TECHNICAL SPECIFICATIONS FOR THE FRANK VENABLES THEATRE

1. Seating Capacity

The theatre has a total seating capacity of 406, comprised of 373 fixed, high-back and upholstered seats (Rows A through K), 10 positions for wheelchairs and accompanying guests (Row L) plus room for 23 upholstered, portable chairs at the back of the house (Row M). Row M is only set up for anticipated sell-out events.
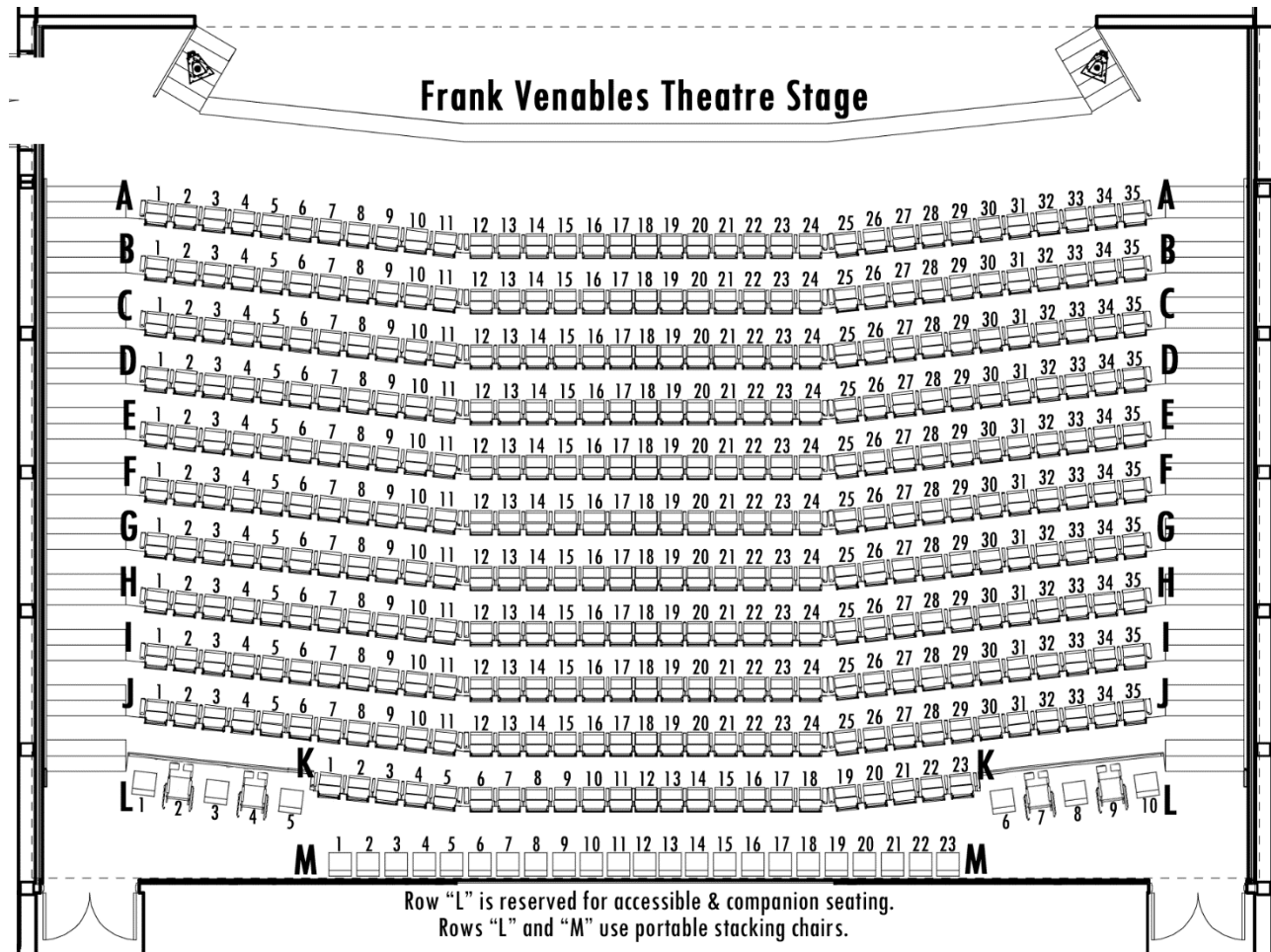

