Technical Information Package

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Technical Director
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For all venue contacts please follow this direct [link](#)
Click on “Our Team” and then “Vilar Performing Arts Center”

Shipping Address
(Use for all freight carriers, e.g. UPS/FedEx)
68 Avondale Lane
Avon, CO 81620-3822

Mailing Address
(USPS only)
P.O. Box 3822
Avon, CO 81620-3822

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Travel Directions

These directions are for reference only. Please coordinate all arrival and parking with Facilities Manager. Beaver Creek is a gated mountain community requiring advance vehicle coordination.

From the East (Denver) or West (Utah):
From Interstate 70, Exit 167 (Avon). Take south exit from roundabout to go south on Avon Road. Continue south on Avon Road through three more roundabouts to the Beaver Creek main gate. Follow Village Road uphill for 2 miles as you pass a golf course. Take the second left after passing under a ski chairlift on to Avondale Lane. The Vilar Center is two blocks down on your right.

Link to Google map: http://goo.gl/maps/ldY4j

Parking and Loading Dock

Limited paid public parking is located directly across from the Vilar Center in the Villa Montane Parking Garage. Max vehicle clearance 7’-2”. More information available at the Beaver Creek Main Gate, (970) 949-4911.

Semi-Trucks are permitted into Beaver Creek one at a time. Trucks will unload at theatre and park in a lot 1.5 miles from the theatre. All truck movements are coordinated by our Facilities Manager. Loading area overhead clearance is 14’-3”.
* Please call in advance for a separate truck route, truck staging and to arrange a guide-vehicle per resort regulations.

Tour bus parking with shore power is permitted on site with advance coordination. Two busses max. Overhead clearance for bus parking on site is 13’-3”.

Enclosed loading dock is immediately to the left of the theatre main entrance. Loading path is a 9’-6” W by 12’ H covered loading passage ending in a freight elevator. (No ramp up required.)

The freight elevator is 8’-8” W by 10’-6” L by 8’ H. Freight elevator accesses kitchen/laundry level and dressing room/stage level. 9,400 pound capacity. Detailed specifications in Appendix E. Items too long for the elevator, that can safely be flown, can be passed through both doors and loaded down to stage via two 2-ton motors on a trolley system.

Building Specifications

Policies
House opens 30 minutes prior to curtain. Lobby opens 45 minutes prior to curtain. The entire Vilar Center, including the loading dock, is a smoke-free environment. Executive director or deemed representative will make a pre-curtain announcement at show time, approximately 5 minutes in length.

Internet
Wireless: 802.11 AC is available in the building. Access information will be provided on arrival. Wired: one Ethernet run may be made with advance notice to green room or a dressing room.
Cellular Service
Venue is underground and cell service is unavailable unless outside in the loading dock/lobbies. Venue phone will be provided for use on request. Venue phone only available in Green Room. Wifi calling available.

ADA Access
Available to all lobby, auditorium, stage right, stage left and all other spaces via elevators and/or wheelchair lift. Please inquire for specific routes.

Assisted Listening
Ten (10) Sennheiser 830s IR audio enhancement devices held in box office.

Crews
Professional, non-union staff. Technical director or designated representative must be present for all operations on stage. Other required department heads determined by TD in advance. Additional crew shift/break requirements in accordance with Colorado state law and company policy: 10 minute break every 2-3 hours, 1 hour meal break for shifts longer than 5 hours. Overhire available, please advance.

Stage & Carpentry
Email Technical Director for link to all current technical documentation; lineset schedules, light plots, frequency lists.

Seating
530 seats: ~429 in the orchestra, ~101 in the balcony. 18 seats may be removed for handicapped access. 2 rows of footlight seating may be added in the orchestra pit with advance approval.

Stage Dimensions
Proscenium is 38’ to 45’ wide (adjustable with notice) by 24’-9” high. Plaster Line to back wall is 34’. The distance from the plaster line to the last usable line set is 31’-1”, see current lineset schedule for specifics. The curved apron/orchestra pit cover is 32’ wide with a depth from the Plaster Line of 10’ at the center and 8’ at the sides. Stage deck to auditorium floor is 3’.

