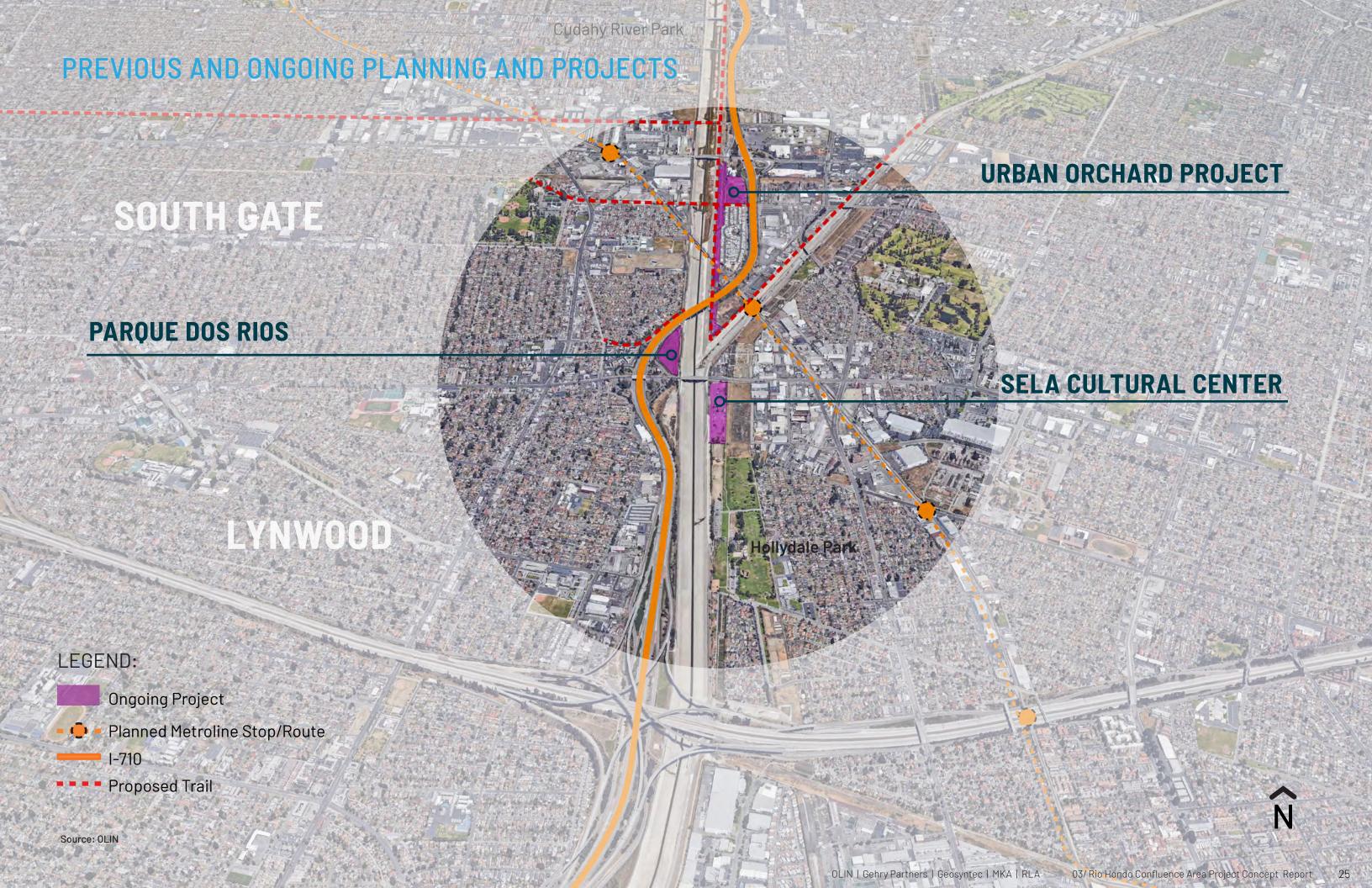


INTRODUCTION
LOWER LA RIVER REVITALIZATION PLAN (LLARRP)
PROJECTS UNDER DEVELOPMENT
RIO HONDO CONFLUENCE FEASIBILITY STUDY
LA RIVER MASTER PLAN

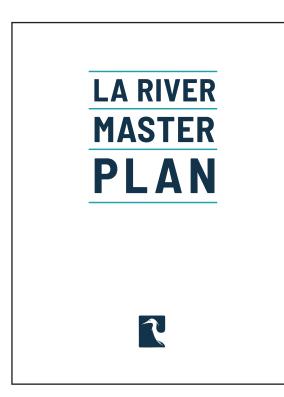
PREVIOUS AND ONGOING PLANNING

There have been several planning efforts, both previous and ongoing, that have identified the Rio Hondo Confluence Area as a significant opportunity area along the LA River for multi-benefit improvements. Plans including the LA River Master Plan (expected completion 2020), the Lower LA River Revitalization Plan (LLARRP, 2018), and the LA River index (2016) have each ascertained varying needs through a multitude of assessment criteria and areas of focus. In addition to the needs discerned, the Rio Hondo Confluence Area presents numerous opportunities with readily available and underutilized land in and above the channel, on top of the levee, on adjacent parcels, and in the extensive transmission line right-of-way.

Complementing existing LA River related planning efforts, there are other regional plans and projects in development that fall within the Rio Hondo Confluence Area, such as the Metro WSAB Eco-Rapid line, Parque Dos Rios, Urban Orchard, and the SELA Cultural Center. The projects' close proximity within the context of the previous and ongoing planning efforts warranted comprehensive evaluation of the broader area, resulting in the Rio Hondo Confluence Feasibility Study in 2019 that formed the basis of this report.