Figure 1 – Seating plan

2. Stage Dimensions – **Figure 2** shows all curtain offsets and stage dimensions.

2.1 Stage Dimensions

- Proscenium opening is 45'-10" (14m) wide.
- 42'-11"' (13.1m) from the back wall to the front of the apron.
- 29'-5" (8.8m) from the back wall to front of the proscenium.
- Note: An automatic fire curtain is located immediately behind the proscenium. **This area must be kept clear of all on-stage set pieces in case curtain is deployed by fire alarm system or power failure.**
- Main curtain is 25'-3" (7.7m) from the back wall.
- Mid traveller is 15'-11"' (4.85m) from the back wall.
- Back traveller is 3'-11" (1.19m) from back wall.

- Back wall is painted white for use as a projection screen and cyclorama lighting screen. **No set pieces, props or other equipment is to be placed against or leaned onto the back wall at any time.**
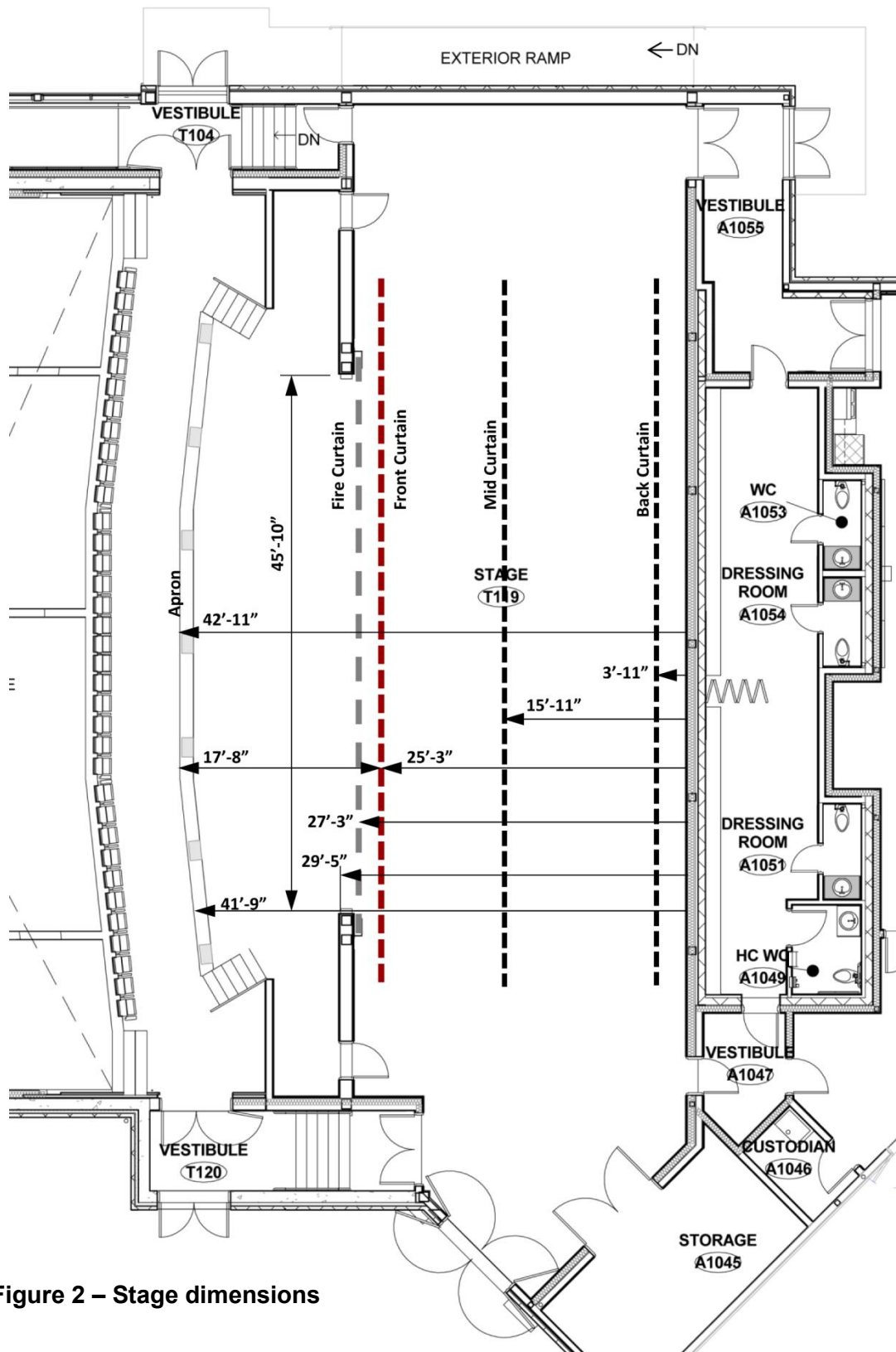

