

Arkansas River Corridor Vision & Master Plan

July 2005

Partnership

Study Funding Through State Planning Assistance
Program and Local Public and Private Partners
Through INCOG

INCOG



Original study conducted in 1968

PHASE **2** ENGINEERING AND PLANNING
- a study of dams and related improvements



A DEVELOPMENT PLAN FOR RIVER LAKES PARK

A STUDY BY HUDGINS, THOMPSON, BALL & ASSOCIATES, INC. of TULSA, for THE TULSA METROPOLITAN AREA PLANNING COMMISSION

Vision Phase

- ❖ **Vision Phase is the First of the 2 Phases**
- ❖ **Intended to Define Community Wants and Needs**
 - **Not Intended to Produce a Final Master Plan**
- ❖ **Goals of the Vision Phase**
 - **Broadly Define Opportunities and Constraints**
 - **Develop Consensus through an Open Process**
 - **Synthesize a Plan that Illustrates the Vision promoted by the Community**

Vision Phase Process

- ❖ **Inventory and Analysis**
 - **5 Open House Meetings, March 2004**
 - **Public Input Surveys**
- ❖ **Public Participation**
 - **3 Day Design Workshop, May 2004 with public review each evening**
- ❖ **Plan Approval**
 - **Approval by Advisory Committee, Steering Committee and INCOG Board of Directors - August 2004**
 - **Approval by TMAPC, Tulsa City Council & Tulsa County Commission as an element of the Comprehensive Plan – October 2004**

Public Participation

- ❖ Essential to Success of Both Phases
- ❖ Essential to Continued Support for Implementation
- ❖ Essential for Ongoing Life of the Corridor



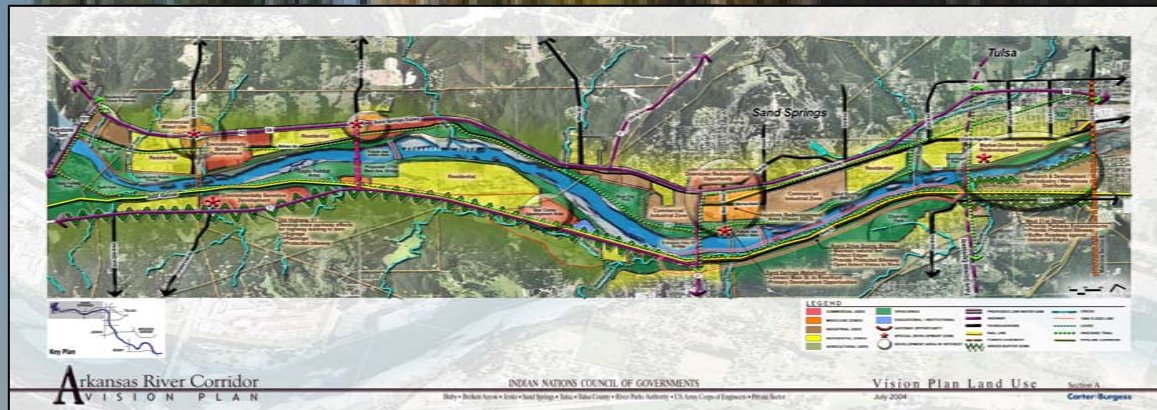
Community Wish List

(Top Ten Wants and Needs)

