

# Desert Discovery Center Feasibility Study: Phase II

Report to Scottsdale City Council | November 9, 2010



# DDC Consultant Team

- **Swaback Partners, pllc** - *Architecture*
- **ConsultEcon, Inc.** - *Economic Consultants*
- **Olinger Group** - *Market Research*
- **BRC Imagination Arts** - *Experience Design*
- **Exhibit Design Associates (EDA)** - *Exhibit Design*
- **Ten Eyck Landscape Architects, Inc.** - *Landscape*
- **Renaissance Companies** - *Cost Estimation*

# DDC Contract Tasks

- **Task 1 - Define & Finalize the DDC Concept**
- **Task 2 - Market Survey, Concept Testing & Refinement**
- **Task 3 - Preliminary Architectural Design**
- **Task 4 - Preliminary Project Cost Estimates**
- **Task 5 - Preliminary Business/Marketing Plan/Budget**
- **Task 6 - City Meetings**

# Desert Discovery Center Mission Statement

The Desert Discovery Center is a magical place providing a culture of educational wonder and recreational insights, inspiring both residents and visitors to understand, appreciate, sustain, and return to the McDowell Sonoran Preserve and the world's richest, most amazing desert, which is its home.



# Existing Gateway Site & Proposed DDC Location

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# DDC Public Outreach

- **Joint Sub-Committee**
- **McDowell Sonoran Preservation Commission**
- **Tourism Development Commission**
- **McDowell Sonoran Conservancy**
- **Focus Groups**
- **Public Open Houses**
- **On-Line Surveys**

# DDC Progress Since City Council June 15, 2010

- **Joint Commission Meetings**
- **Public Open Houses**
- **Refined Concept Designs**
- **Cost Estimates**
- **Business Plan**
- **Marketing Plan**
- **Phase II Draft Final Report**
- **Phase II Final Report**

# Phase II Feasibility Study - Summary

## Site Size

- Desert Discovery Center: 8-9 Acres
- New Parking: 4-5 Acres
- Existing Parking: 4-5 Acres

## Facility Size

- Net: 61,610 SF
- Gross: 73,932 SF

## Parking

- Existing Gateway Parking Req'd: 341-500 Spaces \*
- DDC Parking Req'd: 428 Spaces
- **Grand Total: 769-918 Spaces**

\* Onsite parking numbers will be further analyzed for possible shared parking and off-site alternative provisions

# Phase II Feasibility Study - Summary

## Capital Cost

· Buildings and Site:	\$35.1 M
· Exhibits:	\$13.1 M
· Permits, Design, Engineering:	\$4.0 M
· City Project Management & Public Art:	\$3.9 M
· Furniture, Fixtures, Equipment:	\$1.0 M
· Contingency (10%):	\$4.8.0 M
· Startup Budget:	\$5.8 M
· <u>Operating Reserves/Endowment:</u>	<u>\$4.0 M</u>
· <b>Total Capital Cost:</b>	<b>\$74.0 M</b>

# Phase II Feasibility Study - Summary

## Ticket Prices and Attendance

- Annual Mid-Range Attendance Potential: 333,000
- Ticket Price (Adult): \$15
- Ticket Price (Child): \$9

## Personnel

- Full Time: 46
- Part Time: 60
- Volunteers: 250+

# Phase II Feasibility Study - Summary

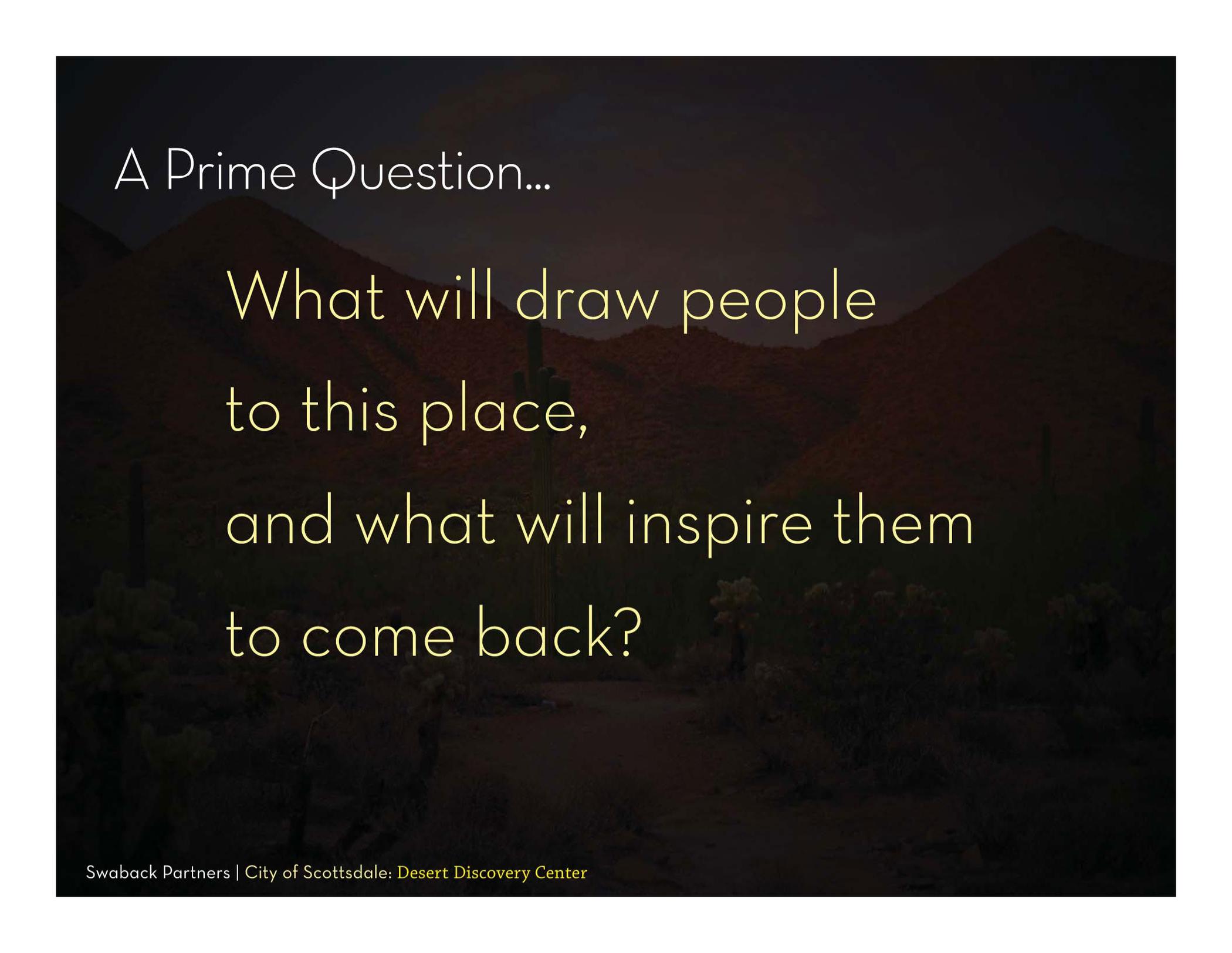
## Annual Revenue (stabilized year)

· Operational Revenues:	\$5.55 M
· Operational Reserves Interest:	\$0.18 M
· <u>Non-Operational Revenue</u> *:	\$1.66 M
· <b>Total Annual Revenue:</b>	<b>\$7.4 M</b>

## Annual Operating Expenses (stabilized year)

· Operating Costs:	\$7.04 M
· <u>Capital Reserves:</u>	\$0.35 M
· <b>Total Annual Revenue:</b>	<b>\$7.4 M</b>

\* Non-Operational Revenue includes grants, gifts, corporate sponsorships, fundraising events, endowment proceeds, and other relevant sources.



