

MILTON AND TAMAR MALTZ Performing Arts Center at The Temple-Tifereth Israel CASE WESTERN RESERVE UNIVERSITY

# Technical Data & Information

Milton and Tamar Maltz Performing Arts Center 1855 Ansel Road Cleveland, OH 44106 216-368-6062 www.case.edu/maltzcenter mpacinfo@case.edu

> Case Western Reserve University 10900 Euclid Avenue Cleveland, OH 44106



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### **General Information**



The exterior of the Milton and Tamar Maltz Performing Arts Center in Cleveland, Ohio

#### HANDICAPPED ACCESS

Available via the West (side) lobby entrance. Stage access is available via the stage right wheelchair lift. Wheelchairs and numerous disability-seating locations are available within the facility. Assisted listening devices are available with both headset and neckloop receivers.

#### PARKING

Parking is available in Lot 82, which is adjacent to the west side of the building. Additional parking is generally available in Lot 81, which is adjacent to the north side of the building. At scheduled times, shuttles run from the Tinkham Veale University Center on campus to the West entrance.

#### SECURITY

Location: West Lobby Entrance Coverage: 24 hours



# Livestreaming



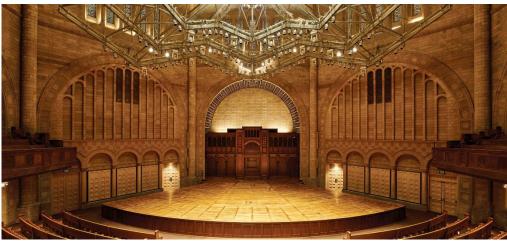
Ensembles can reach their audiences via livestream and Zoom integration

Silver Hall can easily accommodate those performing artists who wish to stay engaged with their audiences. Our facility features the latest livestreaming technology including large video monitors, robotic cameras, a diverse set of microphones and the most current livestreaming software available.

<u>Component</u>	<u>Qty</u>	<b>Description</b>	Brand
Large screen monitors	2	55" stand mounted	Plura
Confidence monitors	2	40" stand mounted	Plura
Robotic PTZ cameras	6	Full HD with 30x zoom	Telemetrics
Video recording deck	2	AJA Ki Pro Rack	AJA
Video switcher	1	Grass Valley Director	Belden
Digital mixing console	1	Yamaha CL3 via Dante	Yamaha
vMix	1	Video streaming software	StudioCoast PTY
WireCast	1	Video streaming software	Telestream
Multistreaming service	1	Cloud-based multi stream	Restream



# Lighting



Lighting instruments hang from the beautiful glass and steel canopy in Silver Hall

A full complement of fixed ETC Selador lighting fixtures blanket the Silver Hall stage with even, warm coverage along with side and front lighting provided by Source Four fixtures. Control is centralized via a Strand Neo lighting board featuring a flat touch screen panel and iPad remote.

<u>Component</u>	<u>Qty</u>	<b>Description</b>	<u>Brand</u>
Flat screen monitor	1	Touchscreen display	Planar
Control board	1	Neo Lighting Console	Strand Lighting
Touch control panel	2	Visionet Control System	Strand Lighting
Lighting dimmers	12	2.4k Hi-Rise C21 module	Strand Lighting
Moving canopy fixtures	12	Selador Desire D40 LED	ETC
Static canopy fixtures	88	Selador Desire D40 LED	ETC
Theatrical instruments	24	10° Source Four, Series 2	ETC
Theatrical instruments	24	14° Source Four, Series 2	ETC

\*MPAC retains a strict concert/lecture plot. Any refocusing of the Source Four fixtures will incur additional charges. Static units mounted on the Acoustic Canopy are fixed and cannot be refocused.



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# **Video Production**



Extensive video recording system located in the A/V control room of Silver Hall

The Maltz Performing Arts Center is equipped with the latest in camera and recording technology. Our facility allows clients to choose exactly how they wish to capture their event. We offer an entire range of possibilities; from a simple, single camera archival recording to a fully produced, multicamera, dynamic HD video recording with the addition of livestreaming, lower third graphics, special effects and post-production editing. Our system highlights include the following:

- Six Telemetrics PTZ HD RoboEye cameras capture events from *multiple* angles
- Integrated Grass Valley Director video switcher allows for seamless transitions
- Excellent results from our AJA Ki Pro Rack audio/video recording units
- Distinct video presentations via our Crestron systems and laser projectors
- Multiple sources effortlessly alternate via our Analog Way Seamless Switcher
- High quality, portable Plura brand monitors are used throughout the facility



# Audio Recording



ProTools software is used for high quality audio recordings of live performances

Our facility features a dedicated sound booth, equipped with everything a recording engineer needs in order to create the highest quality, multi-track audio recordings. Microphone placement is effortless and wide-ranging using the extensive collection of microphone stands and overhead Servoreeler lines. Likewise, signals coming from the stage are easily patched and routed using the Dante Controller software program. Our equipment highlights include the following features:

- Record up to 32 channels using ProTools software on our Apple MacBook Pro
- Millennia microphone preamps provide superior incoming signal quality
- Integrated Dante controller allows for flexible input and output patching
- Rednet 5 and AVID I/O units send incoming signals to our ProTools software
- Dante Virtual Soundcard and iMAC setup provide an excellent backup element
- Retractable overhead mic and filament lines allow for flexible mic positioning
- ATC nearfield speakers provide recording engineers with accurate monitoring



# Sound Reinforcement



View from the Front of House overlooking the Yamaha CL3 mixing console

The Maltz Performing Arts Center meets the challenge of sound reinforcement in a seven-sided hall with the very best equipment and technology. Typical event needs are met by the use of our in-house RANE audio system along with the installed D & B speaker system. Likewise, larger events that require additional power may call upon our Yamaha CL3 digital mixing console as well as our Martin Sound MLA line array units. Here are some of our reinforcement highlights:

- Front of House mixing is accomplished using our Yamaha CL3 digital console
- Integrated Dante System and Yamaha RIO boxes for flexible patching of inputs
- D & B Voice Lift sound system and amplifiers provide excellent sound quality
- Choice of handheld, lavalier or earset-style Shure wireless microphones
- Martin Audio ground-stacked MLA line array units for live bands or big events
- Electro-Voice EV-EKX-12P and EV-EKX-15P loudspeakers for stage monitoring
- Williams Sound Assisted Listening System for our hearing-impaired patrons



# Microphones



Collection of a wide variety of microphones for use by our valued clients

With an extensive and ever-expanding microphone collection, the Maltz Performing Arts Center can provide our customers with the flexibility to create the best audio possible. Whether it's a high-profile speaker at the podium, a piano soloist encompassed by a symphony orchestra or a group of dynamic vocalists, the correct microphone is within easy reach. Choosing reinforcement or recording is easy; our microphones can cover any application. Common uses include:

- Schoeps Colette Series microphones provided unparalleled recording quality
- Shure Beta 87 Series wireless vocal microphones allow for freedom of movement
- Sennheiser Evolution Series microphones combine high quality and flexibility
- Audio-Technica gooseneck microphones capture the spoken voice at the podium
- Earthworks Flexwand microphones define ease-of-use for groups of voices
- Full line of Shure vocal and instrument microphones for amplified ensembles



