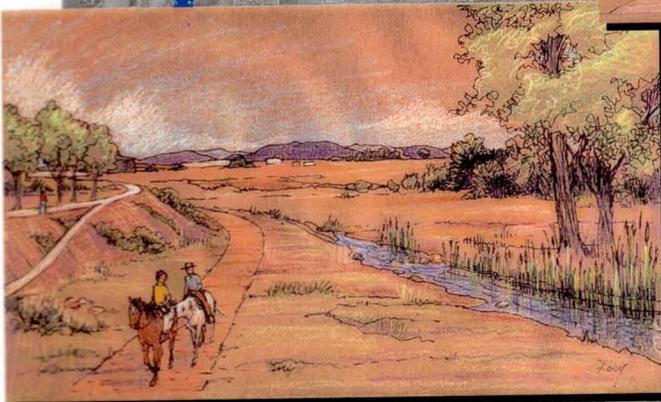
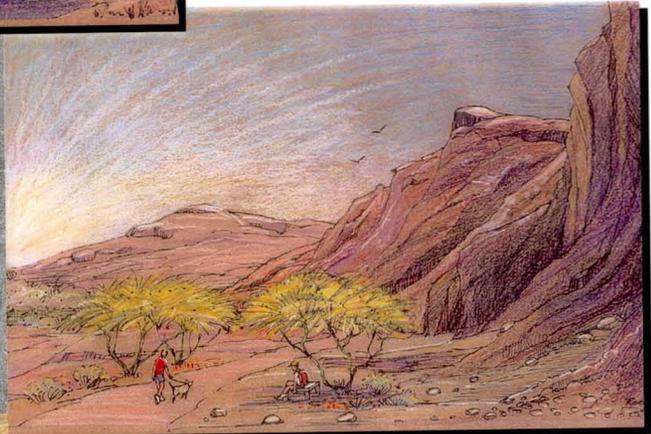
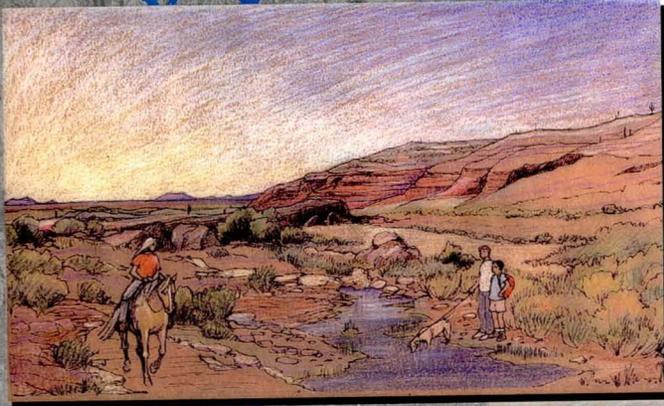


West Valley Recreation Corridor

PASAJES DEL RIO

Design Concept Report Executive Summary



Carter-Burgess

July 1999



A901.604

West Valley Recreation Corridor

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DESIGN CONCEPT REPORT

EXECUTIVE SUMMARY

Prepared For:

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
2801 West Durango Street
Phoenix, Arizona 85009

Prepared By:

CARTER & BURGESS, INC.
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TABLE OF CONTENTS

INTRODUCTION

Summary	1
Project History	2

TRAIL CONNECTIONS

Avondale	4
El Mirage	4
Glendale	5
Peoria	5
Phoenix	5

CONSTRAINTS

Constraints	6
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OPPORTUNITIES

Overall Area	7
Avondale	7
El Mirage and Youngtown	7
Glendale	8
Peoria	8
Phoenix	8

DESIGN CONCEPT PLAN

Design Concept Plan	9
Rural Zone	9
Suburban Zone	10
Urban Zone	10

DEMONSTRATION PROJECTS

Avondale	11
El Mirage and Youngtown	12
Glendale	12
Glendale and Peoria	12
Peoria	13
Phoenix	13

LIST OF EXHIBITS

Context	1a
Trail Connections	5a
Constraints	6a
Opportunities	8a
Corridor Plan	10a
Character Sketches	10b
Land Use Concept	10c
Circulation Concept	10d
Access Concept	10e
Cross Sections	10f

INTRODUCTION

SUMMARY

The Design Concept Report articulates design concepts, implementation strategies and potential funding sources for development of projects within the West Valley Recreation Corridor study area.

The West Valley Recreation Corridor (The Corridor) lies along the Agua Fria River from Lake Pleasant south thirty-four miles to the confluence of the Gila River and the New River from Circle Mountain Road south twenty-six miles to the confluence of the Agua Fria River. Skunk Creek enters the New River south of Greenway Road. The project area is bounded on the west by Litchfield Road and on the east by Interstate 17 (see Context exhibit).

The Corridor project is a combined effort of the Flood Control District of Maricopa County (FCD), the Maricopa Association of Governments (MAG), the Cities of Avondale, El Mirage, Glendale, Peoria, Phoenix, Surprise, Youngtown and Maricopa County. The project provides a regional framework for river corridor, open space, recreation, trails and multi-modal transportation planning, riparian and wildlife habitat preservation and enhancement for the Agua Fria River and New River. The project also provides the framework for preserving scenic corridors, identifying stormwater retention and recharge areas, developing environmental education nodes and increasing tourism opportunities for the West Valley. The rivers offer unique opportunities to provide current and future generations with an open space amenity that incorporates the best of what Arizona has to offer – broad scenic vistas, native vegetation and riparian and wildlife habitat.

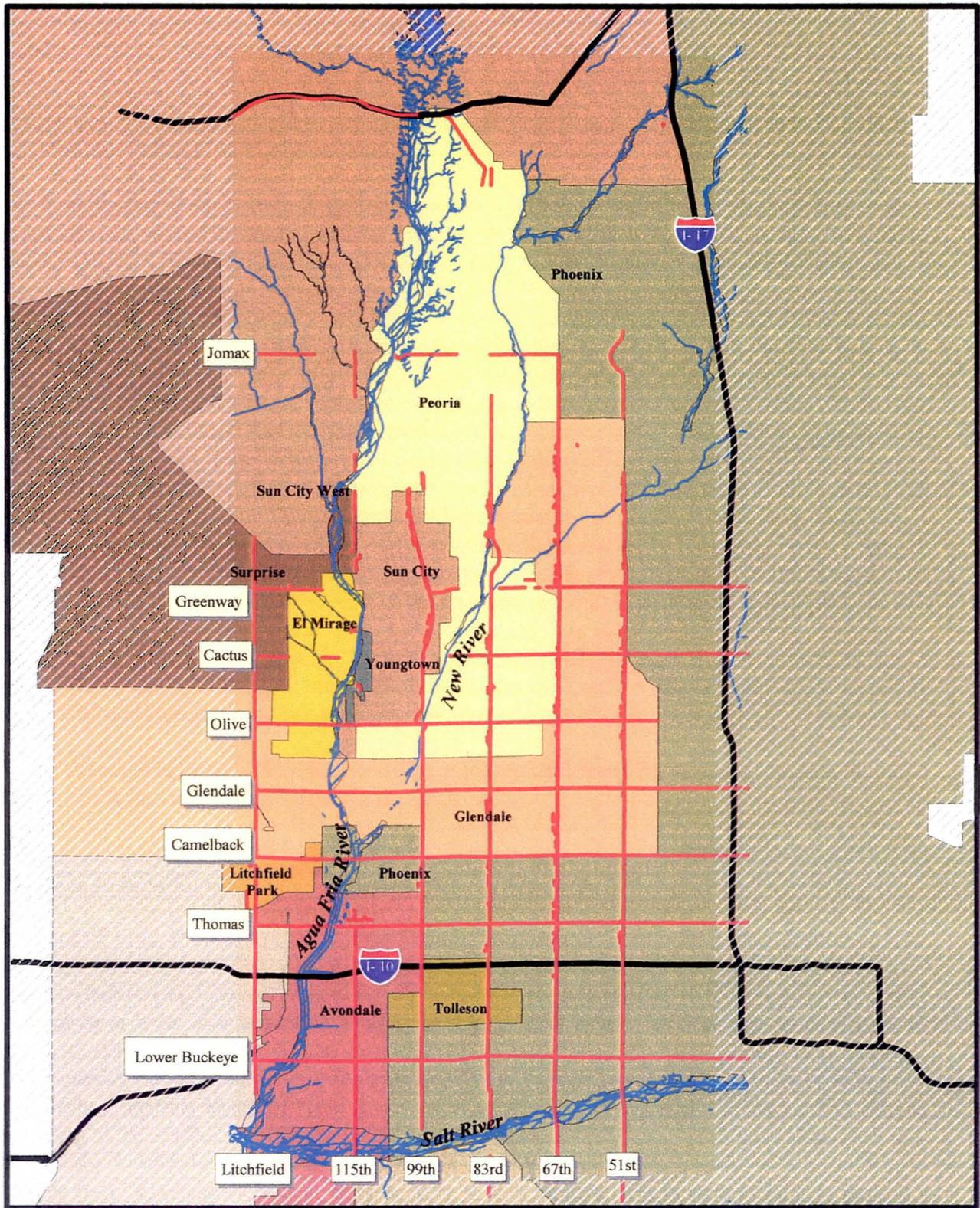
The overarching theme of The Corridor project is 'River Passageways' (Pasajes Del Rio). This theme conveys the concept of the transformation of the rivers as they travel through the study area. The theme is also meant to convey the personal transformation that occurs as people enter, interact with and pass through the river corridor systems. The theme portrays the ever changing, always evolving, aspects of nature and of our relationship and interaction with, and our understanding of, our role on planet earth.