Stage Floor
Black composite flooring, no traps. Sprung floor on sleepers with neoprene pads.

Wings
Centerline to stage right fly operator rail is 79’. There is a 6’ by 10’ piano storage area in the SR wing which is not removable. Centerline to stage left wall is 39’.

Orchestra Pit
The curved apron when orchestra pit is covered is 32’ wide with a depth from the plaster line of 10’ at the center and 8’ at the sides. It is usually covered. When open for an orchestra, the pit is 5” deep (from stage level), and 9’ on center from upstage wall to downstage wall. In some configurations it is seated with up to 45 footlight seats or opened for a standing/dancing area.
Grid and Over-Stage

**We are a short-fly house.** There is no grid above the stage, instead 31 working linesets are are underslung from I-beams, (bottom of I-beams is 34’-11”.) Seven I-beams run upstage-downstage and are 10’-9” on center. (The center beam is on center line.)

Battens are 69’ long, 1½” nominal steel pipe. In trim is 5’, **max-out trim is 31’-6”**. Email **Technical Director** for current Lineset Schedule and details.

Single-Purchase rope system. First electric has a dedicated automated winch. Operator rail is located stage right at stage level. Loading gallery stage right, 26’-6” above stage floor. Accessed by enclosed ladder or loading dock door.

Available Weight: 700 x 35lb. bricks.

Crossover

24” wide and lit, upstage of dead-hung full-stage black drape.

Stage Manager’s Console

Backstage right near loading dock elevator and green room/dressing rooms. Audio and video monitor and production comm is available. Page mic available. Communication with House Manager via Motorola two-way radios.

Shop Area

None. We stock only the most basic assortment of tools for repairs or adjustments to scenic elements. The closest substantial hardware/materials resource is Home Depot located 4 miles away. Specialized theatrical rentals, equipment and supplies are only available by mail-order.

Additional Equipment

- 36’ Genie™ Personnel Lift
- 18’ Scaffold unit
- Pallet Jack

House Draperies

Main Curtain: Reddish-brown with gold trim. On traveler track at plaster line. Manually operated stage right.

Borders: Six (6). Flat, black velour. 8’ H x 70’ W.

Legs: Two (2) sets of two. Flat, black velour. 25’-9” H x 16’-6” W.

Full-Stage Travelers (used as legs 2 and 4): Two (2). Pleated, black velour. 26’ H.

Black Scrim with bottom chain. 30’ H x 60’ W.

Sky Blue Cyclorama, seamless muslin with bottom pipe. 28’-6” H x 68’ W.

White Leno Bounce. (Old cyc. Has tears and cannot be used as primary cyc.)
**Film & Projection**

**Projection**

Primary: Panasonic PT-DZ870-ULK 8,500 lumen WUXGA DLP projector mounted on balcony rail
14’ 6” x 25’ Front Projection Screen (16:9)

Also available: Sanyo PLC- XF60 / 1024 x 768 XGA 6500 lumens with fly bracket

**Video**

Analog Way PLS-200 Switcher
DVD Player
Blu-ray Player

**Notes**

Venue does not maintain any computers/software for playback or presentations. Preferred input to projector is HDMI or SDI at front of house production booth. Remote shutter control available at FOH or SR. Very minimal adaptors and video cables are available.

**Lighting**

Please email Technical Director for a link to current Vectorworks and PDF Rep Plot. Some drawings at end of this document for reference.

**Company Switch**

- Lighting and motor power Stage Right: 120/208V, 3 phase, 400A/leg.
- House lighting power on SR Platform: 120/208V, 3 Phase, 600A/leg
- Audio power Stage Left: 120/208V, 3 phase, 100A/leg.