Figure 2 – Stage dimensions

2.2   Stage Floor

The sprung stage floor is sanded oak plank, stained black.

- **Nailing or screwing into the floor is not permitted.**
- **Tap dance or similar shoes may not be used directly on the stage floor.**
- **Use of duct tape on the stage floor is not permitted. Any other tape use must be approved in advance by Theatre Manager.**
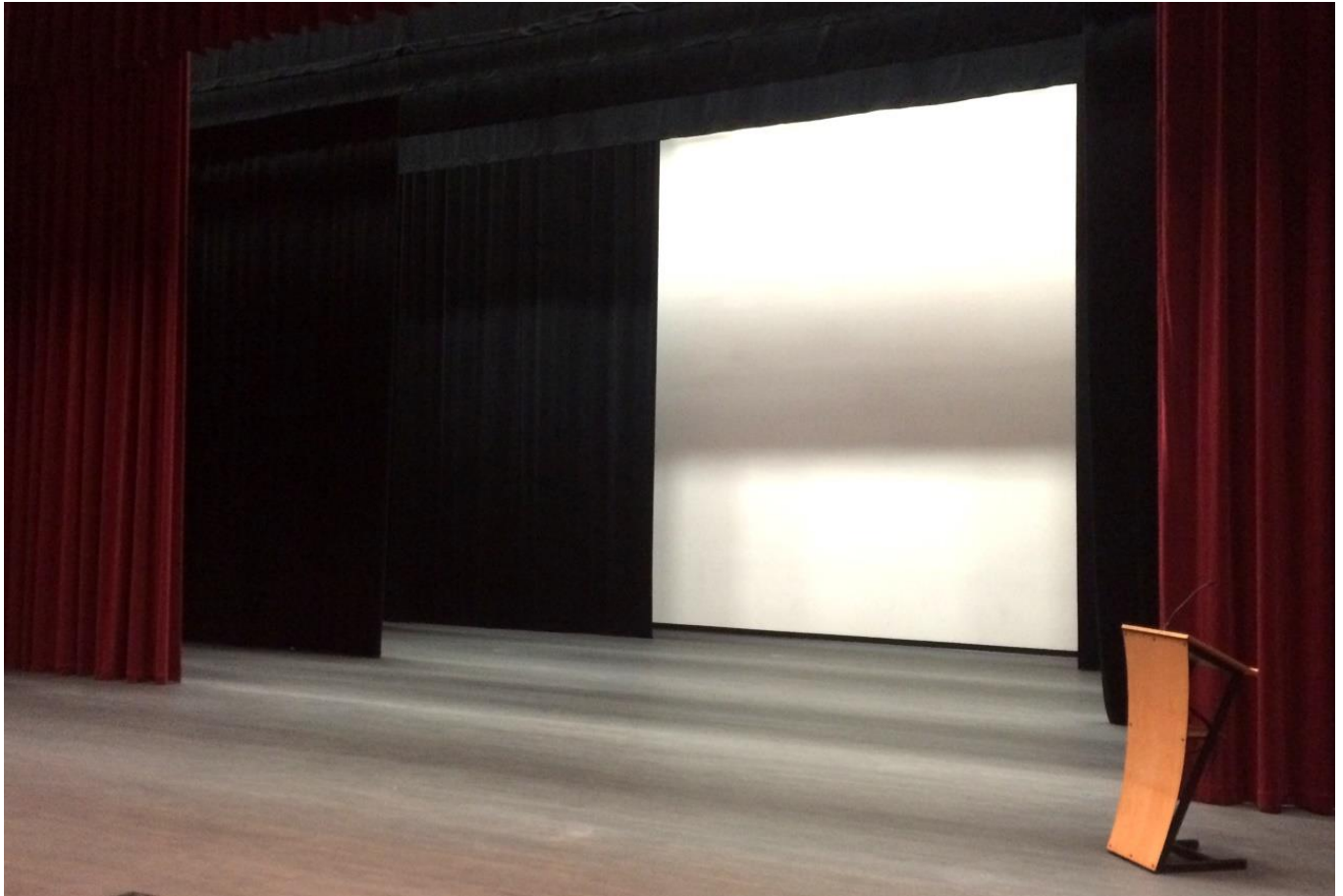