A Prime Question...

What will draw people  
to this place,  
and what will inspire them  
to come back?

# Program of Spaces

## ***Welcome Pavilion***

Public Restrooms  
Public Lockers  
Vending  
Concierge Station  
Ticketing  
Security Desk

## ***Hospitality Pavilion***

Sonoran Market  
Desert Cafe

## ***Discovery Portals***

History of the McDowell  
Sonoran Preserve  
Orientation to the DDC

## ***Hidden Desert***

World Beneath Our Feet  
Wildlife Cams  
Snake's Eye View Theater  
The Secret Sex Lives of Plants  
Ant Habitat  
Bee Habitat  
Reptile Habitat

## ***Seasons of the Sonoran Desert***

Spiral Sculpture of the  
Seasons: A Year in the Life  
Many-Colored Desert  
Tom's Thumb Theater  
Cacti/Agave Gallery  
Woody Plant Gallery  
Herbaceous Plant Gallery

## ***Human Adaptation***

Water Allocation  
Hohokam Environment  
Cowboy Environment  
Fifties Environment  
Contemporary/ Near-Future  
Environment (Sustainability)

## ***Staying Alive***

The Desert After Dark  
Airborne Enemy  
Twilight Wall / Dawn Wall  
Couch's Spadefoot Sculpture  
Grasshopper Mouse/Beetle  
Darkling Beetle Sculpture  
Tortoise Combat Sculpture  
Costa's Hummingbird at  
Chuparosa Sculpture

## ***The Tomorrow Pavilion***

Walk-in Saguaro Cactus  
Interactive Floor  
Time Machine  
Free Learning Space  
Terrarium Listening Station  
Small Animal Habitats

## ***Desert Great Room***

Event Pavilion  
Catering Kitchen  
Bar Storage  
Restrooms  
Lobby

## ***Exterior Spaces***

Welcome Terrace  
Orientation Courtyard  
Event Terrace  
Connecting Passages  
Desert Dining Garden  
View Terrace  
Amphitheater  
Group/School Kids' Orientation

