Microphone stand | 16 | K&M 210/6 | |
| Microphone stand | 16 | K&M 210/8 | |
| Microphone stand | 8 | K&M 259 | |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-6 Communications

| Item | Quantity | Brand and Model | Paid Item |
|--|----------|--|-----------|
| Intercom host machine (Matrix 32 x 32) | 1 | Clear-Com Eclipse HX-Delta | |
| Phone interface | 1 | Clear-Com TEL-14 | |
| System interface | 1 | Clear-Com Helixnet HMS-4X | |
| Double circuit intercom | 12 | Clear-Com Helixnet HBP-2X | |
| Fixed intercom microphone/ speak | 1 | Clear-Com V12PDXY 110 / 340 Clear-Com V12PDDXY 110 / 340 | |
| Single-ear headset | 12 | Clear-Com CC-300 | |
| Double -ear headset | 4 | Clear-Com CC-400 | |
| Telephone intercom | 2 | Clear-Com HS-6 | |
| Digital Wireless Intercom set | 12 | 1. Portable wireless sub-station / Clear-Com FS-BP 2. Single-ear headset / Clear-Com CC-300 | * |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-7 Locations of Communications

Each floor is paired with intercom system, 70 units in total.

| No. | Floor | Location |
|-----|--|---|
| 1 | B3F | Right rear lower stage (B301) |
| 2 | | Left rear lower stage (B301) |
| 3 | | Right front B3 side gallery (B302) |
| 4 | | Left front B3 side gallery (B302) |
| 5 | B1F | Below Orchestra (right) |
| 6 | | Below Orchestra (left) |
| 7 | | Below Orchestra (middle) |
| 8 | | Orchestra |
| 9 | | Command Lounge (B1070) |
| 10 | | Main stage right upper stage (side gallery B1082) |
| 11 | | Main stage left upper stage (side gallery B1082) |
| 12 | | B1F audio equipment room |
| 13 | | Main Stage Lower Right Stage (side gallery B1082) |
| 14 | | Main Stage Lower left Stage (side gallery B1082) |
| 15 | 1F | Down stage right |
| 16 | | Down stage left |
| 17 | | Right side upstage right |
| 18 | | Left side upstage left |
| 19 | | Upstage right |
| 20 | | Upstage left |
| 21 | | Backstage upstage right |
| 22 | | Backstage upstage left |
| 23 | | Stage right Downstairs |
| 24 | | Stage left Downstairs |
| 25 | | Stage right proscenium |
| 26 | | Stage left proscenium |
| 27 | | Auditorium under loop box |
| 28 | | Rest preparation room 01 (1137) |
| 29 | | Rest preparation room 02 (1093) |
| 30 | | Dressing Room 01 (1134) |
| 31 | | Dressing Room 02 (1132) |
| 32 | | Dressing Room 03 (1130) |
| 33 | | Dressing Room 04 (1128) |
| 34 | | Dressing Room 05 (1126) |
| 35 | | Dressing Room 06 (1124) |
| 36 | | Dressing Room 07 (1112) |
| 37 | | Dressing Room 08 (1114) |
| 38 | | Dressing Room 09 (1116) |
| 39 | | Dressing Room 10 (1118) |
| 40 | | Dressing Room 11 (1120) |
| 41 | | Dressing Room 12 (1122) |
| 42 | | Loading Dock 01 (1010) |
| 43 | | Control Room -under the table (2043) |
| 44 | | 2F |
| 45 | Lighting box (2042) | |
| 46 | Lighting box (2042A) | |
| 47 | Audience area (control table elevating platform) | |
| 48 | Event Light Bridge | |
| 49 | 3F | Event Light Bridge |
| 50 | | Left working gallery |
| 51 | | Right working gallery |
| 52 | | Upper working gallery |
| 53 | Stage Area Right Working Corridor 4th Floor | |
| 54 | 4F | Stage Area left Working Corridor 4th Floor |
| 55 | | Repair catwalk |

| | | | |
|----|------|----------------|------------|
| 56 | R1F | Catwalk 1st | |
| 57 | | Catwalk 1st | |
| 58 | | Catwalk 1st | |
| 59 | | Catwalk 2st | |
| 60 | | Catwalk 2st | |
| 61 | | Catwalk 2st | |
| 62 | | Catwalk 3st | |
| 63 | | Catwalk 3st | |
| 64 | | Catwalk 3st | |
| 65 | | Amplifier room | |
| 66 | | Dimmer room | |
| 67 | | R2F | Winch room |
| 68 | | | Winch room |
| 69 | | | Grid |
| 70 | Grid | | |

