

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
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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.

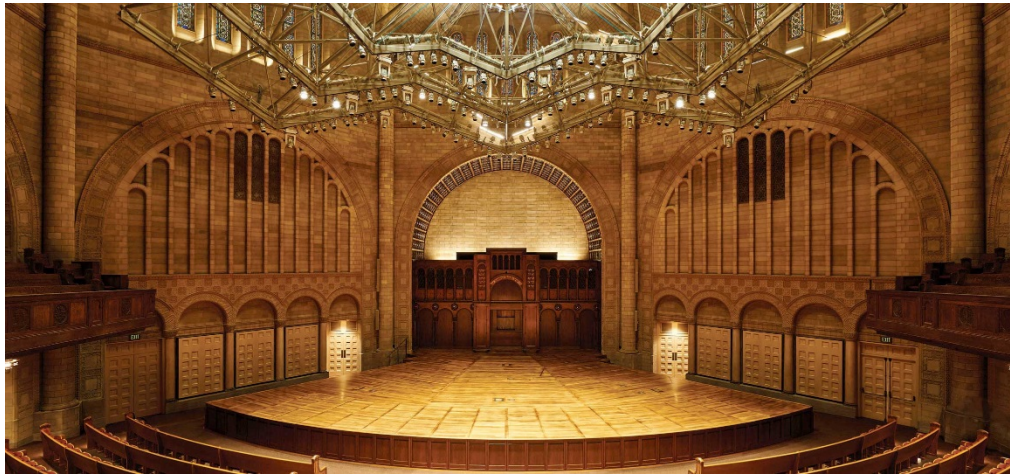
SECURITY

Location: West Lobby Entrance

Coverage: 24 hours

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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>	<u>Description</u>	<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.

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, multi-camera, 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

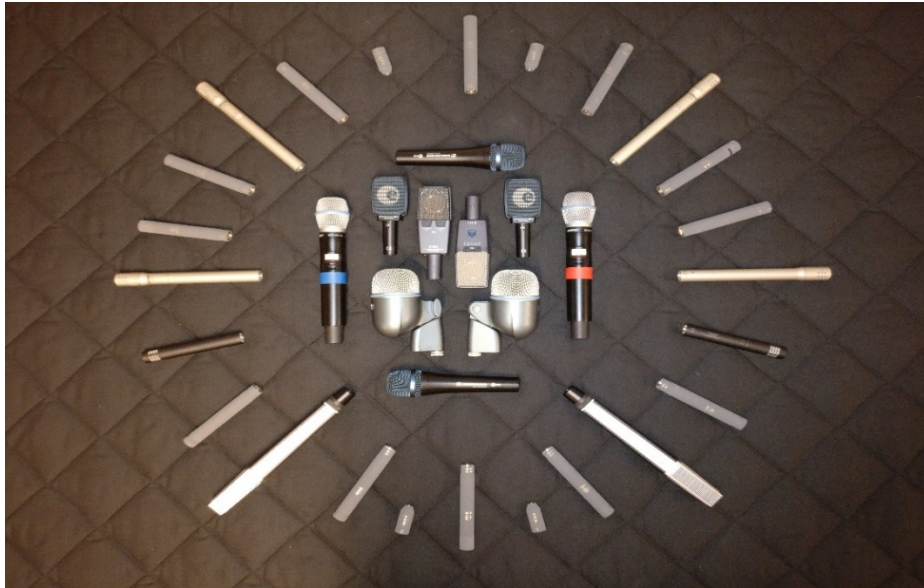


View from the Front of House overlooking the Yamaha CL3 mixing console

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

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Microphones

<u>Brand</u>	<u>Qty</u>	<u>Model</u>	<u>Description</u>	<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

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Furnishings



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

Tables & Chairs

<u>Item</u>	<u>Qty</u>	<u>Description</u>	<u>Brand</u>
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



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

Ensemble Furnishings

<u>Item</u>	<u>Qty</u>	<u>Description</u>	<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

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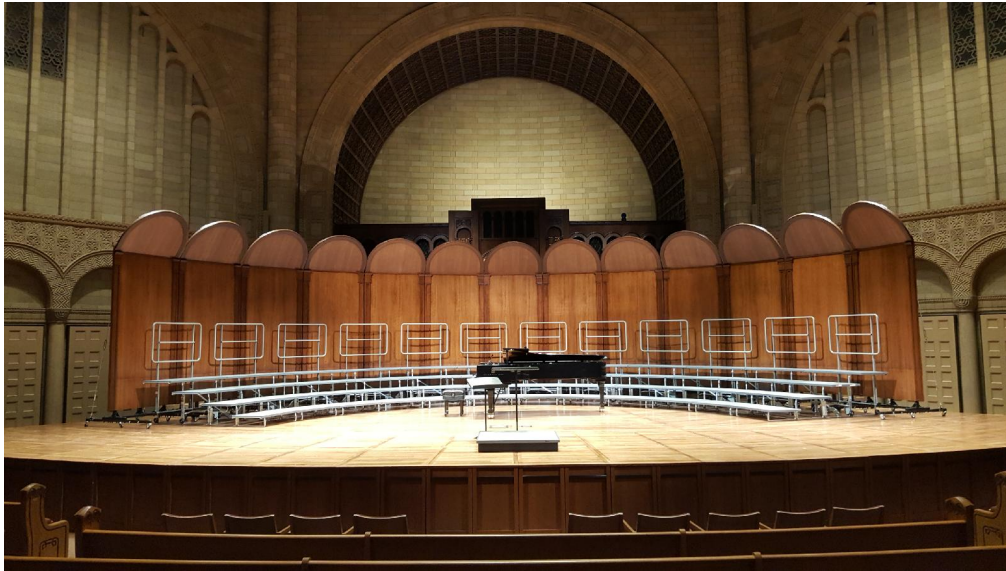


Multi-height Stagetek platforms with Wenger musician's chairs shown onstage in Silver Hall

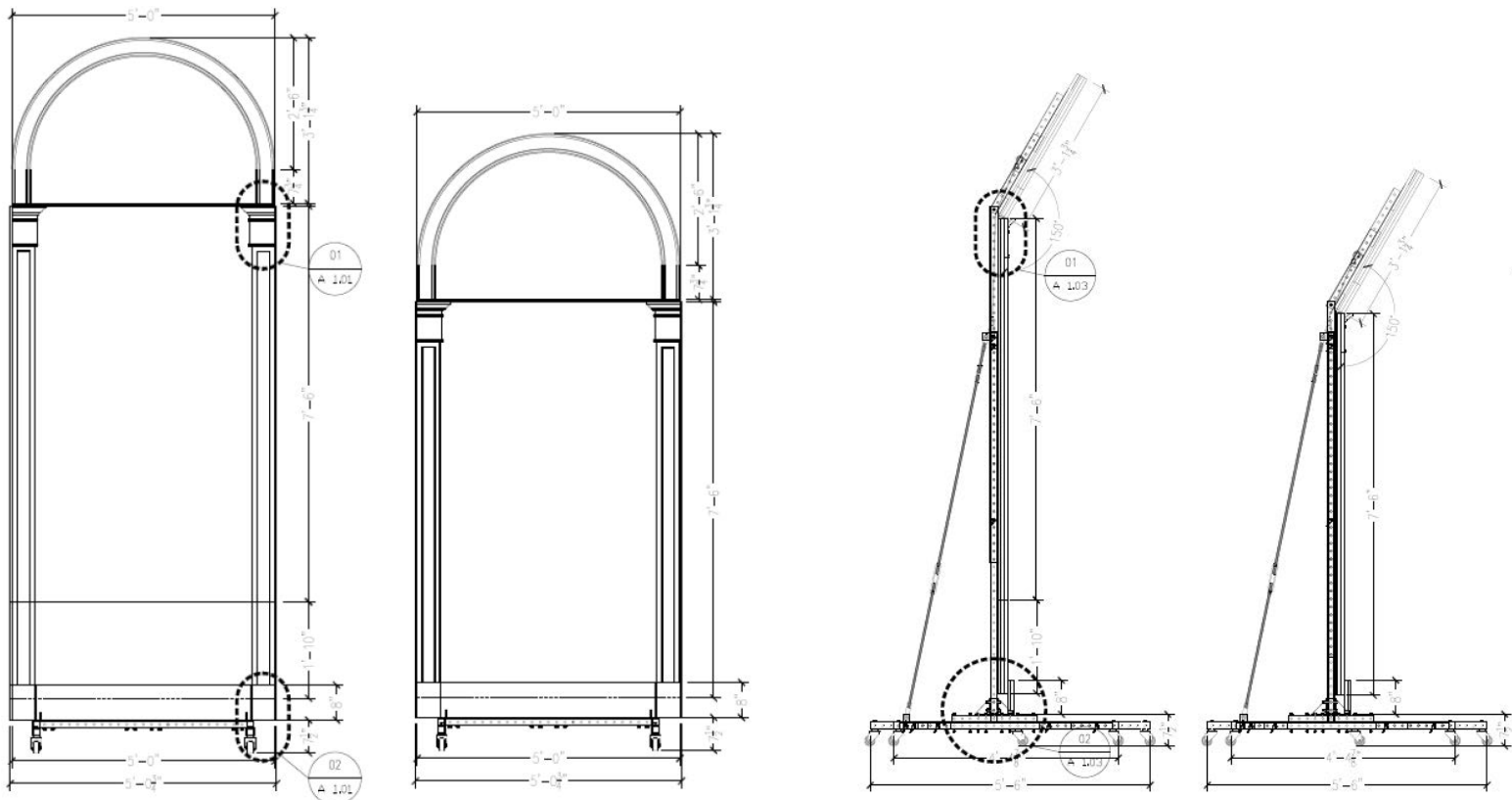
General Furnishings

<u>Item</u>	<u>Qty</u>	<u>Description</u>	<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