Maricopa County, MAG and the Cities of Avondale, El Mirage, Glendale, Peoria and Phoenix have prepared plans addressing the rivers. The result is a system of planned, interlinking multi-use (used by groups such as bicyclists, walkers and hikers) and equestrian trails the full length of the Agua Fria River and New River.

Areas of constraints and opportunities have been identified. The constraints deal primarily with safety issues related to sand and gravel operations, flood control structures, multi-lane, high-speed

West Valley Recreation Corridor

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Context

0 2 4 6 Miles



FLOOD CONTROL DISTRICT
of Maricopa County
June 1999

traffic roads and limited locations for safely crossing roadways. These constraints will dictate preferred access points and trail locations.

The C.A.P., Beardsley, Arizona, R.I.D. and Grand Canals, and Skunk Creek offer unique opportunities to extend the trails system to the west and east of the project area, create connections between the two river channels and provide areas for the development of regional linear parks. Throughout the river corridors there are opportunities to develop environmental education nodes and wildlife viewing and recreational areas. There are excellent opportunities to preserve and enhance as well as create riparian and wildlife habitat areas, including recharge basins and low flow channels.

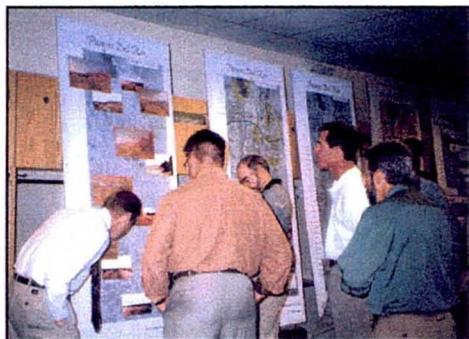
The Design Concept Plan offers a variety of experiences and interactions with the rivers. The Design Concept Plan envisions a flowing, interlinking system of multi-use and equestrian trails the full length of the project area. These trails will connect to multi-modal systems, schools, parks, recreational and open space areas, canals and employment centers throughout every community involved in the project. The Design Concept Plan reflects the character of both river corridors as they pass through the study area. In the northern and southern reaches of the rivers there are natural landscapes with preserved and enhanced riparian and wildlife areas. These areas will incorporate low impact uses, such as wildlife viewing areas and environmental educational nodes, with natural material trails. In the suburban and urban areas, where the river corridors become more constrained with structured flood control systems, the uses become more intensified with paved, multi-use trails and activity nodes and parks. Throughout both river corridors, low flow channels and recharge ponds will be utilized to bring life back into the river channels.

The development of The Corridor project will provide regional amenities and enhancements for both the man-made and natural landscapes in the West Valley.

PROJECT HISTORY

In August of 1998, Mr. John F. Long, a well-known local supporter of parks and recreation and, in particular, of the West Valley river corridor systems, called a meeting of local governments. Mr. Long was instrumental in catalyzing the group to explore the potential of working together to create a natural open space and recreation amenity along the New River. Mr. Long continues to be an important supporter of and liaison between the cities. In 1998, MAG received a TEA-21 Transportation Enhancement Grant for a study of a multi-modal transportation corridor along the New River from the Town of New River south to the confluence with the Agua Fria River, continuing to the confluence with the Gila River. In March of 1999, the FCD became involved and included the Agua Fria River from Lake Pleasant south to the confluence with the Gila River. At that time the FCD retained Carter & Burgess, Inc., to facilitate and coordinate the planning process,

provide design concept alternatives and prepare a Design Concept Report.



May 11th Public Meeting



May 11th Public Meeting

The Corridor project is a cooperative effort between FCD, MAG, the Cities of Avondale, El Mirage, Glendale, Peoria, Phoenix, Surprise and Youngtown, Maricopa County and private citizens. The project can become a model for other regions in Arizona.

TRAIL CONNECTIONS

Following is a synopsis of the salient features of each city's plan for the trails along the Agua Fria and New River (see Trail Connections exhibit). There is a system of planned, interlinking multi-use (used by groups such as bicyclists, walkers and hikers) and equestrian trails the full length of The Corridor study area. These trails provide connections with existing and future planned multi-modal and bikeway systems, schools, parks, recreational and open space areas and employment centers.

Avondale

- Equestrian trail in the river channel.
- Unpaved trails on both sides of the river up to Broadway Road.
- Paved, multi-use trails from Broadway to Indian School Road along both sides of the river.
- River trails tie into paved multi-use trails along Buckeye Road and the R.I.D. Canal.
- Plan incorporates riparian and wildlife habitat areas, recharge basins, open space, park and activity nodes. Multi-use trails connect to transit routes and bikeway systems that, in turn, connect to neighborhoods, schools, parks and employment centers throughout the City, and to regional open space systems.



Portion of Avondale Plan

El Mirage

- Regional linear park located along the river includes a variety of recreational facilities and a paved, multi-use trail.
- Regional linear park incorporates a neighborhood trail system to link parks, schools and retail centers with adjacent neighborhoods and links the City's park system with other west side communities.
- Equestrian trail entire length.



Portion of El Mirage Plan

Glendale

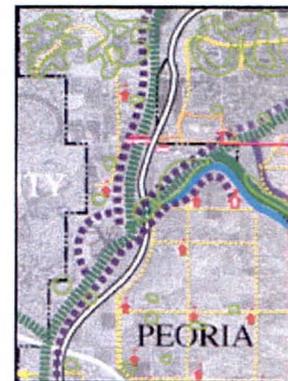
- Natural features connected to park system and street, residential and commercial property landscaping.
- Trails system on New River and Skunk Creek connects and extends the City's linear parks.
- Equestrian trail along New River, Skunk Creek and Arizona Canal.
- Paved, multi-use trail on New River and Arizona Canal.
- Unpaved trail on Grand Canal.



Portion of Glendale Plan

Peoria

- Trails connect parks and activity nodes along Agua Fria River, New River and Skunk Creek to regional trails and open spaces.
- Equestrian trails on Agua Fria River, New River, Skunk Creek, C.A.P. and Arizona Canals.
- Paved, multi-use trails on Agua Fria River, New River, Skunk Creek, Arizona and C.A.P. Canals, Carefree Highway and Lake Pleasant Road south of the Carefree Highway.
- Unpaved trails throughout the area west of Agua Fria River north of Pinnacle Vista Road.
- Recharge basins and riparian areas along both river corridors.