3-8 Stage Cameras and Video Surveillance Systems

Stage monitors are installed in right and left stage entrances, first, second, and third floor lobbies, master and secondary control rooms, dressing rooms and green rooms.

| Item | Quantity | Brand and Model | Paid Item |
|--------------------------|----------|---|-----------|
| Camera (2/3 inch 3CCD) | 1 | Panasonic AW-HE870 Panasonic LZ20M85G | |
| Remote control | 1 | Panasonic AW-RP50 | |
| Switcher | 1 | Panasonic AW-RP120 | |
| Camera | 2 | Panasonic AW-HE60SN | |
| Infrared camera | 1 | AIDA GEN3G-200 | |
| Switcher | 2 | Ricoh STG-4 | |
| Video recording | Show | Fixed camera for stage panoramic view recording, only suitable for archived copy. | |

*Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.*

3-9 Paging Systems

Backstage Paging Systems

There are four venues individually Backstage Paging Systems in National Kaohsiung Center for the Arts. For Opera House paging available to all dressing rooms, green rooms, Company office and passage, it can also available paging to separately 13 zones. The Paging and Program position is located on the stage manager' s console.

Zone 1 : 1162 Company office -01 、 1166 Company office -02

Zone 2 : Corridor (1136 、 1169 、 1164)

Zone 3 : Corridor (B1079 、 B1085 、 B1101)

Zone 4 : B1089 Dressing Room -18 、 B1092 Dressing Room -19 、 B1094 Dressing Room -20 、 B1098 Dressing Room -21

Zone 5 : B1065 Dressing Room -14 、 B1068 Dressing Room -15 、 B1070 Dressing Room -16 、 B1074 Dressing Room -17

Zone 6 : 1094 Quick Change Booth

Zone 7 : 1112 Dressing Room -02 、 1114 Dressing Room -03 、 1116 Dressing Room -04 、 1118 Dressing Room -05

1120 Dressing Room -06 、 1122 Dressing Room -07 、 1137 Waiting Area

Zone C : Corridor (B1063 、 B1015 、 B1013) 、 B1011 Air Lock 、 B1010 Parking L0t Foyer

Zone D : Corridor (1053 、 1100) 、 1062 Dressing Room -01 、 1093 Waiting Area

Zone E : Public Toilet (1138 、 1139) 、 Corridor (1225 、 1109)

Zone X : 1124 Dressing Room -08 、 1126 Dressing Room -09

Zone Y : 1128 Dressing Room -10 、 1130 Dressing Room -11

Zone Z : 1132 Dressing Room -12 、 1134 Dressing Room -13

3-10 Projector

| Name of Item | Quantity | Brand and Model | Paid Item |
|-----------------------------|----------|--|-----------|
| 20000 Ansi Projector | 2 | Digital Projection Titan Super Quad 1080p 3D | * |
| 0.67:1 fixed HB Lens | 2 | 105-607 1.1m-10m | |
| 1.87-2.56:1 zoom HB Lens | 2 | 105-611 4m-24m | |
| 2.56-4.16:1 zoom HB Lens | 2 | 105-612 9.1m-45m | |
| HD switching effect machine | 1 | Analogway ste100 | * |

※With projector scaffolding of back projection.

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

3-11 Projector connections

| Video & Computer | | | Communication & Control | | |
|-------------------|----------------|----------|-------------------------|-------------------|----------|
| Type | Connector | Quantity | Type | Connector | Quantity |
| Qty DVI-D / DVI-A | DVI-I | 1 | 3D Sync Out | BNC | 1 |
| HDMI 1.3 | HDMI | 1 | 3D Sync In | BNC | 1 |
| 3G-SDI | BNC | 1 | LAN | RJ45 | 1 |
| VGA/ Analog RGB | 15-pin D-Sub | 1 | RS232 | 9-pin D Sub | 1 |
| Component Video | 4 x BNC | 1 | Wired Remote In | 3.5mm Stereo Jack | 1 |
| S-Video | 4-pin Mini DIN | 1 | Wired Remote Out | 3.5mm Stereo Jack | 1 |
| Composite Video | RCA | 1 | Update Port | RJ45 | 1 |
| Composite Video | BNC | 1 | Service Port | USB Type B | 1 |

3-12 Surtitle

| Name of Item | Quantity | Brand and Model | Paid Item |
|-----------------------------|------------------------|---|-----------|
| LED Subtitle display screen | 1 / 12 pieces in total | 1. 12 Panasonic (TH-55LFV70W) 、 2 Laptop 、 1 Switcher 2. Include installation 3. After second performance will discount 50% 4. Shared with Playhouse | * |

Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.