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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

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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 HMX4X - 2
Clear-Com belt packs - Helixnet HBP2X - 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

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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" w x 9'10" h (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

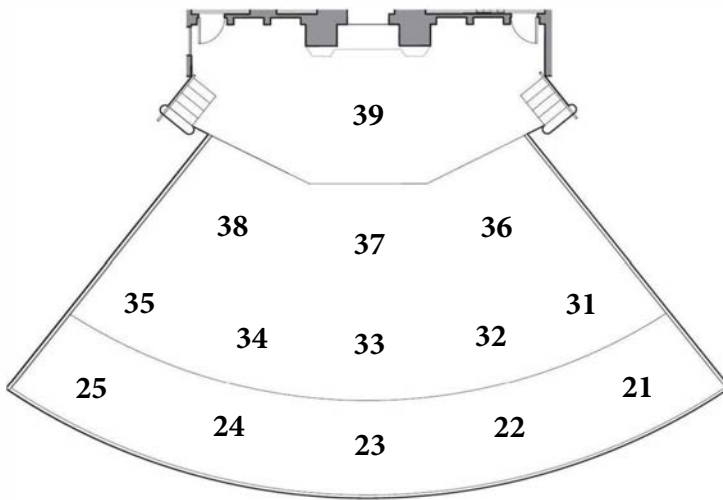
Control Processor - Crestron PRO-3
Digital Graphics Engine - Crestron DGE-2
House Reference - Mutec iClockDP
Seamless Switcher - Analog Way QMX150
Touchscreen controller - Crestron TS Series
Video Router - Snell Vega Series

Video Accessories

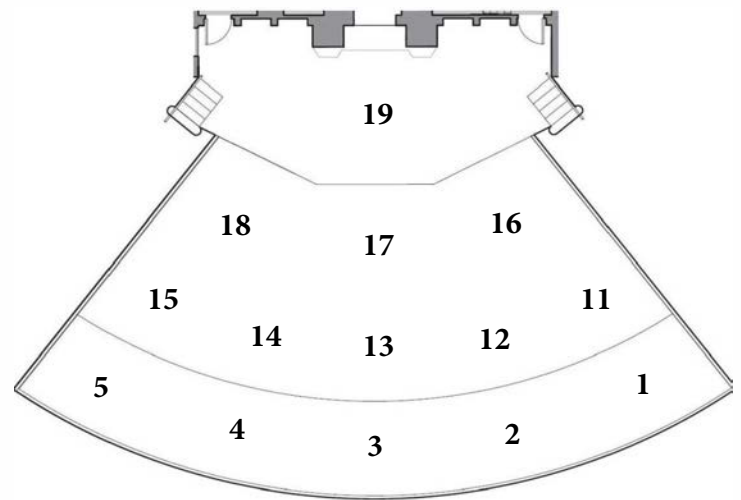
Blu-ray player - Oppo BDP105D Darbee Edition - 1
Signal scalars - Decimator MD-HX - 2
Furman line conditioner PL-PLUS DMC - 1
Audio delay unit - Rane AD22S - 1
Portable light stand set - Manfrotto 368B - 4
Signal converters HDMI to SDI - AJA HA5 - 2
Signal converters SDI to HDMI - AJA HI5-Plus - 2

Magic Sheet - Silver Hall

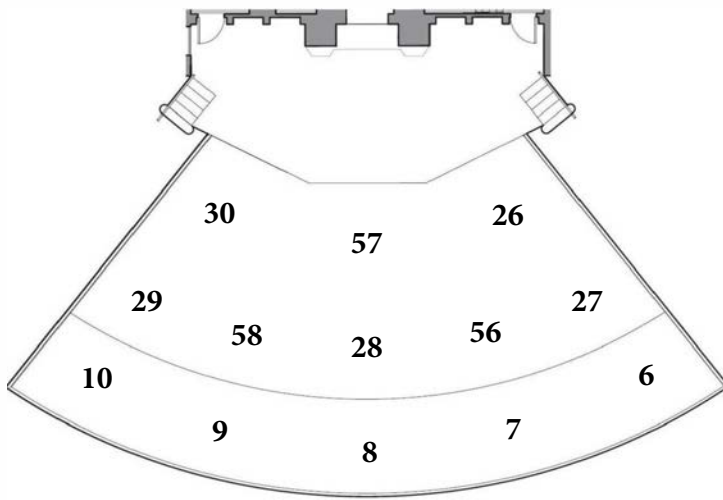
Down Lights



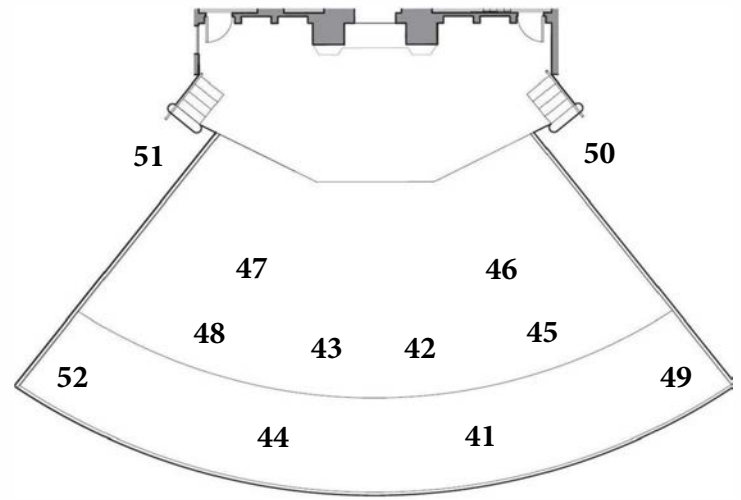
Front Lights



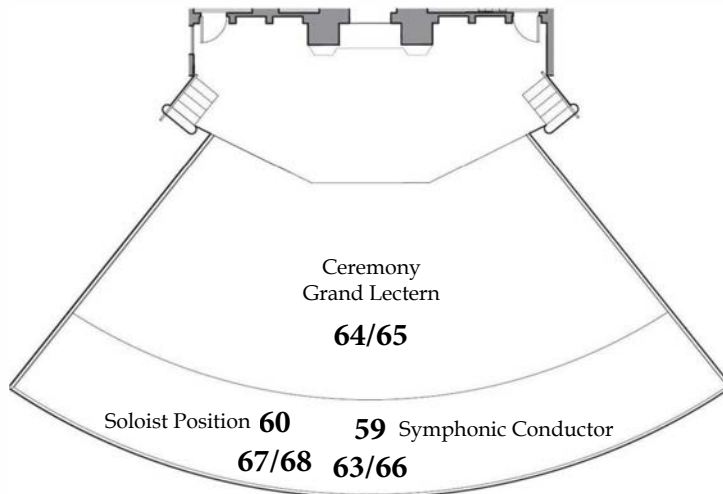
Side Lights



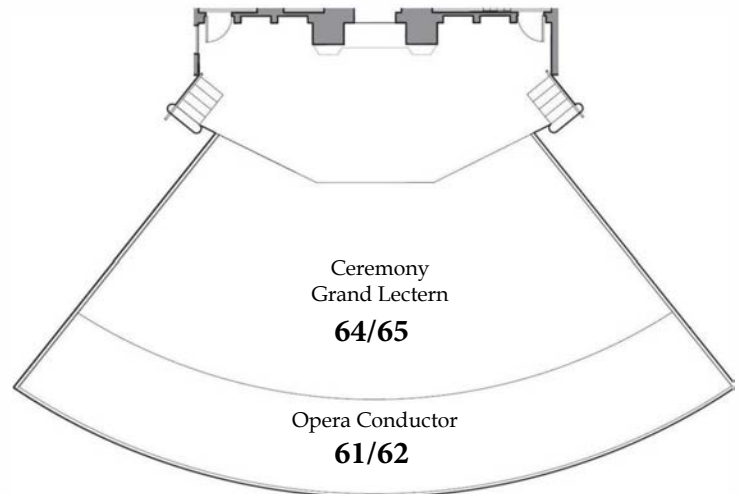
Moving Lights



Special Purpose - Extension Up



Special Purpose - Extension Down



Technical Data & Information
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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" w x 4'10" h (119" diagonal)/16:9 aspect ratio

Video Presentations

HDMI/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

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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

HDMI/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

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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