Figure 3 – Stage showing movable curtains and back wall

2.3   Dance Floor

The theatre uses Marley Adagio Tour dance floor material for all ballet, tap and other percussive dance performances. A separate fee in addition to normal rental charges shall be levied for use and installation of this flooring by theatre staff. Flooring material is black only.

2.4   Loading Dock

There is one loading dock located on the north-east corner of the building. The doors load directly onto the stage at upstage left.

2.5   Additional Stage Equipment

- Yamaha G3 grand piano – additional rental charges apply to both piano use and tunings
- 6 Wenger musician chairs
- 4 Wenger ensemble stools; height adjustable
- 8 Manhasset music stands
- Mid-Atlantic, 48" wide, flat table, multi-media podium (black)

- o With VGA, HDMI and XLR microphone inputs
    - ▪ Microphone input has 48V phantom power on (cannot be turned off)
  - o Connections patch to Barco video projector and Crestron sound system
  - o Suitable for on-stage use only
- Custom-built, light birch and black steel speaker's lectern 24"W X 18"D top
  - o With MX412C lectern microphone on sloped table
  - o Small, flat shelf under 15"W X 11"D
  - o Can be used on stage or in lobby
- 3 portable stage risers (1' High X 6' Wide X 8' Long) with front skirting and 2 portable steps
- Folding tables, plastic
  - o 2 x 30" x 72"
  - o 1 x 30" x 96"

3. Dressing Room/Backstage

The dressing room (52'L X 9'W) is suitable for up to 18 artists, complete with make-up desks and lighting:

- An accordion wall can be used to divide the area into two separate rooms
- Dressing room includes three private washrooms and one shower stall

Figure 4 – Dressing room

4. Control Room

There is an audio and lighting control room with sliding glass openings, located at the centre back of the theatre. Access to the control room is via stairs from the upper lobby or elevator from the main floor.

- If required, touring audio consoles may be set up in the house, immediately in front of the control room.
  - o Access doors are provided for power and audio cable connections into the control room.
- The control room is served by audio feed of house program for when glass openings are closed.

Figure 5 – Control Room

5. Lighting System

5.1 Lighting Console

- ETC ION1000 Lighting Control Console (upgraded to Windows® 7 Embedded Standard, which includes a new motherboard, solid state drive and output connections)
  - ETC FADW 2x20 Fader Wing
  - 2 x touch screen monitors, mouse and keyboard
  - iPad with *iRFR-BTS v.1.2.23* app for remote control of lighting console.

5.2 Fixtures

- The following LED lighting fixtures can be adjusted for colour and intensity from the lighting control console:
  - 24 x Selador Vivid 11" LED Cyc Lighting
  - 15 x Selador Vivid 11" LED Top/Back Lighting
  - 62 x ETC S4 Lustr+ LED
  - 12 x ETC S4 LED Series 2
  - Lenses and lens tubes for S4 fixtures
    - 20 x 15°-30° zoom lens assembly
    - 10 x 19° lens tube
    - 4 x 26° lens tube
    - 46 x 36° lens tube
    - 10 x 50° lens tube
- 4 x Mac 350 Entour moving-head spot lights
  - Colour wheel, gobos, intensity, position, iris and edge can be controlled from the lighting control console
- 2 x LDR Canto 1200 MSD/MSR follow spots are located above the control room on the back catwalk
- 1 x Chauvet Hurricane 1800 Flex fog machine

5.3 Lighting Booms

- 6 x 7-feet tall plus 2x 8-feet tall lighting booms on 50-pound, cast iron Altman bases
  - Can be used in stage wings or on lobby mezzanine for lobby events
- 4x floor-level, plywood lighting stands