## ***Mysterious World Exhibit***

## ***Rotating Exhibits***

## ***Resources***

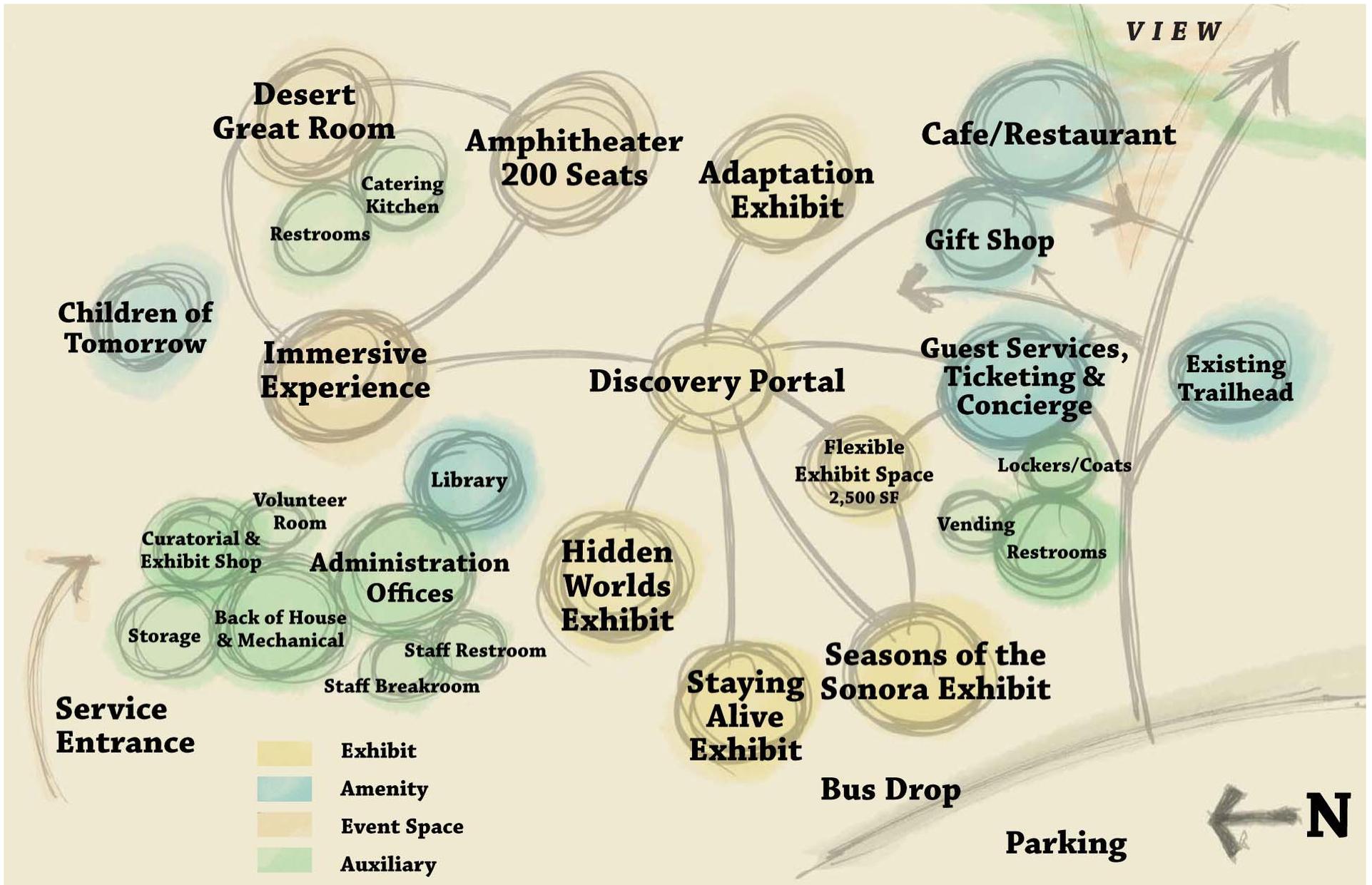
Volunteer Room  
Library

## ***Administration***

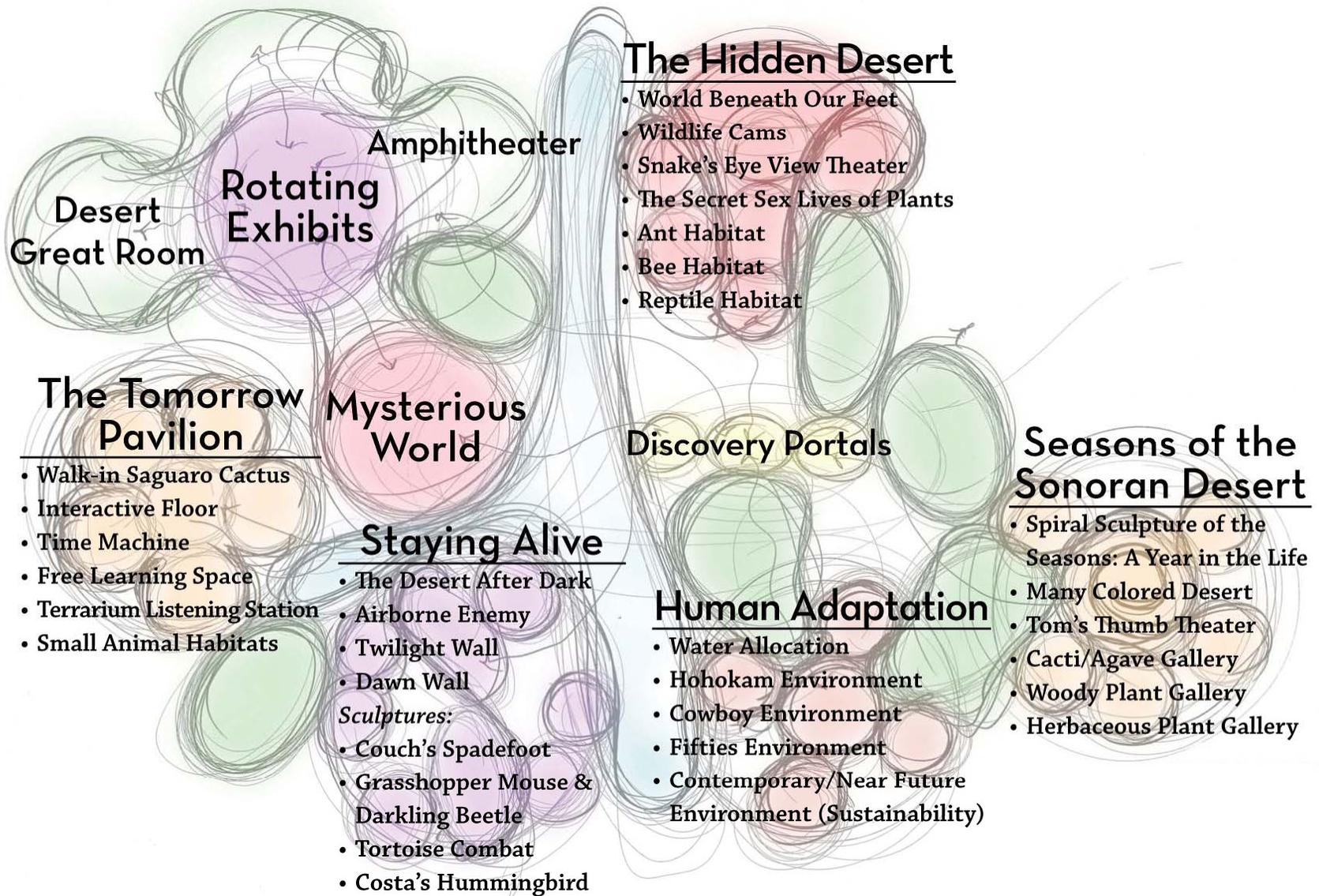
18 Offices  
2 General Work Areas  
Reception  
20 Work Spaces  
Staff Breakroom/Kitchen  
Employee Locker Room  
Staff Bathrooms

## ***Back of House***

Curatorial/Exhibit Shop  
Storage  
Landscape Maintenance Bldg.  
Other/Mechanical