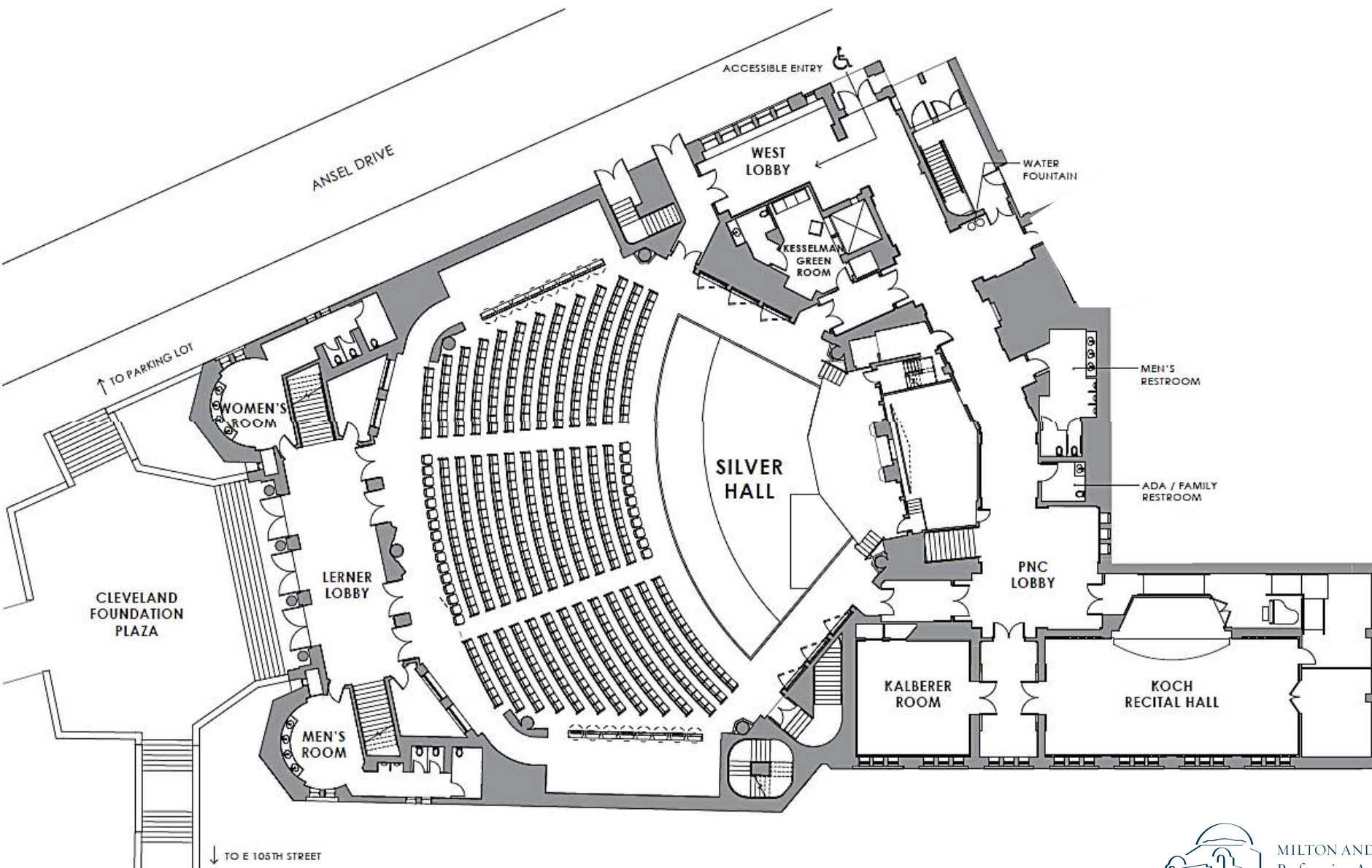
Amenities

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

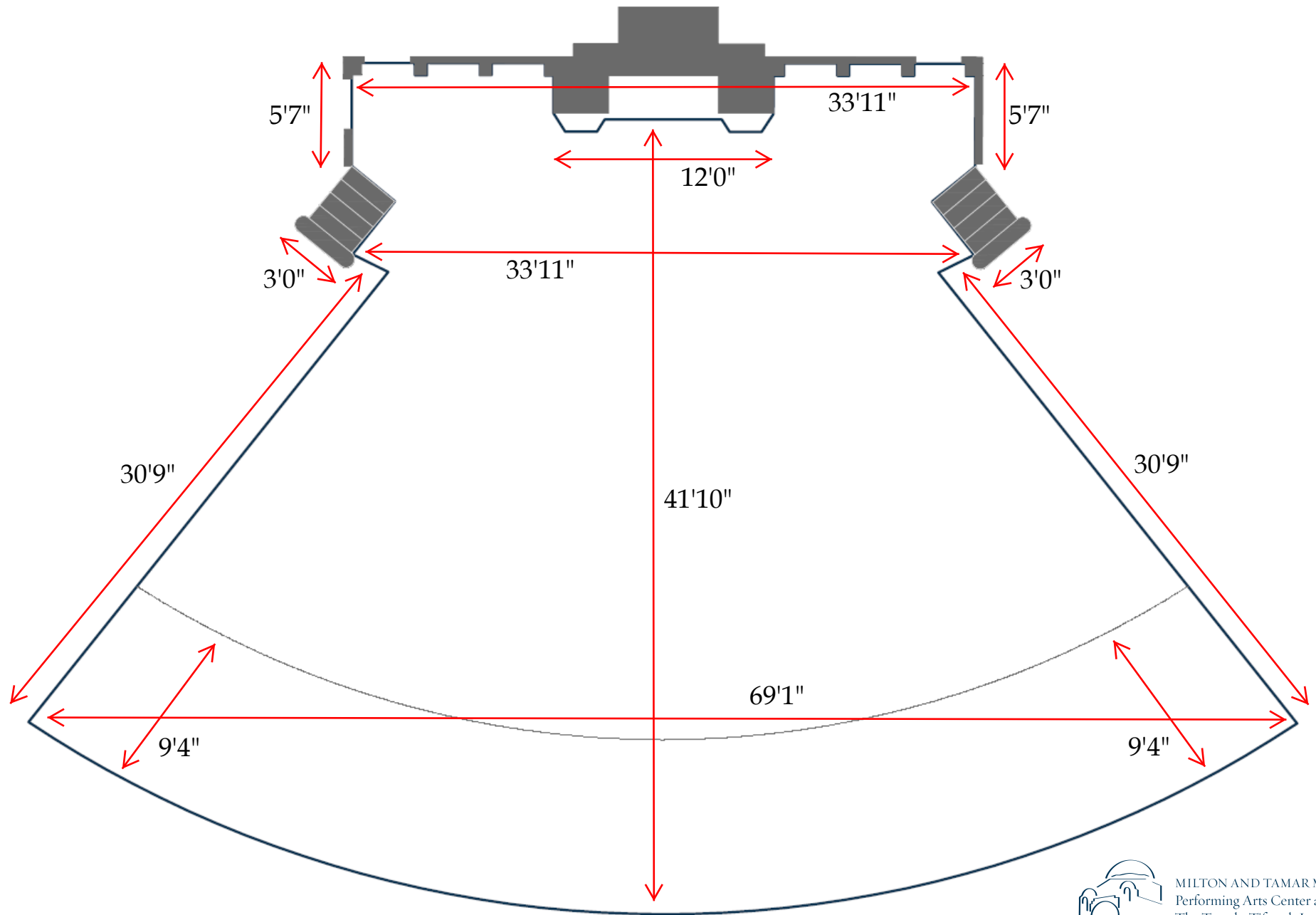
Furniture

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

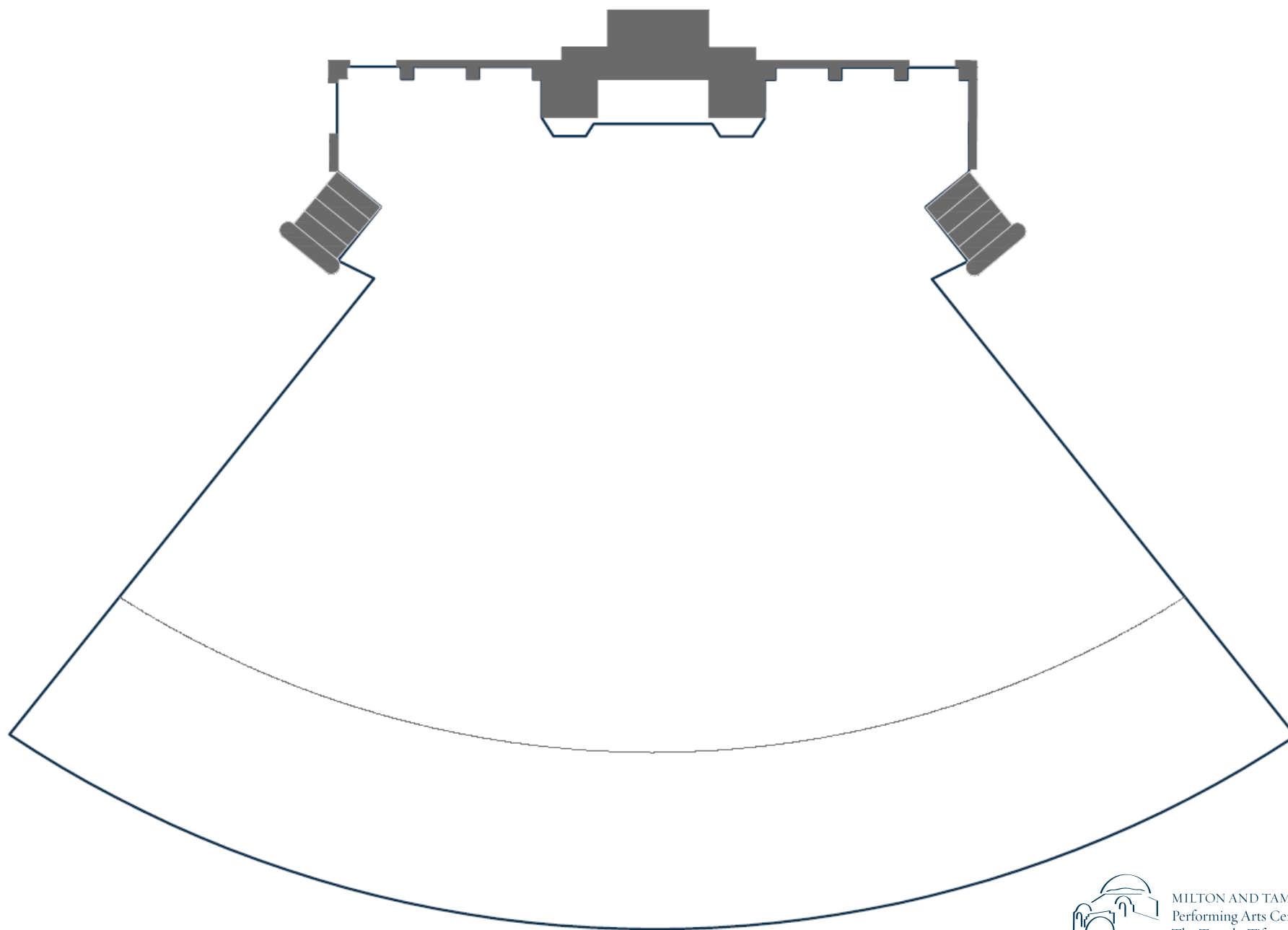
Maltz Performing Arts Center - First Floor Overview