4 Backstage

4-1 Dressing Room and Company office

| No. | Floor | Room No. | Name | Capacity | Notes |
|-----|-------|----------|-------------------|------------------|---|
| 1 | 1 | 1062 | Dressing room 01 | 7 | Includes mirror, table and chair, toilet and shower. |
| 3 | | 1112 | Dressing room 02 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 4 | | 1114 | Dressing room 03 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 5 | | 1116 | Dressing room 04 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 6 | | 1118 | Dressing room 05 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 7 | | 1120 | Dressing room 06 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 8 | | 1122 | Dressing room 07 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 9 | | 1124 | Dressing room 08 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 10 | | 1126 | Dressing room 09 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 11 | | 1128 | Dressing room 10 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 12 | | 1130 | Dressing room 11 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 13 | | 1132 | Dressing room 12 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 14 | | 1134 | Dressing room 13 | 3 | Includes mirror, table,sofa and chairs, toilet and shower |
| 15 | | 1162 | Company office 01 | 15 | Includes table and chairs. |
| 16 | | 1166 | Company office 02 | 15 | Includes table and chairs. |
| 17 | | B1 | B1065 | Dressing room 14 | 16 |
| 18 | B1068 | | Dressing room 15 | 8 | Includes mirror, table and chairs, toilet and shower |
| 19 | B1070 | | Dressing room16 | 3 | Includes mirror, table and chairs, toilet and shower |
| 20 | B1074 | | Dressing room 17 | 32 | Includes mirror, table and chairs, toilet and shower |
| 21 | B1089 | | Dressing room 18 | 28 | Includes mirror, table and chairs, toilet and shower |
| 22 | B1092 | | Dressing room 19 | 12 | Includes mirror, table and chairs, toilet and shower |
| 23 | B1094 | | Dressing room 20 | 30 | Includes mirror, table and chairs, toilet and shower |
| 24 | B1098 | | Dressing room 21 | 21 | Includes mirror, table and chairs, toilet and shower |

4-2 Orchestra Facilities

| No. | Item | Quantity | Notes |
|-----|---------------------------------------|----------|--|
| 1 | Chair | 60 | |
| 2 | Ensemble stool | 10 | * |
| 3 | Conductor' s chair | 1 | |
| 4 | Music stand | 60 | |
| 5 | Music stand light | 80 | * White light, two brightness mode |
| 6 | Conductor' s podium(single layer) | 1 | WENGER L 120cm x W 115cm x H 25cm |
| 7 | Conductor' s stand | 1 | * WENGER Desk is 0.69(w)x0.51(d)m Desk height is adjustable from 0.76-1.2m |
| 8 | Percussion table stand | 3 | * |
| 9 | Endpin stopper | 5 | * |
| 10 | Acoustic shield | 10 | * |
| 11 | Music stand Tray | 10 | * |
| 12 | Solo Musician' s PODIUM 130*60*16(cm) | 2 | * |
| | Solo Musician' s PODIUM 100*60*16(cm) | 10 | * |
| | Solo Musician' s PODIUM 130*60*30(cm) | 2 | * |
| | Solo Musician' s PODIUM 100*60*30(cm) | 8 | * |

Items with * mark are shared with Playhouse

4-3 Pianos (shared between four theatres)

| No. | Item | Brand | Model Number | Quantity | Paid Item |
|-----|--------------------------|-----------------|-------------------------|----------|-----------|
| 1 | Model-D Concert grand | Steinway & Sons | D-274 | 3 | * |
| 2 | Concert grand | FAZIOLI | F308 | 1 | * |
| 3 | Grand Piano | YAMAHA | C7XPE | 1 | * |
| 4 | Grand Piano | KAWAI | SK-6L | 1 | * |
| 5 | Celesta | Schiendmayer | 5 ½ Octave Studio model | 1 | * |
| 6 | Harpsichord | J.C.NEUPERT | Hemsch | 1 | * |

*Items with * mark are paid items. Please refer to the rate tables of National Kaohsiung Center for the Arts.*

Important: *Pianos shared with four venues, booking in advance is required.*

WeiWuYing's contract-signed piano technician must tune all pianos before performance. (Piano hire fees do not include tuning costs)

4-4 Loading Dock / Scenery Shipping Path / Loading Flow

4-4-1 West Dock

Opera House and Playhouse use the West Dock for loading and unloading. The dock is equipped with three hydraulic dock leveler that can be adjusted according to the required height.