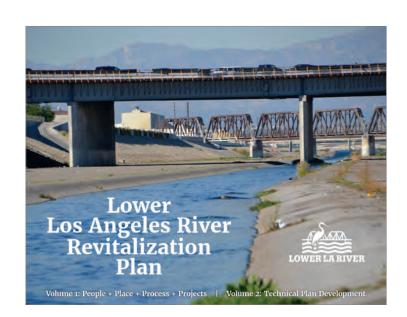


PREVIOUS AND ONGOING PLANNING



LA RIVER MASTER PLAN (EXPECTED COMPLETION 2020)

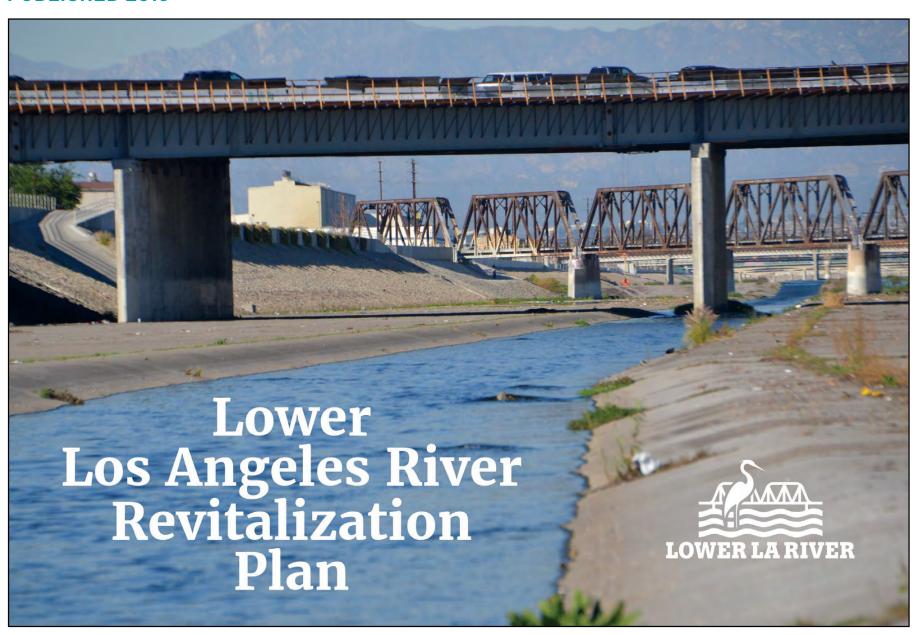




LOWER LA RIVER REVITALIZATION PLAN (2018)

LOWER LA RIVER REVITALIZATION PLAN

PUBLISHED 2018



VOLUME 1

- The Lower Los Angeles River Revitalization Plan
- The Lower Los Angeles River Story
- Vision Into Action
- Community-Driven Outcomes
- From Concept to Reality
- The Long View

VOLUME 2

- The Plan Framework
- List of Strategies for All Opportunity Areas
- Signature Strategies
- Governance and Funding
- Review of Existing Planning Efforts
- Summary of Input

GOALS AND OBJECTIVES

- Community Economics, Health, and Equity
- Public Realm
- Water and Environment

LOWER LA RIVER REVITALIZATION PLAN

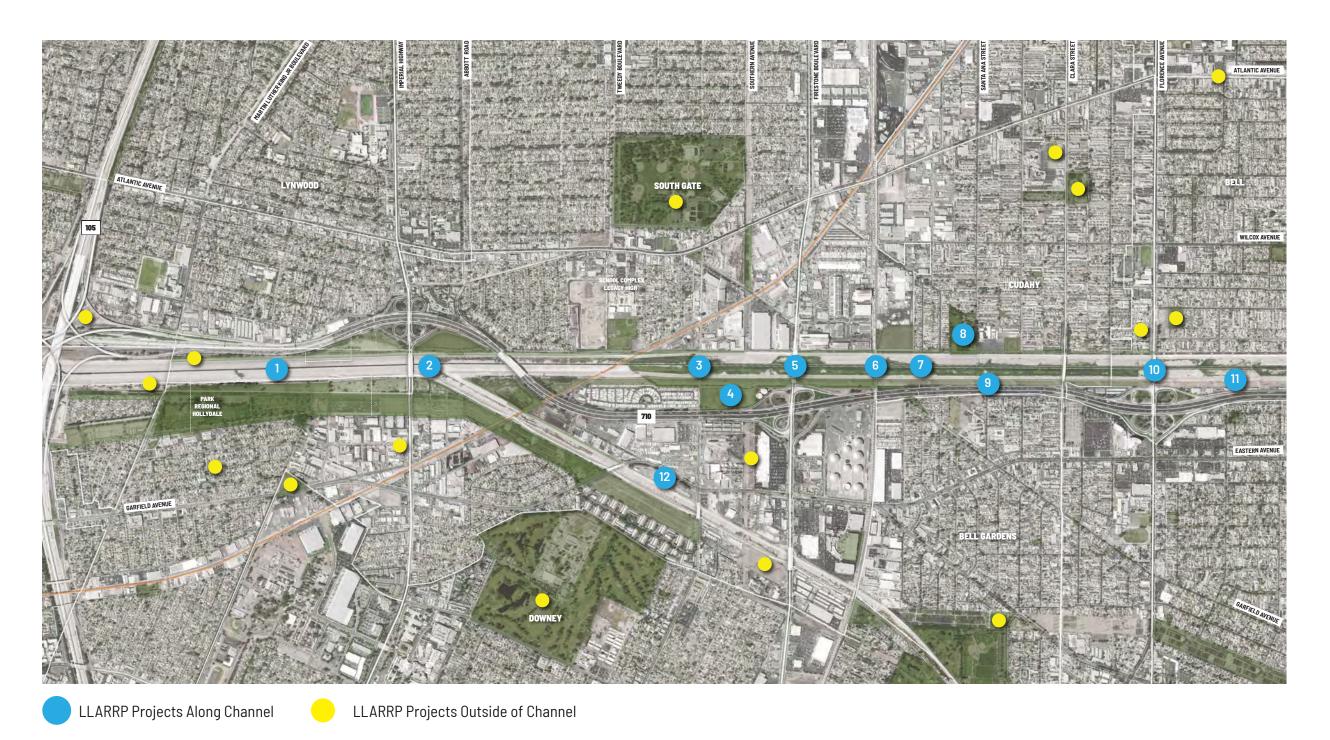
In 2018, the LLARRP, among other previous planning efforts, designated the Rio Hondo Confluence Area as a location with significant opportunity. The area became one of the LLARRP's signature projects, deeper investigation, and more focused design efforts. The recommended projects largely address hydraulics, public space, and programming, among other areas of interest. The plan includes conceptual ideas for river crossings, habitat enhancement, levee terracing, and an inflatable rubber dam in the site area. The plan also identifies opportunities for inriver access and safety, low water crossing, low flow channel modifications, a river amphitheater, and adjacent right-of-way open space improvements. In its totality, the project's objective is to create a continuous open space network along the river's waterfront, similar to the goals promoted throughout the RHCAP.