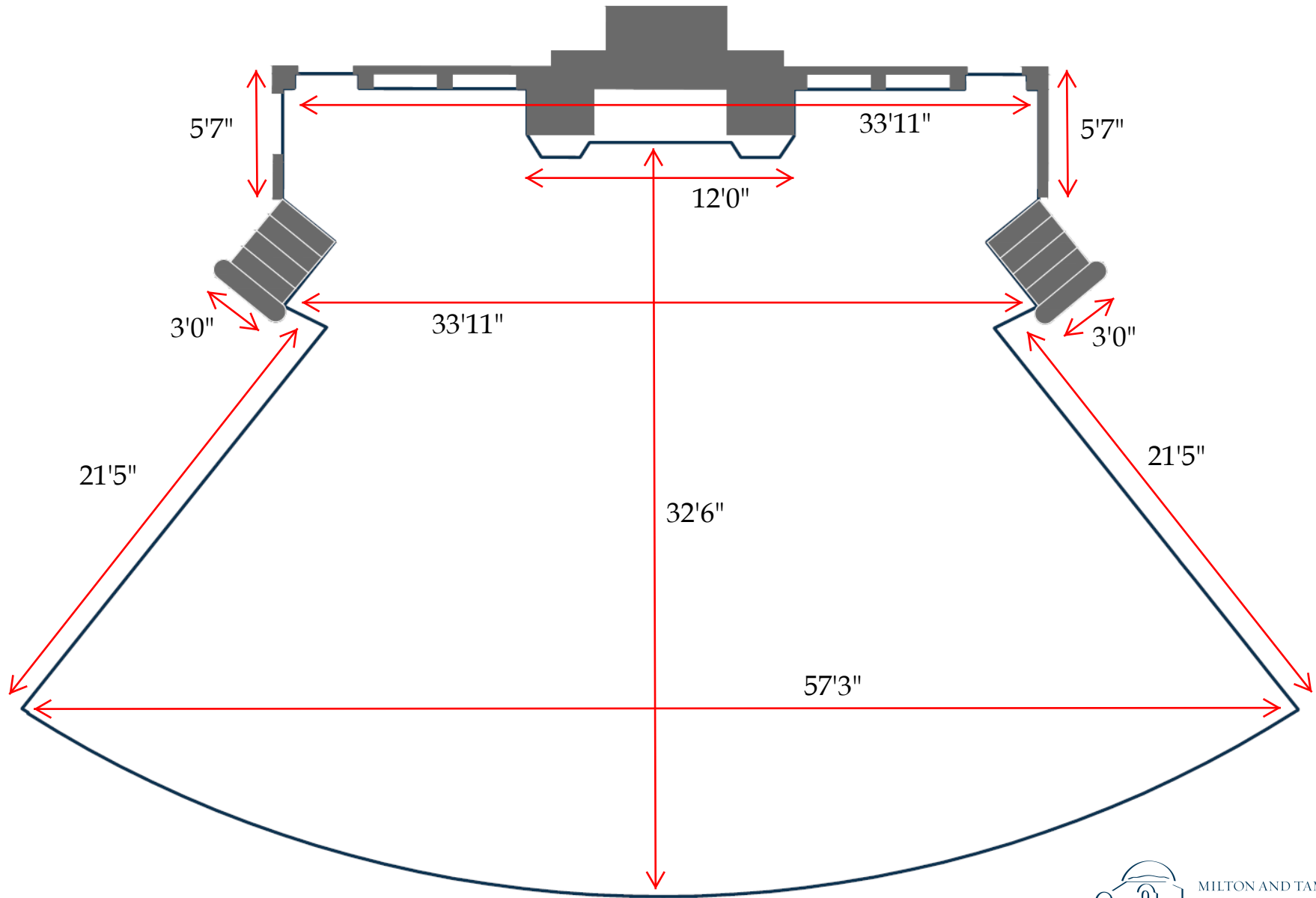
Concert stage mode with dimensions



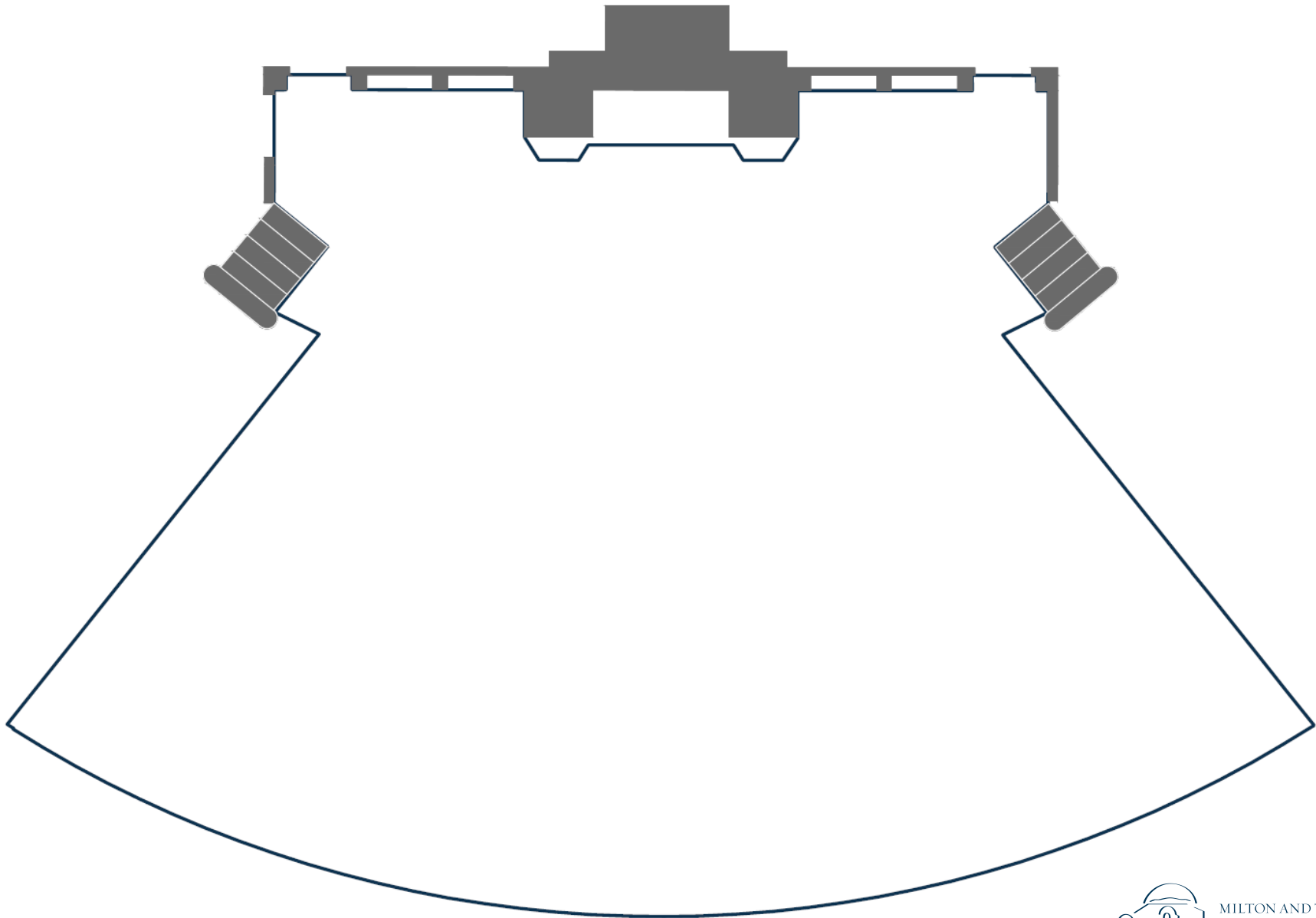
Concert stage mode without dimensions



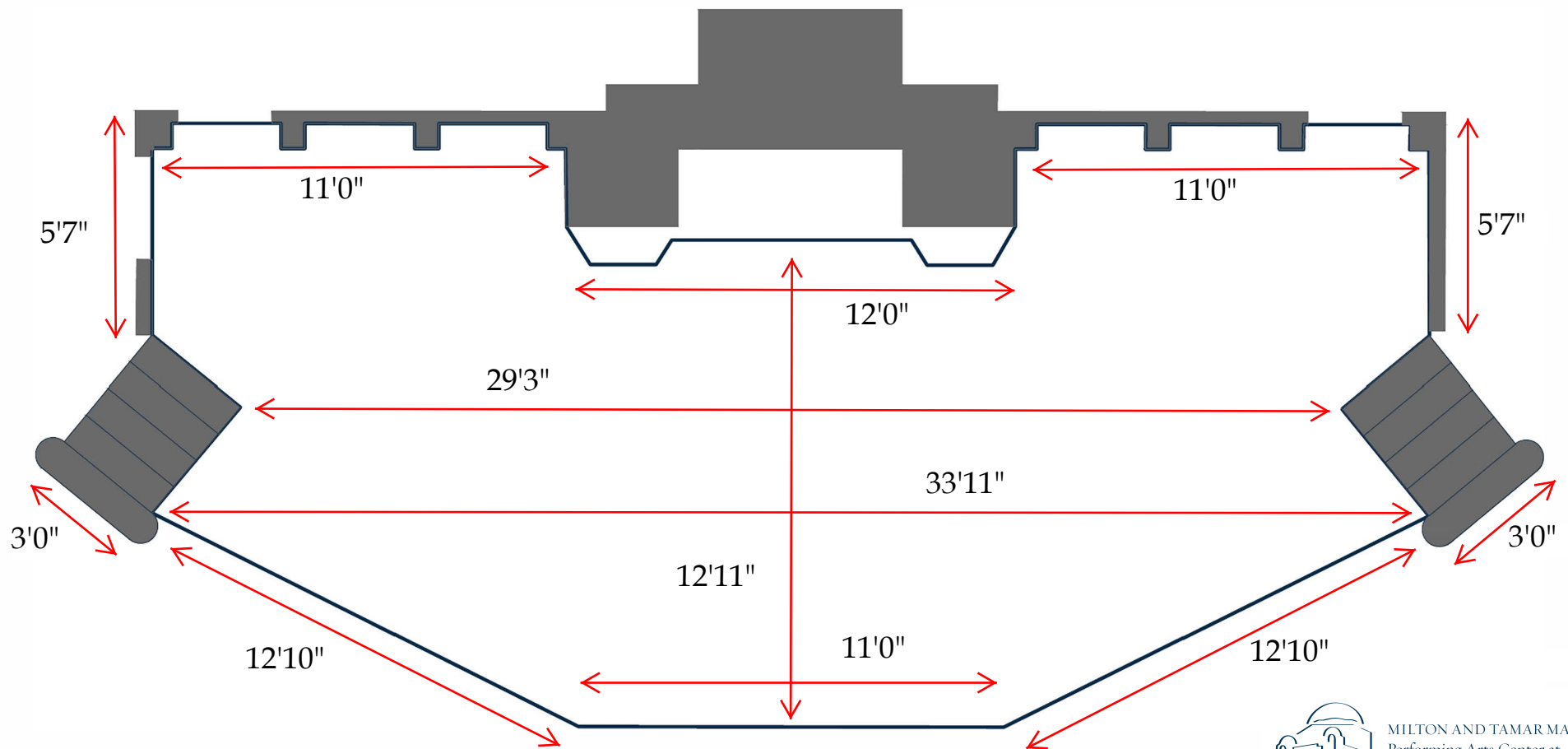
Ensemble stage mode with dimensions