Dock Dimension

- Big loading dock: 7.25m (width) x 4.3m (height)
- Small loading dock: 3.5m (width) x 4.3m (height)
- Loading clearance: 4.3m height from floor to top (Truck height limit 4.2m)
3.8m height from dock to grid area
- Stage entrance and exit: minimum 4m (width) x 3.4m (height)
- Height from dock to floor: 0.98m

4-4-2 Handling equipment

- 2.5mt Electric Forklift x1
- 1.5mt Stand-Up Automatic Electric Forklift x1
- 3mt Manual Hydraulic Pallet Jack x2

East Dock Handling equipment

- The East Dock equipment is mainly used by Recital Hall and Concert Hall. In need, please requests in advance.
- 1.5mt Stand-Up Automatic Electric Forklift x1
 - 3mt Manual Hydraulic Pallet Jack x1

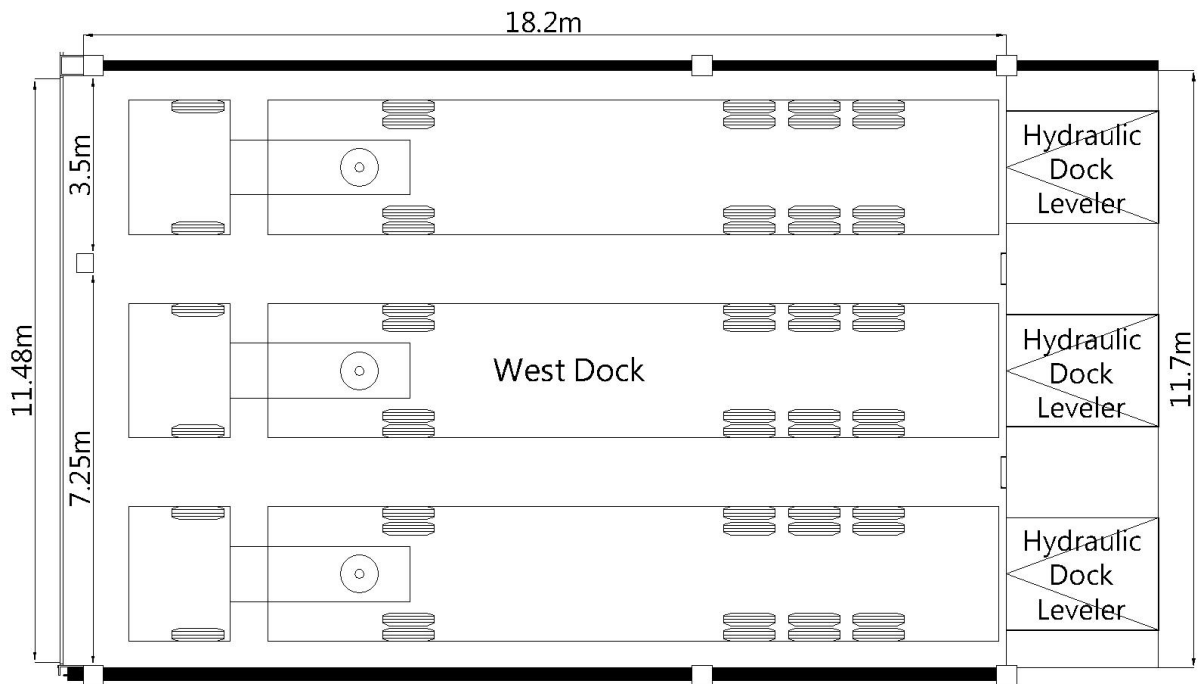