# Microphones

<b>Brand</b>	<u>Qty</u>	<u>Model</u>	<b>Description</b>	<u>Usage</u>	
AKG	2	C414XLS	Multi pattern – condenser	Acoustic instruments	
Audio Tech.	4	AT4021	Cardioid - condenser	Acoustic guitars and drums	
Audio Tech.	2	Pro 35	Cardioid - condenser	Clip-on for sax and brass	
Audix	2	MB5050	Cardioid - condenser	Vocal groups and choirs	
Earthworks	1	PM40	Omnidirectional - condenser	Piano amplification	
Earthworks	6	FW730	Cardioid - condenser	Vocal groups and choirs	
Schoeps	2	CCM2	Omnidirectional - condenser	Close miking of source	
Schoeps	2	CCM41	Super cardioid – condenser	Orchestra spot miking	
Schoeps	6	MK2	Omnidirectional - condenser	Main pair overhead	
Schoeps	2	MK21	Wide cardioid – condenser	Main pair overhead	
Schoeps	2	MK22	Open cardioid – condenser	Regional overhead	
Schoeps	4	MK4	Cardioid - condenser	Regional overhead	
Schoeps	2	MK5	Dual pattern – condenser	Main/Regional overhead	
Sennheiser	2	E906	Super cardioid – dynamic	Instrument amplifiers	
Sennheiser	4	E945	Super cardioid – dynamic	Vocals and speech	
Sennheiser	2	MD441-U	Super cardioid – dynamic	Numerous applications	
Shure	4	Beta 52A	Super cardioid – dynamic	Kick drum and bass guitar	
Shure	8	Beta 87A	Super cardioid - condenser	Wireless vocals and speech	
Shure	2	Beta 91A	Half cardioid - condenser	Kick drum and piano	
Shure	4	Beta 98AMP	Cardioid mini - condenser	Snares and toms	
Shure	4	SM57	Cardioid - dynamic	General instrument	
Shure	4	SM58	Cardioid - dynamic	General vocal	
Shure	4	SM81	Cardioid - condenser	Overhead drum kit	
Shure	8	MX150	Cardioid - condenser	Wireless lavalier for speech	
Shure	4	MX153	Omnidirectional - condenser	Wireless earset for speech	



# Furnishings



Clients can enjoy a meal onstage in Silver Hall during meetings or conferences

#### Tables & Chairs

Item	<u>Qty</u>	Description	Brand
Conductor's chairs	2	Steel frame, #157F091	Wenger
Director's chair	1	Aluminum, #S102	Cantoni
Folding chairs	24	Novite, black plastic	KI Furniture
Metal frame chairs	68	Red fabric, #N27F53	Izzy
Musician's chairs	135	Black fabric, steel frame	Wenger
Task chairs	4	Black fabric, adjustable	KI Furniture
Wood chairs	94	Custom, green fabric	Thos Moser
Wood chairs	260	Custom, red fabric	Thos Moser
Rectangular tables – 6'	6	Aluminum, brown	Southern Aluminum
Rectangular tables – 8'	12	Aluminum, brown	Southern Aluminum
Round tables – 5'	6	Aluminum, brown	Southern Aluminum





Steinway & Sons Concert D grand piano shown onstage in Silver Hall

### Ensemble Furnishings

Item	<u>Qty</u>	Description	<u>Brand</u>
Artist grand piano	1	Model D - 9' Hamburg	Steinway & Sons
Acoustical shell units	13	Wood, custom	Tartan Group
Artist benches	2	Spade leg, black	Jansen & Sons
Baby grand piano	1	Model M – 6'	Steinway & Sons
Cello chairs	15	Black, #943151	Wenger
Cello riser	1	Wood, #R1511082	Kolberg
Choir risers	12	Tourmaster, 3 or 4-step	Wenger
Conductor's podium	1	Custom design - 12" h	Reserve Millwork
Conductor's stands	3	Acrylic, clear	Wenger
Conductor's stand	1	Metal, black	Wenger
Ensemble stools	12	Black fabric, steel frame	Wenger
Music stands	160	Classic 50, black plastic	Wenger
Sound shields	6	Acrylic, portable	Wenger



Technical Data & Information Milton and Tamar Maltz Performing Arts Center



Multi-height Stagetek platforms with Wenger musician's chairs shown onstage in Silver Hall

### General Furnishings

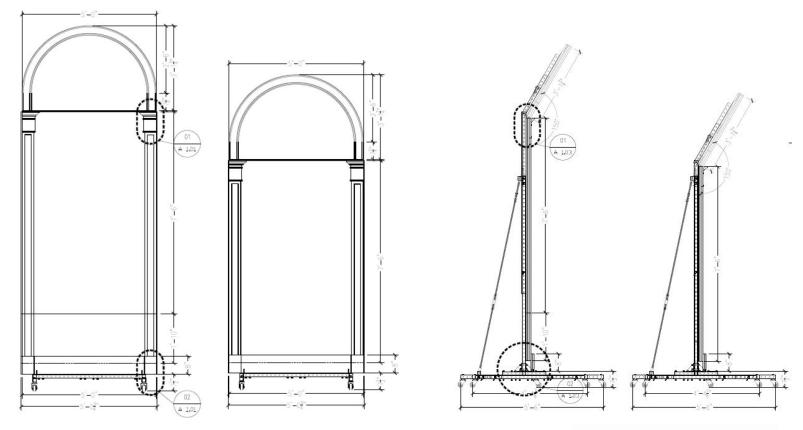
Item	<u>Qty</u>	Description	<u>Brand</u>
Full-length mirrors	8	Brown finish, #900452	Coaster Company
Grand lectern	1	Custom, wood - 32" width	Thos Moser
Medium lecterns	2	Custom, wood - 24" width	Thos Moser
Stagetek platforms - small	4	Black finish - 4'd x 4'w	Wenger
Stagetek platforms - large	10	Black finish - 4'd x 8'w	Wenger
Stagetek legs – 6″	48	Black finish	Wenger
Stagetek legs – 12″	24	Black finish	Wenger
Stagetek legs – 18″	24	Black finish	Wenger
Stagetek legs - 24″	24	Black finish	Wenger
Stanchions & Rope	16	Bronze, #310/841MN	Crowd Control
Step platforms	2	Gray carpeted – 3' x 3'	Wenger
Wardrobe racks	2	Metal frame, chrome	Whitmor



### **Acoustical Shell**



The 13-piece acoustical shell helps performers onstage hear each other and clarifies sound for the audience





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### Silver Hall Technical Specifications

Nominal dimensions: 86' W x 98' D x 86' H Standard usage: Concerts, Lectures, Ceremonies, Presentations Seating capacity: (all totals include 492 balcony seats)

Concert stage configuration: 980 Ensemble stage configuration: 1069 Lecture stage configuration: 1192