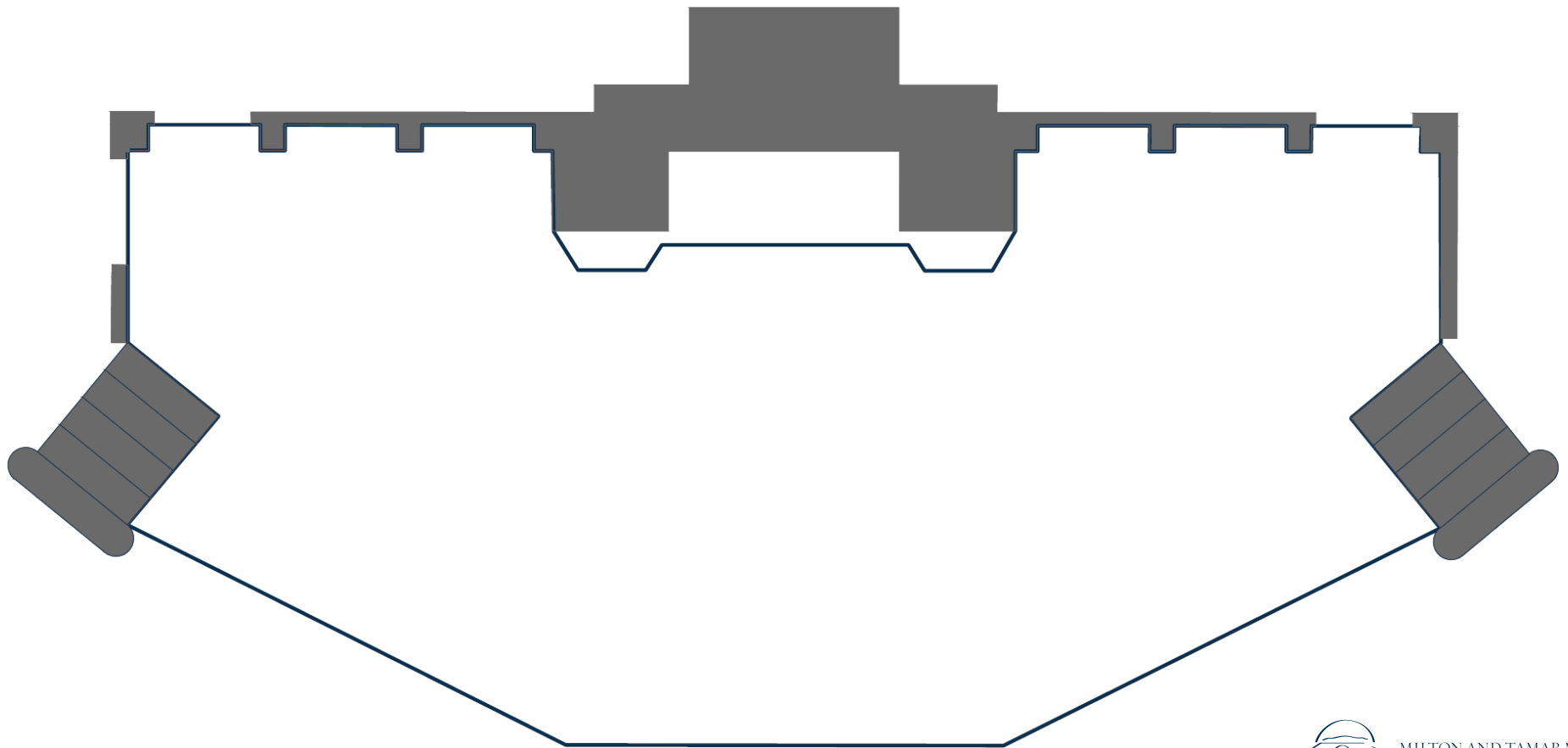
Ensemble stage mode without dimensions



Lecture stage mode with dimensions

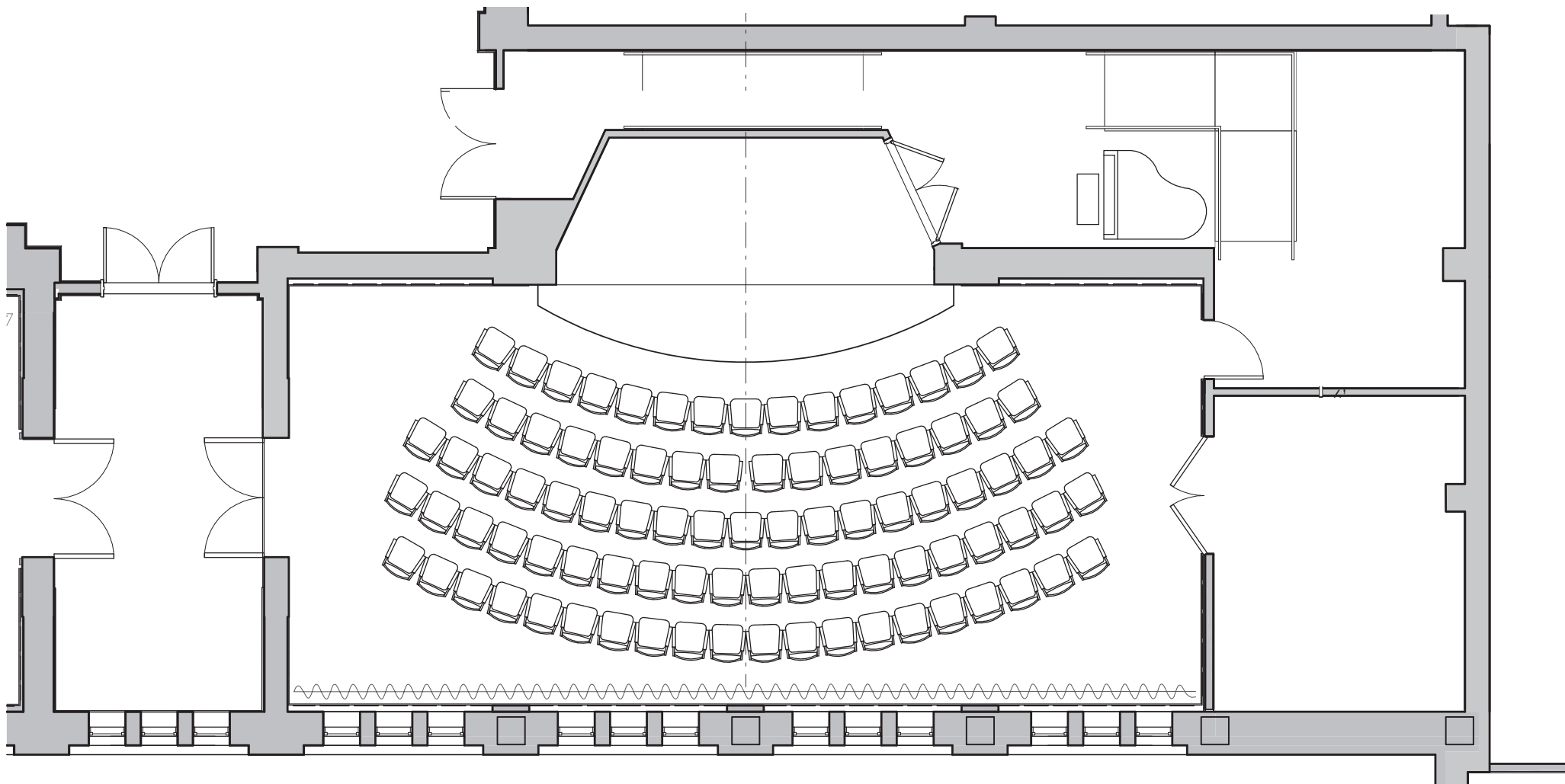


Lecture stage mode without dimensions



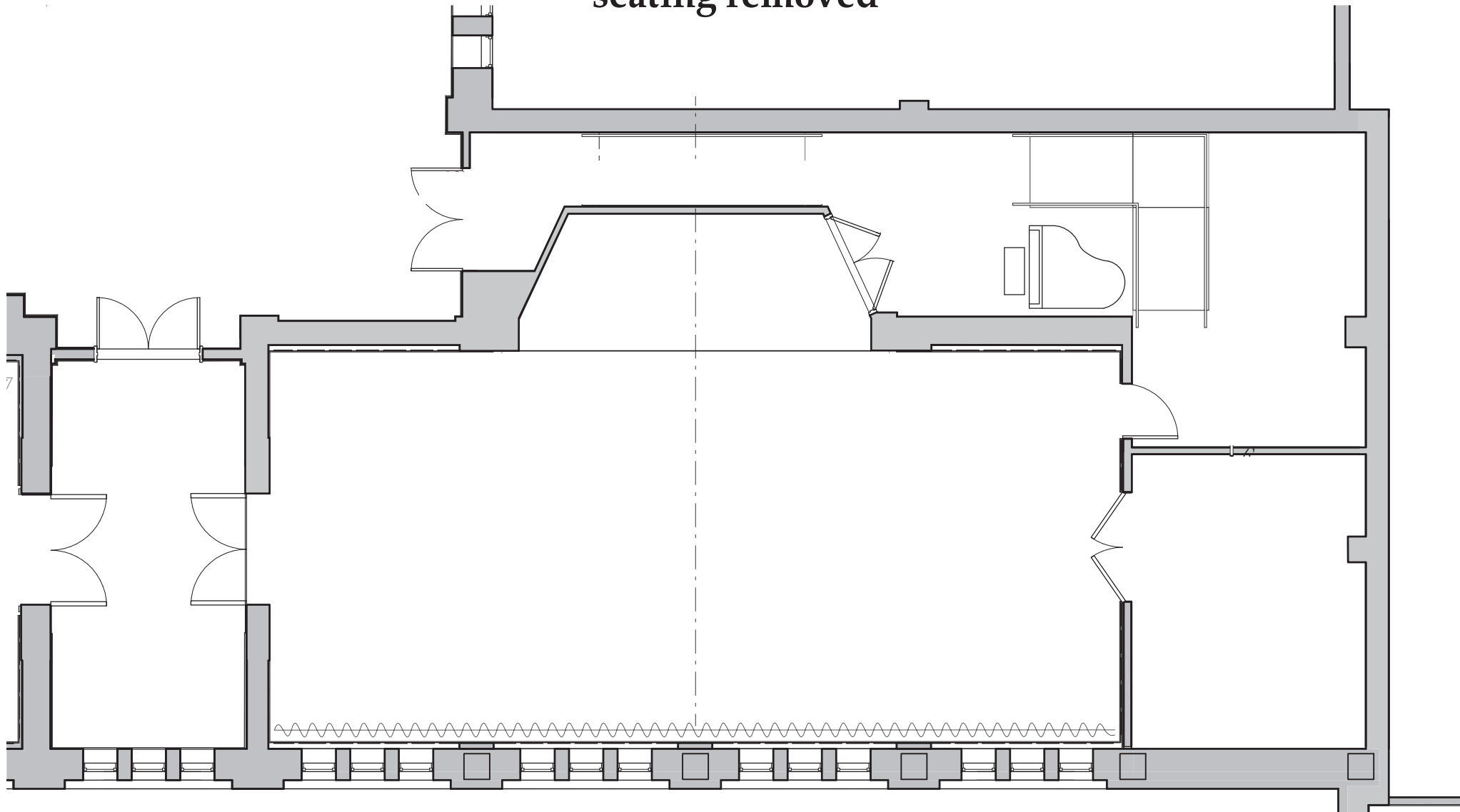
KOCH RECITAL HALL.