# Space and Flow Diagram



# DDC Phase II - Interpretive Themes & Exhibits

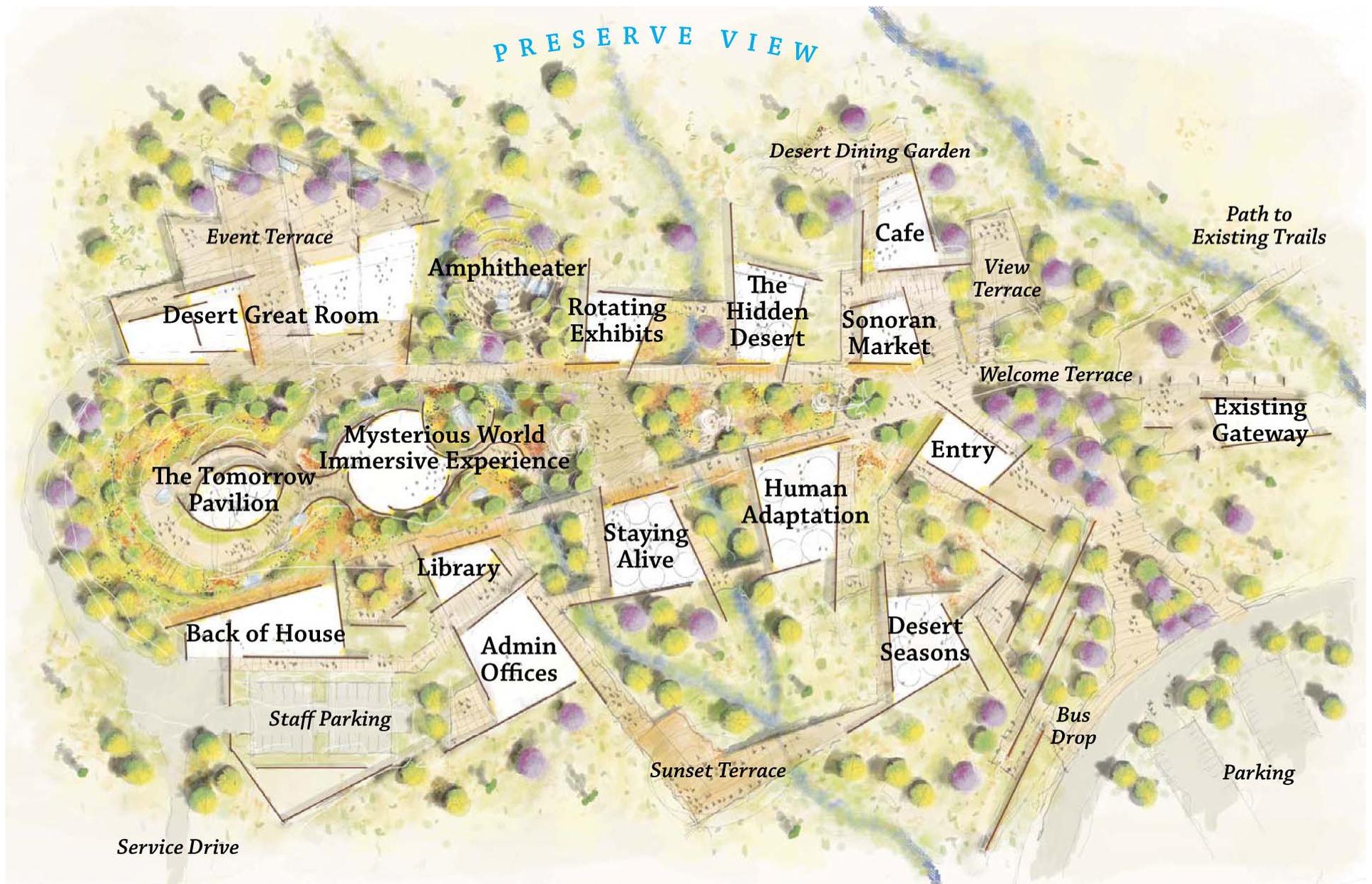
# DDC Landscape Interpretive Themes

- **Water**
- **Microclimates**
- **Adaptation**
- **Plant Biomes**
- **Animal Habitats**
- **Senses of the Desert**



# DDC Evolving Conceptual Plan

Swaback Partners | City of Scottsdale: *Desert Discovery Center*



# DDC Evolving Conceptual Plan

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# DDC Evolving Conceptual Roof Plan

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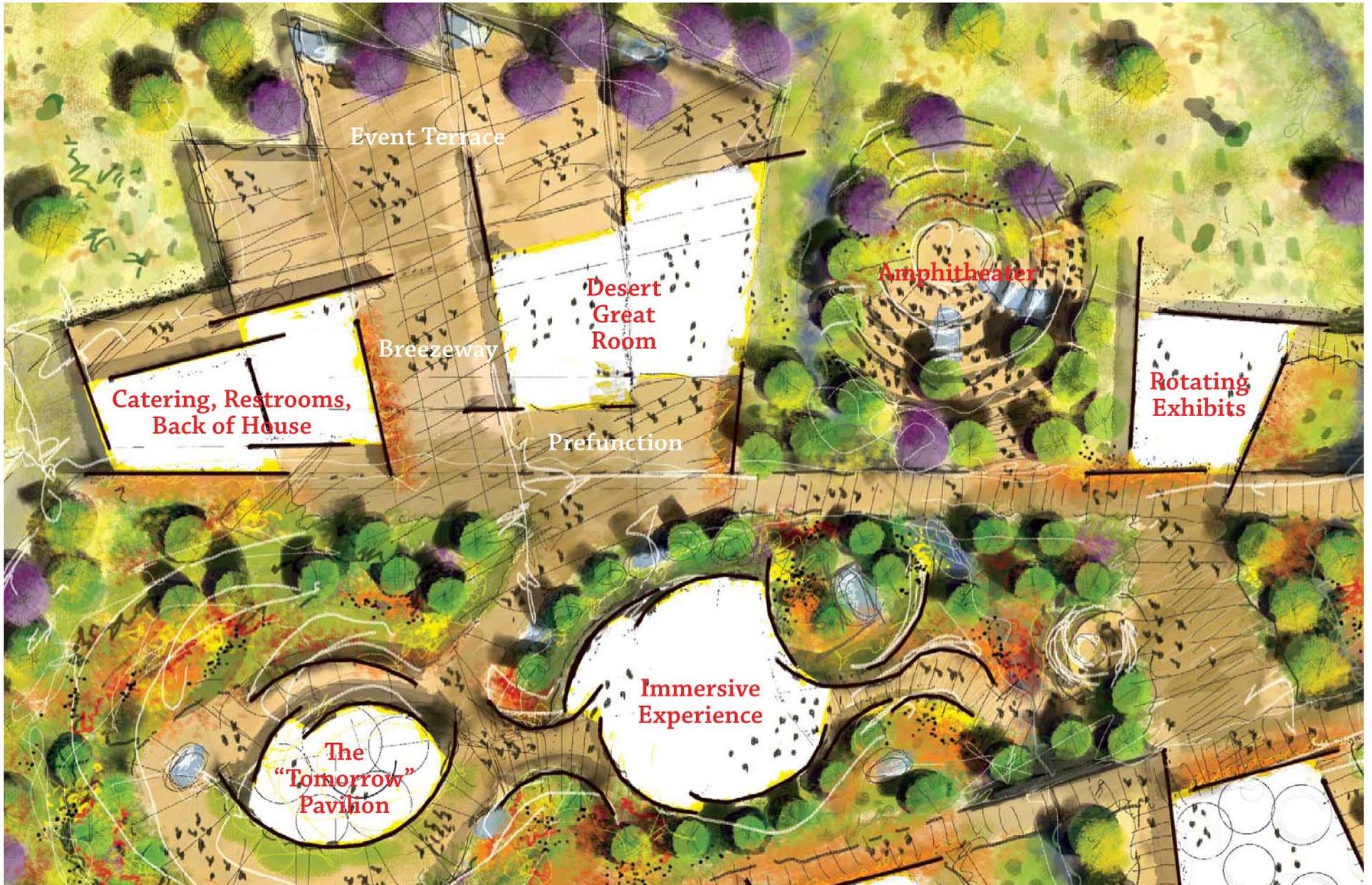
# The Welcome Plaza