While the plan's goals largely align with those of the RHCAP, the feasibility of particular projects is of concern. For example, the plan proposed in-channel vegetation that is likely not feasible due to sensitive hydraulics. Adjacent low flow channel modifications may not be able to offset the adverse impact of vegetation on hydraulics. 2D or 3D hydraulic modeling is necessary to confirm feasibility. Similarly, the siting of vegetated levee terracing may obstruct stormwater flows and its feasibility should be evaluated with a 2D or 3D hydraulic model. Lastly, the rubber dams may promote algae growth in ponded areas as a result of high nutrient concentrations in the river water.

LLARRP PROJECTS

- BIKE PATH/HOLLYDALE CROSSING 1
 - RIO HONDO CONFLUENCE AREA (2)
- PROPOSED SOUTHERN AVE BRIDGE 3
 - URBAN ORCHARD 4
 - FIRESTONE BOULEVARD 5
- GREENWAY OPPORTUNITY ALONG SOUTHERN PACIFIC TRANSPORTATION RAILWAY 6
 - SHULL STREET PED/BIKE/EQ. OVERPASS 7
 - CUDAHY RIVER PARK 8
 - UPPER SEGMENT MULTI-USE EASEMENT 9
 - FLORENCE AVENUE 10
 - NEW BIKE PATH 11
 - LAC SANITATION DISTRICT TRANSFERS STATION IMPROVEMENT (12)

LOWER LA RIVER REVITALIZATION PLAN



Source: Gehry Partners, Drawn from sites from the Lower Los Angeles Revitalization Plan, 2018



LOWER LA RIVER REVITALIZATION PLAN

LLARRP PROJECTS	→ 1 BIKE PATH/	2 RIO HONDO	3 PROPOSED SOUTHERN	4	5 FIRESTONE	6 GREENWAY OPPORTUNITY
BUILDING BLOCKS	HOLLYDALE CROSSING UNINCORPORATED	CONFLUENCE AREA SOUTH GATE, LYNWOOD	AVE BRIDGE SOUTH GATE	URBAN ORCHARD SOUTH GATE	BOULEVARD SOUTH GATE	ALONG SOUTHERN PACIFIC TRANSPORTATION RR BELL GARDENS, SOUTH GATE, CUDAH
FLOODPLAIN EXPANSION						
IN-RIVER ACCESS AND SAFETY						
LOW WATER CROSSINGS						
LOW-FLOW CHANNEL MODIFICATIONS						
REGRADING FOR LANDSCAPE TOPOGRAPHY RESTORATION						
RIVER AMPHITHEATER						
RUBBER DAMS AND INUNDATION AREAS						
STREAM RESTORATION						
	Not applicable to project		Applicable to pr	oject		

Source: Lower LA River Revitalization Plan, 2018.

LOWER LA RIVER REVITALIZATION PLAN

LLARRP PROJECTS	→ 7 SHULL STREET	8	9 UPPER SEGMENT	10	11	12 LAC SANITATION DISTRIC
BUILDING BLOCKS	BIKE/EQ. OVER BELL GARDENS, CU	PASS CUDAHY RIVER F	PARK MULTI-USE EASEME		NEW BIKE PATH LONG BEACH, UNINCORPORATED, PARAMOUNT, COMPTON,	TRANSFER STATION IMPR SOUTH GATE
FLOODPLAIN EXPANSION						
IN-RIVER ACCESS AND SAFETY						
LOW WATER CROSSINGS						
LOW-FLOW CHANNEL MODIFICATIONS						
REGRADING FOR LANDSCAPE TOPOGRAPHY RESTORATION						
RIVER AMPHITHEATER						
RUBBER DAMS AND INUNDATION AREAS						
STREAM RESTORATION						
	Not	applicable to project		pplicable to project	J L	

LOWER LA RIVER REVITALIZATION PLAN

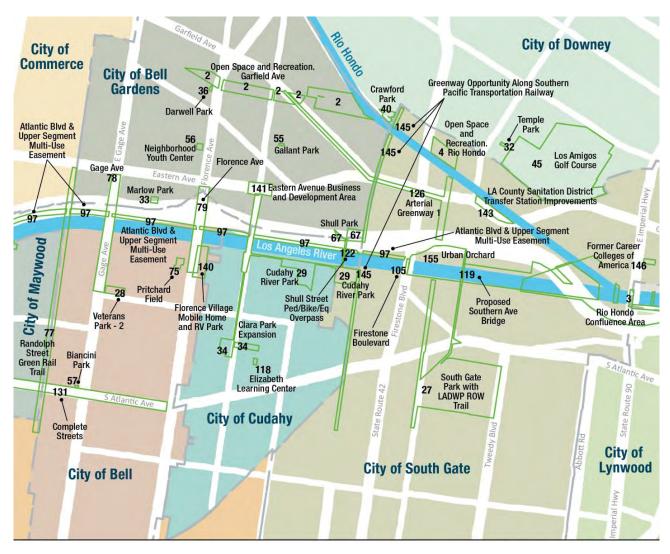
OPPORTUNITY AREAS

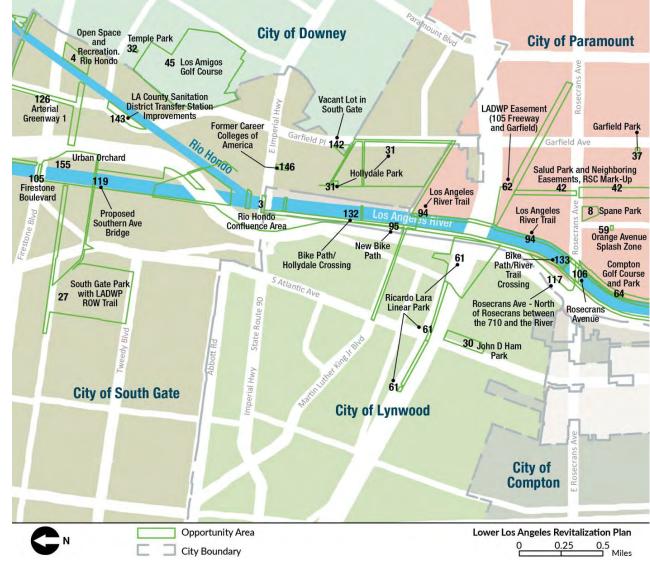
Sponsoring / Managing Entity: LA County, Rivers and Mountains Conservancy, and CA State Assembly