#### Amplification

Ashley NE/NXP Series Series 8250 – 3 Series 4004 – 2 Series 8004 – 1 D & B power amplifier Model 10D - 2 Joe Meek 2-channel mic preamp Twin Q2 - 1 Millennia 8-channel mic preamps HV-3R Series – 6 Yamaha digital stage boxes RIO 3224-D – 2

#### **Assisted Listening System**

Williams Sound System – T45 FM receivers model #PPAR38N – 42 Folding headphones model #HED021 – 42 Neckloops model #NKL001 – 12

#### **Audio Control Room**

Nearfield monitors – ATC SCM20ASL – 2 Studio monitor stands – Ultimate MS9036B – 2 Open-back headphones – Sennheiser HD800 – 1 Over-ear headphones – Sony MDR-7506 - 1 Studio monitor controller – DACS Headmaster – 1 Voltage regulator – Furman P-1800-AR – 1



#### **Audio Recording Consoles**

#### ProTools System

Primary computer - Apple MacBook Pro Backup computer - Apple iMAC Desktop ProTools interface - Avid HD Native Analog audio interface - Avid HD I/O Primary Dante networking software - Focusrite RedNet 5 (32 channels) Backup Dante networking software - Dante Virtual Soundcard (32 channels) Backup recorder - Denon DN-700R SD/USB Recorder Licensing – Pace iLOK

#### **Audio Mixing Consoles**

Yamaha CL3 Digital Mixing Console 64 input channels 24 output channels Dante/iPAD compatible Rane HAL Audio Distribution System DR6 touchscreen control 12 input channels Mute, EQ, Volume functions

#### **Overhead Microphone Positioning System**

Servoreeler SRC-12 microphone retraction system System is Crestron/iPAD compatible Microphone canopy positioning lines – 12 Filament canopy positioning lines – 12

#### Sound Reinforcement Speakers

D & B Voice Lift System L & R XC Series speaker columns - 4 L & R B4-SUB subwoofers - 2 Martin Sound Line Array System - MLA Series L & R Floor-standing line arrays - 4 L & R Subwoofers - 4 Electro-Voice stage monitor loudspeakers EKX-12P powered 12" floor monitors - 6 EKX-15P powered 15" floor monitors - 2 Fulcrum Acoustic stage monitor loudspeakers FX896 acoustic 8" floor monitors - 4 FA28AC powered 8" floor monitors - 2



#### Stands - Konig & Meyer

Short telescoping mic stand #23320 – 2 Short mic stand with boom #25960 – 6 Stackable mic stand #26075 – 4 Tall tripod boom mic stand #21021 – 2 Tripod boom mic stand short reach #25200 – 6 Tripod boom mic stand long reach #25600 – 6

#### **Standard Accessories**

Direct boxes – Whirlwind DIR – 4 Dual direct boxes – Radial PROD2 - 2 Dual direct boxes – Whirlwind DIRECT2 - 2 Laptop dual direct box – Samson MCD2 - 1 Headphones – Sony MDR-7506 - 2 Microphone splitters – Rapcohorizon MS1 – 2 Shock mounts – Audio Technica AT8410A – 10 Speaker stands – Ultimate Support JS-TS50 - 2

#### Wireless System

Shure wireless quad receiver units – ULXD4Q - 2 Shure Beta 87A wireless handheld microphones – 8 Shure ULXD1G50 belt pack transmitters – 4 Shure MX150BCTQG lavalier microphones – 4 Shure MX153TOTQG headset-style microphones - 4

\*Either belt pack (with lavalier or headset-style microphones) or handheld microphones can be used with receivers. Presenters and performers can mix and match, with up to 8 channels per event.

#### Communications

Clear-Com main stations – Helixnet HMS-4X - 2 Clear-Com belt packs - Helixnet HBP-2X – 14 Cue light system - Leon Audio QLM16 – 12

#### Infrastructure

SDI/BNC, Triax and XLR connections throughout the hall Cat 6 ethernet connections run through the entire facility Company Switch – Union Connector model CS-1-123 Cam-Lok or bare wire connections available, 3-phase, 400 amp 120 volt power available throughout/208 volt power onstage



#### **Video Monitoring**

All monitors are the PLURA brand Dual monitor 7" LCM-207-3G – 1 Small 19" LCM-119-3G – 3 Medium 23" LCM-123-3G – 2 Multiview 24" vectorscope MVM-124 – 1 Confidence monitors 40" DBM-140 – 2 Large screen monitors 55" DBM-155 - 2

#### **Video Projection**

HIGHlite laser 11k projector - Digital Projection - WUXGA 3D/11,000 lumens Retractable screen – Draper Inc. -  $17'6'' \le 9'10'' \le 240''$  diagonal)/16:9 aspect ratio

#### Video Recording

Recording decks - AJA Ki Pro Rack – 2 Recording disk drives - AJA Ki-Stor – 8 Recording docks – AJA Ki-Stor Dock – 2 Robotic cameras - 30X zoom, Telemetrics PT-RE-1 PTZ – 6 Robotic camera controller - Telemetrics RCCP-1-STS – 1 House static camera – Panasonic AW-HE40 – 1 Server unit - Grass Valley Nonlinear Production Center – 1 Video switcher unit - Grass Valley GV Director – 1 Mixing console for audio – Yamaha MGP16X - 1

#### **Video Processing**

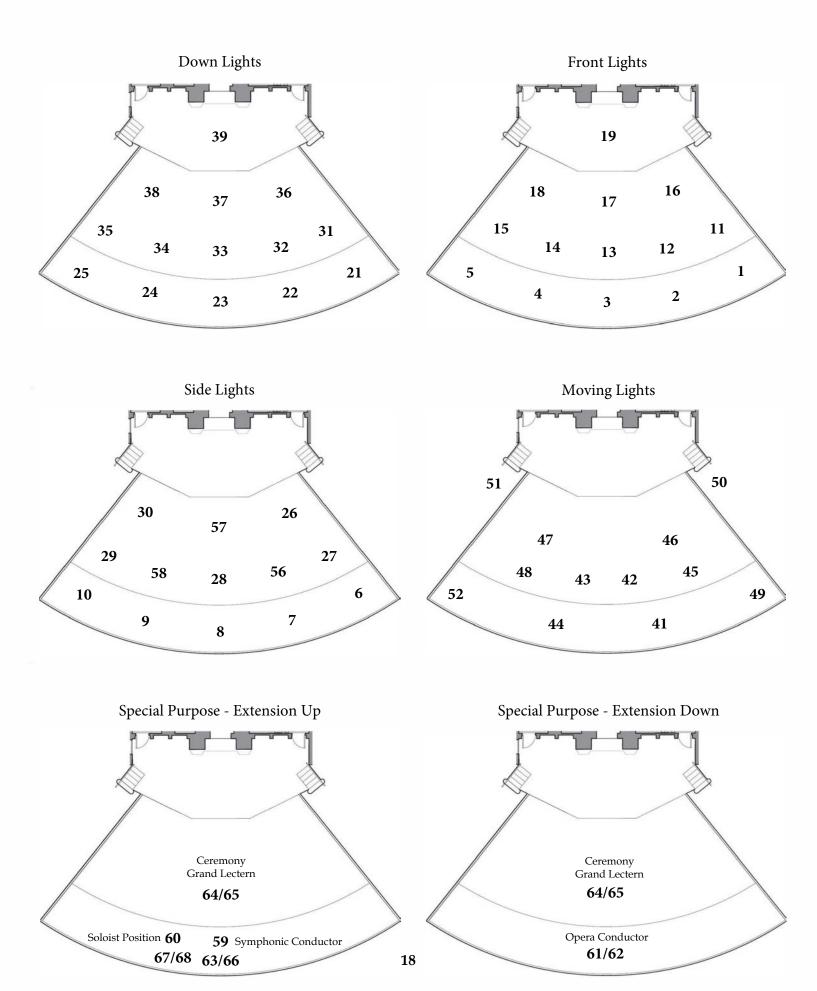
Control Processor – Crestron PRO-3 Digital Graphics Engine – Crestron DGE-2 House Reference – Mutec iClockDP Seamless Switcher – Analog Way QMX150 Touchscreen controller – Crestron TS Series Video Router – Snell Vega Series

