**THE LIED CENTER**

The Lied Center of Kansas is a major university presenter engaging audiences and artists through presentation, education, research, and service. Opened in 1993, the Lied Center offers a variety of performing arts events and special events. The Lied Center is also home for performances by the KU School of Music and Department of Dance, and is the location for major campus and community events.

**GPS COORDINATES** 38°57'18"N, 95°15'44"W

**DIRECTIONS** From I-70.
- Exit I-70 at West Lawrence, Exit No. 202. Proceed SOUTH onto South McDonald Drive.
- Continue SOUTH under overpass and merge onto Iowa St.
- Continue SOUTH on Iowa Street to 15th St./Bob Billings Pkwy.
- Turn WEST (right) onto 15th St./Bob Billings Pkwy.
- Turn SOUTH (left at first light) onto Crestline Drive.
- Turn EAST (first left at top of hill) onto Petefish Drive.
- The Lied Center is directly ahead. Turn left into the lot just past the Dole Institute and follow service entrance signs to the loading dock/stage door on the North side of the building.

**LOADING** Level 30’ push to stage.

**Loading Docks (2)** 4’h
**Dock Doors** 8’w x 10’h
**Delivery Dock** 3’h
**Stage Door** Adjacent to loading dock on North side of building.

**PARKING** (2) tractor-trailers and (1) tour bus or delivery van can stay at loading docks. No permits required. Additional on-site parking is available for trucks, busses, and private vehicles.

**SHORE POWER** Available. See ELECTRICAL SERVICES.
HOUSE

SEATING Totals (include wheel chair spaces).
- Orchestra Level 1102 (25)
- Balcony I Level 510 (12)
- Balcony II Level 334 (10)
- Pit Seats (removable) 74

Maximum Seating 2020
Maximum Capacity 2020

Typical Seat Kills
- House Mix Position 29
- Orchestra Left, Row N 5

Typical Total Seating 1912
With typical seat kills and no pit seating.

STAGE DIMENSIONS

Proscenium Width 56'-0"
Proscenium Height 28'-0"
Stage Width 122'-8"
Plaster Line to Back Wall 48'-8"
Plaster Line to DS Apron Edge 7'-2"
Plaster Line to DS Lift Edge 20'-8"
Stage Height from Floor 3'-6" at front aisle.

STAGE LIFT
Galá Spiralift - variable elevation from stage level (0'-0") to orchestra pit level (-8'-0"). Takes 45 seconds to travel 8' vertical. Stage lift can be converted to "pit seating" with addition of (5) seating wagons and (74) plush velour theater seats.

STAGE FLOOR
Resilient, smooth and level.

Floor Construction From top down.
- 1/8" black battleship linoleum.
- 3/4" under laying (plywood).
- 1" sheathing (plywood).
- 1" x 2" furring on 12" centers.
- 3/4" sheathing (plywood).
- 1" x 2" furring on 12" centers, offset 6" from above furring.
- Cement slab.
RIGGING

GRID  +69' above stage floor.  3" x  1½" steel channel on 5½" centers.  2½" openings between channels.  Grid extends over entire stage area from plaster line to back wall.

CHAIN MOTOR RIGGING
On Stage  Motor points through grid are available in most location up stage of plaster line.  Grid pipes available.
Front of House  Limited to (4) pre-rigged points through architectural fascia DS of proscenium.  Points are beam clamped to high steel with wire rope drops to catwalk postions for quick point installation.  Loads approved by structural engineer:
   Lighting  4000 lbs on two (2) points.  2000 lb max. per point.  
   Audio  8000 lbs on two (2) points.  4000 lb max. per point.  
Please consult with technical staff for your specific needs.

COUNTERWEIGHT RIGGING  Single purchase T-track counterweight system.  Sheaves overhung 70’ above grid.  (8) loft lines per set.
Working Line Sets  43  See LINESET SCHEDULE.
Arbor Capacity  1,200 lbs. each.
Batten Lengths
   Line Sets Nos.  1 - 3  76’
   Line Sets Nos.  4-30  86’
   Line Sets Nos. 31-52  84’
Batten High Trim  67’
Loading Bridge  +57’, stage right.
Counterweight  46,000 lbs. Available.  Full brick = 43 lbs.

Counterweight Locking Rails
   Primary Locking Rail  Stage level, stage right.
   Secondary Locking Rail  +37’ bridge, stage right.
Capstan Winch (“Mule”)  Located in arbor pit.

PIN RAILS  Located on SL and SR bridges, +37’ level.  Tube steel pin rails with welded steel pins on 12’ centers run from down state to up stage.  Facilitate cable pick-ups and spotting lines.