Timeline / Phasing: Varies

Size: Varies

Opportunity Areas Identified by the LLARRP Working Group:





Source: Lower LA River Revitalization Plan, pg 364 & 366, 2018.

LOWER LA RIVER REVITALIZATION PLAN

RIO HONDO CONFLUENCE PROJECT SUMMARY

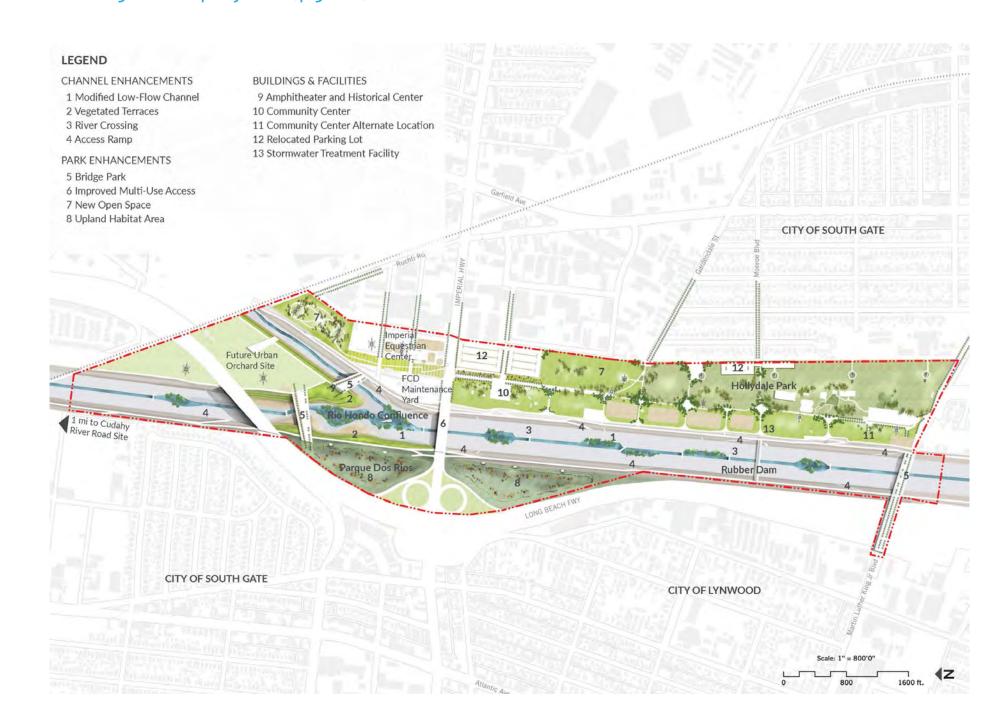
"...The Working Group and public have recommended to transform the confluence into a key anchor point and asset...and the public ultimately nominated it as a signature project." (pg 731)

Working Group Suggestions:

- Multi-Purpose Bridges
- Low Flow Crossings
- Eco-Revelatory Amphitheater
- · Programming/ Planned Activities
- Expanded Multi-Use Trail And Bike/Pedestrian Paths
- Art And Culture Opportunities
- Seasonal Recreation
- In-River Access
- Habitat Restoration
- Safety Features
- Stormwater Capture
- Playgrounds
- Signage/Navigation

Proposed Enhancements:

- Modified Low-Flow Channel
- Vegetated Terraces
- River Crossings
- Access Ramps
- Bridge Parks
- New Open Space
- Multi-Use Access (Including Equestrian Access)
- Upland Habitat Area
- · Amphitheater/Historical Center
- Community Center
- Relocated Parking Lots
- Stormwater Treatment Facility



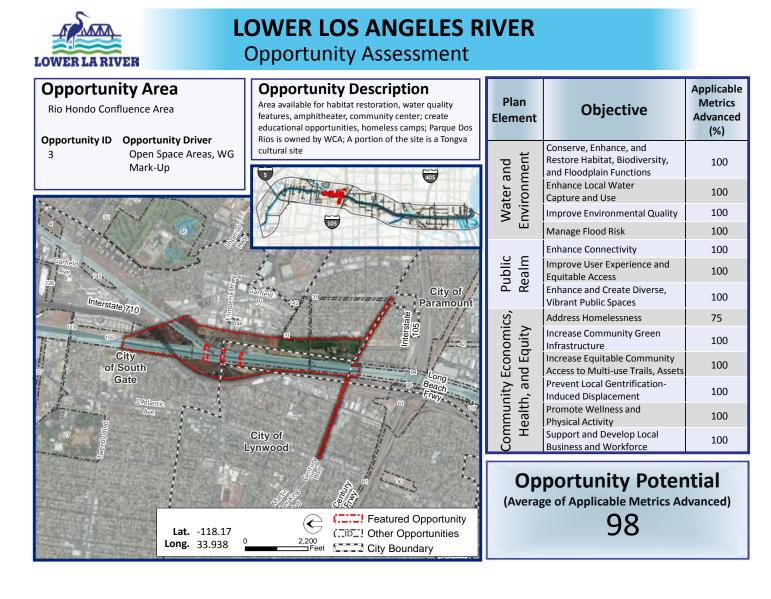
LOWER LA RIVER REVITALIZATION PLAN

RIO HONDO CONFLUENCE AREA

Sponsoring / Managing Entity: Rivers & Mountains Conservancy, Gateway Cities Council of Governments, and LA County Board of Supervisors