#### **Video Accessories**

Blu-ray player – Oppo BDP105D Darbee Edition - 1 Signal scalers – Decimator MD-HX - 2 Furman line conditioner PL-PLUS DMC – 1 Audio delay unit – Rane AD22S - 1 Portable light stand set – Manfrotto 368B - 4 Signal converters HDMI to SDI – AJA HA5 – 2 Signal converters SDI to HDMI – AJA HI5-Plus -2



# **Magic Sheet - Silver Hall**



### Bud and Katie Koch Recital Hall Technical Specifications

Nominal dimensions: 23' W x 48' D x 16' H Standard usage: Recitals, Lectures, Conferences, Receptions Room capacity: 90

#### Amplification

Lab Gruppen Power Amps – E Series 12:2, 8:2 Millennia Mic Preamp - HV-3R Series Black Lion - PM8 MKII Mixer

#### Assisted Listening System

Williams Sound System - PPAVP with FM receivers

#### **Audio Recording**

Denon DN-700R - SD/USB Recorder Schoeps Colette MK2H/CMC6 overhead microphones - 2 \*All signals may be patched to the Silver Hall Audio Control Room\*

#### Video Recording

Panasonic AW-HE40 PTZ HD camera with IP control - 1 Crestron Capture HD Pro USB Recording deck – 1 \*All signals may be patched to the Silver Hall Video Control Room\*

#### **Video Projection**

Christie DWU555-GS laser video projectors – house left and right Draper retractable screens –  $8'8'' \le 4'10''$ h (119'' diagonal)/16:9 aspect ratio

#### **Video Presentations**

HMDI/VGA access via stage right floor pocket Crestron DGE-2/PRO3 Control Processors Oppo BDP105D Darbee Edition Blu-ray player

#### Wireless System

Shure wireless receiver unit – ULXD4D Shure Beta 87A wireless handheld microphones – 2 Shure ULXD1G50 transmitters with lavalier or headset microphones– 2



### Walter and Jean Kalberer Room Technical Specifications

Nominal dimensions: 23' W x 23' D x 15' H Standard usage: Meetings, Lectures, Receptions, Control Room for A/V Room capacity: 49

**Amplification** Lab Gruppen Power Amp - E Series 4:2

Audio Recording Denon DN-700R - SD/USB Recorder

#### **Video Projection**

Christie laser video projector - Model DWU555-GS – 5,400 lumens Retractable screen – 9'8" w x 5'5" h (133" diagonal)/16:9 aspect ratio – Draper Inc.

#### **Video Presentations**

HMDI/VGA access via rack port Control Processors – Crestron DGE-2/PRO3 Blu-ray player – Oppo BDP105D Darbee Edition

#### Wireless System

Shure wireless receiver unit – ULXD4D Shure Beta 87A wireless handheld microphones – 2 Shure ULXD1G50 transmitters with lavalier or headset microphones– 2

#### **Control Room Connections**

The Kalberer Room can be used as a fully-functional A/V Control Room for Silver Hall HD/SDI video connections via Coax/BNC – 16 Analog audio channels – 64 Ethernet ports – 8



### Gerry and Jane Kesselman Green Room Technical Specifications



Nominal dimensions: 11'6" W x 20'6" D x 8' H Standard usage: Guest hospitality, Dressing room, Lounge Room capacity: 8

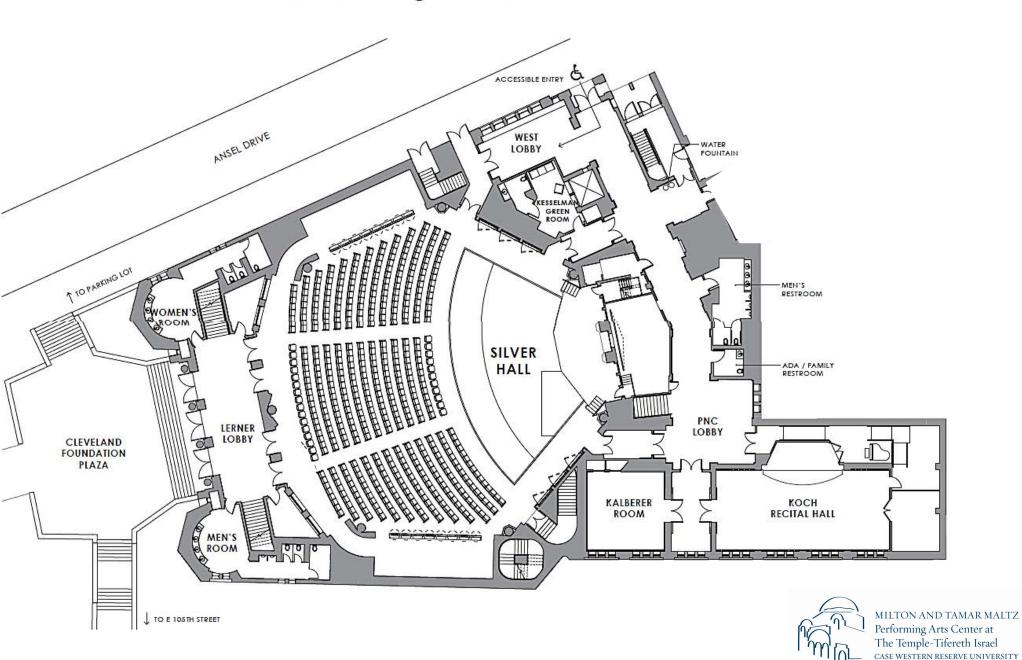
#### Amenities

Upright piano, private restroom, refrigerator, microwave oven, ironing board with steam iron, garment steamer, overhead audio monitor, wall-mounted video monitor, closet with rod and hangers