**Dimmers**

380 ETC Sensor, 2.4 kW.

**Console**

Located in Control Booth at rear of the house. Can be moved to tech table for programming but must be in booth for performances per house policy. Multiple DMX network inputs and outputs located around the theater.
- ETC Ion 3000 with 2x20 playback wing

**Houselights**

Operated from preset stations at Control Booth and Stage Manager’s Console or programmable at light board via dimmers. House manager can take emergency control of the house lights via a key switch in both the upper and lower lobbies.

**Circuits**

20A, dimmer per circuit, 380 total.
Repertory Lighting Instruments by Position

Focus access by Genie lift overstage, ladders to balcony and box boom positions, and tension grid to catwalks.

Onstage Moving Lights:
- 8 Clay Paky A.leda B-EYE K10
- 12 Martin Mac Quantum

Deck Moving Lights:
- 6 Martin Mac 250 Entour

Onstage Electrics:
- 25 Source Four 26°
- 24 Source Four 36°
- 3 Source Four 50°
- 32 Source Four PAR WFL
- 4 Source Four PAR WFL as audience blinders
- 60 PAR 64 pre-rig on upstage concert truss (use same circuits as Dance Towers)
- 10 3-Cell Altman Sky Cyc
- 8 6-Cell Altman Ground Cyc

Balcony Rail:
- 2 Martin Mac Quantum
- 8 Source Four Zoom 15°-30°
- 1 Source Four 10°
- 3 Source Four 19°

Catwalks:
- 48 Source Four 19°
- 2 Source Four 26°
- 30 Source Four PAR NSP in 3 color wash, as downstage “concert truss”
- 2 Source Four Zoom Jr. 25°-50° as curtain warmers

Box Booms:
- 20 Source Four Zoom 15°-30°

Dance Towers:
- 48 Source Four 36° on eight, 6’-6” tall, pre-rig towers (Use same circuits as 60K Truss)

Additional Instruments
- 48 ETC Source Four 575W Ellipsoidal Spot Lights
- 5 10° barrels
- 18 19° barrels
- 42 26° barrels
- 16 36° barrels
- 21 50° barrels

Note: there are more barrels than instruments
- 2 Source Four Jr. Zooms 25°-50°
- 25 Source Four PAR
- 12 Source Four PARnels
- 22 Altman 6” Fresnels
- 4 PAR 64
- 6 PAR 16 Birdies
**Followspots**
Located center, above Control Booth position behind glass. All three positions have audio monitor and comm stations.

- 3 Lycian Starklite II 1200W. 7” color cuts. With Telrads and comm.

**Lighting Accessories:**
- 2 Rosco RevoPRO Dual Gobo Rotators
- 2 High End Systems Data Flash strobe lights
- 1 DF-50 Hazer & Fan
- 8 10’ x 1½” boom pipes with 50 lb. bases

**Various:**
- A and B size Pattern Holders, steel and glass
- 7.5” Barn Door
- 10” Barn Door
- 5” Top Hat (6.25” frame)
- Source Four Iris
- 6.25” Donut
- 7.5” Donut

**Notes**
All instruments and circuits are wired for Stage Pin (2P&G). Adaptors and a variety of stage pin and DMX cable available. All instruments have gel frames and safety cables.

**Audio**
VPAC has a strictly enforced DB limit of 92dBA. VPAC has worked to build a trust in the market as it pertains to this issue in our venue, and will not compromise our integrity to the patrons and the community, which loud shows have done in the past. VPAC provides dBA monitoring equipment at the FOH mix position as well as staff trained in its use. Our equipment measures a 10-minute average allowing for the natural fluctuation of a performance. A drum shield and amplifier baffles are available as needed. If sound levels are too high at sound check, or if the band is not executing a full sound check, a drum shield and amplifier baffles are required.

**Paging System**
Volume-controlled program monitor/paging speakers at: lighting and sound positions in the booth, dressing rooms, green room, stage manager console, and followspot booth. Paging mic at Stage Manager’s Console, stage right.