Stage extension with seating

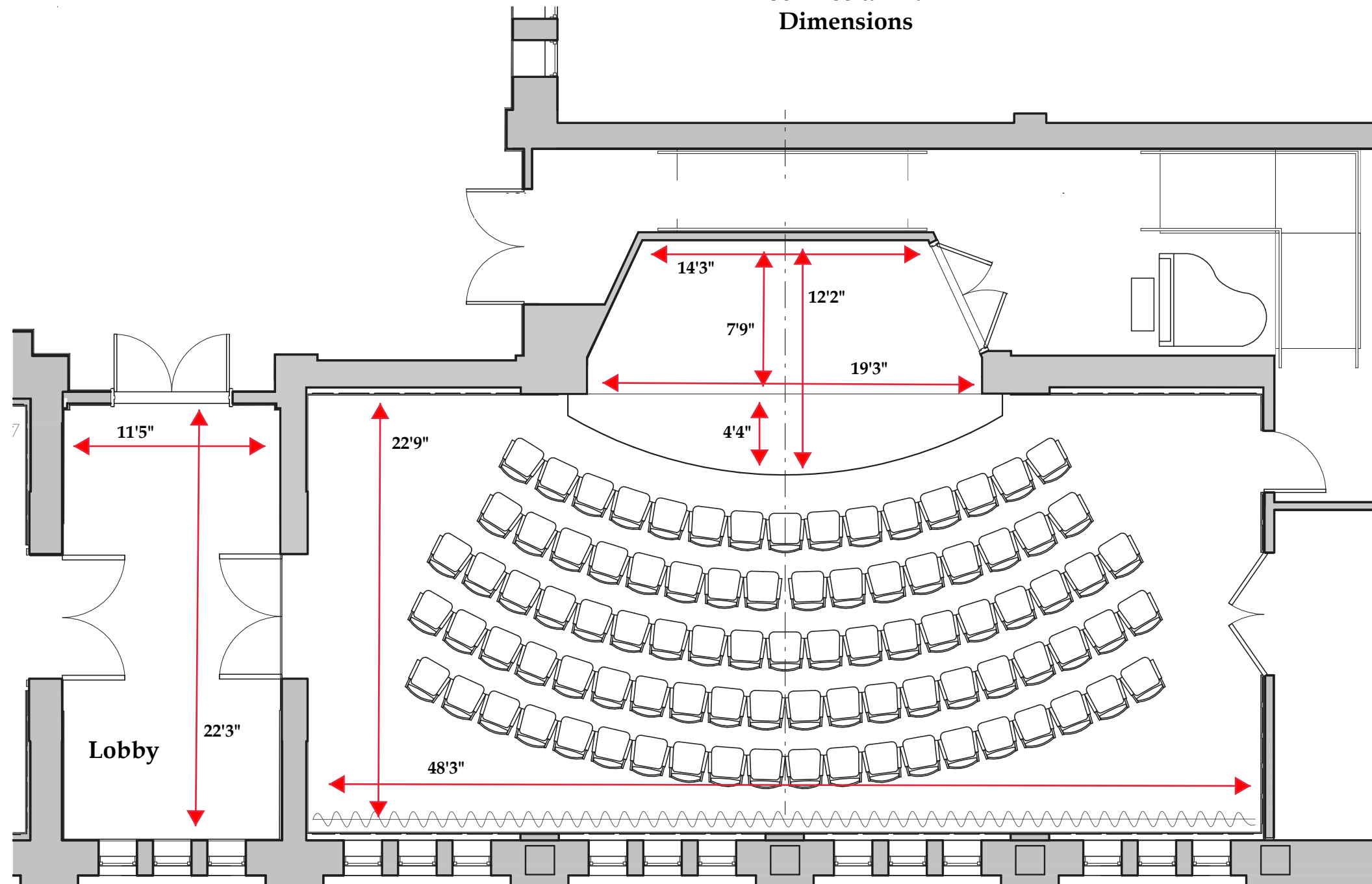


KOCH RECITAL HALL

Stage extension and seating removed



Koch Recital Hall Dimensions



The Kalberer Room

Windows

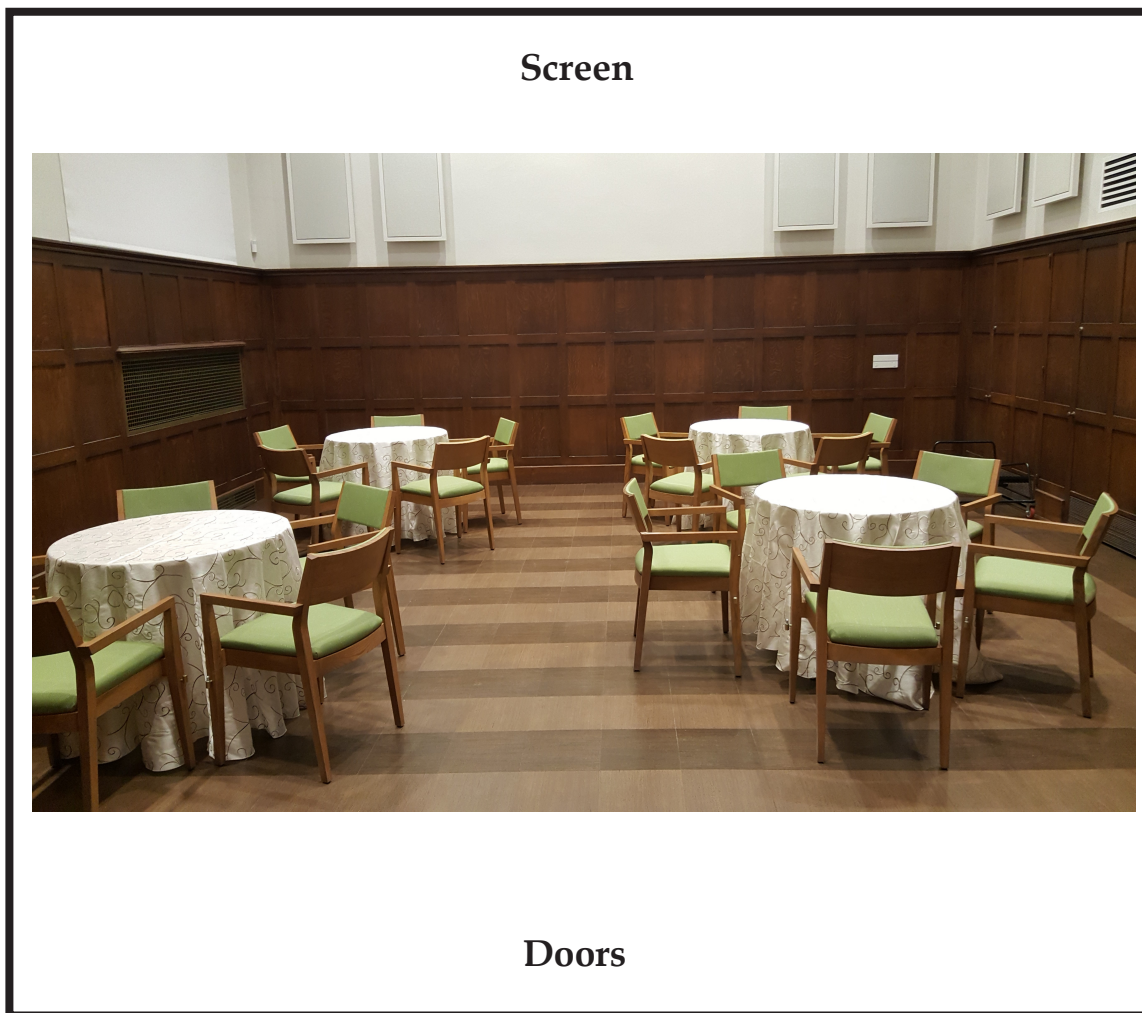
Screen

Storage

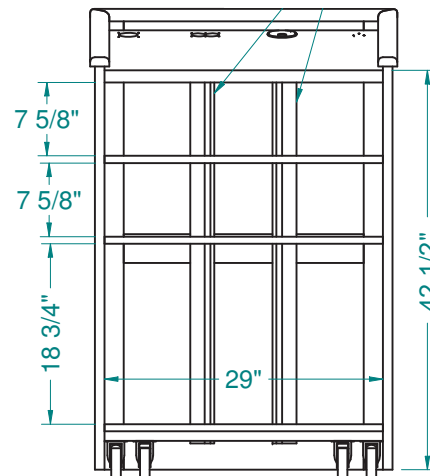
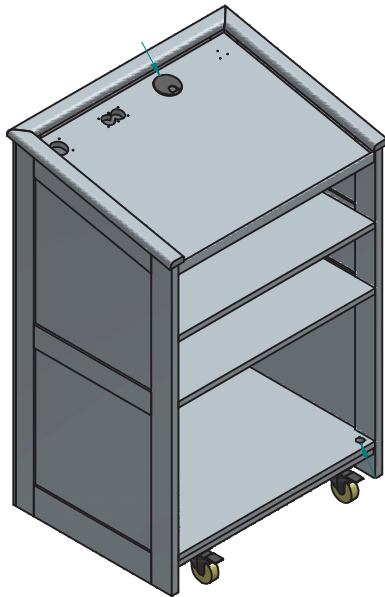