#### Furniture

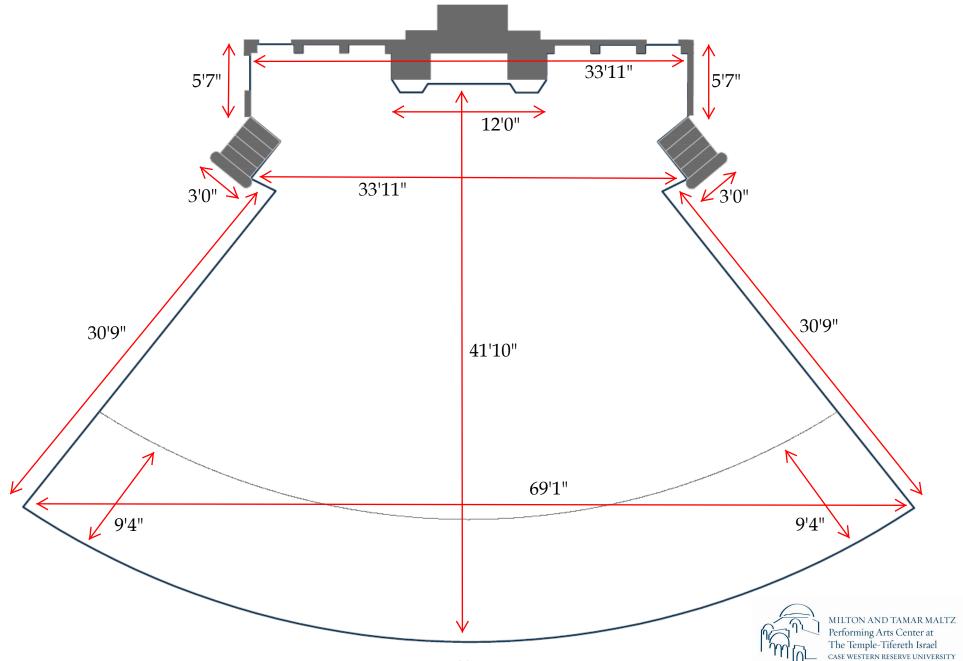
Leather sofa, leather chair, coffee table, full-length mirror, countertop, storage drawers



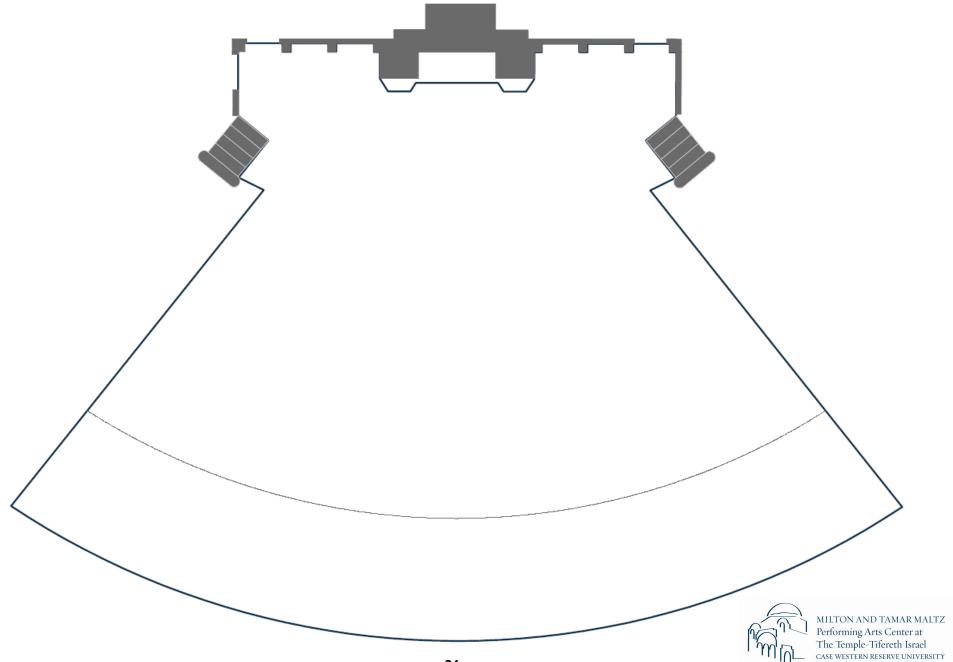


### Maltz Performing Arts Center - First Floor Overview

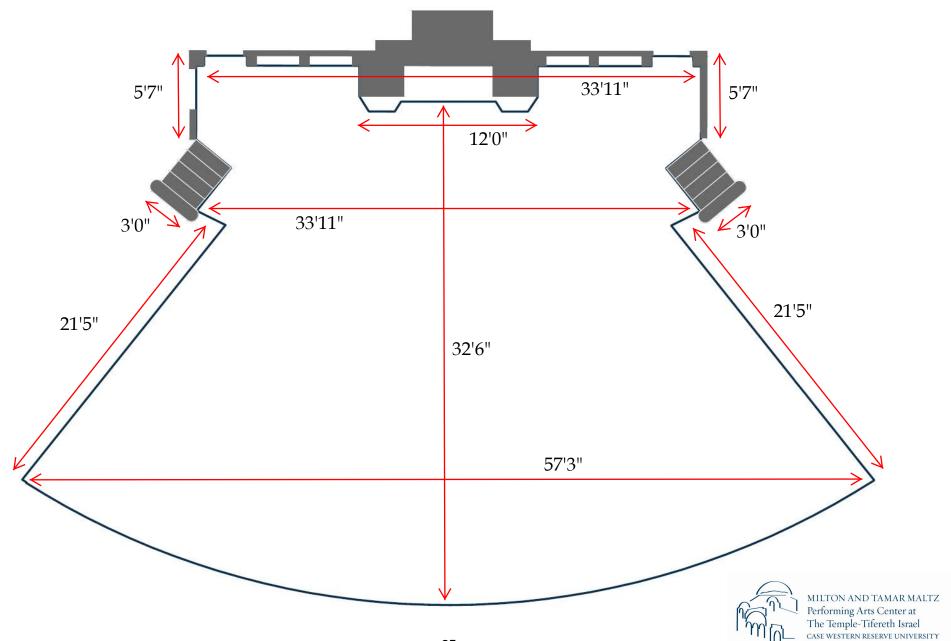
### Concert stage mode with dimensions



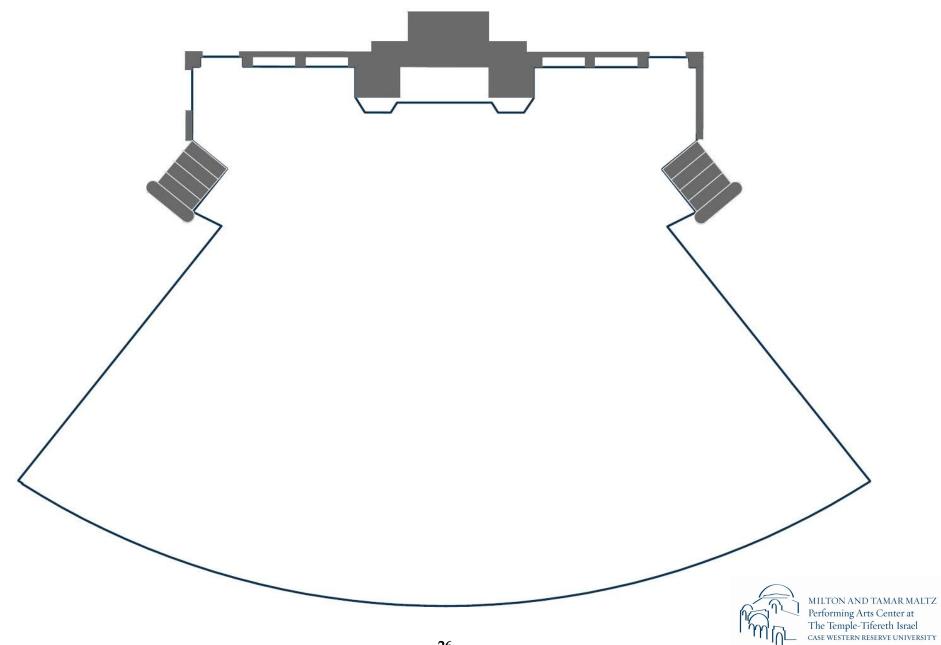
# **Concert stage mode without dimensions**