Portion of Peoria Plan

Phoenix

- Trails connect mountain preserves, parks and rivers.
- Equestrian trails on Agua Fria River and New River.
- Paved, multi-use trail on Agua Fria River – at Camelback Road, the trail goes up the New River.
- Camelback Ranch Park includes a recharge area and ties into the bikeway system.
- Equestrian and multi-use trails along the New River, Skunk Creek and the C.A.P. Canal. Trails connect New River with proposed Sonoran Preserve and the Adobe Dam Recreation Area.
- Equestrian and multi-use trails on Arizona Canal.
- Unpaved trail on the Grand Canal.



Portion of Phoenix Plan

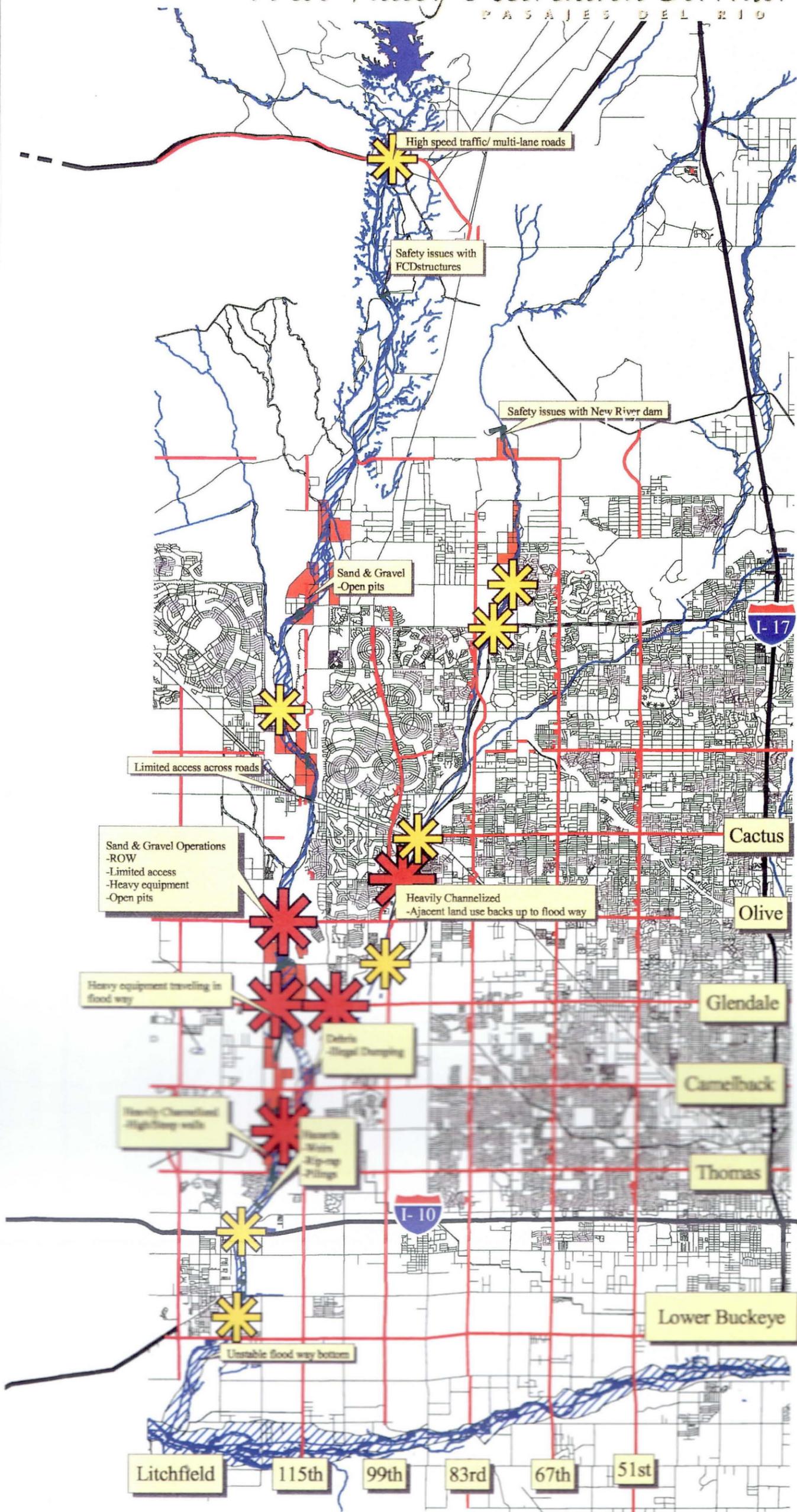
CONSTRAINTS

This study has identified areas of constraints throughout the river corridors (see Constraints exhibit). Although problematic, constraints also open the avenue for creative approaches to developing an interlinking multi-use and equestrian trails system. Constraints, in many cases, will determine access points, trailheads and trail locations.

- Large open pit sand and gravel operations.
- Limited access at sand and gravel operations.
- Heavy sand and gravel equipment traveling in the floodway.
- Land holdings that may be converted into sand and gravel operation.
- Limited right-of-way, adjacent land use backs up to floodway.
- Channelization with high steep walls.
- Lack of safety guard rails along river bank levees.
- Weirs, rip-rap, pilings and unstable soil conditions.
- No passage on top of levees underneath bridges.
- Crossing at street level conflicting with multi-lane roads carrying large volumes of high-speed traffic.
- Limited access from streets.
- Debris and illegal dumping.
- Inconsistency in trail standards between cities.

West Valley Recreation Corridor

PASAJES DEL RIO



LEGEND

-  Major Constraint
-  Minor Constraint
-  Main Roads
-  Structural Hazards
-  Flood Way
-  Sand and Gravel Operations

0 2 4 Miles

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CONSTRAINTS



 FLOOD CONTROL DISTRICT of Maricopa County

June 1999

OPPORTUNITIES

Excellent opportunities abound throughout each river corridor from preserving and enhancing natural landscapes to developing recreational centers (see Opportunities exhibit).

Overall Area

- Extension of trails system and regional linear parks to north, east and west through Skunk Creek and the C.A.P., Beardsley, Arizona, R.I.D. and Grand Canals.
- Canal connections between rivers.
- Trail connections to multi-modal facilities.
- Development of environmental education nodes and wildlife viewing areas.
- Development of parks, open space and recreational areas.
- Create new and preserve and enhance existing riparian and wildlife habitat areas.
- Recharge basins for wildlife habitat and recreational facilities.
- Low flow channels to create riparian and wildlife habitat areas and allow for the creative design and application of water features as both a visual and an acoustical amenity.
- Land ownership patterns present potential for acquisition of easements or land dedications.
- Reclamation of sand and gravel operation sites.
- Trailhead development at street intersections with rivers.

Avondale

- TEA-21 Transportation Enhancement Grant submittal for underpass/trail systems project at McDowell Road and Agua Fria River.
- Develop environmental education and wildlife viewing area at Agua Fria River confluence with Gila River.
- Develop primary access location at Coldwater and Kaizu Parks area with connection to trails system, schools, parks and multi-modal facilities.
- Provide trail connection to the R.I.D. Canal.

El Mirage and Youngtown

- Collaboration on joint projects.
- Develop trailhead and regional linear park.
- Create trail connections to schools and parks.

Glendale

- Capitalize Skunk Creek connections.
- Develop trailhead at Glendale Avenue connecting trails system to multi-modal facilities and airport.
- Connect to Arizona and Grand Canals.
- Initiate joint projects with Peoria.