Figure 4.1 - West Loading Dock Plan

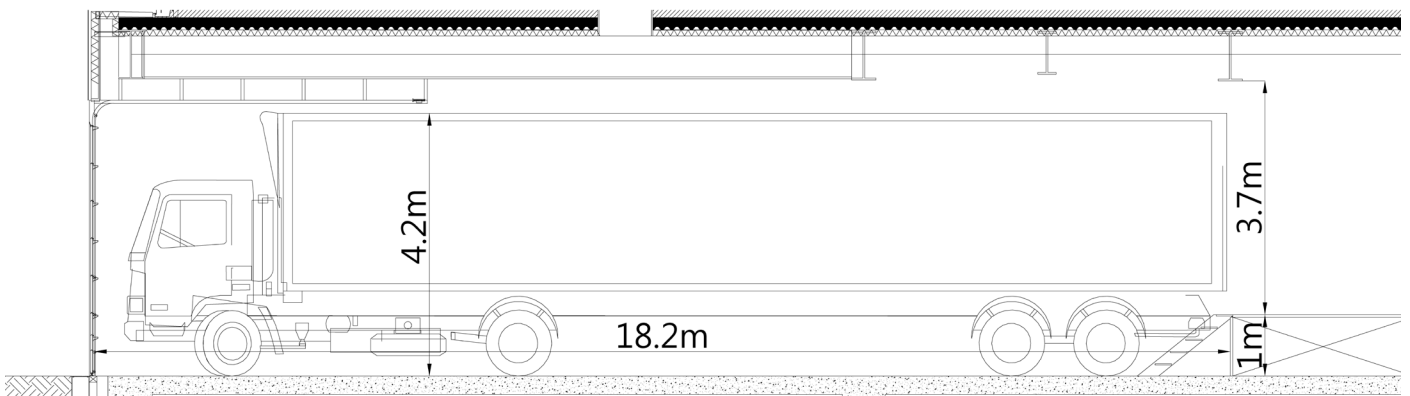


Figure 4.2 - West Loading Dock Section

4-4-3 Scenery Shipping Path / Loading Flow

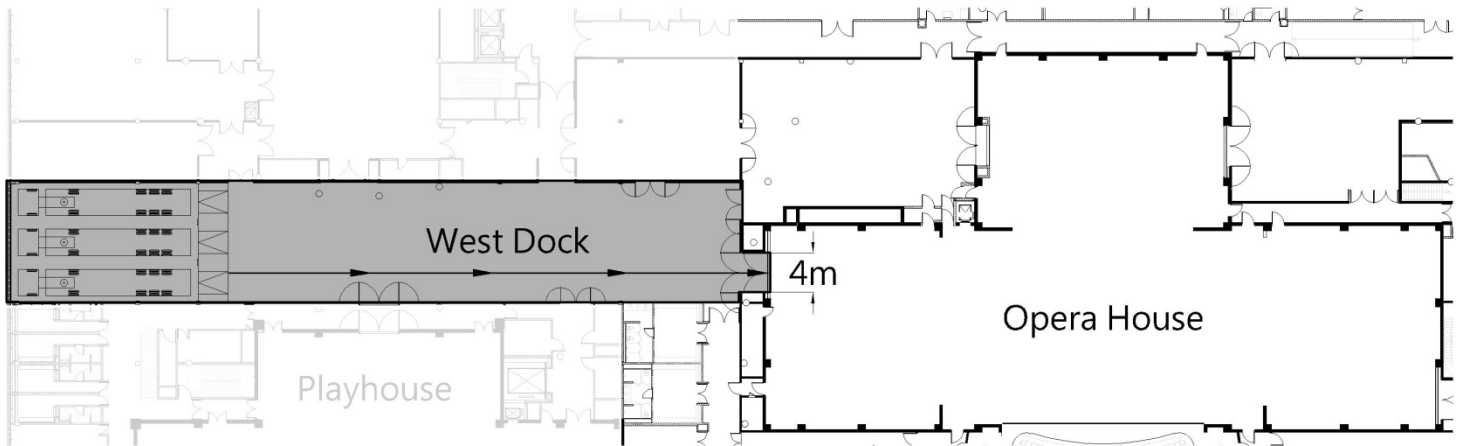


Figure 4.3- Loading Flow

4-4-4 Hydraulic Dock Leveler

Capacity: 22.6mt

Area: 198cm (width) x 221.9cm (length)

Elevation: +/- 30.5cm

Quantity: 3

4-5 Other Facilities

4-5-1 Rehearsal Rooms

Opera House provide a dedicated rehearsal studio connecting with rear stage. There are also 12 different function and accommodated rehearsal studios, these available for hire between four major theatres .Requests should be discussed well in advance to determine availability. The hire fees please refer to the rate tables of National Kaohsiung Center for the Arts.