Swaback Partners | City of Scottsdale: Desert Discovery Center



# Linked Desert Pavilions

Swaback Partners | City of Scottsdale: Desert Discovery Center



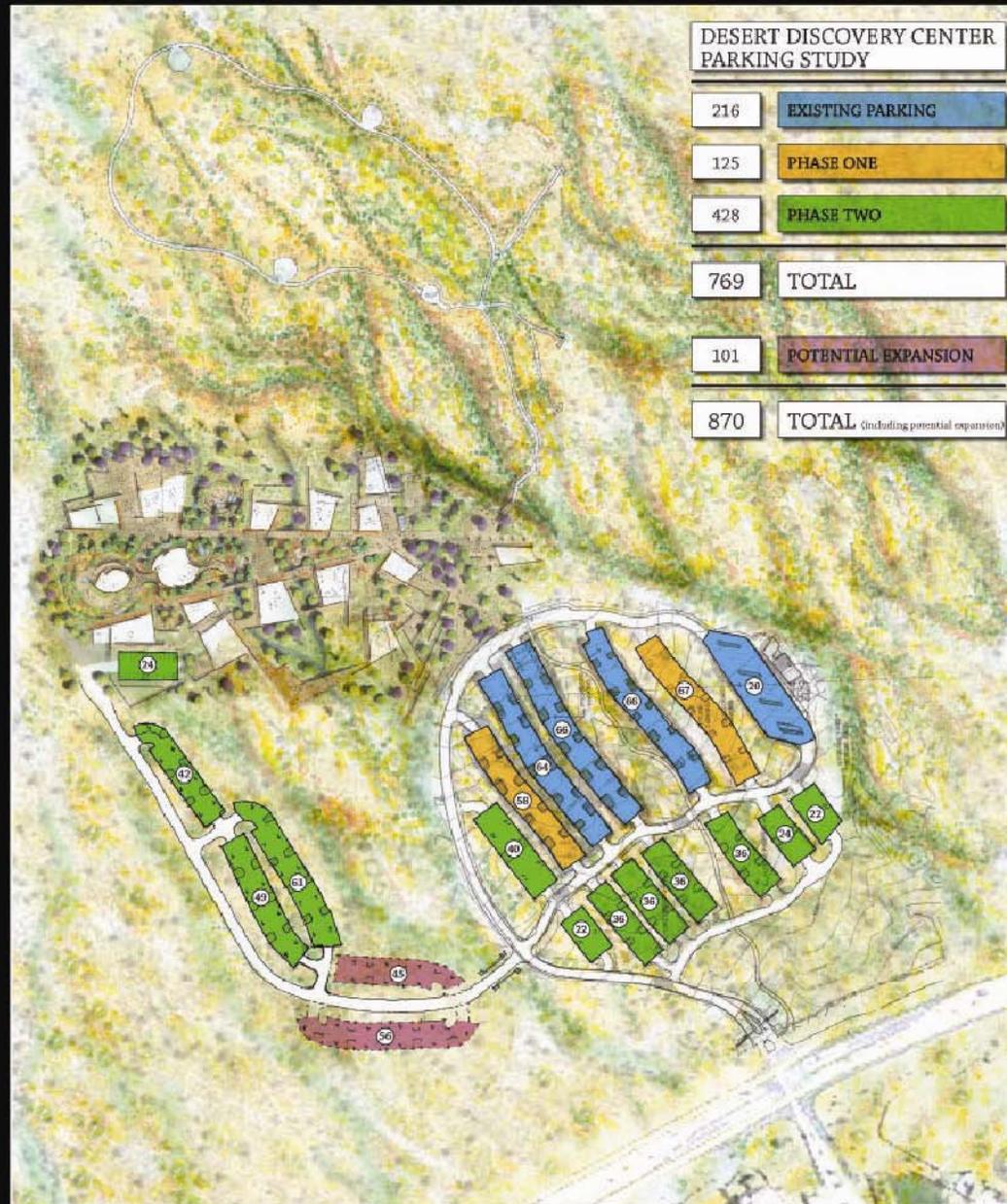
# Desert Great Room, Amphitheater, Immersive Experience

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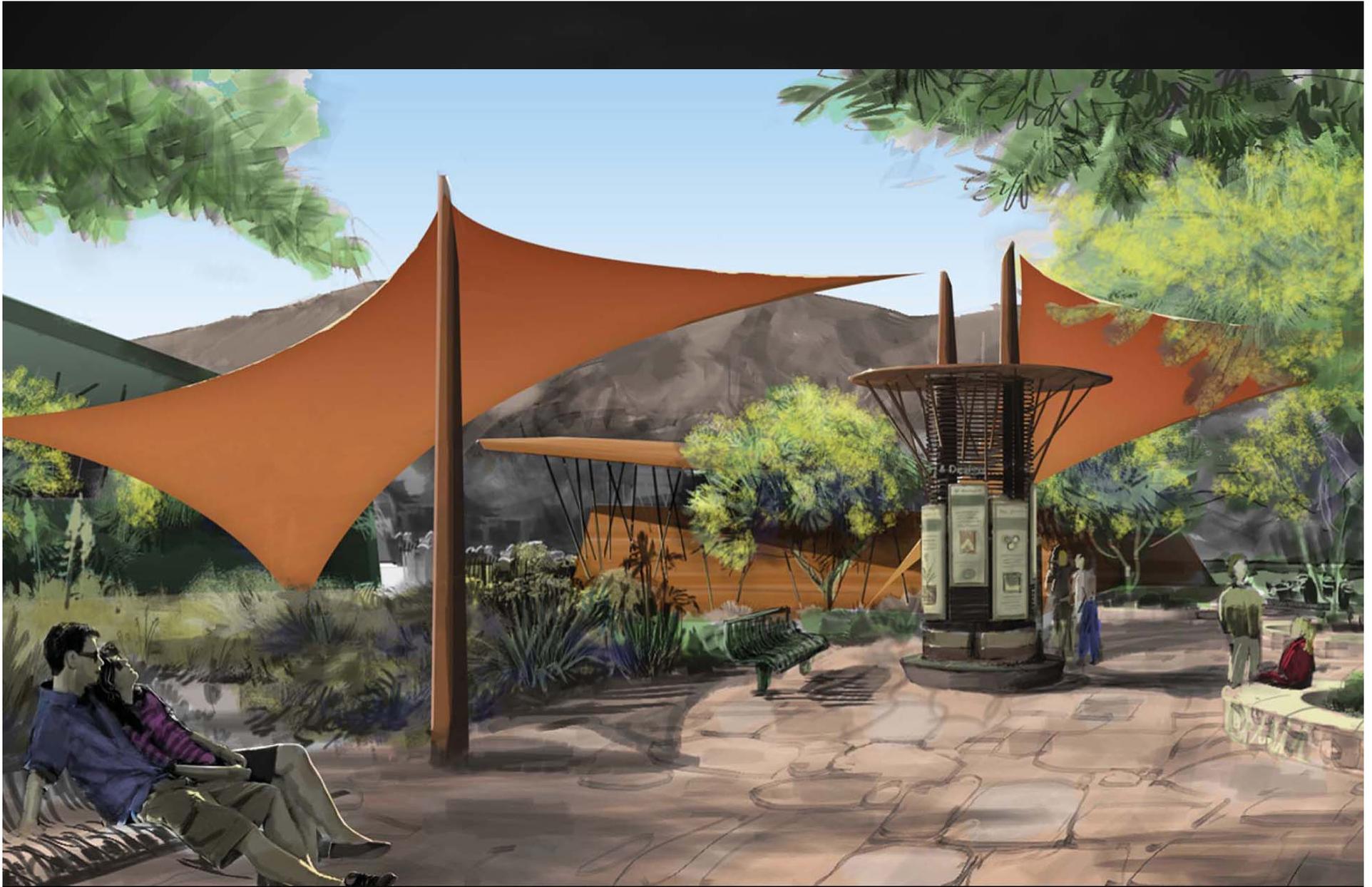


# Existing Trail Connections

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# DDC Conceptual Parking Plan