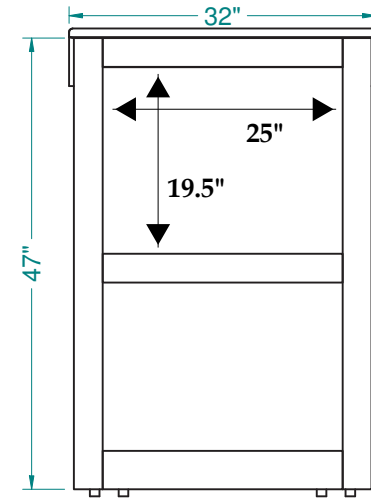
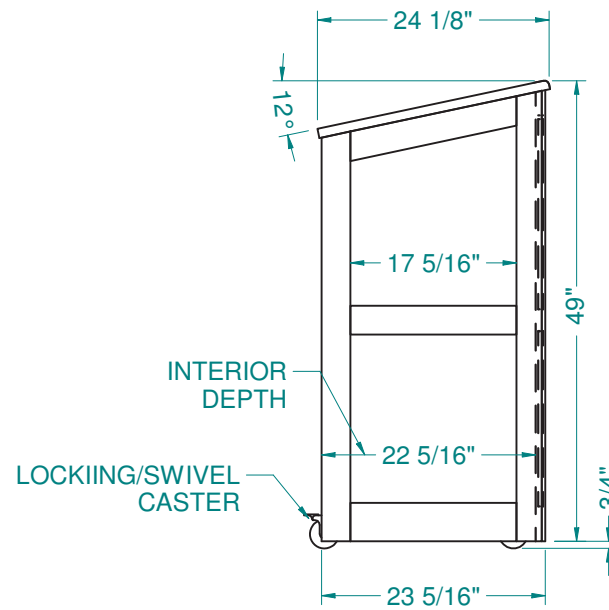
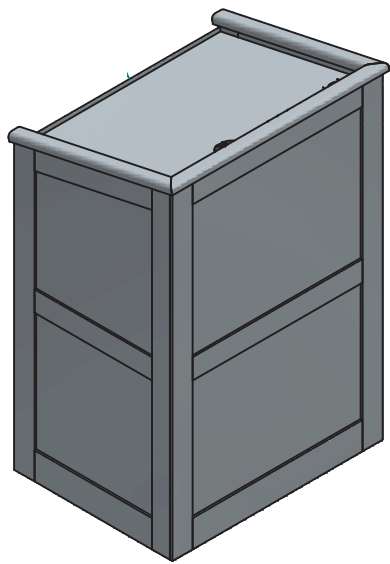
23'

Doors

23'



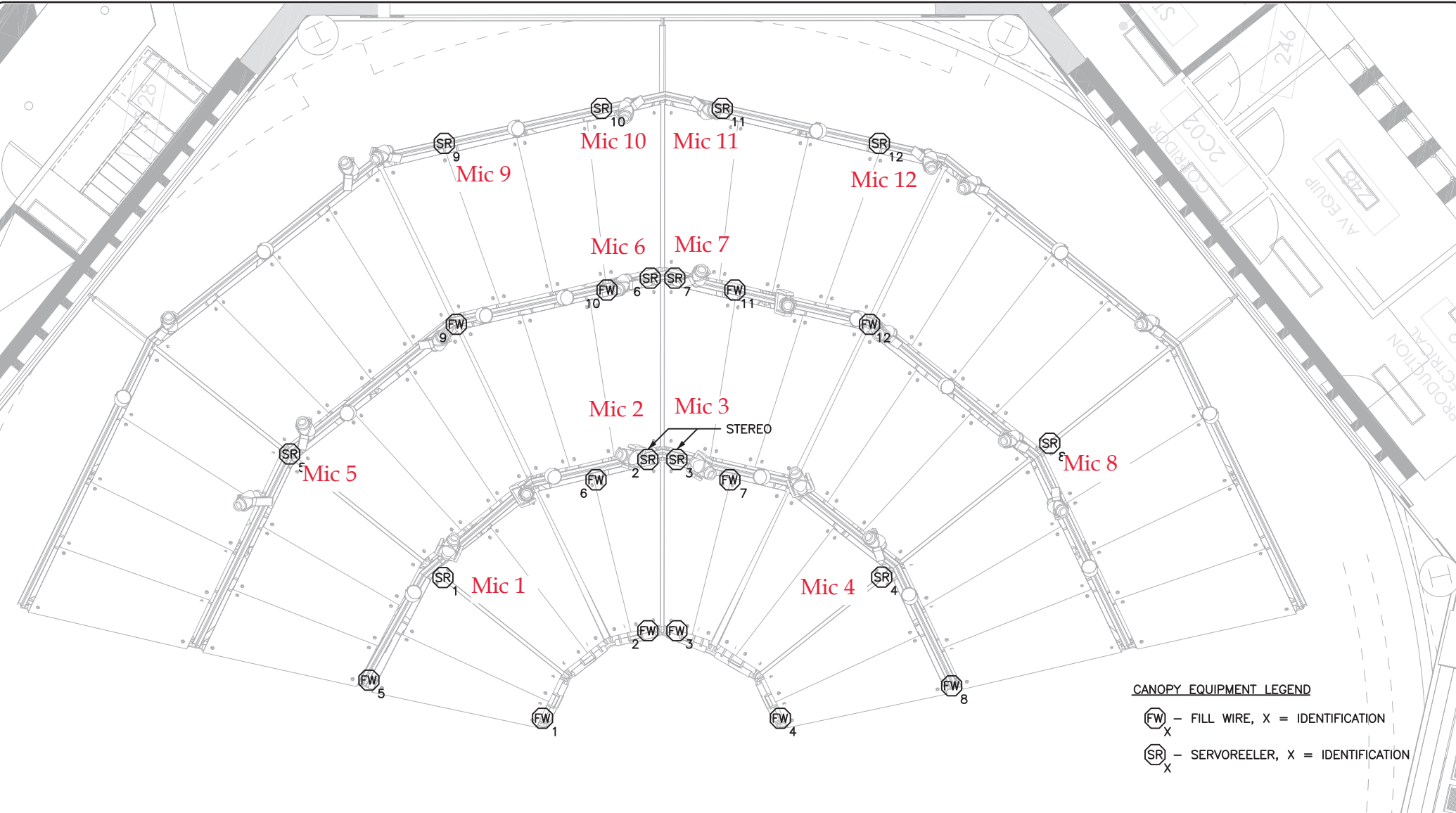
MILTON AND TAMAR MALTZ
Performing Arts Center at
The Temple-Tifereth Israel
CASE WESTERN RESERVE UNIVERSITY