Timeline / Phasing: Varies

Size: 246 acres





LOWER LOS ANGELES RIVER

Building Block

Sub-regional water

Trailheads and staging

recycling facility

Transit-oriented

Water capture and

onsite storage

Shade (veg or

Χ

Χ

70 Traffic calming

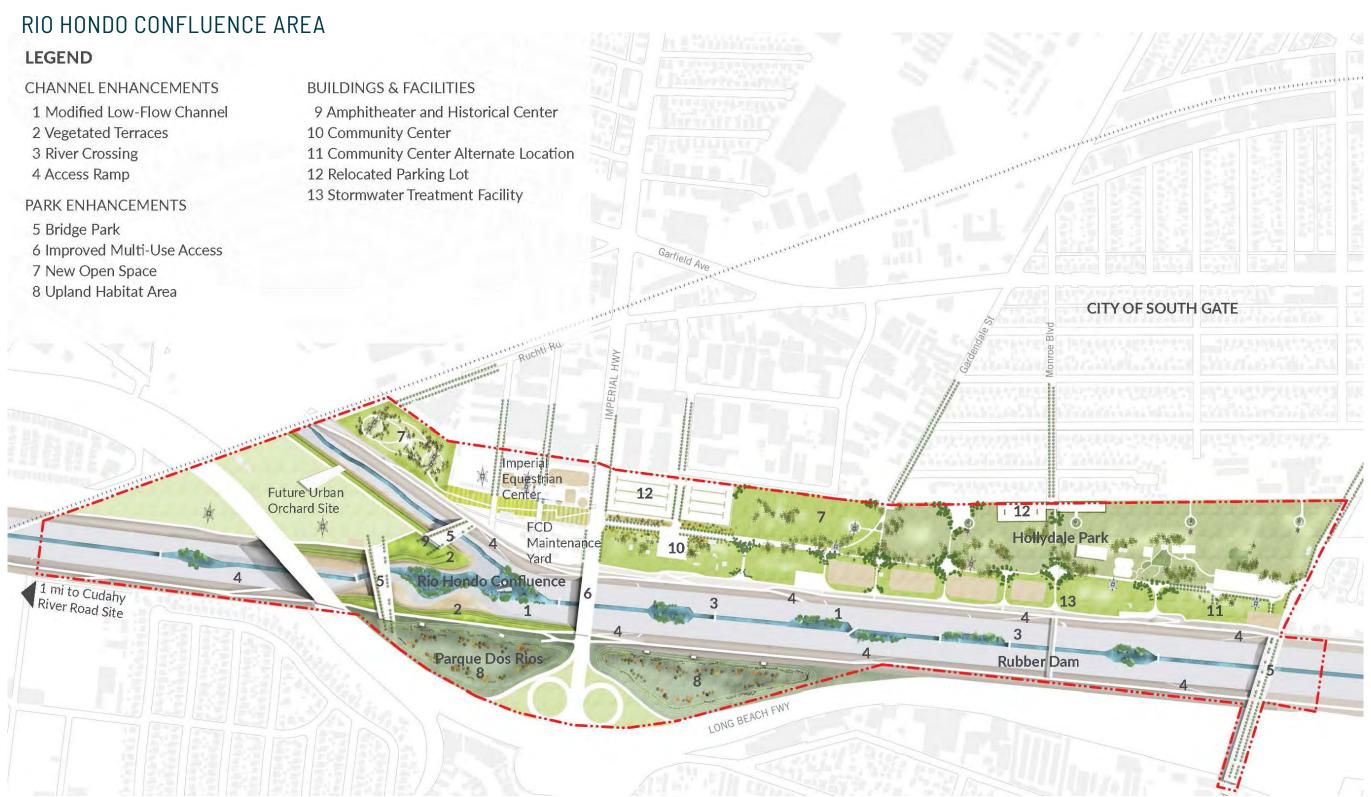
71

Opportunity Assessment

		_	ID	Building Block	Applied	ID	Building Block	Applied
Opportunity Area Rio Hondo Confluence Area		21	Bike hubs	Х	44	Overcrossing	Х	
Opportunity ID			22	Floodplain expansion		45	Oyster bed restoration	
			23	Green infrastructure	X	46	Passive space	X
3		24	Habitat area		47	Pedestrian and cyclist access	X	
			25	Habitat corridor		48	Permeable paving	
ID	Building Block	Applied		Historical, cultural,		49	Plazas	
1	Active space	X	26	environmental education/assets/	X	50	Pop-up parks	X
2	Additional permanent homeless shelters		27	signage Homeless space		52	Property acquisition	X
3	Bioswales	X	27	sharing Infiltration basins and		53	Public art and murals	X
4	Boardwalks and overlooks		28	trenches		54	Recreation center	X
5	Brownfields remediation	X	29	In-river access and safety	X	55	Regional gateway	
6	Climbing wall		30	Leverage planned regional water		56	Regrading for landscape topography	
7	Commercial zone access	X		recycling projects Leverage pump			restoration	
9	Community garden	X	31	stations to convey		58	Residential zone access	X
10	Community gateway			stormwater	.,	59	Restrooms	
12	Continuous park space	Х	32	Lighting	X	60	River amphitheater	X
13	Curb cuts/street eddy basins		36	Loop and spur trails	V	61	Rubber dams and inundation areas	
14	Destination stops	Х	37	Low income access	X	62	Safe crossings	X
15	Diversion to sanitary sewer		38	Low water crossings	X	63	Seating	
16	Drinking fountains	X	39	Low-flow channel modifications	X	64	Security	X
17	Dry wells		40	Multi-use publicly- owned properties		65	Shallow groundwater banking	
18	Elevated paths		41	Onsite water recycling		67	Signage	X
20	Equestrian trails	X	42	Open space access	X	68	Stream restoration	

Source: Lower LA River Revitalization Plan, pg 374-375, 2018.