Peoria

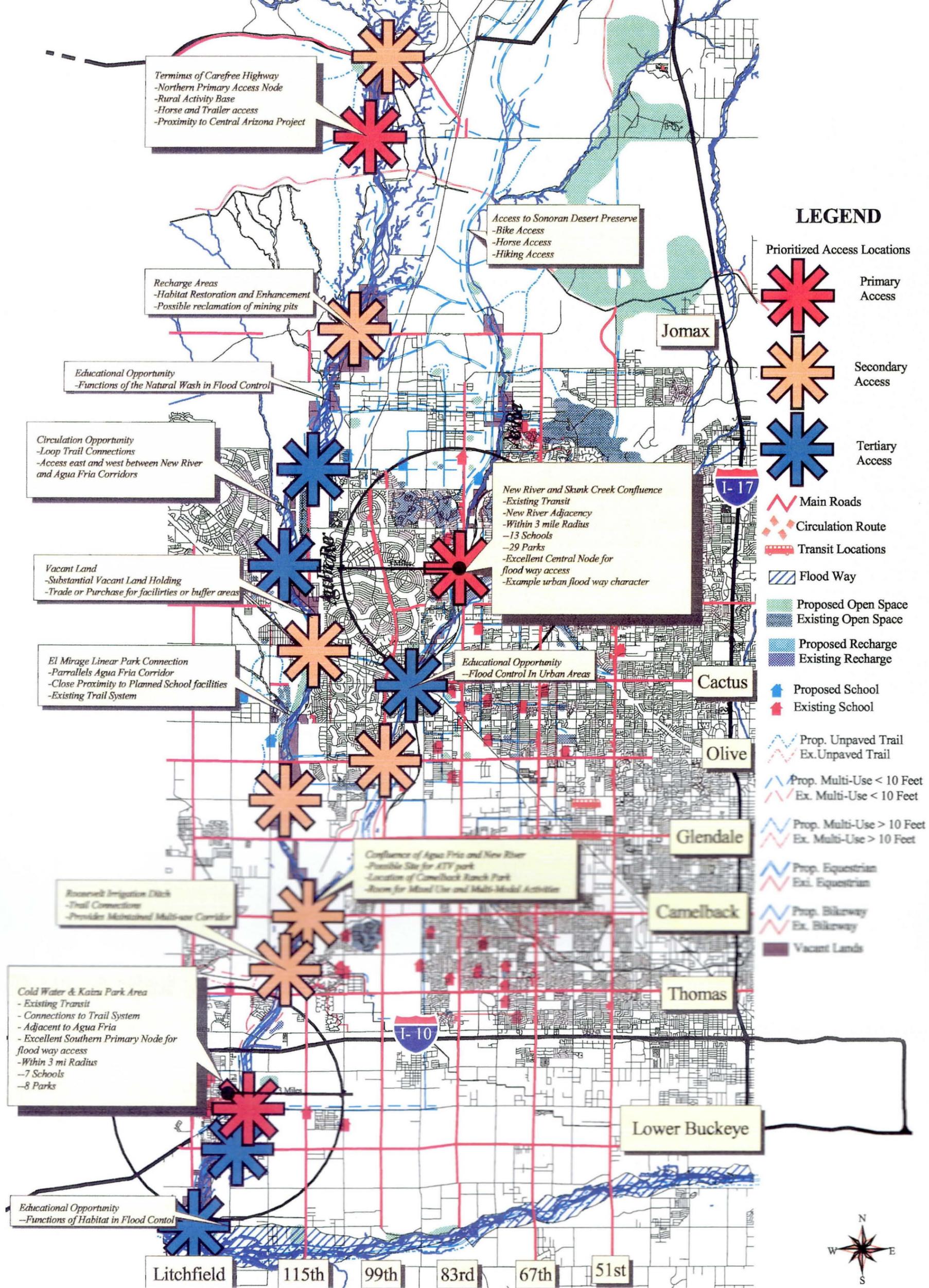
- TEA-21 Transportation Enhancement Grant submittal for multi-use trail along New River from Grand Avenue to confluence with Skunk Creek.
- Develop educational nodes for presenting flood control methods in urban areas.
- Create a primary access location at confluence of New River with Skunk Creek with connections to trails system, multi-modal facilities, schools, parks and employment areas.
- Develop recharge basins for habitat restoration and enhancement.

Phoenix

- Create trailhead at Camelback Ranch Park which connects to trails system, multi-modal facilities and employment areas.
- Develop recharge basin at Camelback Ranch for habitat development.
- Establish trail connections to proposed Sonoran Preserve.
- Utilize the C.A.P. Canal to extend the trails system to the East Valley.

West Valley Recreation Corridor

P A S A L E S D E L R I O



LEGEND

- Prioritized Access Locations**
- Primary Access
 - Secondary Access
 - Tertiary Access
- Main Roads**
- Main Roads
- Circulation Route**
- Circulation Route
- Transit Locations**
- Transit Locations
- Flood Way**
- Flood Way
- Open Space**
- Proposed Open Space
 - Existing Open Space
- Recharge**
- Proposed Recharge
 - Existing Recharge
- Schools**
- Proposed School
 - Existing School
- Trails**
- Prop. Unpaved Trail
 - Ex. Unpaved Trail
 - Prop. Multi-Use < 10 Feet
 - Ex. Multi-Use < 10 Feet
 - Prop. Multi-Use > 10 Feet
 - Ex. Multi-Use > 10 Feet
 - Prop. Equestrian
 - Ex. Equestrian
 - Prop. Bikeway
 - Ex. Bikeway
- Vacant Lands**
- Vacant Lands

0 2 4 Miles

OPPORTUNITIES

NOTE: The opportunities map illustrates the approximate location of community resources as they relate to the West Valley Corridor.

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FLOOD CONTROL DISTRICT of Maricopa County
June 1999

DESIGN CONCEPT PLAN

The Design Concept Plan (see Corridor Plan exhibit) offers a variety of experiences and interactions with the rivers. The Plan strives to reflect and maintain the character of the rivers (Character Sketches exhibit) while embracing a wide range of uses (Land Use Concept exhibit). Low impact activities, such as wildlife viewing and back country hiking, are as much a part of The Corridor as are higher impact uses, such as bicycle commuting and field team sports in park areas. The Plan is based on a series of inter-linking, multi-use trails that connect to multi-modal systems, schools, parks, recreational and open space areas, canals and employment centers throughout each community (Circulation Concept and Access Concept exhibits). Different flood control measures will be utilized in The Corridor based on the safety, health and welfare of the local ecosystem and the communities adjacent to the floodway (Cross Sections exhibit). The result is an overall project that has the flexibility to respond to a wide range of users and activities and one which maintains the functionality required to promote a strong river corridor ecosystem and flood management system.

- The rivers provide a safety net for floods and one of the strongest recreational, transportation and aesthetic amenities in the West Valley.
- The rivers reach into each community and preserve some of the last pieces of natural habitat for the remaining wildlife and fauna within our urbanized areas.
- Three character zones define the function, structure and uses within The Corridor study area. They are the 'rural' character zone, the 'suburban' character zone and the 'urban' character zone.

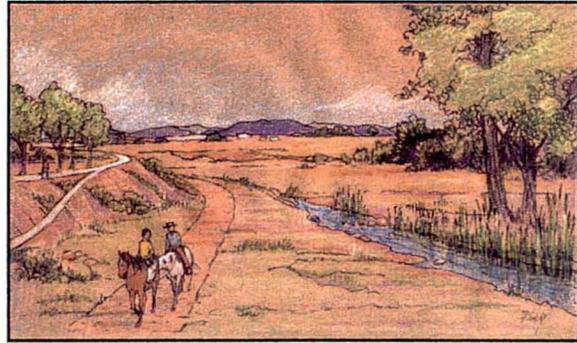
Rural Zone

- Least developed of the three zones.
- Focus is to protect and conserve the natural systems within the river corridors.
- Low impact trails and facilities.
- Protects the environment while providing access and a natural experience for the visitor.
- Provides environmental education and wildlife viewing areas.
- Maintain in a rural, unimproved state.
- Informal pullovers, trails and signage provide the general access locations.