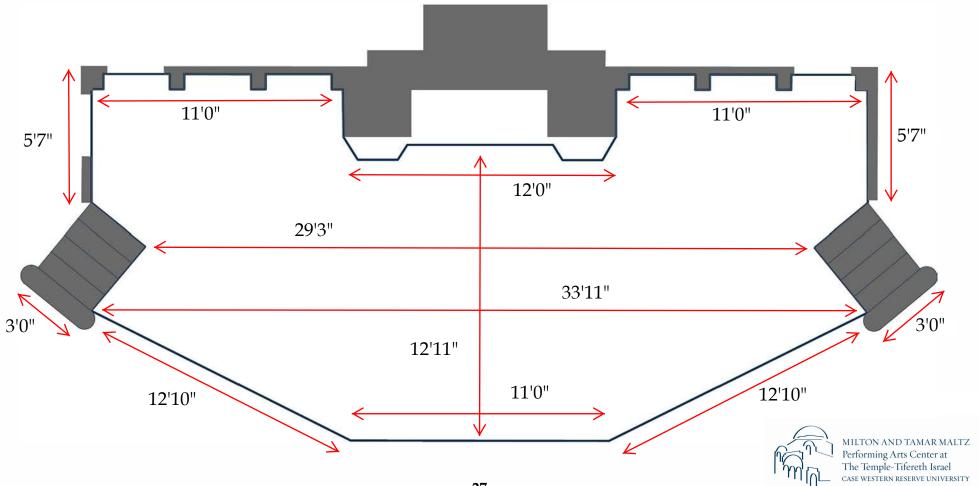
### Ensemble stage mode with dimensions



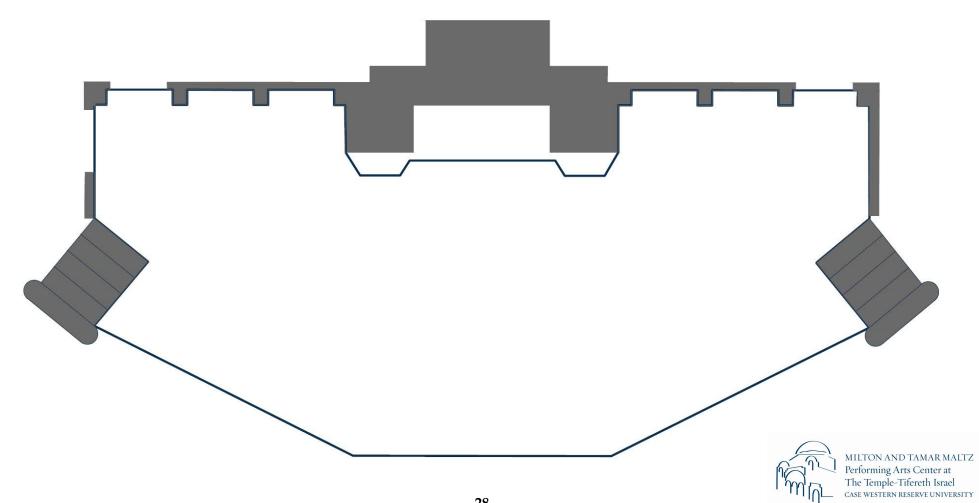
### Ensemble stage mode without dimensions