**Production Communications**
Clear-Com. 4-Channel or Party Line.
- Wired Stations: Control Booth lighting side (2), Control Booth audio side (1), Stage Right, Stage Left, Fly Rail, Main Curtain, Followspots (3), Tension Grid, US wall onstage (2).
- Wireless: 2-channel HME headsets (4).

**Mix Positions**
FOH at rear of orchestra seating, 55 feet from stage, just house left of center with unobstructed sightlines to the stage and both PA hangs. House console can be lowered via hydraulic lift for a guest
console to be placed on top. Guest snake ties guest consoles into house snake. Please note the mix position may not be moved into the house due to the limited size of the house, equipment requirements, and the aesthetics policy of the VPAC.

Monitor mix position is stage left.

Mixing Consoles
- Front of House: Digico SD-12 with Waves SG Live Bundle Board specifications. Note: Phantom is FOH only.
- Monitor Mix: Digico SD-9 V2 Board specifications.

Audio Snake
- Radial 56 x 8, dual A/B Jensen isolated split downstage left.
- Digico SD Rack downstage left with Optocore fiberoptic snake run to FOH mix position
- Digico D Rack with madi snake for monitor mix position

House PA
Array motor point capacity is ½ ton
- 2 Adamson Spektrix Line Array in left-right arrangement. 6 Spektrix and 2 Wave per side.
- 1 Adamson Spektrix Double 18” Subwoofer Flown per side in array
- 1 Adamson Spektrix Double 18” Subwoofer per side. Ground mounted.
Lab Grupen, XTA processed

Front Fill Speakers
- 6 Meyer UPM-1P Front Fills

Monitor Speakers/IEM
- 12 Meyer UM-1P 12” narrow-coverage powered monitors
- 2 Meyer UM-100P 12” wide-coverage powered monitors
- 2 Meyer UMP-1P 15” powered monitors
- 1 Dual 15” EAW passive drum subwoofer
- 4 JF80 permanently mounted FOH/over stage for fold back
  Crown Macro Tech
- 4 Sennheiser EK300 stereo IEM
- 4 Sennheiser G4 stereo IEM
- 1 Shure P4HW wired IEM

Microphones
- 3 Neumann KMS 105
- 8 Shure SM-57
- 2 Shure Beta 57A
- 9 Shure SM-58 (2 switched)
- 3 Sure Beta 58A
- 6 Shure Beta 87C
- 2 Shure Beta 87A
- 1 Shure Beta 91
- 4 KSM32 Studio Condenser
- 1 Audio Technica AT871R condenser
- 4 Shure Beta98D/S
- 2 Shure Beta52A
- 3 Sennheiser e604
- 2 Shure SM-81
- 4 AKG-C535EB
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<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
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<tbody>
<tr>
<td>2</td>
<td>AKG-C747 comb</td>
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<tr>
<td>4</td>
<td>AKG-CK91 (se300b)</td>
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<tr>
<td>5</td>
<td>AKG 10&quot; CK98 shotguns (used w/se300b)</td>
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<td>3</td>
<td>Neumann KMR-82i Shotguns</td>
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<td>2</td>
<td>AKG-C414 B-ULS</td>
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<td>2</td>
<td>AKG-C3000</td>
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<td>4</td>
<td>DPA 4099 plus various mounts</td>
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<td>AKG-D112</td>
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<td>AKG-C418</td>
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<td>Sennheiser-MD421 II</td>
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<td>Shure SM-91</td>
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<td>Crown PCC 160 floor mic</td>
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<td>AT853 Uni-point hanging mics</td>
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<td>Beyer M88</td>
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DI

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<td>Countryman Type 85 FET Active</td>
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<td>Radial Pro DI Passive</td>
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<td>2</td>
<td>Radial J48 Active</td>
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<td>Radial J48 Stereo Active</td>
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<td>1</td>
<td>Radial JPC Stereo Active</td>
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<td>Radial Pro D2 Stereo Passive</td>
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Wireless Microphones