LOWER LA RIVER REVITALIZATION PLAN

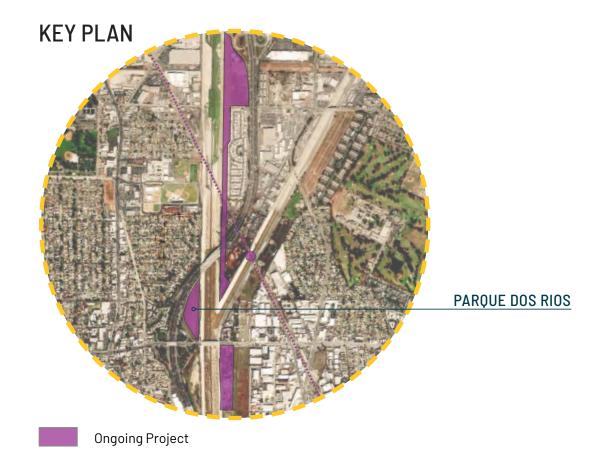


< N

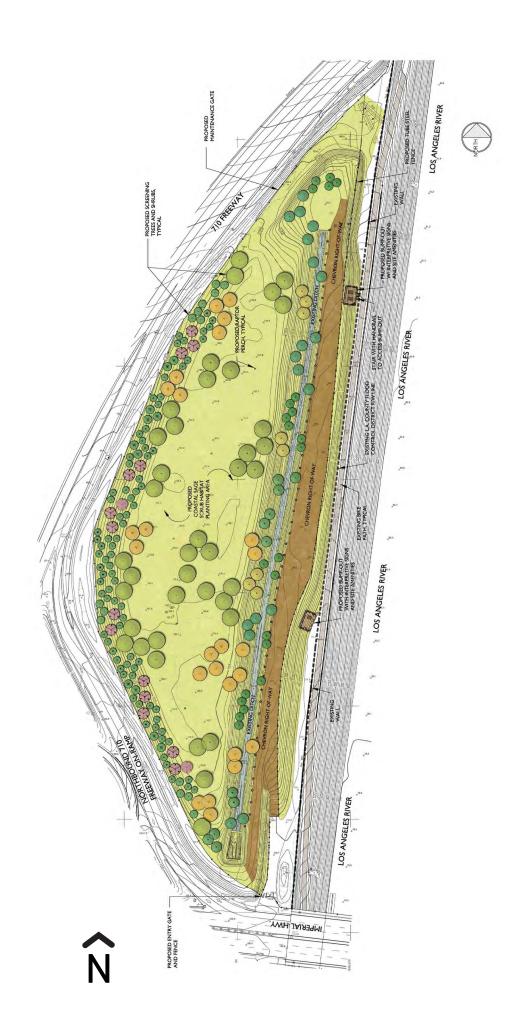
PARQUE DOS RIOS

PROJECT UNDER CONSTRUCTION

- Led by Watershed Conservation Authority (WCA), City of South Gate, LA County Regional Park and Open Space District, LACFCD, Rivers and Mountains Conservancy, and Northeast Trees.
- The plan for the site is to create a natural area for wildlife, with a habitat viewing deck adjacent to the bike path that will overlook the natural area and the San Gabriel Mountains as well as be a place for rest, reflection and relaxation along the bike path.
- 2020 Completion



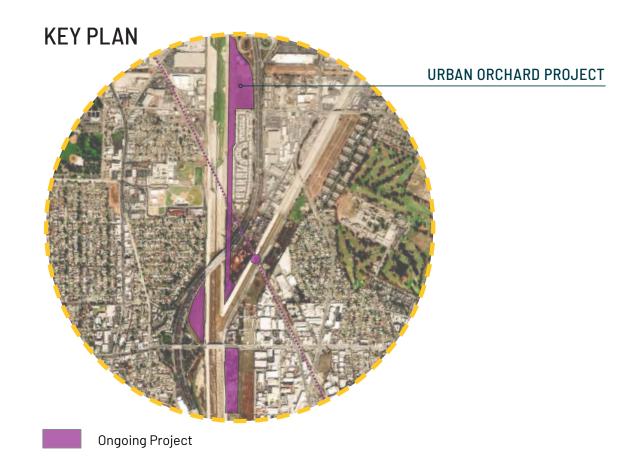
Source: Watershed Conservation Authority, Parque Does Rios, https://www.wca.ca.gov/parque_dos_rios, Accessed 09/27/18.



URBAN ORCHARD PROJECT

PROJECT UNDER DEVELOPMENT

- Led by Trust for Public Land and City of South Gate
- The park will offer amenities such as an orchard with fruit trees, picnic areas, bike/pedestrian trails, wetland with native fish species, nature play area, community building, educational garden, fitness equipment, and native plant palette
- Phase 1: ~End of 2021 Completion









SELA CULTURAL CENTER

PROJECT UNDER DEVELOPMENT

- Led by Rivers and Mountains Conservancy
- Site Selection and Feasibility Study completed Summer 2019
- Concept Design anticipated for Spring 2020
- Cultural Center will include Music and Visual Arts, and Cultural/Community program spaces
- Between Imperial Highway and Hollydale Regional Park