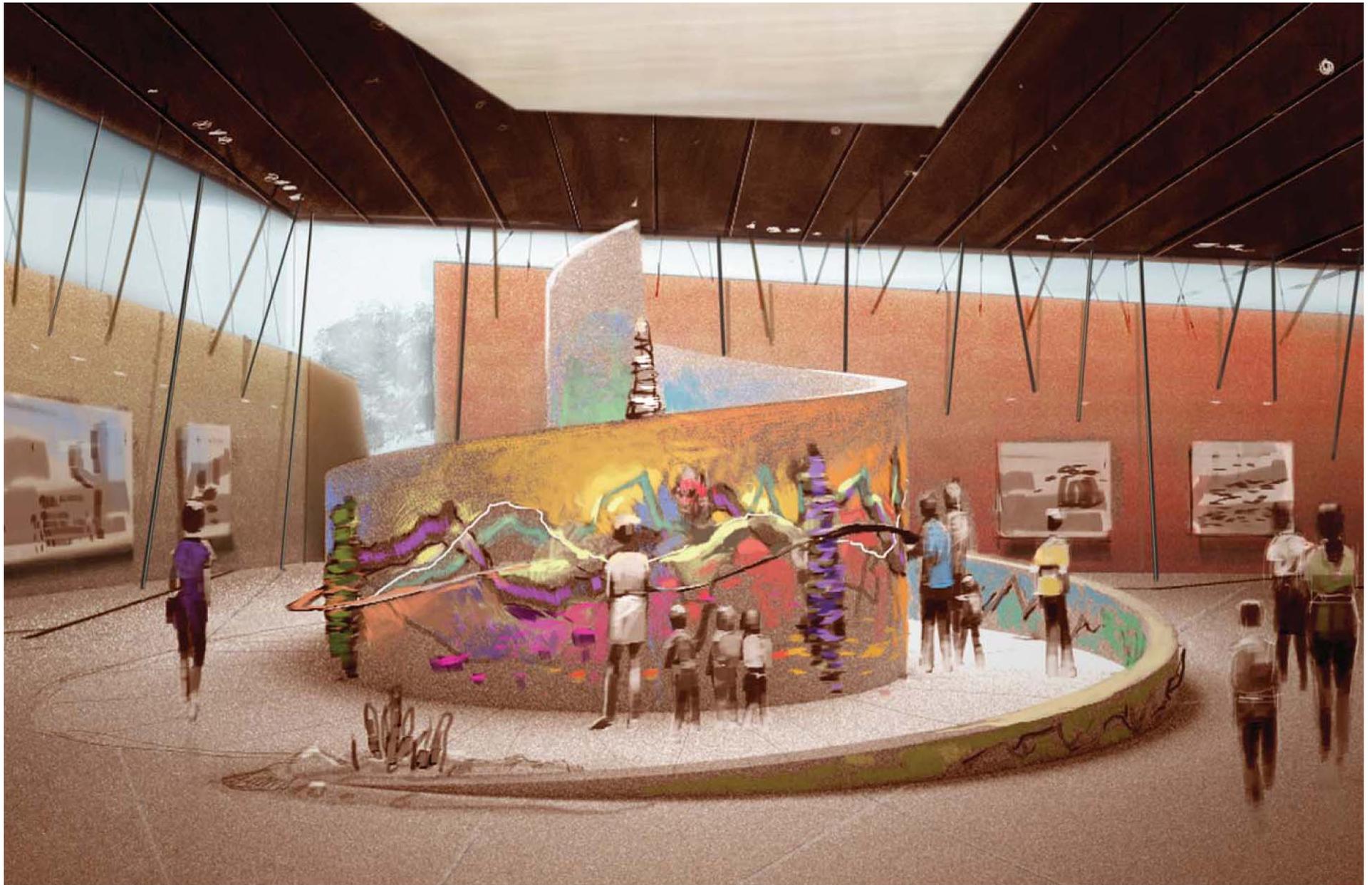
# Outdoor Environment

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# Entry Perspective

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# “Desert Seasons” Exhibit Pavilion

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# Interconnecting Shaded Passages

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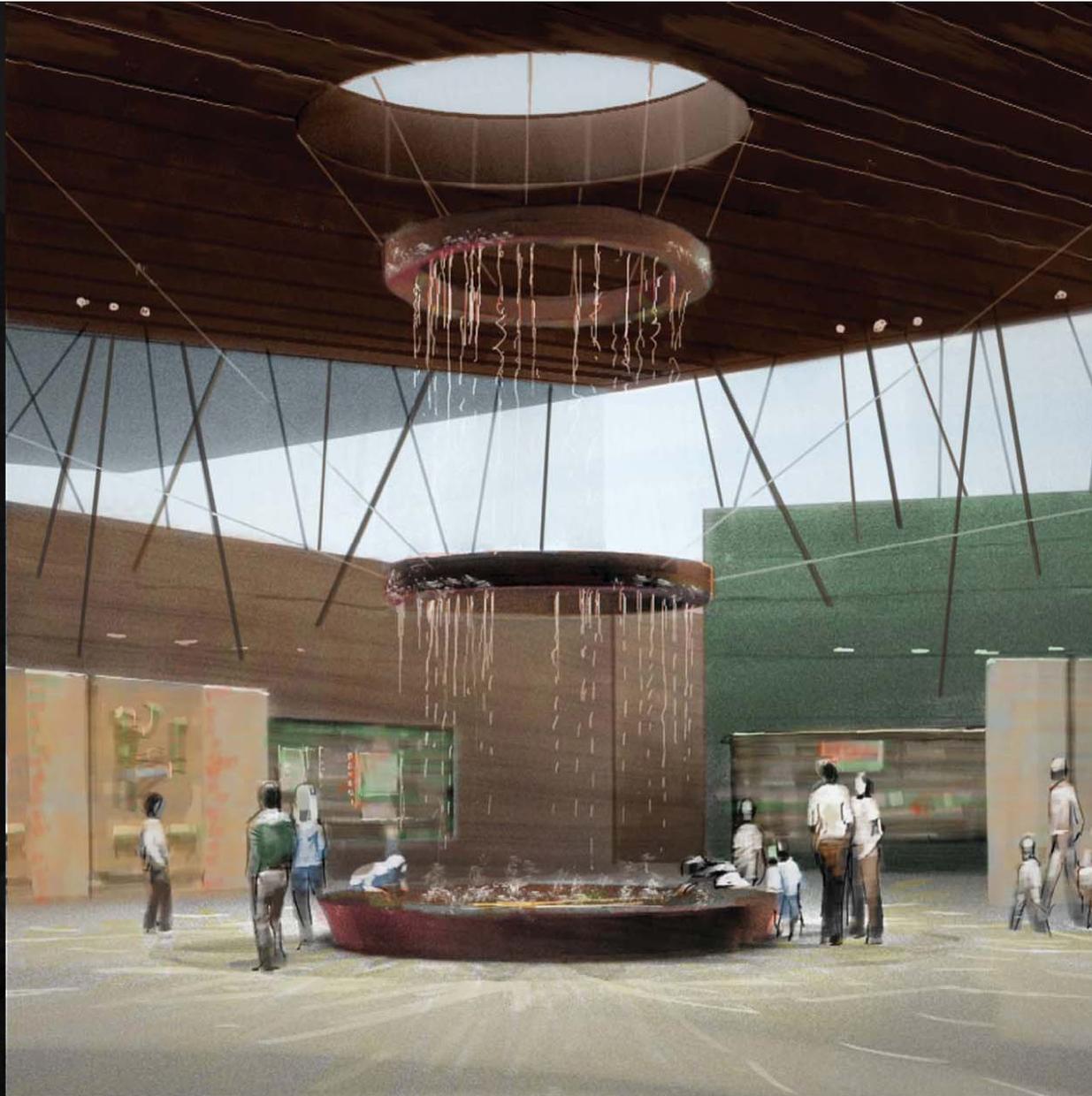
# “The Hidden Desert” Exhibit Pavilion