Spotting Line Hardware  Limited amount of spotting sheaves, j-bolts, and hand lines are available.

Rigging for Super Title Screen  20’ batten spot rigged on (3) hemp lines with clew located just down stage of main curtain.  Suitable for light rigging such as super title screen, small projection screen or banner.

HOUSE DRAPERY

PERMANENT DRAPERY and EQUIPMENT
Main Curtain/DS Legs  Manual fly or travel.  Midnight blue 25 oz. lined velour with 50% fullness.
   (1) Pair  42’ w x 31’ h each half.
Main Curtain/Grand Teaser  Motorized fly, variable speed.  Midnight blue, 25 oz. lined velour with 50% fullness.  64’ w x 31’ h.
Front Projection Screen  Steel frame with matte white screen surface.  Permanently installed on line set 10.  55’ w x 20’ h.  36’ black border below screen.
Orchestra Shell Ceilings  (3) ceiling panels permanently installed on motorized line sets.  Panels tilt to vertical position and clear to 50’ above stage.

MOVABLE DRAPERY and EQUIPMENT
Borders  Black 25 oz velour, sewn flat with no fullness.
   (1)  86’ w x 16’ h.
   (4)  86’ w x 10’ h.
Legs  Black 25 oz velour, sewn flat with no fullness.
   (1) Pair  26’ w x 30’ h each, on traveler track.
   (4) Pair  15’ w x 30’ h each.
Traveler  Black 25 oz velour, 50% fullness.  40’ w x 30’ h each half.  Mounted on traveler track.
Blackout Drop  Black 25 oz velour.  Sewn flat without fullness.  65’ w x 30’ h.
Scrim  Black sharks tooth.  65’ w x 30’ h.
Rear Projection Cyclorama  Garriets “Opera-Cyc.” Off-white vinyl.  Also use as front or rear projection screen.  65’ w x 30’ h.
Sky Drop/Bounce  Natural muslin, horizontally seamed.  62’ w x 33’ h.
Small Projection Screen  Garriets “Opera-Cyc.” Off-white vinyl.  Front or rear projection.  20’ w x 16’ h.
LIGHTING EQUIPMENT

FRONT OF HOUSE INSTRUMENTS  See FRONT OF HOUSE LIGHT PLOT for types and locations. Instruments will not be moved for use on stage.

STAGE INSTRUMENTS  C-clamps, safety cables and color frames are available for all instruments. All connectors are 20 A, 2P+G stage pin.

( 4 ) 14° Ellipsoidal ETC Source4 575w
(16) 19° Ellipsoidal ETC Source4 575w
(12) 20° Ellipsoidal ColorTran 1000w
(42) 26° Ellipsoidal ETC Source4 575w
(1 ) 26° Ellipsoidal Strand SL 575w
(36) 30° Ellipsoidal ColorTran 1000w
(34) 36° Ellipsoidal ETC Source4 575w
(16) 36° Ellipsoidal Strand SL 575w
(24) 40° Ellipsoidal ETC Source 4 575w
(10) 50° Ellipsoidal ETC Source 4 575w
(1 ) 50° Ellipsoidal Strand SL 575w
(2 ) 90° Ellipsoidal Selecon 575w
(10) 6” Fresnel ColorTran 1000w
(24) 8” Fresnel ColorTran 2000w
(64) Source4 PAR ETC Source4 575w

( 7 ) Ovation B-1965FC LED Batten fixtures
7-cell RGBAL Chauvet 423w

(10) COLORado Batten 144 Tour LED Ground Row
3-cell RGBWA Chauvet 181w

ACCESSORIES
Pattern holders
Top hats
Irises
Side arms
Boom bases and pipes
Floor stands
(24) 8” Barn doors
(10) 6” Barn doors

FOLLOWSPOTS  (3 ) Strong Super Trouper LT 2kW. Located in Spot Booths 1 & 4 and Center projection booth

ATMOSPHERIC EFFECTS
(1 ) Reel EFX DF50 hazer.

ELECTRICAL SERVICES

LIGHTING POWER  Located stage left wall.

(3 ) 400A/leg, 120/208V, 3Ø, 5-wire, Cam-lock or tails

SOUND POWER  Located stage left or right.
Transformer isolated.

(1 ) 200A/leg, 120/208V, 3Ø, 5-wire, bare-lugs.

SHORE POWER SERVICES  Located at loading dock.