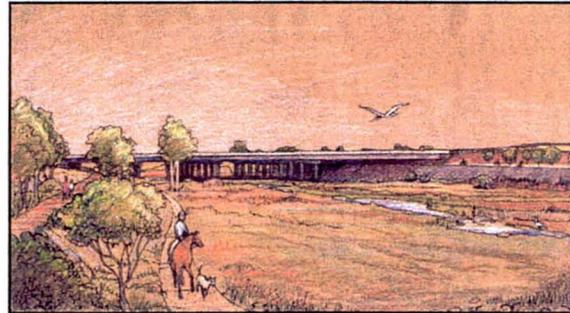
Suburban Zone

- Facilities for the suburban community.
- Transition between rural and urban zones.
- Natural and paved trails with segregated trails for uses incompatible at higher densities.
- Connections to residential communities.
- Access to trails system is built into the existing and proposed park and open space systems along the rivers.
- Land use adjacent to the rivers is mixed use.
- Facilities are incorporated into the existing infrastructure of a community.



Urban Zone

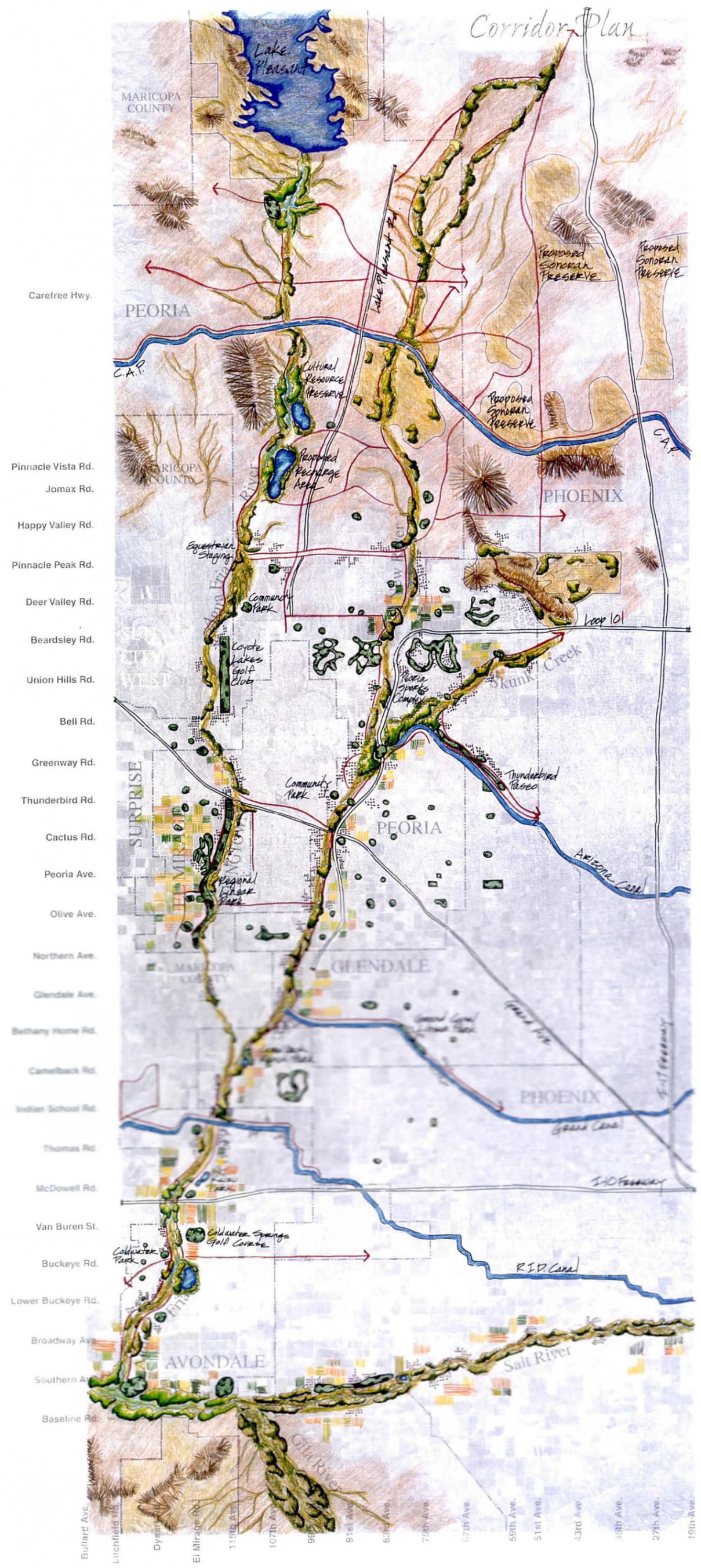
- Characterized by a structured floodway.
- Trails system mostly segregated by use.
- Trails system focuses on parks, open space and multi-modal functions.
- Encourages use of river corridors as a public amenity and alternative transportation zone.
- Restaurants and local commercial development are compatible uses within adjacent lands.
- Uses corridors in the development of sites to take advantage of river aesthetics and trails system.
- Corridor facilities integrated with commercial and park and recreational sites.



West Valley Recreation Corridor

P A S A J E S D E L R I O

Corridor Plan



- Carefree Hwy.
- Pinnacle Vista Rd.
- Jomax Rd.
- Happy Valley Rd.
- Pinnacle Peak Rd.
- Deer Valley Rd.
- Beardsley Rd.
- Union Hills Rd.
- Bell Rd.
- Greenway Rd.
- Thunderbird Rd.
- Cactus Rd.
- Peoria Ave.
- Olive Ave.
- Northern Ave.
- Glendale Ave.
- Bethany Home Rd.
- Camelback Rd.
- Indian School Rd.
- Thomas Rd.
- McDowell Rd.
- Van Buren St.
- Buckeye Rd.
- Lower Buckeye Rd.
- Broadway Ave.
- Southern Ave.
- Baseline Rd.

West Valley Recreation Corridor



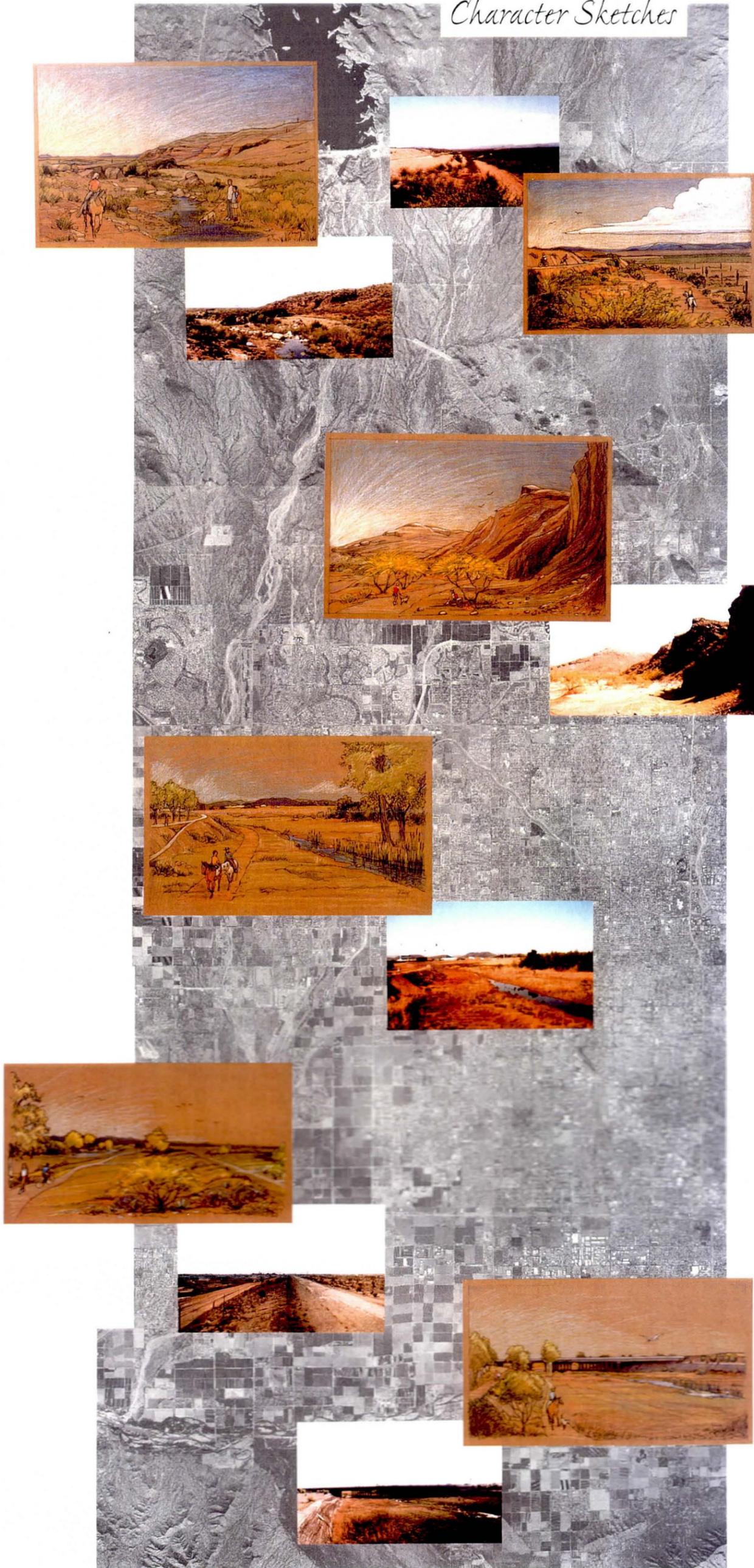
Maricopa County Parks & Recreation and Transportation Departments
 City of Avondale
 City of El Mirage
 City of Glendale
 City of Peoria
 City of Phoenix
 City of Surprise
 City of Scottsdale
 Arizona Department of Transportation