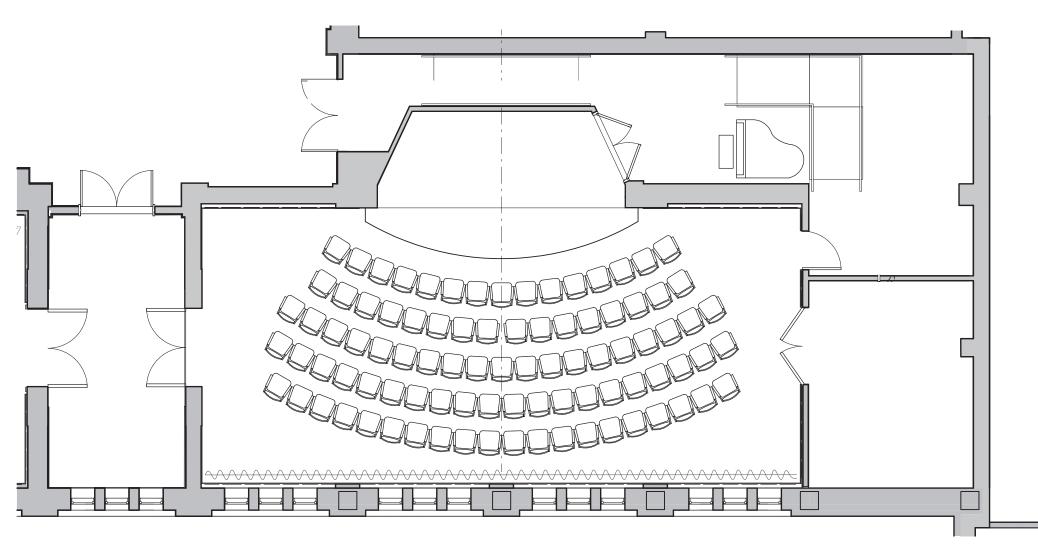
Lecture stage mode with dimensions



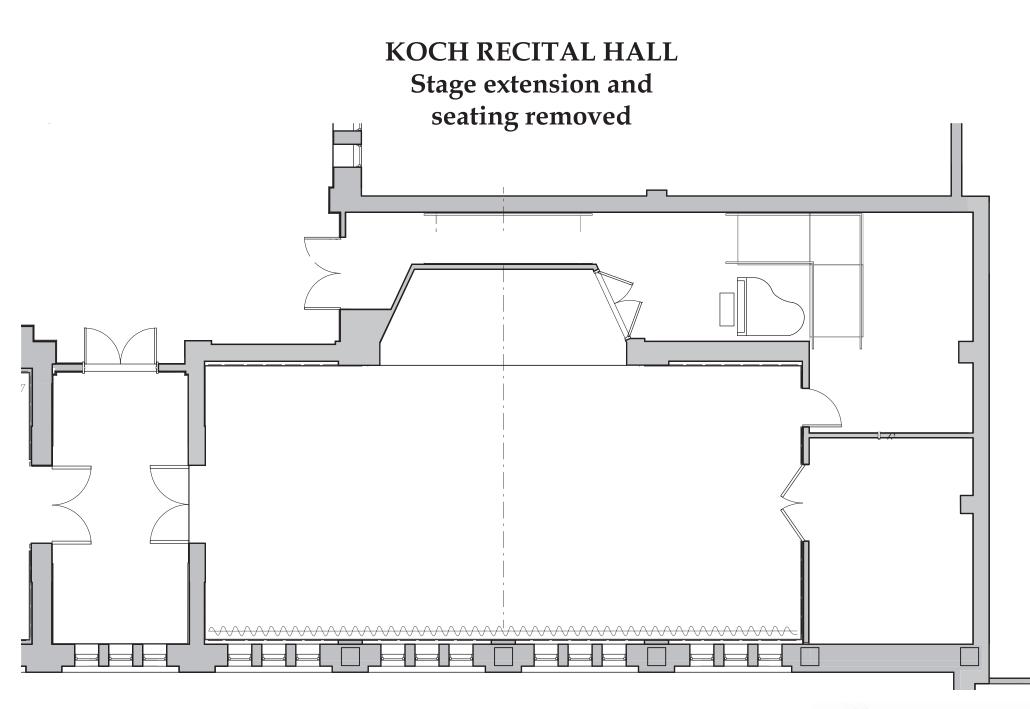
Lecture stage mode without dimensions



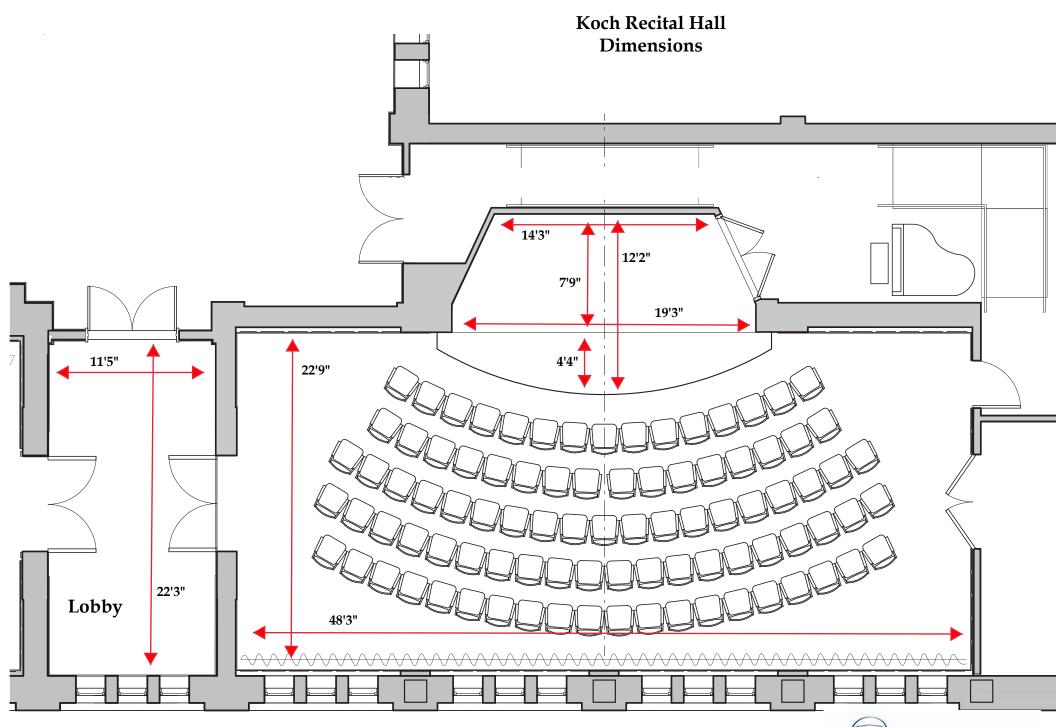
### **KOCH RECITAL HALL**







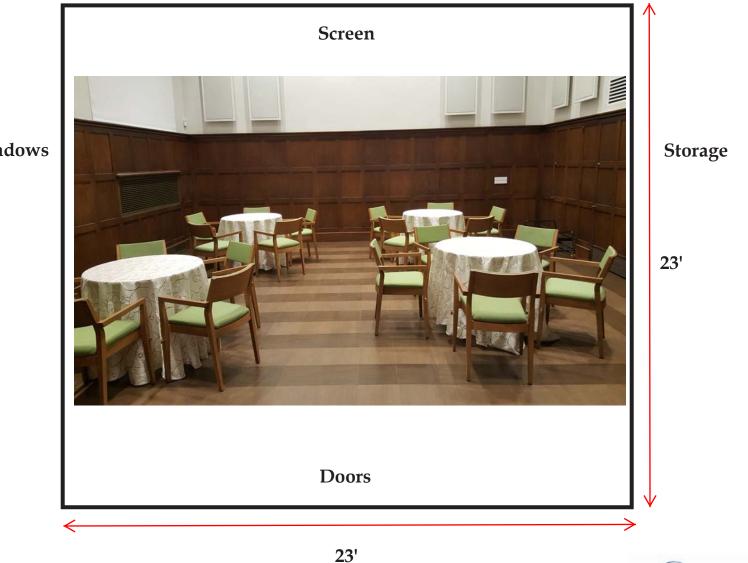




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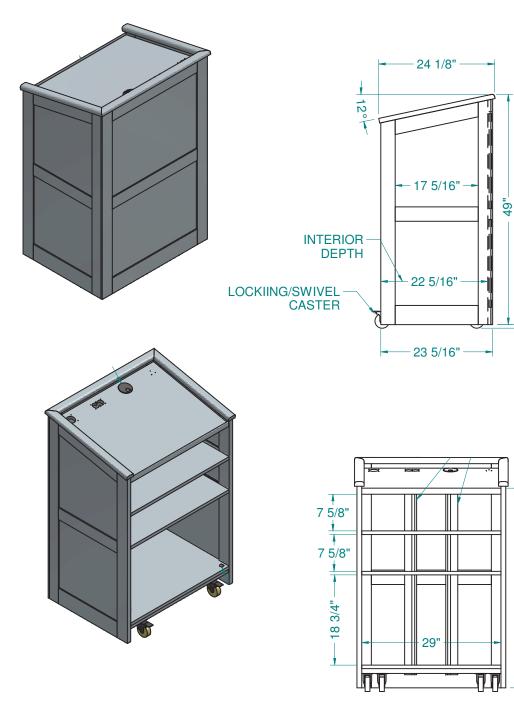
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### The Kalberer Room