5.4 Miscellaneous Lighting System Comments

- The standard house lighting plot with on-stage side lighting (channels 61 through 72) is shown in **Figure 6**.
  - Fixtures above the house (**rows FOH 1 through FOH 4 in Figure 6**) are all accessible from catwalk system (**Figure 7**) for aim, zoom and focus.
  - Access to adjustable lighting above the stage (rows LX2 and LX4 in Figure 5) is by use of a Genie AWP-30S aerial work platform, permanently stored back-stage.
  - Users wishing to adjust lighting above the stage must make arrangements to have this work done by a technician approved by the theatre manager.
- The standard house lighting plot includes a pre-set general wash of the stage.
  - This wash is accomplished using the fixtures displaying 50 and 75 intensity in **Figure 6**.
  - These fixtures are physically labelled with yellow stickers showing their channel numbers
  - Any changes to the stage wash fixtures on LX 2, LX 4 or FOH 1 through FOH 5 must be coordinated with the theatre manager in advance and must be fully restored. A venue restoration fee may be included in the final invoice for the purpose of restoring the theatre to its default technical specifications unless all restoration is competed by the user group making the changes.
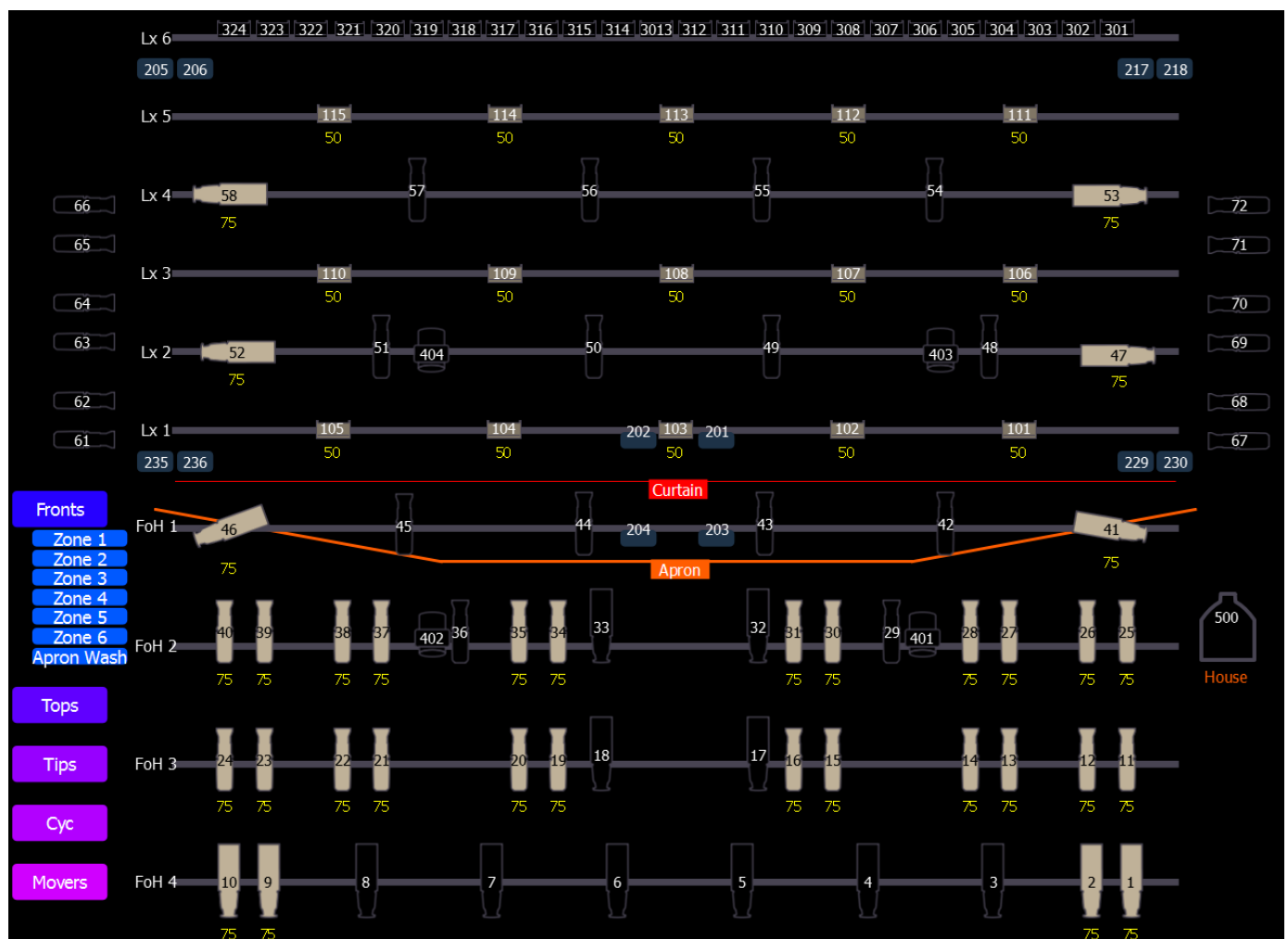