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<tr>
<td>12</td>
<td>Lectrosonics Venue receivers</td>
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<tr>
<td>12</td>
<td>Lectrosonics LM-400 belt pack transmitters w/ E6 &amp; B6 microphones</td>
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<tr>
<td>12</td>
<td>Lectrosonics handheld transmitters with Lectrosonics HHC capsules</td>
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<tr>
<td>2</td>
<td>Lectrosonics plug-on transmitters with phantom power</td>
</tr>
<tr>
<td>4</td>
<td>Shure SM 58 microphone capsules</td>
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<tr>
<td>6</td>
<td>Shure Beta 87 microphone capsules</td>
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Signal Processors

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<tr>
<td>1</td>
<td>Digico 4REA4 located FOH for FOH, Sub and Front Fill processing as well as signal distribution throughout the theater</td>
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<tr>
<td>2</td>
<td>Avalon 747sp Tube Compressors</td>
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<td>Summit DCL 200 Tube Compressors</td>
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Playback

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<tr>
<td>2</td>
<td>Tascam Compact Disc Players: CD-500</td>
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<tr>
<td>1</td>
<td>1/8” Auxillary input FOH</td>
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Mic Stands

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<td>2</td>
<td>Tall straight, solid triangular base</td>
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<tr>
<td>7</td>
<td>Tall boom, round base</td>
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<tr>
<td>6</td>
<td>Tall straight, round base</td>
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<td>1</td>
<td>Tall straight, solid triangular base</td>
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<td>1</td>
<td>Short boom, round base</td>
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<tr>
<td>11</td>
<td>Tall boom</td>
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<tr>
<td>12</td>
<td>Short boom</td>
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<td>2</td>
<td>Kick drum/guitar amp mic stand</td>
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<td>Kick drum/guitar amp base only</td>
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<tr>
<td>3</td>
<td>10” round stand bases</td>
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<td>3</td>
<td>12” solid triangular stand bases</td>
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<tr>
<td>3</td>
<td>Tabletop 6” round bases</td>
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<td>3</td>
<td>Choral mounts w/c-clamp</td>
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Notes

All lengths of cable available for a variety of stage layouts. No instrument cables available. Various mic clips available. Guitar stands available. Venue does not carry horn clips.

Props

Pianos
- 9’ Steinway D Concert Grand
- Steinway Studio Upright (Green Room)
- Fazioli Baby Grand (May Gallery)

Orchestra Shell
- 5 20’ tower sections, natural pine.

Chairs & Music Stands
- 30 Wenger black cushioned orchestra chairs
- 4 ea. Black and Natural Wood Stools (no back)
- 2 Adjustable height, low-back cello/bass stools
- 40 Black Manhasset stands
- 1 Conductor’s stand
- 40 40W Clip Lights

Platforms
- Wenger Versalite 3000 and 5000 Platform series with skirting and chair rails. Various Triangle/Trapezoidal additions for semi-circle arrangements.
- 10 8’ x 4’ sections
- 47 8” legs
- 75 16” legs
- 52 24” legs
- 2 Wenger Stair Sections with handrails
- 1 Wenger Double Conductors Podium.

Dance Floor
- Harlequin Cascade 32’ x 52’, must run SL⇔SR
- Harlequin Black/Grey Reversible 33’ x 49’, must run SL⇔SR
- 5 Dance Barres

Lecterns
- Light Wood Podium
Green Room, Dressing Rooms, Wardrobe

Green Room – located at stage level
26’-6” x 16’ room with sink, lounge area, and rehearsal piano. The Green Room is adjacent to the dressing rooms and is 15’ from stage right wings. There is a video monitor with audio feed of stage.