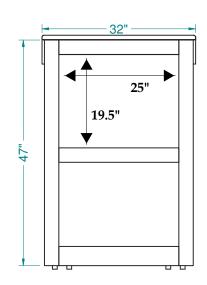


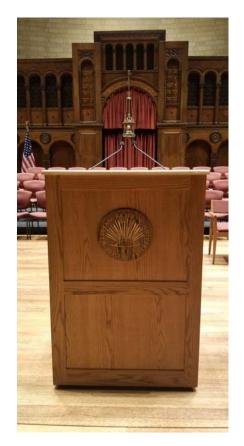
Windows





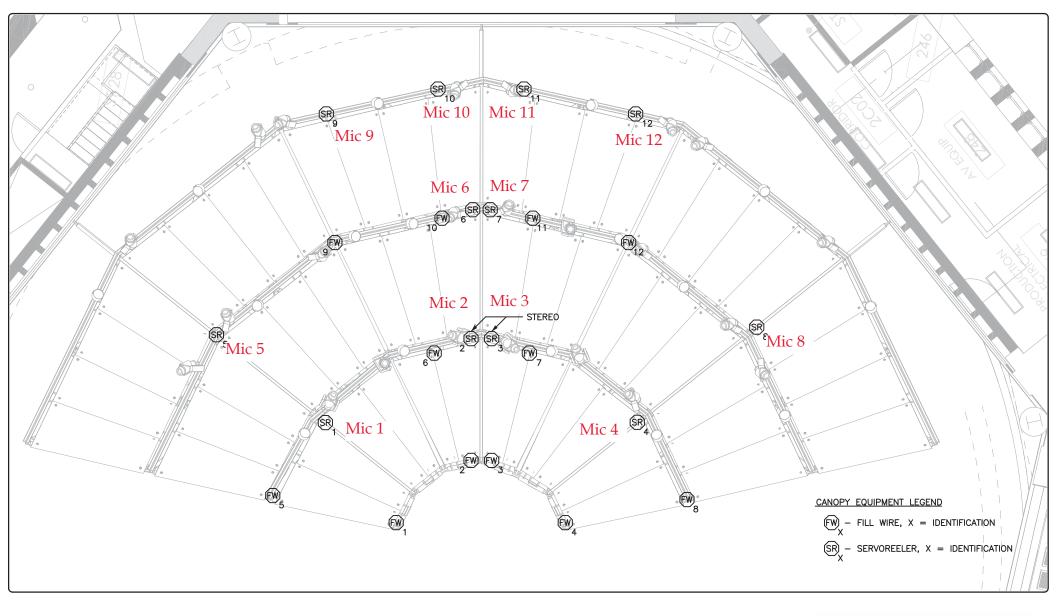
**Grand Lectern** 



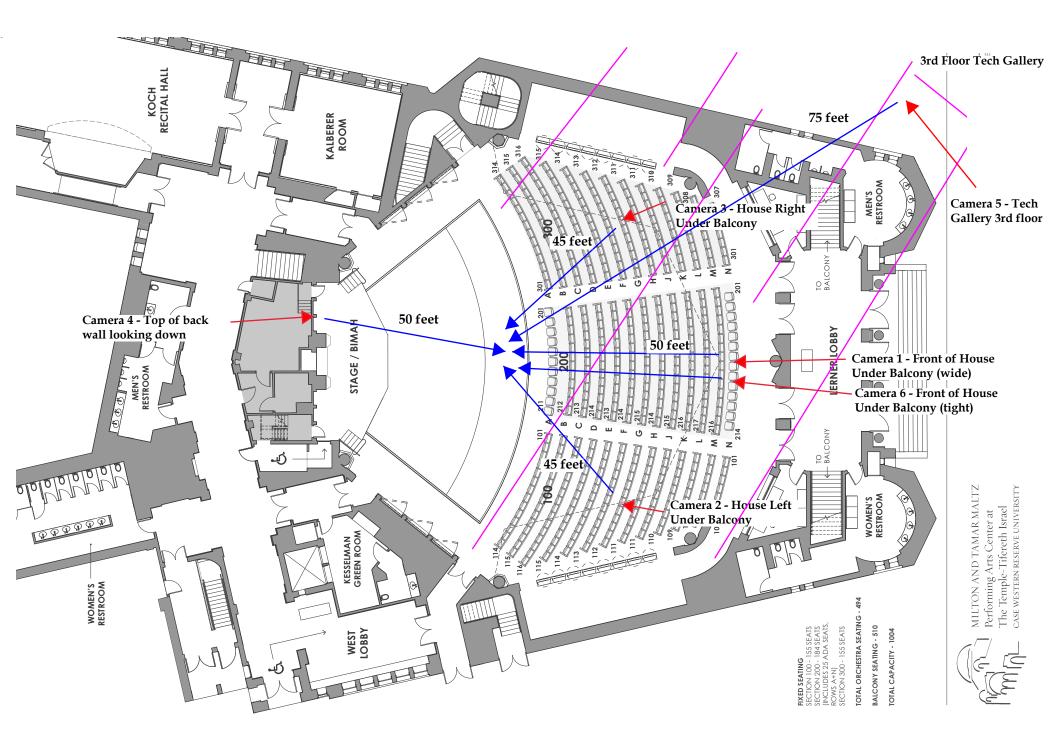


3/4"

42 1/2"

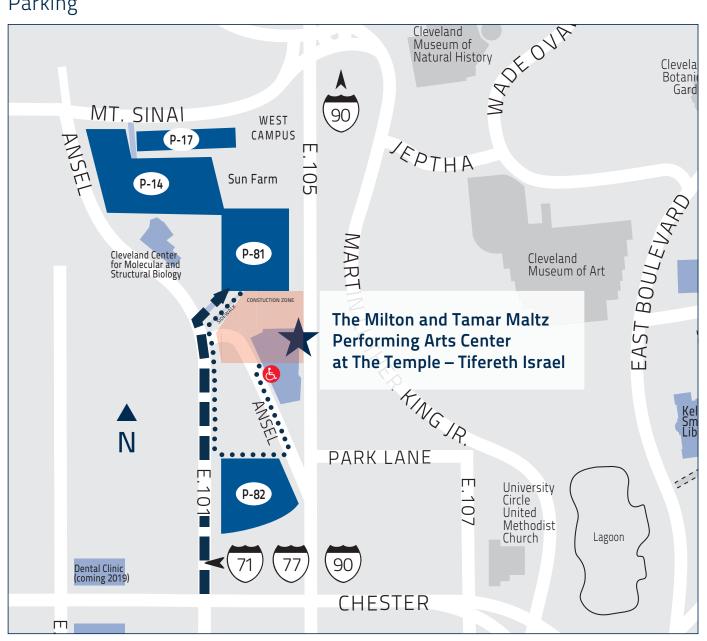






# The Milton and Tamar Maltz Performing Arts Center at The Temple-Tifereth Israel

Parking



#### Event parking for the Maltz Performing Arts Center:

Guests should access Lot 82 and Lot 81 from E. 101st Street. Cash and credit cards are accepted.

#### Non-event parking:

Guests should access Lot 82 from Ansel Road and E. 101st Street.

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- ADA guest drop-off (one-way) is available via the Ansel Road and E. 105th Street intersection only. Please drop off your guest at the Maltz Performing Arts Center and continue north to the P-82 or P-81 Lot.
- Driving Path for Parking
- Walking Path



MALTZ PERFORMING ARTS CENTER