(2 ) 50A/leg, 120/208V, 1Ø, range plug.
SOUND

HOUSE SPEAKER SYSTEMS

Center Cluster System (mono): All JBL component system w/ sub. Mounted at C/L above proscenium

Main PA System (stereo)
(8) Meyer CQ2 self-powered, long throw, full-range loud speakers (15” + 4” compression driver)
(2) Meyer 650P self-powered subwoofer (2 x 18”)
System configuration is (2) CQ2s over (1) 650P ground-stacked with (2) CQ2s flown in proscenium per side.
Consult with technical staff for availability

Enhancement Systems
(4) Meyer UMP-1P self-powered near fill loud speakers.
Under balcony and box seating fills (delayed)

System Processing
(2) Dolby Lake 4 x 12 with wireless tablet PC control. All house zones available (cluster, stereo system, near fill, delay zones)

Assistive Listening System
Hearing Loop system, 1 channel.

House System Tie-In
(3) locations: house mix, stage left and stage right

MONTOR SPEAKERS
(4) EV SX-300 (12” + 1” horn, 2-way, wedge/pole mount)
(1) Galaxy Hotspot, full range monitor (low profile)
(2) Meyer UPJ-1P self-powered speakers
(4) JBL PRX815W (15”, 2-way full range monitor)

HOUSE MIXING AND PROCESSING

House Mix Position
Orchestra level. Not obstructed or under balcony. 21’ SR of center, 67’ from plaster line
12’ w x 6’ d (+3’ d seating overhang)

House Sound Console
Avid DShow Profile with mix rack. 48 x 32 x 8 ch insert. All comps, gates, EQs, reverb, delay, etc. are onboard.

Auxiliary Sound Console
Behringer X32, 32 channel

Playback and Recording
(4) Denon DV-D4000
(1) HHB CRD830

INTERCOM
Clear Com, (4) channels with patching matrix. Tie-in located stage right. Permanent stations located in all key positions. Single channel belt packs and headsets available

DRESSING ROOM PAGE
Available at stage manager’s desk or patchable. Pages all dressing rooms, and backstage areas

PROGRAM MONITOR
Audio program available to all dressing rooms and backstage areas, operator booths, offices and lobby areas. Individual volume controls in backstage and office areas

MICROPHONES

Wireless
(6) Sennheiser Evolution systems. Available mics:
(2) Countryman E6 headset
(4) Sennheiser MKE2 lavaliere
(6) Sennheiser EW500 hand held
(1) G2 835 cardioid capsule
(4) G3 945 hypercardioid capsule

Wired
(3) AKG C414
(4) AT 853
(3) AT 857Q unipoint
(2) C-ducer CRSE/8 contact mic
(3) Crown PCC160 pressure zone mic
(1) EV RE20
(4) Neuman KM184
(2) Sennheiser MD421
(2) Shure Beta52
(4) Shure Beta58
(10) Shure SM57
(8) Shure SM58
(1) Shure SM58 w/switch
(4) Shure SM81

Accessories
Direct boxes, microphone stands, boom arms
sub snakes, cables and adapters

VIDEO

PROJECTION

Projector
Eiki LC-HDT2000. 15K lumens, Native 2K resolution. Mechanical shutter for full black out. 4 hot-swappable lamps. Located in booth at rear orchestra

Zoom Lenses
(2): 4.40-6.20:1, 2.63-3.56:1

Front Projection
Max. image size on front projection screen:
25’w x 20’h 5:4 or 4:3 standard aspect ratios
35’w x 20’h 16:9 wide screen aspect ratio

Rear Projection
Consult with technical staff for specific needs

Playback
Mac with QLab
PC Interface (with audio) CAT5 link to stage
PC Interface (with audio) HDMI, in booth
PC Computer, Dell, in booth
Blu-Ray Yamaha BD-S673
Other sources as needed

Switching and Preview
Video with audio switching between playback sources. Operator preview/monitor system

CCTV SYSTEM

Color Cameras
(1) View of stage. PTZ mounted at center of Balcony 1
(1) View of audience. Mounted at top of proscenium opening

Patch Bay
Located down stage right. RG59U dry lines to selected AVS panels. All terminals BNC

Distribution
(1) 1 x 5 composite video DA Ocean Matrix OMX7019
(1) 1 x 8 composite video DA Ocean Matrix OMX7027

Monitors
Available at stage manager’s desk, technical offices, loading dock and shop.

STAGE EQUIPMENT

ORCHESTRA SHELL  Steel frame, wood paneled acoustical shell by Hoffend and Sons. White concert lighting integrated into ceiling panels. (4) Configurations available (see drawings at right).