Dressing Rooms – located at stage level
- Chorus Room: 18’-3 x 11’-10”, 9 mirror spaces.
- Chorus Room: 11’-4 x 11’-3”, 9 mirror spaces.
- Star Room: 10’-5” x 8’-4”, 2 mirror spaces.
- Star Room: 11’-2” x 9’-2”, 3 mirror spaces.
All dressing rooms are on stage level. The farthest star dressing room is 74’ from backstage. All include tables, mirrors, make-up lighting, clothes racks, a sink, toilet, shower, and towels. The two larger dressing rooms are equipped with handicap-accessible restrooms/showers.

Wardrobe Facilities – no dedicated space, share with kitchen
- Frigidaire Heavy Duty Extra Capacity Washer and Dryer on site
- Iron and Ironing Board (1)
- Steamer (2)
- Rolling clothes rack, 5’ tall x 4’ long x 20” wide (6)

*No same-day dry cleaning services available in town. None. At all.
Appendix A: Emergency & Medical Information

ALL EMERGENCIES DIAL 911

Beaver Creek Security: (970) 949-4911 Headquartered in gatehouse at base of resort
Avon Fire Department: (970) 748-4050 (non-emergency)
Eagle County Sheriff: (970) 748-4040 (non-emergency)

Medical Services

Alpine Mobile Physicians – Open 24/7
    On-call services
    (970) 376-8376

Centura Health Emergency and Urgent Care – Open 24/7
    50 Buck Creek Road, Avon
    (970) 668-7000

Avon Urgent Care – Open 8 am – 8 pm, 7 days a week
    230 Chapel Square, Avon
    (970) 949-6100

Avon Chiropractic & Wellness
    150 E. Beaver Creek Blvd, #106-B, Avon
    (970) 949-0444

Dental, Dr. David Wilson
    82 E. Beaver Creek Blvd, #211, Avon
    (970) 949-4433

Hyperbaric Oxygen Therapy – Open 8 am – 6 pm, M-F and by special appointment
    Vail Integrative Medical
    0105 Edwards Village Center, A203, Edwards
    (970) 926-4600
    link to more info
Appendix B: Local Services

For Hire Transportation

**Dial-A-Ride**
On request free bus service within Beaver Creek resort only
(970) 949-1938

**High Mountain Taxi**
Fares from Aspen to East Vail
(970) 476-8294

**Colorado Mountain Express**
**Airport Service**
Shared rides or premier point-to-point service
(970) 754-7433
[www.coloradomountainexpress.com](http://www.coloradomountainexpress.com)

Massage & Gym

**Allegria Spa**
Located in the Park Hyatt Beaver Creek, 2 blocks from theater
(970) 748-7500
[www.allegriaspa.com](http://www.allegriaspa.com)

*Therapists for on-site sessions available on request

Groceries & Pharmacies

**City Market & Pharmacy**
72 Beaver Creek Place, Avon
(970) 949-5409

**Beaver Creek Market & Deli**
In Beaver Creek, 20 yards from theater
(970) 949-0742

**Walmart & Pharmacy**
255 West Main Street, Avon
(860) 409-0404

**Walgreens & Pharmacy**
15 Sun Road, Avon
(970) 949-4057

Laundry
Theater is equipped with a household size stackable washer & dryer.

**National Velvet Dry Cleaners**
150 E Beaver Creek Blvd, Avon
(970) 748-1616
[www.nationalvelvetdrycleaner.com](http://www.nationalvelvetdrycleaner.com)
*No same-day dry cleaning services available in town.

Post Office

**Avon Post Office**
111 W Beaver Creek Blvd, Avon
(970) 949-4057
Appendix C: High Altitude Information

The VPAC maintains two oxygen bottles with masks for backstage use which must be supervised by authorized personnel.

High Altitude Health Tips

*From the Beaver Creek Medical Center*

In the Vail/Beaver Creek area, there is 30% less oxygen and 50% less humidity than at sea level. Everyone is affected to some degree and the symptoms range from restlessness and shortness of breath, to coughing, to increased heart rate and headaches. Although it can be serious, it's easily avoidable.