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# “The Tomorrow Pavilion” - Children’s Exhibit

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# “Human Adaptation” Exhibit Pavilion

Swaback Partners | City of Scottsdale: [Desert Discovery Center](#)



# “Mysterious World” - Immersive Experience

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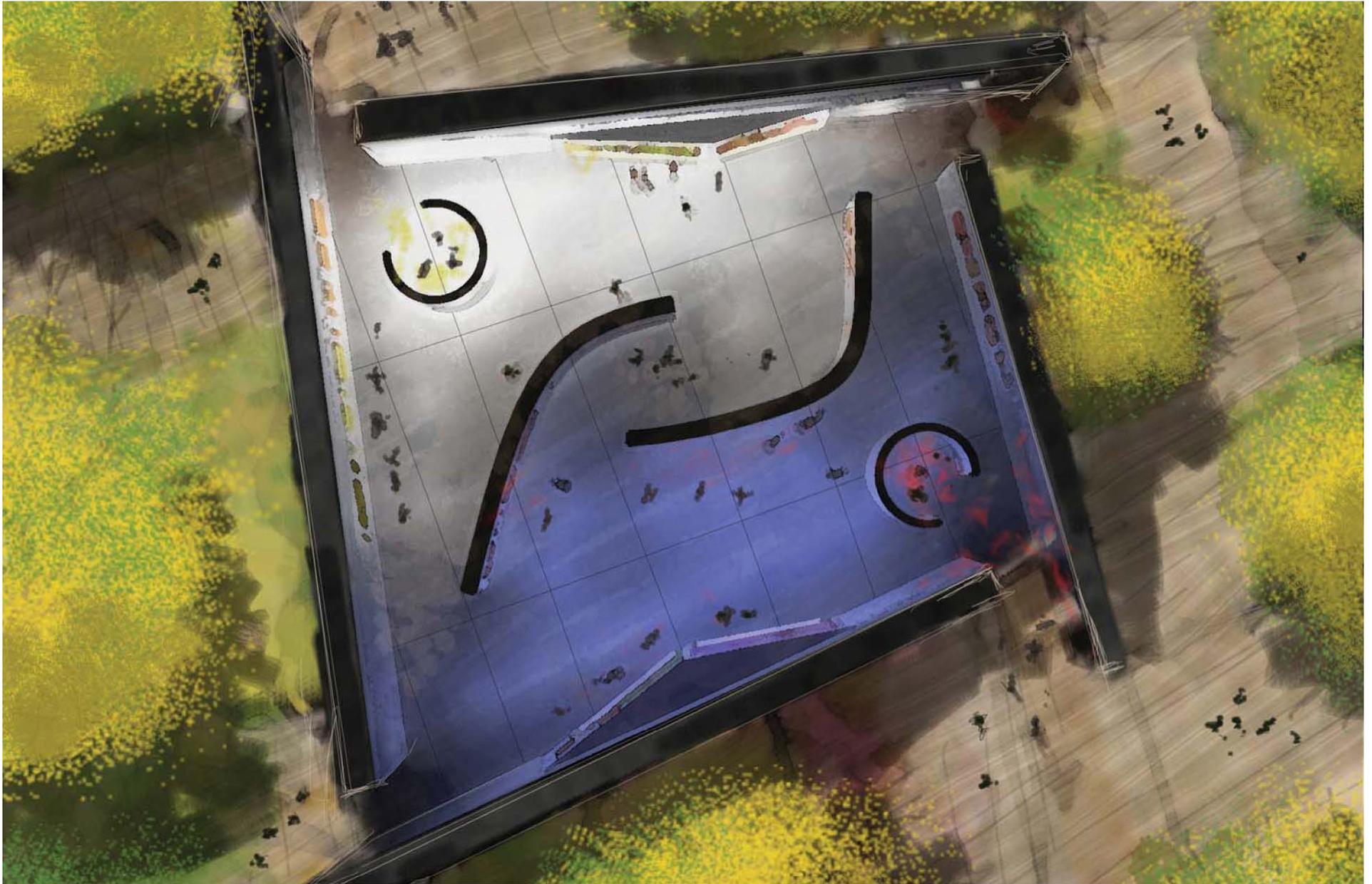
# “Mysterious World” Immersive Experience

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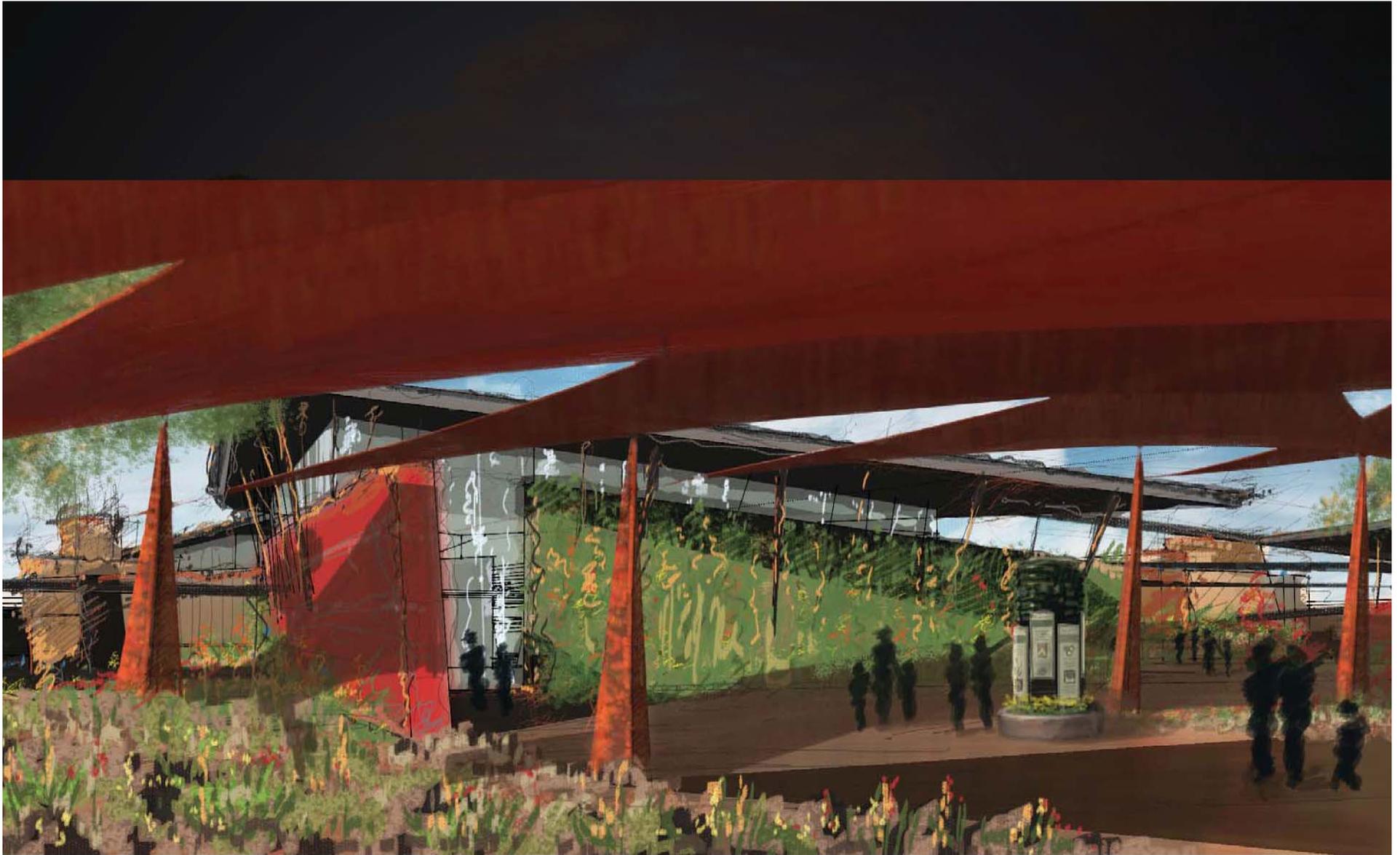
# “Mysterious World” Immersive Experience

