Braiding Bullhead: Connecting a River Community

Katie Klein and Mallory Piazzola
Jessica Hall 3.3.2012
602 Winter 2012

google images
Overview

Introduction

Analysis

Vision

Design Elements

Project Description
Goal and Objectives
Analysis
Vision
Design Elements
Help Us Create A Destination
Request for Qualifications (RFQ)
Prime Waterfront Property
Bullhead City, Arizona

Share your Vision for Bullhead City’s waterfront parcel located along the Colorado River and just a short distance from Laughlin, Nevada. This prime government-owned property consists of lands located on both sides of Arizona Highway 95 and includes nearly one mile of Colorado River frontage as well as extensive uplands east of Arizona Highway 95. Owned by the U.S. Bureau of Land Management (BLM), this land is commercially leased to the City of Bullhead City. Both sides of the site are available for a variety of mixed uses. The City is seeking exciting RFQ’s to help create a remarkable destination for the region.

Developer Responsibilities/Expenses for this Phase
Provide a Vision for the Site
Prepare Conceptual Plan
Provide a Schedule of Development
Outline Financial Plans/Goals

Bullhead City is located in northwestern Arizona in Mohave County. Bullhead City is recognized as the principal commercial and retail center for Mohave County, AZ and southern Clark County, NV. The City now desires to capture even more of the tourism dollars generated both by recreational and winter visitation and the Laughlin resorts. Bullhead City views Section 12 as becoming not only a hub of activity for city residents, but a civic hallmark showing of the City’s best qualities. It is anticipated that this site will become known worldwide as a marquee destination on the Colorado River.

Site Specifications
Section 12 T20N R22W
Total Site—276 acres
West/River Side—67 acres
East/Highway 95 Side—209 acres

377 Acres
Provide a vision concept to link Bullhead City to the Colorado River.

Design a landmark space for visitors and the community.

Plan for impacts of future urban development and possible flooding.

Provide educational opportunities for the public to discover, enjoy, and access the Colorado River.
Objectives

Introduction

**Keep the site primarily open space, including washes and seasonal wetlands**

**Increase native vegetation**

**Plan for current and future urban run-off**

**Provide educational resources**

**Provide recreational trails, connecting to the “Greenways Plan” and increasing access to River**

**Plan for 100 year flood/dam removal**
Current Site

Introduction

Analysis

Vision

Design Elements
Introduction

Analysis

Vision

Design Elements

Limited

Mostly in North developed area

Unclear river access
Viewsheds

Introduction

Analysis

Vision

Design Elements

Minimal vegetation

Minimal development

- Power Plant
- Steep bluffs
- Casino
- Community Park & Fire Station
- HWY 95
- Pass Canyon Rd
- Minimal vegetation
- Minimal development
- Floodway improvements
- Unimproved natural drainages
- Low desert hills
- Some with off-road vehicle areas
- 3-story condominium development on high bluffs
- Gun club
- Industry
-一些有越野车辆区域
- Bing Maps
River Edge to Highway

Introduction
Analysis
Vision
Design Elements
Mesquite Palo Verde desert wash salt tolerant native plant combo is best for higher terrace.
Approximately 2,000 feet of Colorado River shoreline.

Access to about 40-50 percent is limited by the presence of shoreline bluffs between 10-15 feet in height.

The remainder of the shoreline (1,000-1,200 feet) slopes more gradually and is better for recreation.
Hydrology

**Analysis**

Slope:
1. 0-5%
2. 5-10%
3. 10-15%
4. over 15%

**Vision**

Washes lead to Colorado River

100 year flood zone

Steep slopes to East cause flooding in washes

**Design Elements**

Introduction

Analysis Vision Design Elements
Vegetation

Introduction

Analysis

Vision

Design Elements

- Imported Turf
- Riparian Species
  - Cottonwood Willow
-Introduced Species
- Desert Wash Vegetation
  - Catclaw acacia
  - Four-wing salt bush
Saline due to urban area, agriculture, and lowering of groundwater table.

There are alluvial fans, fan terraces, inset fans, wide alluvial washed composed of sand, gravel, and material washed out of the Black Mountains to the east.

There are two dominant soil types: Carrizo is highly permeable Gunsight-Havasu is moderately permeable, very gravelly sandy loam located on fan terraces and hillsides.

Areas with Gunsight-Havasu soil are less well suited to development due to their high rock content and steep slope.
Constraints

Run-off (possibly future pollution source with increase in development)

Flooding

Steep slope

Highway

Wetland habitat

Boat launch
Concept: Braiding Bullhead City

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Analysis</th>
<th>Vision</th>
<th>Design Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interconnectedness and overlapping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowing uniform making water order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>path of least resistance gravity slope</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rain travel movement meandering trails access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gateways destinations connect journey adventure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Add two more Colorado River access points to the south

Move Active Recreation on other side of HWY

Provide vegetation buffer for Colorado River

Create a Promenade north of the middle wash to provide a community connection to Colorado River
<table>
<thead>
<tr>
<th>Introduction</th>
<th>Analysis</th>
<th>Vision</th>
<th>Design Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masterplan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trails</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promenade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase vegetation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland restoration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Programming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Located south of historic Bullhead and across Laughlin, a major tourist destination. A good park essentially acts as a safeguard between developed areas and the river.
Solar Power

Very sunny
No clouds
Potential money
Shade spaces
Potential offset dam energy?
Wetland Restoration

Wetland Section Elevation

- Stabilize eroding banks
- Buffer pollutants
- Flood buffer
- Provide habitat
Plant more native species such as the cottonwood, willow, and sedges. The Lower Colorado River is highly saline from urban neighborhoods, agriculture, and natural sources. These plants can tolerate the salinity.
Wetland to Wash Vegetation

Introduction

Analysis

Vision

Design Elements

Rocks and plants help water circulation.

Increased circulation aids the water quality and health of the river.
Promenade

Encourage use of space near river

Connect community to River

Visual access to wetland without disturbing habitat

Opportunity for education & more shade

In request for community amenities for people passing site or visiting

Introduction

Analysis

Vision

Design Elements

Wetland Restoration

Transition to natural

Playground

Courtyard

Natural Public Space

Bridge
Promenade

Highlights a wash to show runoff leads to river

Provides seating

Shade

Event/Commercial Space

Views of River

Solar Panels
Educate visitors and community about wetlands, watersheds and Colorado River
Field trip destination, summer camp destination
Watershed Mural on permeable pavement, which shows “braiding” from mountains to wash and wash to river
Educational signs throughout trails
Active Recreation Park: Baseball/sport fields, moved to otherside of HWY to create a larger buffer for Colorado River
Passive Recreation: Trail and seating keep people out of sensitive habitats and
Recreation

Neighboring community, visitors, students can use low impact light way to be active at cooler temperatures

Creates a destination
Beach

Access to a Beach and Colorado River

Introduction  Analysis  Vision  Design Elements

River Access Points
Beach and Picnic Area
Natural Play Area
"The sun shines not on us, but in us. The rivers flow not past, but through us..."

- John Muir