What you can do:

**Go easy!** When you arrive in the mountains, it usually takes a day or two for your body to adjust. Don’t overexert. Effects of exercise are more intense here. If you normally run 10 miles a day at home, you might try 6 miles here.

**Hydrate!** Drinking plenty of water is the number one way to help your body adjust easily to our higher altitude. The decreased humidity, along with the decreased oxygen makes dehydration a common health problem. You breathe faster, which causes the body to lose moisture more quickly. You’ll need 40-50% more fluids per day than you would at sea level.

**Monitor your alcohol intake!** In our rarified air, golf balls go ten percent farther... and so do cocktails. Alcoholic drinks pack more of a wallop than at sea level. It is recommended that you go easy on the alcohol in the mountains, as its effects will feel stronger here.

**Eat foods high in potassium!** Foods such as broccoli, bananas, avocado, cantaloupe, celery, greens, bran, chocolate, granola, dates, dried fruit, potatoes and tomatoes will help you replenish electrolytes by balancing salt intake.

**Plan for sun!** We receive over 300 days of sunshine each year (more than San Diego or Miami). With less water vapor in the air at this altitude, the sky really is bluer in Colorado. But there’s 25 percent less protection from the sun. You can get seriously burned in as little as 20 minutes if you’re not using proper protection. Use sunglasses, sunscreen, and lip balm, even in winter.

**Other High Altitude Issues:**

**Frostbite.** The best cure is prevention but if you experience frostbite do not rub it. Slowly warm the affected area in lukewarm water. Call a physician, especially if the frostbite has affected a large area.

**Nosebleeds.** Increased activity and low humidity dry membranes in the nose, which may cause bleeding. You can prevent it by putting a touch of Vaseline in your nostrils each morning and night, and maintaining an increased fluid intake.
Appendix D: Hypobaric Chamber Information

Relief, Recovery, Rehabilitation – Results
vailhealth.com

VIMG is happy to announce an exciting new service for our patients and guests, hyperbaric oxygen therapy.

What is Hyperbaric Oxygen Therapy (HBOT)

Simply put, HBOT is a non-invasive therapeutic treatment that delivers oxygen to cells in the body. All living creatures require air, water, and food, and nothing is more vital than oxygen. It is possible to last weeks without food, a few days without water but only mere minutes without oxygen. HBOT involves breathing oxygen in a pressurized chamber in which the atmospheric pressure is raised up to three times higher than normal. Under these conditions, your lungs can gather up to three times more oxygen than would be possible breathing oxygen at normal air pressure. The body's tissues need an adequate supply of oxygen to function and when tissue is injured, it may require more oxygen to heal. "Hyperbaric oxygen therapy increases the amount of oxygen dissolved in your blood," says Nayan Patel a biomedical engineer in FDA's Anesthesiology Devices Branch. An increase in blood oxygen may improve oxygen delivery for vital tissue function to help fight infection or minimize injury.

Hyperbaric chambers, used in HBOT are any number of enclosures, which can be pressurized to allow a person inside to experience higher atmospheric pressures than the normal environmental pressures. For example, a treatment at an elevation of 12,000 feet above sea level using a 4 psi (1.27 ATA) can simulate a decent of ~5,843 feet to 6,157 feet above sea level. At higher elevations, the barometric pressure is lower. This decrease of pressure also decreases the oxygenation of blood, and is known as anoxia—where molecules of oxygen exert less pressure on the walls of the alveoli (Dalton's Law). HBOT follows this law.

How does Hyperbaric Oxygen Therapy (HBOT) work?

Hyperbaria - Increased atmospheric pressure as a means of increasing oxygen uptake without an enriched oxygen source

Hyperoxia - Increased total oxygen content

Hyperbaria is based on the concept of the relationship of gas pressure and uptake in liquids (blood, plasma and tissues). Henry's Law states that "a gas is dissolved by a liquid in direct proportion to its partial pressure." For example, at sea level, atmospheric pressure is 760 mm Hg, the oxygen concentration is 21% and the body's oxygen content or partial pressure, pO2, in blood and plasma is ~ 40 mm Hg.