| Room No. | Name | Dimension (Length x Width x Height / m) | Notes |
|----------|---|--|---|
| 1171 | Rehearsal Studio-01 (Opera House rehearsal room) | 16.4x12.3x10.4 Subsidiary space 6.9x5.3x3 | 1. Grand Piano 、Wooden floor covered black color dance floor 、Wall mount glassless mirrors x 1 side 2. Capacity : 110 |
| 1182 | Rehearsal Studio-02 | 11.4x10.8x3.8 | 1. Wooden floor covered gray color dance floor 、Sound absorption wall x 2 side 、Wall mount glassless mirrors x 2 side 2. Capacity : 50 |
| 1184 | Rehearsal Studio-03 | 11.1x10.8x4 | 1. Grand Piano 、Wooden floor covered gray color dance floor 、Sound absorption wall x 2 side 、Wall mount glassless mirrors x 2 side 2. Capacity : 50 |
| 1186 | Rehearsal Studio-04 | 17.5x12.1x3.9 Subsidiary space 6.6×8.8 ×3 | 1. Grand Piano 、Wooden floor ,black color dance floor 、 Wall mount glassless mirrors x 2 side 、Fixed Ballet barre on the single sided wall mirror x 2 2. Capacity : 110 Rehearsal Studio-04 use only Green Room-01(With dressing room) |
| 1192 | Rehearsal Studio-05 | 19.3x12.2x3.9 Subsidiary space 6.6×8.8 ×3 | 1. Grand Piano 、Wooden floor , black color dance floor 、Wall mount glassless mirrors x 2 side 、Fixed Ballet barre on the single sided wall mirror x 2 2. Capacity : 110 Rehearsal Studio-05 use only Green Room-02(With dressing room) |
| B1111 | Rehearsal Studio-06 | 8x7.4x2.3 | 1. Upright piano ,Chair , Music stand 、Wooden floor 、Sound absorption wall 2. Capacity : 25 |
| B1112 | Rehearsal Studio-07 | 5.2x4.4x2.3 | 1 Chair , Music stand 、Wooden floor 、Sound absorption wall 2 Capacity : 10 |
| B1113 | Rehearsal Studio-08 | 7.2x5x2.7 | 1. Chair , Music stand 、Wooden floor 、Sound absorption wall 2. Capacity : 15 |
| B1114 | Rehearsal Studio-09 | 5.2x3.7x2.7 | 1. Chair , Music stand 、Wooden floor 、Sound absorption wall 2. Capacity : 10 |
| B1115 | Rehearsal Studio-10 | 5.2x4.1x2.7 | 1. Chair , Music stand 、Wooden floor 、Sound absorption wall 2. Capacity : 10 |
| B1116 | Rehearsal Studio-11 | 5.2 x 4.1 x 2.7 | 1. Chair , Music stand 、Wooden floor 、Sound absorption wall 2. Capacity : 10 |
| B313 | Orchestra Studio | 15.9x9.9x8.8 | 1. Grand Piano ,Chair , Ensemble stool 、Wooden floor 、Sound absorption curtain 2. Capacity : 80 |
| B304 | Chorus Rehearsal Room | 18.7x14.3x7.8 | 1. fixed auditorium < 84seats > 、Grand Piano ,Chair , Ensemble stool 、Wooden floor 、Sound absorption curtain 2. Capacity : 200 |

4-5-2 Carpentry Shop / Metal Shop / Costume Shop / Laundry Room

National Kaohsiung Center for the Arts is equipped with basic production facilities, include Carpentry Shop, Costume Shop, and laundry rooms. The hire fees please refer to the rate tables of National Kaohsiung Center for the Arts.

| Room No. | Name | Dimension (Length x Width x Height / m) | Notes |
|----------|-----------------|--|---|
| 1002 | Carpentry Shop | 11.9×19.7×3 | Basic wood crafts and electrical tools |
| 1165 | Costume Shop-01 | 5.9×10.2×3 | Basic facilities for the maintenance of costume; Sewing machine, overlock machine and steam / iron equipment |
| 1181 | Costume Shop-02 | 5.8×11.8×3 | |
| 1163 | Laundry Room-01 | 5.8×4.9×3 | Washing machine, tumble dryers, sink and clothes folding table |
| B1019 | Laundry Room-02 | 6×8.2×3 | |