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West Valley Recreation Corridor

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Character Sketches



West Valley Recreation Corridor



Maricopa Association of Governments

Maricopa County Parks & Recreation and Transportation Departments

City of Avondale

City of El Mirage

City of Glendale

City of Peoria

City of Phoenix

City of Surprise

City of Youngtown

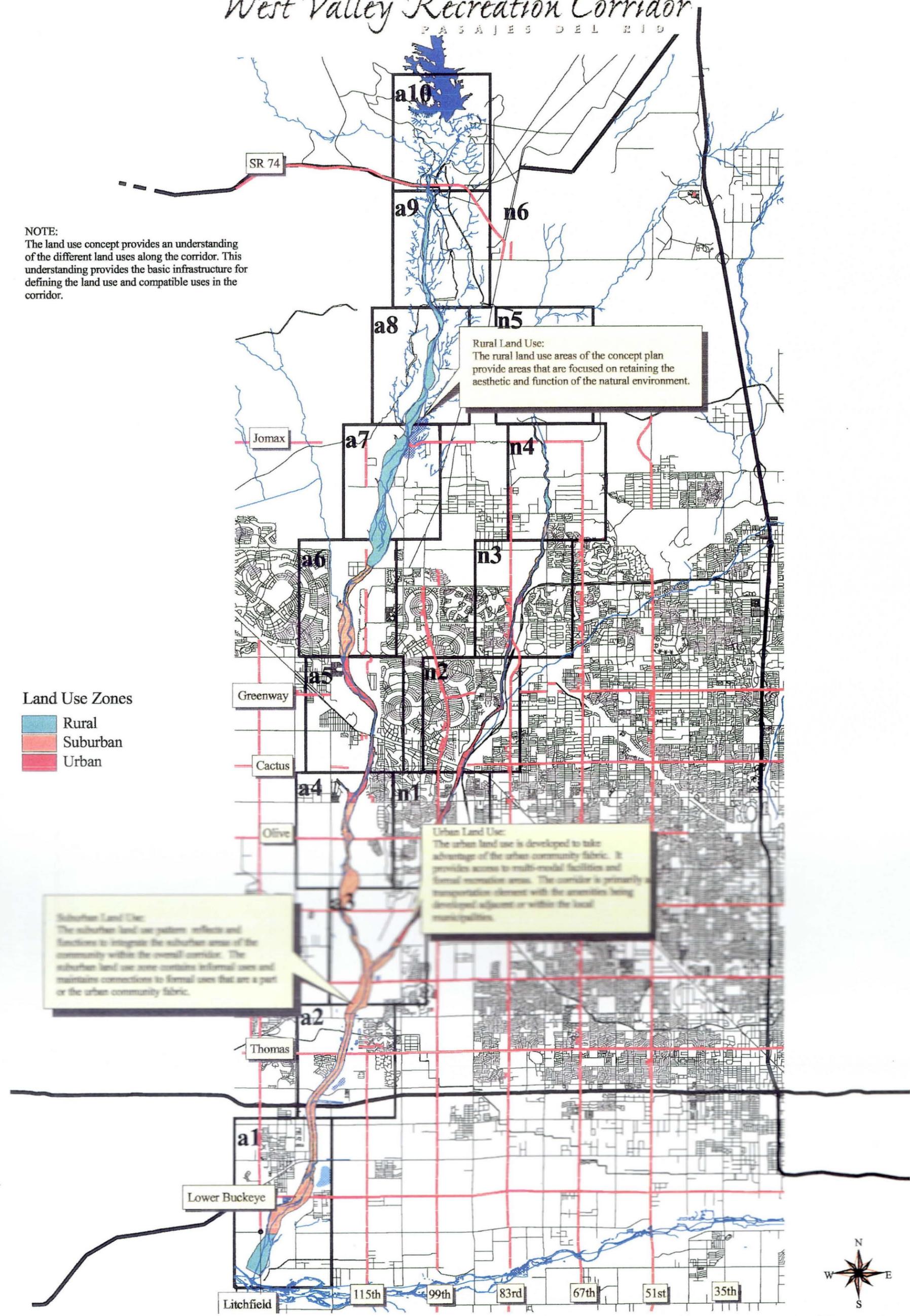
Arizona Department of Transportation

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West Valley Recreation Corridor

PASAJES DEL RIO

NOTE:
The land use concept provides an understanding of the different land uses along the corridor. This understanding provides the basic infrastructure for defining the land use and compatible uses in the corridor.



Rural Land Use:
The rural land use areas of the concept plan provide areas that are focused on retaining the aesthetic and function of the natural environment.

Urban Land Use:
The urban land use is developed to take advantage of the urban community fabric. It provides access to multi-modal facilities and formal recreation areas. The corridor is primarily a transportation element with the amenities being developed adjacent or within the local municipalities.

Suburban Land Use:
The suburban land use pattern reflects and functions to integrate the suburban areas of the community within the overall corridor. The suburban land use zone contains informal uses and maintains connections to formal uses that are a part of the urban community fabric.

- Land Use Zones**
- Rural
 - Suburban
 - Urban



LAND USE CONCEPT



West Valley Recreation Corridor

PASAJES DEL RIO

NOTE:
The Circulation Concept is meant to be a loose interpretation of the hydrologic drainage patterns within the Corridor. By emulating these drainage patterns the circulation becomes a basic building block within the infrastructure and begins to reach into every facet of the community.