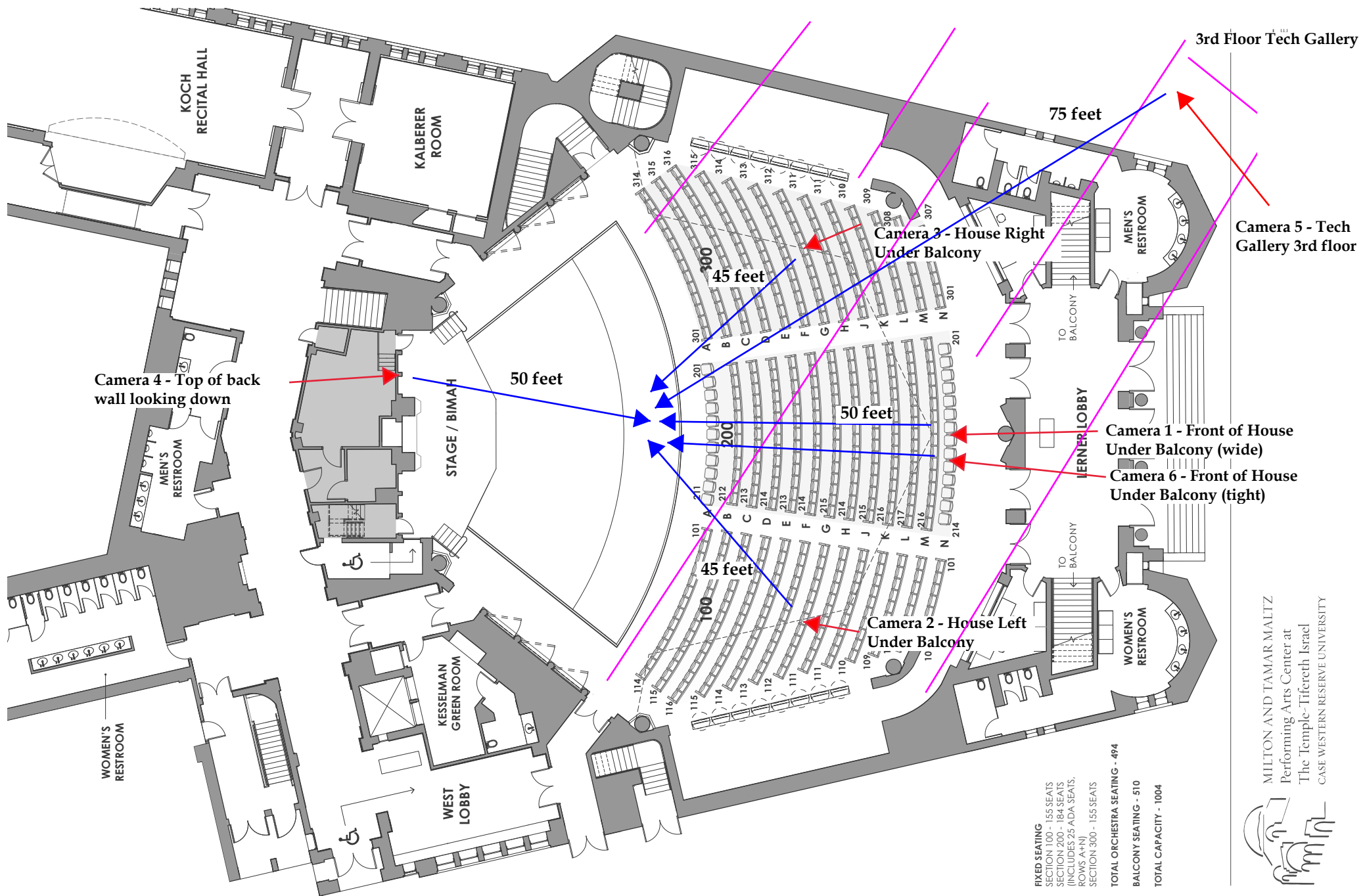


Grand Lectern



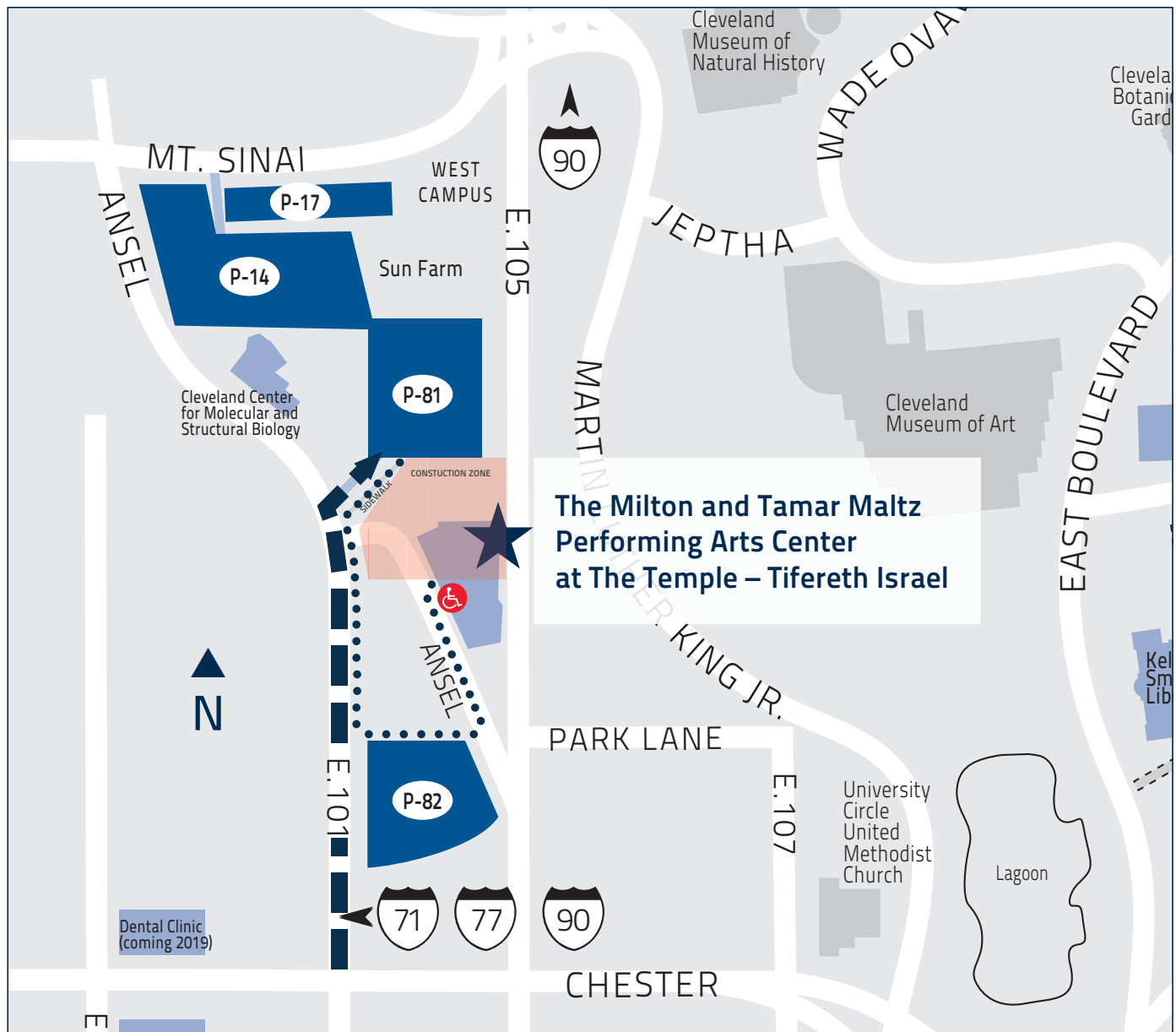
Canopy microphone drop and filament line locations





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.

■ & 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

1855 Ansel Road, Cleveland, OH 44106
216-368-6062 | case.edu/maltzcenter