Figure 6 – Standard house lighting plot

- No changes are allowed to the top lights mounted on rows LX1, LX3 and LX5, or to the cyc lights mounted on row LX6. LED fixtures must not be unplugged and relocated from their standard location without prior permission.
- Fixtures for Channels 61 through 76 are stored in the backstage equipment room and are connected using the DMX gateways that they are stored with, which is programmed to Universe 6
- 8 x floor level and 4 x overhead lighting circuits are patched for practical or conventional lighting

○ Controlled from the lighting control console (can be operated in dimmable or relay mode)
○ Shown in **Figure 6** as Channels 201, 202, 203, 204, 205, 206, 217, 218, 229, 230, 235 and 236

Figure 7 – Catwalk access to lighting fixtures above the seating area

6. Main Audio System

6.1 Mixer

- Yamaha CL1 digital mixing console using Dante network to input and output devices.
- Inputs and outputs located in control room and at downstage left and downstage right
    ○ Rio 1608 in control room
    ○ Rio 3224 at DSL
    ○ Ro 8 at DSR
    ○ Ri 8 at DSR
- iPad with *Stagemix CL v.5* app for remote control of mixing console

6.2 Fixed Speakers

- Left & Right Array: Meyer UPQ-1P
- Centre Array: 2 x Meyer UPJ-1P
- Subs (flown above the lip of the stage at catwalk level): 2 x Meyer 600-HP
- Stage apron: 7 x Meyer MM-4XP lip fill speakers

6.3 Hearing Assistance

- Audio induction loops are installed in the main theatre seating area
- These work directly with T-Loop option installed in most hearing aids
- The drivers for these loops are installed in the main audio rack in the control room
- Signal source for the induction loop drivers is supplied from the Matrix 3 output on the Yamaha mixer
- For amplified shows, send a feed of Main Left and Main Right to Matrix 3 for the hearing assistance loops
- For acoustic shows, send a feed from the shotgun condenser mics suspended over the stage apron to Matrix 3. These mics are patched to input channels 44 and 45 on the Yamaha mixer.

6.4   Stage Monitors

- 6 x QSC KW112 monitors
- 2 x Fender tripod speaker stands

6.5   Microphones and Inputs

- 1 x Shure MX412C lectern microphone
- 6 x Shure Beta 58A microphones
- 2 x Shure SM94 microphones
- 5 x Sennheiser EW100G3 wireless receivers can be used with any 5 of the following:
  - ○ 5 x belt-clip transmitters with head-worn or lapel-worn microphones (5 each)
  - ○ 3 x SKM-100-835-G3 wireless hand-held microphones
  - ○ 2 x SKM-100-845-G3 wireless hand-held microphones
  - ○ User groups are responsible for providing their own supply of AA alkaline batteries for use in wireless microphone transmitters.
- Shure drum kit microphones:
  - ○ 4 x Shure SM57
  - ○ 1 x Shure Beta 52A
  - ○ Miscellaneous clamps and mounting clips
- 2 x Sennheiser e609 dynamic instrument microphones
- 2 x pairs C-ducer contact condenser microphone straps
- 2 x DPA 4017B shotgun condenser microphones suspended above stage apron for hearing assistance loops
- 6 x passive direct injection boxes ¼" TS input to XLR output with ground lift and 0/-20/-40dB attenuation
- 1 x DSAN LSP-1 stereo 3.5mm male to mono 3-pin XLR male passive adapter, with ground lift.
- 1 x RDL EZ-HK1 stereo passive hum killer with 3.5mm female or RCA inputs and outputs, with ground lift.
- 1 x Samson Q6 microphone with slide switch for talkback and announcements from the control room.
- 10 x vocal mic stands with boom on tripod bases
- 4 x short mic stands with boom and tripod bases for instrument pick-up
- 6 x straight mic stands on weighted round bases
- 6 x table-top mic stands
- 1 x 100' 16-input/4-output audio snake
- 1 x 50' 8-input audio snake
- Extensive assortment of 15', 25' and 50' XLR audio cables
- 3 x RoadHog ¼" TS instrument cable, 25 feet long
- 3 x Yorkville ¼" TS instrument cable, 25 feet long