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# “Staying Alive” Exhibit Pavilion

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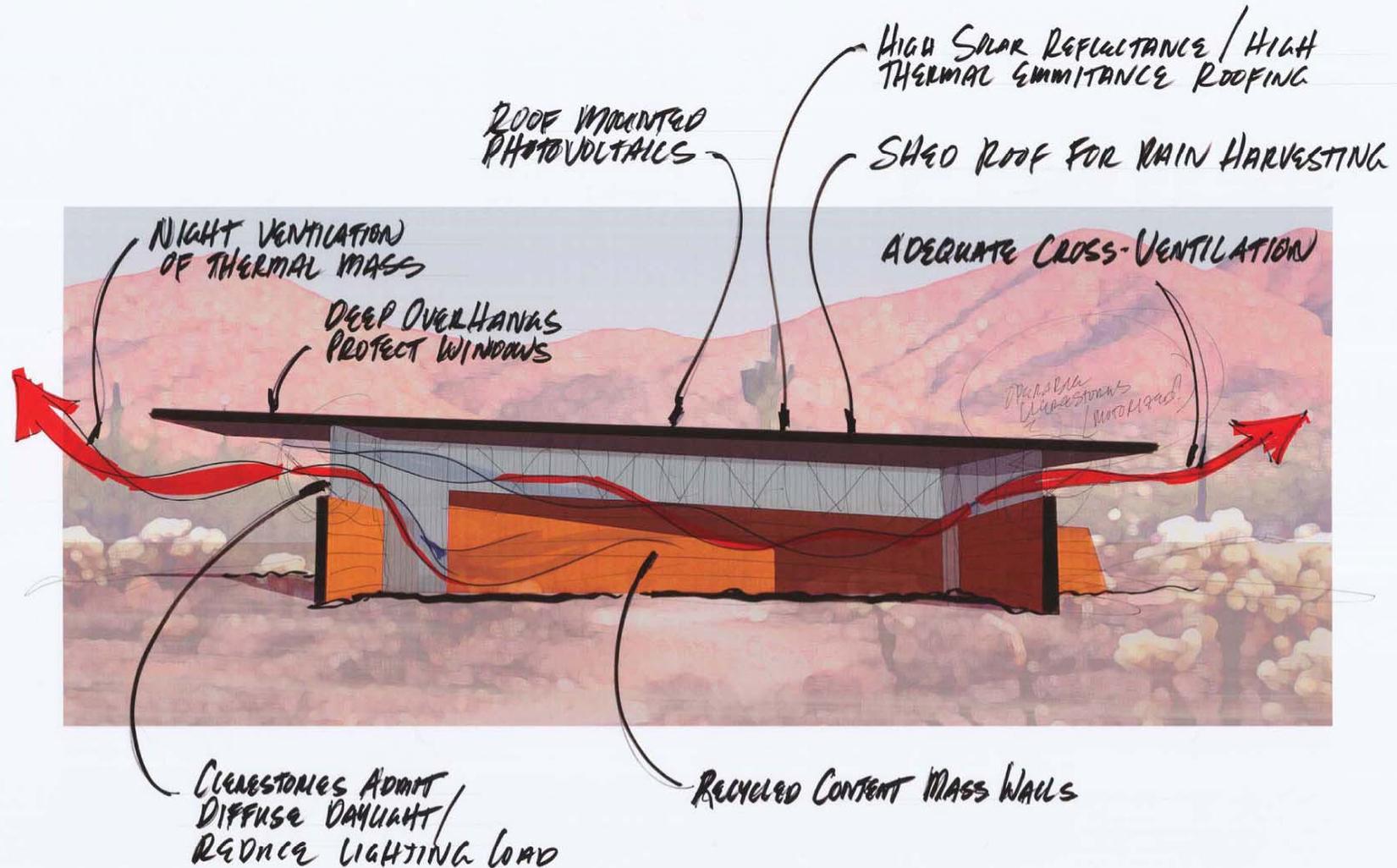
# Shaded Event Terrace

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# The Desert Great Room

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Desert Discovery Center  
Sustainable Strategies

05-12-10

# DDC Emerging Sustainability Strategy

Swaback Partners | City of Scottsdale: **Desert Discovery Center**

# DDC Emerging Sustainability Strategy

## How Will the Desert Discovery Center...

### *maintain a **Sustainable Site?***

- By Selecting and Developing the Site Wisely
- By Reducing Emissions Associated with Transportation
- By Protecting Surrounding Habitats
- By Managing Stormwater Runoff
- By Reducing the Heat Island Effect
- By Eliminating Light Pollution
- By Planting Sustainable Landscapes

### *integrate **Water Efficiency?***

- By Reducing Indoor Potable Water Consumption
- By Reducing Water Consumption to Improve Environmental Well-Being
- By Monitoring Water Consumption Performance
- By Practicing Water Efficient Landscaping

### *propose **Innovation in Design?***

- By Proposing Desert Roofscapes
- By Proposing Desert Living Walls

### *conserve & protect **Energy & Atmosphere?***

- By Improving Energy Performance
- By Tracking Building Energy Performance Through Design, Commissioning & Monitoring
- By Managing Refrigerants to Eliminate CFC's
- By Using Renewable Energy

### *ensure **Indoor Environmental Quality?***

- By Managing Air Contaminants
- By Specifying Less Harmful Materials
- By Allowing Occupants to Control Desired Settings
- By Providing Daylight and Views
- By Improving Ventilation

### *conserve **Materials and Resources?***

- By Selecting Sustainable Materials
- By Practicing Waste Reduction
- By Reducing Waste at Its Source
- By Reusing and Recycling



# Final 585 Page Report

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