Red blood cells have a limitation as to how much oxygen can bind with hemoglobin. The plasma portion of the blood typically has about a 3% oxygen concentration. By placing someone in a 3 psi pressure hyperbaric environment, the increase in atmospheric pressure at sea level goes from 760 mm Hg to 915 mm Hg. This increase in gas pressure, increases the partial pressure of the oxygen gas and thus forces more oxygen to be dissolved in the plasma. This saturation of oxygen in the blood that occurs due to the HBOT therapy, allows the extra oxygen to be diffused or transported to the surrounding body tissues. Thus, oxygen transport by plasma is significantly increased under this specialized treatment. At three atmospheres pressure, enough oxygen can be dissolved in the plasma to support the oxygen demands of the body at rest in the absence of hemoglobin!
The FDA and Medicare have approved the use of Hyperbaric Oxygen Therapy for 13 conditions such as diabetic and other wound healing, anemia and compartment syndrome to name a few. In addition, current research shows that HBOT is a viable treatment for the growing list of “off-label” conditions. These include various disorders from brain injury, peripheral nerve issues, stroke and sports injuries to name a few. Of these ‘off label’ indications, there is growing research on the effectiveness of HBOT although they are not yet formally approved by the FDA. Hyperbaric chambers are medical devices that require FDA clearance. FDA clearance of a device for a specific use means FDA has reviewed valid scientific evidence supporting that use and determined that the device is at least as safe and effective as another legally U.S.-marketed device.

HBOT is very effective for acute mountain sickness. This is a common occurrence for guests to the Vail Valley when traveling from sea level. The initial symptoms of altitude sickness can include: Headache, lethargy, a drop in performance, lack of coordination, insomnia, appetite loss, dizziness, nausea and vomiting. A session in the hyperbaric chamber will simulate a decrease in altitude of approximately 7,000 feet.
Freight Elevator Information

8'-11” to ceiling
8’ tall door opening

10'-7” deep at widest point
9'-6” deep at narrowest

Items that are too long to ride in the elevator can be loaded through both elevator doors to be lowered via two, 2-ton motors to stage. Items must fit through the 5’11” wide x 8’ tall doors. Inquire for details.
Theatre Plan View

House, 450 seats in orchestra, 80 in balcony

Doors exit to Lower Lobby: merch, concessions, restrooms. Box Office/Street access are on upper level.
Repertory Plot – Onstage Fixtures

Guide to Instrumentation

Notes:
Main Curtain Wariors in R27 hung under the QOH positions, dimmer 194.
Position of Ground Cyc units does not scale.

Not Shown:
(6) Dance Towers each equipped with (3) S4-36deg on individual circuits
Max fixture height is 60”
(6) PAR 64 - VSP in Pwdr Rig Truss, 245” upstage of plaster line
**Tuss fixtures use the same dimmers as dance towers: hard patch must be swapped between them
Repertory Plot – Front of House
Repertory Plot – Dance Towers

Guide to Instrumentation

- S4 15-deg
- S4 26-deg
- S4 36-deg
- S4 50-deg
- S4 Zoom (15-30)
- S4 PAR-WNSP
- S4 PAR-ANSP
- S4 PAR-MFL
- S4 PAR-WFL
- 0° Fresnel
- PAR 64-NSP

Notes:
All towers are pre-fabricated Tomcat Dance Towers.
Standard placement: (1) tower beneath each of (4) house electrics
Gray outlined fixtures are hung in the house plot, but not used for this show.

Legend

- Gobo/Frost Color
- Unit Number
- Dimmer
- Channel
- Unit Address

Vilar Performing Arts Center
Rep Plot 2017

- Drawing Title: Dance Towers
- Drawn By: Josh Larson
- Date: 2/15/17
- Rev: 3.0
- 1/4" = 1'

X