7. Audio-Visual Systems

This system allows simple A-V presentations to be made using the main fixed speakers, and may be used with or independent of the Yamaha CL1 mixing console and the Yamaha input boxes in the DSL and DSR audio racks:

- Barco RLM-W12 Video Projector w/ 2.17-2.9:1 Lens
  - ○ Mounted on ceiling of control room
  - ○ Projects onto white, back-stage wall
- Audio-Video inputs include the following options:
  - ○ Tascam CD200iB CD audio player with auxiliary 3.5mm stereo input jack located on sources rack in control room
  - ○ Tascam BDR2000 BLURAY video player located on sources rack in control room
  - ○ External source (e.g. laptop computer) connection into sources rack in control room
  - ○ External source (e.g. laptop computer) connection and microphone input into multi-media podium on stage
  - ○ External source (e.g. laptop computer) connection into stage manager's rack that can be connected in the control room, downstage left or downstage right.

- A Tascam SSR200 digital recorder is also available in the sources rack in the control room, for recording stereo audio program to USB memory stick, SecureDigital or, CompactFlash media.

- House audio program is captured by a single condenser microphone suspended above the centre of the house. This audio feed can be sent to any or all of the following locations:
  - Backstage dressing room
  - Control room for use when glass openings are closed
  - Distributed sound system in the main lobby and lobby mezzanine
- Live video (low resolution) of the stage area is captured by a single security camera mounted outside the control room. This video feed can be viewed in the following locations:
  - Main lobby area on fixed monitors located above the concession serving area.
  - Lobby mezzanine area on fixed monitors located above the main entry doors to the house.
  - Using a laptop computer with free "Digital Watchdog" client software (version 1.5) connected by Cat5e cable at upstage left.