(7) Wall towers, each 14’w x 28’h.
(3) Ceiling panels on motorized line sets.

ORCHESTRA EQUIPMENT
(130) Orchestra chairs - (black) steel, armless, upholstered.
(110) Music stands (black).
(10) Bass stools.
(65) Music stand lights.
(1) Conductor podium.
(1) Conductor stand.
(1) 5-panel Perspex drum shield, 5’h.

PLATFORM RISERS  Stage Right aluminum frame platforms with black PVC surface. Masking, chair rails and guard rails available. No drilling or painting.
(16) 4’ x 8’ Platform tops.
(7) 8’h Leg sets.
(10) 16’h Leg sets.
(5) 24’h Leg sets.
Additional 3’ x 6’ platform risers are available. Check with technical staff for your needs.

CARPETS  Lot of 4’ x 8’ rubber-backed dark gray industrial carpets available for drum risers, cable covers, and other uses.

LADDERS  6’, 8’, 10’, and 12’ are available.

PERSONNEL LIFT  Genie, Model #AWP-30. 30’ lift height. 12V DC battery power with (2) battery/charger packs.

DANCE EQUIPMENT

Dance Floor  Rosco black vinyl dance floor, laid horizontally. Stores on custom dance floor cart.
(6) 63”w x 70’l rolls overall dimensions: 70’w x 30-6”d.
(3) 63”w x 44’l rolls provide up to 15’ additional depth.

Dance Barres
(2) 8’ sections, double sided.

Rosin Boxes: (2)

MUSICAL INSTRUMENTS

PIANOS
(2) Steinway D, 9’ concert grand pianos.
(1) Yamaha C3, 6’ grand piano.
(1) Yamaha C3, 6’ grand piano (located in upper lobby).
(1) Yamaha U3E, 48” upright piano.
All pianos were new in 1993 and are well maintained. KU Fine Arts piano technician required for all tunings and repairs. Second Steinway D new in 2009.

OTHER
(4) concert tympani - 23”, 26”, 29”, 32”
(1) concert harp.
BACK STAGE

DRESSING ROOMS  Lockable. No keys given out.
- Chorus Room A  Seats 21, wheelchair accessible.
- Chorus Room B  Seats 16.
- Chorus Room C  Seats 14.
- Room 24  Seats 2, wheelchair accessible.
- Room 28  Seats 3.
- Room 32  Seats 3.
- Room 34  Seats 2.

Total seating and mirrors for (61) performers. Each dressing room is equipped with costume racks, chairs, mirrors, and incandescent makeup lights. Each has sinks, showers, and toilets, liquid soap, stage manager's page and show program monitor. Towels are available if requested.

CHARLES AND TENSIE OLDFATHER DANCE STUDIO
44' x 24'. Equipped with mirrors, dance barres, sound system, and upright piano. Floor construction is same as stage floor. Dance studio may be used for master classes, rehearsals, lectures, meetings, meal services, and other uses.

LAUNDRY and WARDROBE  Laundry room adjacent to Shop and Chorus Room A. Equipment includes (2) washing machines, (2) clothes dryers, (2) garment steamers, sewing machine, irons and boards, rolling costume racks.

TOURING COMPANY PRODUCTION OFFICE  7' x 15'. Equipped with tables, chairs, (2) telephone lines, high-speed Internet. Located off downstage right. NOTE: Access to grid, loading rail, FOH lighting, and orchestra pit is through production office.

RAYMOND CERF GREENROOM  Equipped with carpet, plush sofas and chairs, table and chairs, kitchenette, ice machine. Cable television available. Shares lavatory facilities with Dressing Room C.

Wireless Internet access available in all backstage areas
# LINE SET SCHEDULE

<table>
<thead>
<tr>
<th>No.</th>
<th>Dist. P/L</th>
<th>Item</th>
<th>Weight</th>
<th>Typical House Goods</th>
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<td>Main Curtain/ Downstage Legs</td>
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<td>2</td>
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<td>Main Curtain / Grand Teaser</td>
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<td>Legs (on split traveler track)</td>
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<td>Front Projection Screen</td>
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<td>44'-0&quot;</td>
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</table>

Shaded line sets have permanently installed equipment and are not available for other uses.

Line Set Nos.19, 22, 24, 32, 37, and 39 are not listed because they are not installed.
STAGE PLAN

Available as downloadable .DXF file at http://www.lied.ku.edu

1000 Stewart Drive  |  Lawrence, KS 66045-7502  |  (785) 864-3469  |  Fax (785) 864-5031  |  www.lied.ku.edu

Update: September 17, 2018