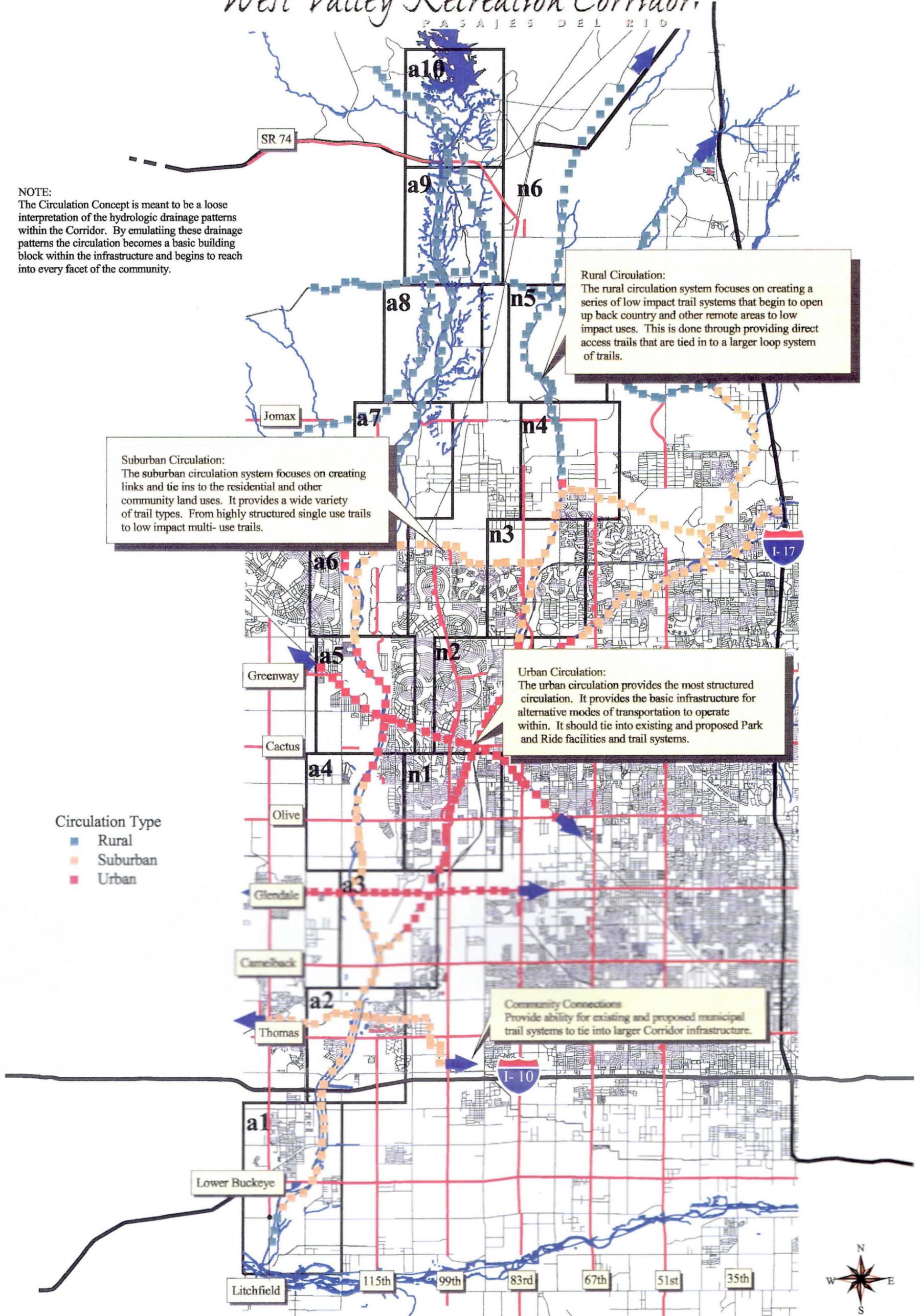
Rural Circulation:
The rural circulation system focuses on creating a series of low impact trail systems that begin to open up back country and other remote areas to low impact uses. This is done through providing direct access trails that are tied in to a larger loop system of trails.

Suburban Circulation:
The suburban circulation system focuses on creating links and tie ins to the residential and other community land uses. It provides a wide variety of trail types. From highly structured single use trails to low impact multi-use trails.

Urban Circulation:
The urban circulation provides the most structured circulation. It provides the basic infrastructure for alternative modes of transportation to operate within. It should tie into existing and proposed Park and Ride facilities and trail systems.

Community Connections
Provide ability for existing and proposed municipal trail systems to tie into larger Corridor infrastructure.

- Circulation Type**
- Rural
 - Suburban
 - Urban



CIRCULATION CONCEPT

West Valley Recreation Corridor

PASAJES DEL RIO

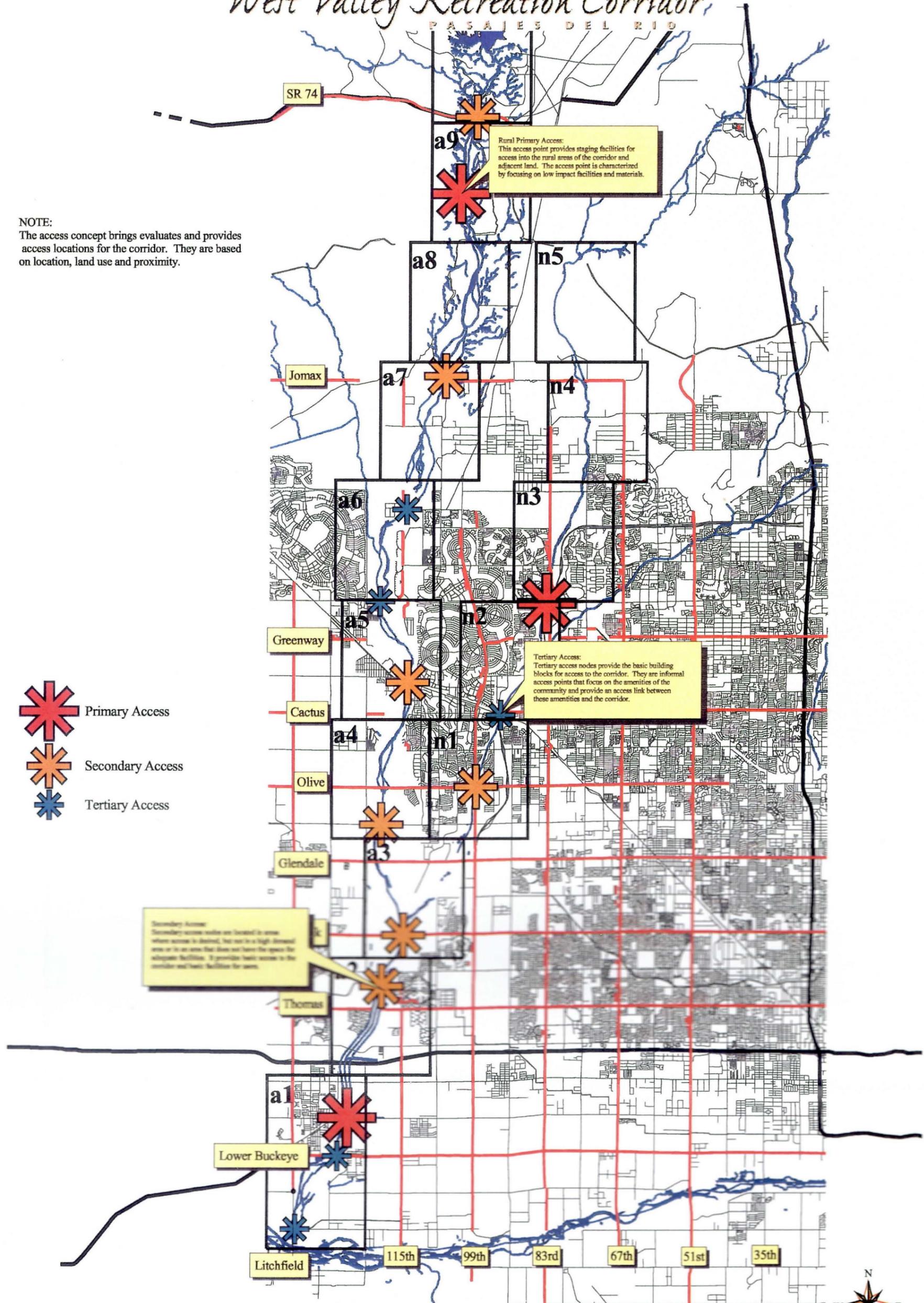
NOTE:
The access concept brings evaluates and provides access locations for the corridor. They are based on location, land use and proximity.