8. Acoustics

The acoustic characteristics of the theatre can be adjusted by manually opening or closing acoustic curtains (**Figure 8**) located along the full length of each catwalk, prior to your show.
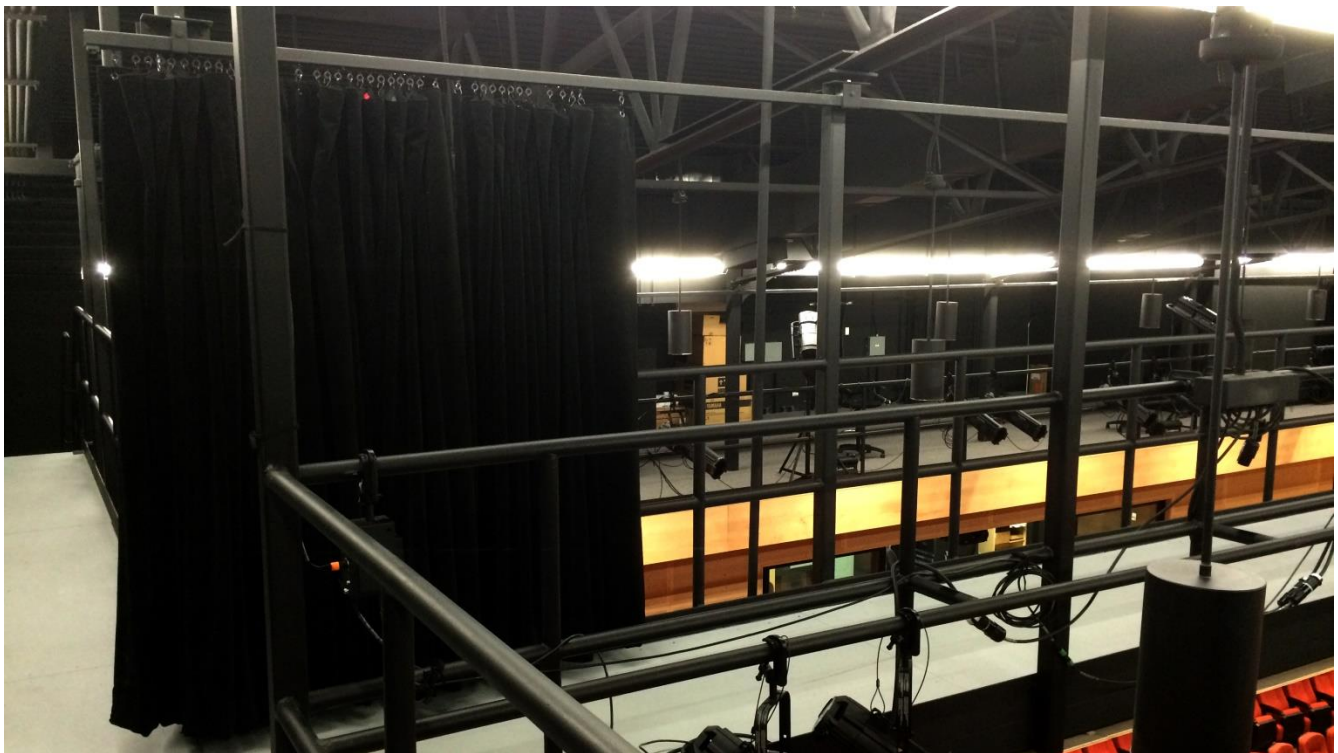

Figure 8 – Acoustic curtains in open position

9. Communication

9.1 Clearcom Communication Equipment

- Clearcom IF4W4 – four-channel wired paging Interface
- Channel A and Channel B communication outlets in following locations:
  - Control room at sound console and at light console
  - On catwalk at follow-spot stations
  - In seating area, centre of row E

- On stage at all four corners
  - In backstage dressing room
  - In manager's office off the main lobby
- Clearcom RM-704 4-channel remote station (in portable stage manager's rack)
  - With 15' connection cord plus 25' extension cord to DSL or DSR input port
  - With up to 50' of XLR 4-conductor headset extension cable
  - With Clearcom GM-9 gooseneck mic for paging
  - Channel A and Channel B communications to locations listed above
  - Channel C page to backstage dressing room
  - Channel D page to lobby
- Clearcom KB-702 2-Channel Remote Speaker Station with push-to-talk handset in dressing room
- 10 x Clearcom RS-701 1-channel belt packs
- 2 x RS-702 2-channel belt packs
- 11 x Clearcom CC-95 headsets
- 2 x Clearcom CC-26K headsets (reserved for control room use)

9.2   Other Communication Equipment

- 3 x Eartec wireless communication headsets plus Eartec-Clearcom Interface hub for backstage use

10.   Lobby Events

User groups using the lobby only, will have access to the following equipment:

- Petrof baby-grand piano
- Custom-built, light birch and black steel speaker's lectern
  - With MX412C lectern microphone on sloped table
  - Small, flat shelf under
  - Can be used on stage or in lobby
- Bose L1 Compact, portable public address system can be set up where needed
  - Line level input using 3.5mm stereo or RCA connectors for use with user group's cell phone, mp3 player, laptop or cd player
  - ¼" TS instrument input
  - Microphone input using XLR connection (no phantom power on Bose L1)
- ART phantom power supply with AC adaptor and XLR input/output for use with MX412C podium microphone on lectern.
- Stage monitors and stands from backstage can also be set up in the Lobby for sound programs needing more power than can be provided by the Bose L1.
- The lobby also has a 70-volt distributed sound system that can be used with the following sources:
  - Live house program audio from microphone suspended above house audience area
  - Paging from portable stage manager's rack
  - Background music and paging from the control room, utilizing the matrix 4 output from the Yamaha CL1 mixing console
- Lighting booms and LED fixtures can be erected on the mezzanine level of the lobby to illuminate a performance on the lower lobby level, patched into the Ion lighting console and operated using the iPad remote control.