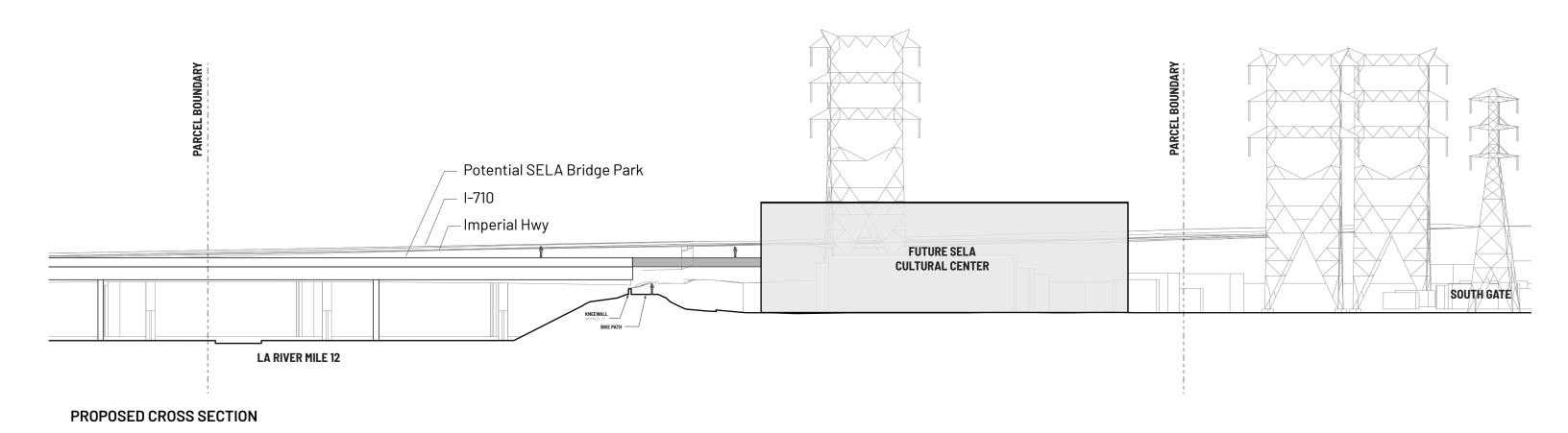






SELA CULTURAL CENTER

PROJECT UNDER DEVELOPMENT



Source: SELA Cultural Center Feasibility Report, 2019

METRO WEST SANTA ANA BRANCH ALIGNMENT

PROJECT UNDER DEVELOPMENT

Metro is planning a new light rail transit (LRT) line that will connect the city of Downtown LA to the Southeast cities, known as the West Santa Ana Branch (WSAB) Transit Corridor. The new rail line is part of Metro's \$6.6 billion effort to expand LA County's public transit network, funded through Measures R & M. The Metro WSAB project is currently undergoing an EIR process to be released in December 2020 and Metro anticipates breaking ground on the project in early 2022. The 19-mile rail line is set to complete in 2028 in advance of the LA Olympics that summer.

The Metro WSAB alignment runs directly through the Rio Hondo Confluence Area and runs parallel to the existing Union Pacific Railroad (UPRR) line. The two closest stops to the project area are currently planned along Firestone Boulevard in South Gate and Gardendale Street in Downey, both of which are approximately a half mile from the confluence. However, Metro has since agreed to explore the addition of a stop at the Rio Hondo Confluence, located in the South Garfield Transmission Right-of-Way Park. The proposed stop will provide direct access to the RHCAP and enhance visitorship to the various projects from riders across the transit corridor.

The Rio Hondo Confluence projects must accommodate the Metro WSAB alignment, most challenging at the LA River Platform Park, and Rio Hondo Platform Park. Currently, the existing UPRR bridges sit within the channels and Metro intends to construct the new lines on the bridges' existing piers, which may compromise their safety during flood events. With such, there are ongoing conversations regarding the elevation of the rail alignment and how it engages the platform parks. This interface of transportation and park infrastructure result in numerous hydraulic and structural challenges that will require significant coordination and different design constraints. Further, the Metro WSAB alignment must navigate across numerous transmission lines, which results in significant vertical constraints, limiting the trains' vertical elevation at different locations across the area. The RHCAP takes into consideration the WSAB alignment to incorporate realistic constraints on the affected projects within the confluence area.



Source: Lower LA River Revitalization Plan, pg 65, 2018.

Ongoing Project

METRO WEST SANTA ANA BRANCH ALIGNMENT

PROJECT UNDER DEVELOPMENT





RIO HONDO CONFLUENCE FEASIBILITY STUDY

The Rio Hondo Confluence Feasibility Study (2019) includes an extensive analysis of the neighborhoods surrounding the confluence, including parks, public health, and ecosystem needs. Opportunities for water capture and requirements for water quality obligations are also included in the analysis. The report includes hydraulic studies based on information provided by the LACFCD and USACE. Significant findings from these studies include:

- The designated reinforced overflow weir at Hollydale Park.
- The existing UPRR bridge elevation is currently lower than the adjacent flood parapet walls on top of the levee.
- Locations where platform support structures are hydraulically feasible.
- The designation of a minimum clearance between the top of the existing levee walls and the bottom of a platform structure to allow for flood overflow, venting, wave action, and maintenance vehicle access.
- Locations where low flow modifications are hydraulically feasible.

Nine benefit categories were considered as part of this study. In each case the potential benefits are outlined or the method for determining the benefit is outlined.

The report serves as a diagram outlining the possibilities for increasing open space and providing LA River improvements. There are opportunities to phase the overall development of the Rio Hondo Confluence Area and consider municipal or conservancy partners in projects, such as on a Southern Ave Bridge Park near South Gate and a cultural center at the confluence. The purpose of the overall feasibility plan is to put each individual project or phase in an overall coordinated context of planning and benefit. It is important that each project or phase does not preclude a future project or phase from being executed.

RIO HONDO CONFLUENCE FEASIBILITY STUDY

PUBLISHED FEBRUARY 11, 2019



01/SITE INFORMATION

02 / SITE CONTEXT

03 / SITE ANALYSIS

People Environment Water

04 / PROGRAM ANALYSIS

05 / VIGNETTES

06 / TECHNICAL REPORTS

Hydraulics
Geotechnical
Structural
Water Quality
Water Supply
Eco-Rapid Transit

07 / COST OPINION

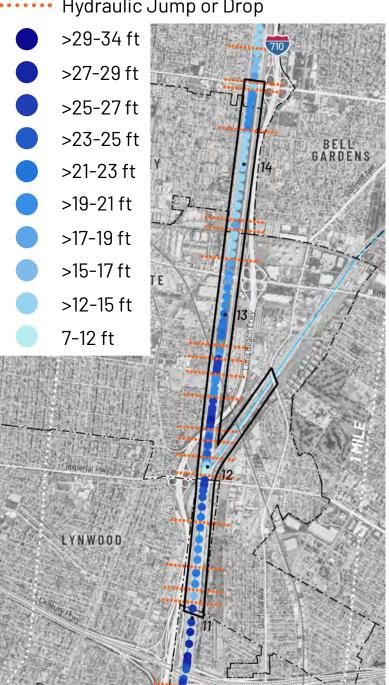
PREVIOUS AND ONGOING PLANNING AND PROJECTS RIO HONDO CONFLUENCE FEASIBILITY STUDY FEASIBILITY STUDY EXTENTS Source: Los Angeles Region Imagery Acquisition Consortium (LARIAC) and Pictometry International Corp 5 mi.