-  Primary Access
-  Secondary Access
-  Tertiary Access

Rural Primary Access:
This access point provides staging facilities for access into the rural areas of the corridor and adjacent land. The access point is characterized by focusing on low impact facilities and materials.

Tertiary Access:
Tertiary access nodes provide the basic building blocks for access to the corridor. They are informal access points that focus on the amenities of the community and provide an access link between these amenities and the corridor.

Secondary Access:
Secondary access nodes are located in areas where access is desired, but not in a high demand area or in an area that does not have the space for adequate facilities. It provides basic access to the corridor and basic facilities for users.



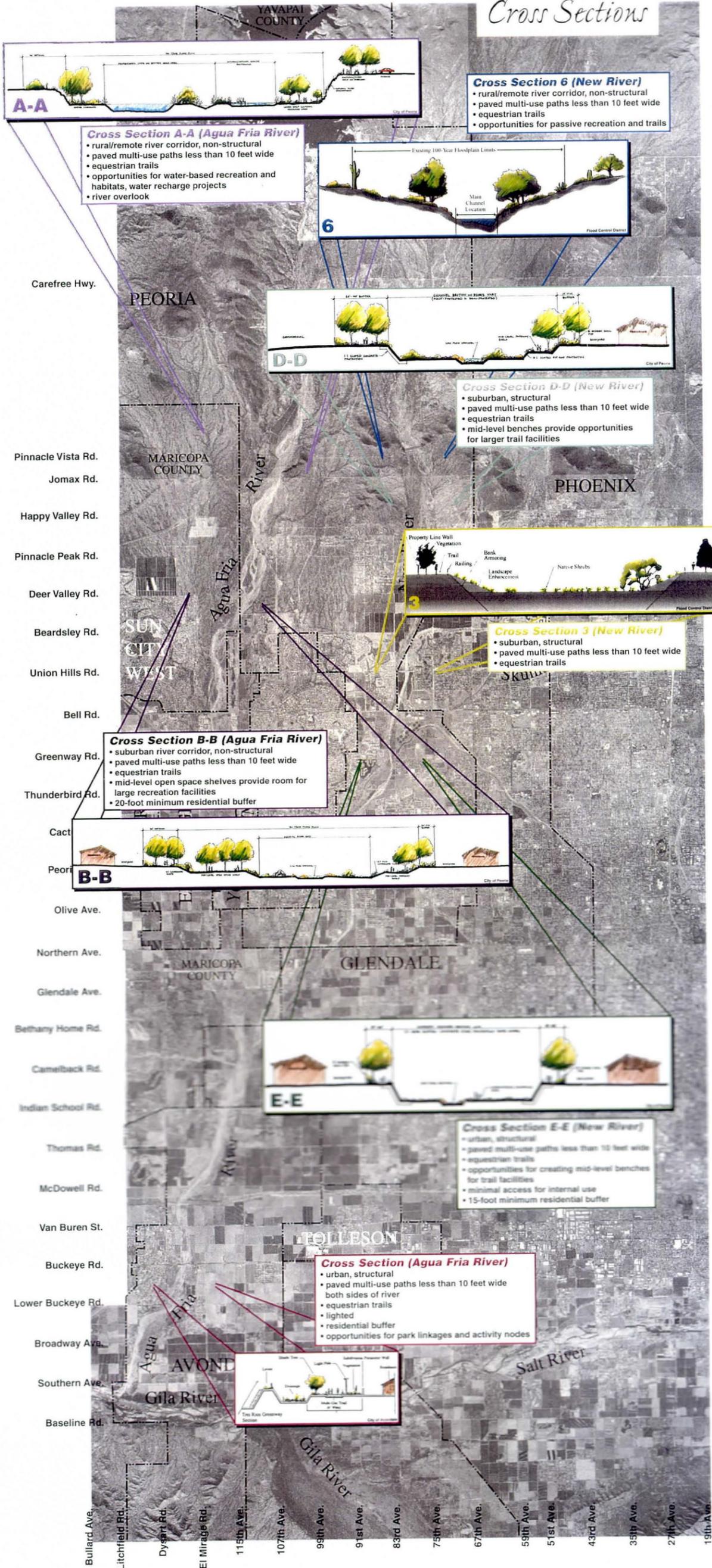
0 2 4 Miles

ACCESS CONCEPT

West Valley Recreation Corridor

P A S A J E S D E L R I O

Cross Sections



West Valley Recreation Corridor



Maricopa Association of Governments

Maricopa County Parks & Recreation and Transportation Departments

City of Avondale

City of El Mirage

City of Glendale

City of Peoria

City of Phoenix

City of Surprise

Town of Youngtown

Arizona Department of Transportation

Carter-Burgess

DEMONSTRATION PROJECTS

The Design Concept Plan proposes demonstration projects that reflect the character of the rivers as they pass through the study area from their rural natural state to the more structured urban settings. The demonstration projects carry out the objectives of the study from providing accessible public multi-modal, alternative transportation and recreational opportunities to enhancing wildlife habitat.

Avondale

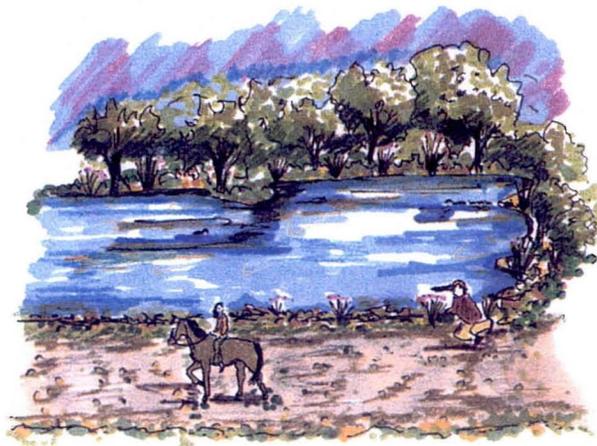
Trailhead at Kaizu Park:



- Ties into proposed trails system, transit routes and McDowell Road underpass/trail system project.
- City submitting a TEA-21 Transportation Enhancement Grant to design and construct a 2,000 linear-foot multi-use path and a 200 linear-foot underpass for McDowell Road on west side of Agua Fria River.
- Riparian and wildlife enhancement.

Wildlife viewing and environmental education area:

- Riparian area at Agua Fria River confluence with Gila River.
- Integrate riparian and wildlife preservation and enhancement with low impact trail access.



El Mirage and Youngtown

Trailhead and park:

- Joint project.
- Within regional linear park on Agua Fria River.
- Connects to trails system, parks, schools, neighborhoods and retail centers.



Glendale

Trailhead on New River:

- On river at Glendale Avenue.
- Ties into trails system and future park-and-ride facility.
- Connects to existing and future bikeways, transit routes and airport area.



Glendale and Peoria

Trailhead at Bell Road:

- Joint project on New River.
- Ties into a future multi-modal transit/park-and-ride facility on Bell Road by the 101 Freeway.
- Connects to trails system, parks, bikeways, schools and employment areas.

Peoria

Multi-use trail:

- On New River from Grand Avenue to the confluence with Skunk Creek.
- City submitting a TEA-21 Transportation Enhancement Grant to design and develop 10,560 linear-foot landscaped trail.
- Connects residences, schools, employment and recreational areas.

Recharge Basin:

- Connects to proposed trails system on Agua Fria River and Jomax and Pinnacle Vista Roads.
- Connects to trails system on New River.

Mountain preserve trails:

- Connects New River to Sunrise Mountain and West Wing Mountain Preserves.



Phoenix



Trailhead at Camelback Ranch Park:

- Connects trails and bicycle system.
- Includes a recharge pond.

Mountain preserve trails:

- Connections from New River to proposed Sonoran Preserve.