RIO HONDO CONFLUENCE FEASIBILITY STUDY

FEASIBILITY HYDRAULIC REPORT- COMPOSITE

Flow Depth:

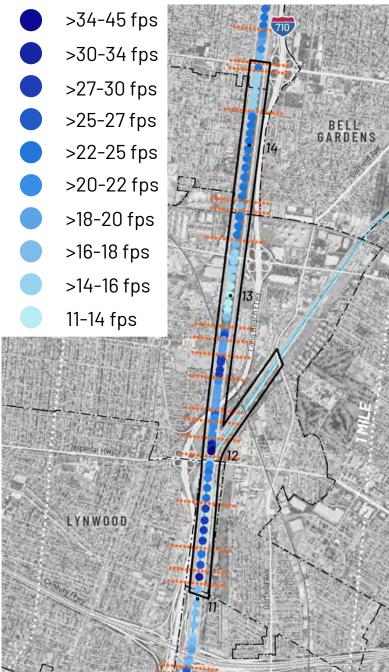
Hydraulic Jump or Drop



Source: Rio Hondo Confluence Los Angeles Signature Project Feasibility Study, 2019

Flow Velocity:

····· Hydraulic Jump or Drop



Froude Number:

Hydraulic Jump or Drop

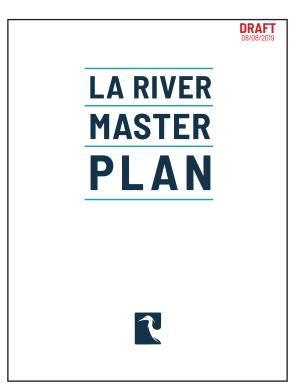


LA RIVER MASTER PLAN

OVERVIEW

The LA River Master Plan (expected completion 2020) is an ongoing process that incorporates more than two decades of planning efforts along the LA River's 51 miles. The planning process began in 2016 as an effort to update the 1996 Los Angeles County LA River Master Plan, recognizing that the infrastructure and its flanking communities' needs have since shifted and grown. LA County has developed a comprehensive corridor plan that seeks to reimagine the LA River as a regional asset beyond its function as flood risk management infrastructure to meet other hydrological, ecological, and community needs. The plan employs a goal-driven framework rooted in these needs resulting in nine goals. Upon identification of site-specific opportunities, project designs are bolstered by a series of foundational principles, a kit of parts, and common elements.

The Master Plan identifies hundreds of existing and potential projects along the river corridor of various scales, XS to XL, each having different associated levels of impact on their neighboring communities. The aggregation of multiple and proximate project sites resulted in the creation of five major project zones, of which the Rio Hondo Confluence Area is among. The area has numerous high needs indicators while presenting tremendous opportunity, existing investment, and interest. There is a dense aggregation of potential and existing projects within a short stretch of the river and its confluence with the Rio Hondo. The confluence also serves as a metaphor for the joining of past, present, and future planning efforts and the merging of historically disconnected communities. The Rio Hondo Confluence Feasibility Study grew out of this assessment and ultimately resulted in the development of the RHCAP concept design report.



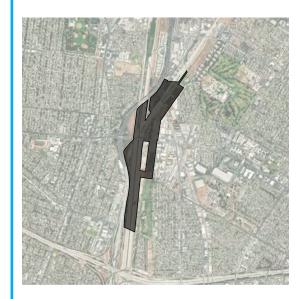


LA RIVER MASTER PLAN

PLANNED AND PROPOSED MAJOR PROJECTS NEAR THE RIO HONDO CONFLUENCE AREA

Planned Major Project: LLARRP, LAC Public Works

River Mile (RM) 11.8 Rio Hondo Confluence



Frame 3
South Gate

XL / 164.6 acres

Land Ownership:

38% Private, 33% Public (Non-County), 16% County, 13% Unclassified

Congressional District: 44 Supervisor District: 1, 2

Council District: n/a

State Senate: 33 **State Assembly:** 63

Planned Major Project: LLARRP

RM 13.9

Cudahy River Park



Frame 3 Cudahy

M / 32 acres

Land Ownership:

51% Public (Non-County), 29% Privately, 18% Unclassified, 2% County

Congressional District: 40

Supervisor District: 1
Council District: n/a
State Senate: 33

State Assembly: 63

LA River Master Plan Proposed Site

RM 12.9

Firestone Blvd



Frame 3
South Gate

L / 56 acres

Land Ownership:

52% County, 26% Public (Non-County), 16% County, 6% Unclassified

Congressional District: 44

Supervisor District: 1 **Council District:** n/a

State Senate: 33 **State Assembly:** 63

Planned Major Project: TPL, City of South Gate, LLARRP, RMC

RM 12.7

Urban Orchard



Frame 3

South Gate

L / 27.8 acres

Land Ownership:

56% Public (Non-County), 29% Private, 10% County, 5% Unclassified

Congressional District: 44

Supervisor District: 1 **Council District:** n/a

State Senate: 33
State Assembly: 63

Planned Major Project: City of South Gate - One Step Closer to the LA River

RM 12

Parque Dos Rios



Frame 3

South Gate

M / 6.9 acres

Land Ownership:

100% Private

Congressional District: 44

Supervisor District: 1 **Council District:** n/a

State Senate: 33 **State Assembly:** 63

Planned Major Project: LLARRP, RMA

RM 11.7

SELA Cultural Center



Frame 3
South Gate

M / 10 acres

Land Ownership:

98% County, 2% Unclassified

Congressional District: 44

Supervisor District: 1
Council District: n/a
State Senate: 33

State Senate: 33
State Assembly: 63

LA River Master Plan Proposed Site

RM 10.5 Highway 105



Frame 3
Paramount
L / 105.9 acres

Land Ownership:

54% Unclassified, 20% Private, 16% Public (Non-County), 10% County

Congressional District: 40, 44

Supervisor District: 4 Council District: n/a State Senate: 33

State Assembly: 63