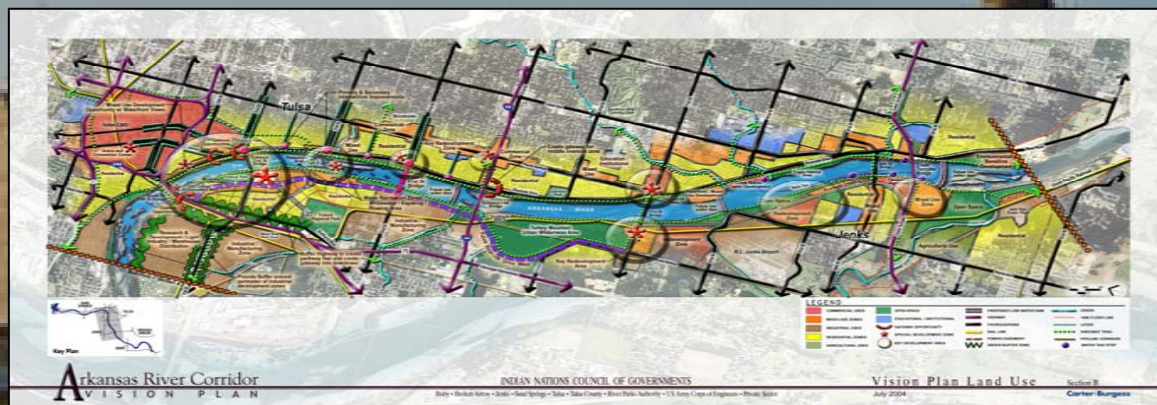
1. **“Riverfront” oriented retail shops and restaurants**
2. **Enhanced preservation of natural resources**
3. **Water in the river - Develop river lakes for recreation**
(rowing, kayaking, fishing et al)
4. **Additional multi-use trails**
5. **Entertainment districts**
6. **Improved access to public lands along the river**
7. **Additional wilderness areas and nature trails**
8. **Boardwalks**
9. **Additional amphitheatre/performing arts spaces and related parking**
10. **Improved connections to downtowns/neighborhoods**

Phase I Vision Plan

Upper reach



Middle reach

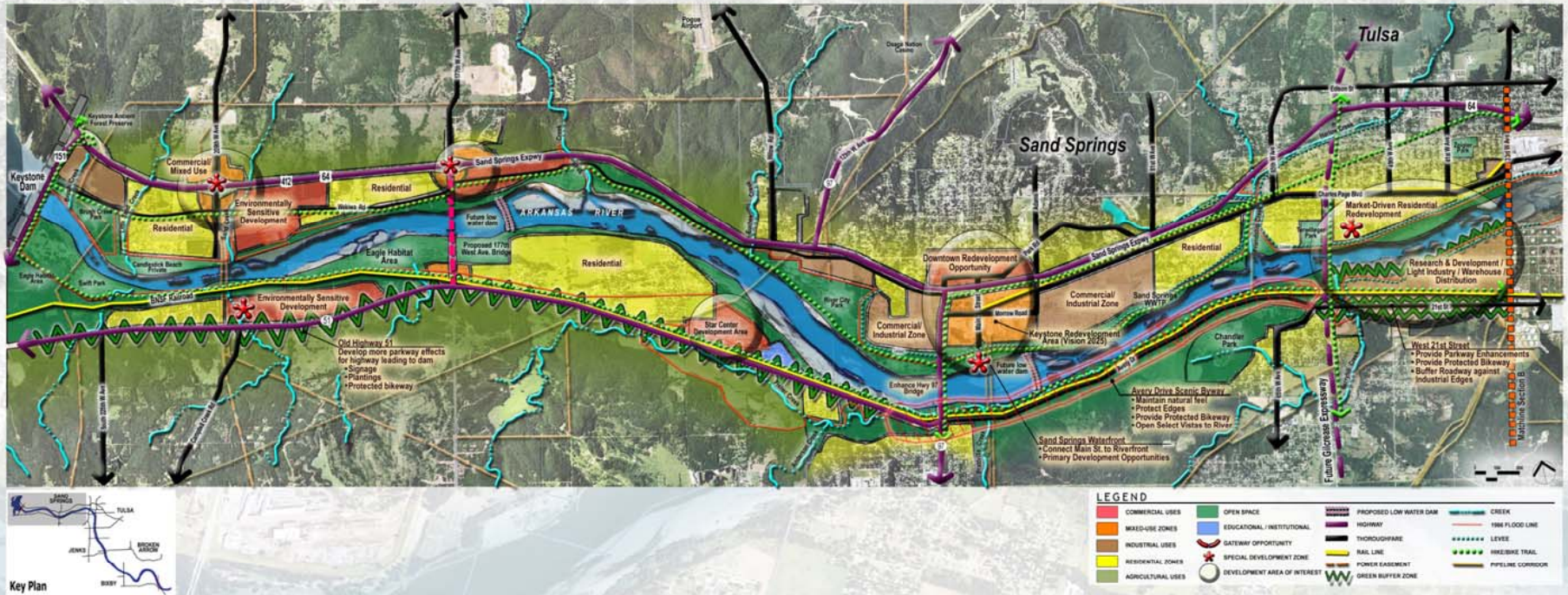


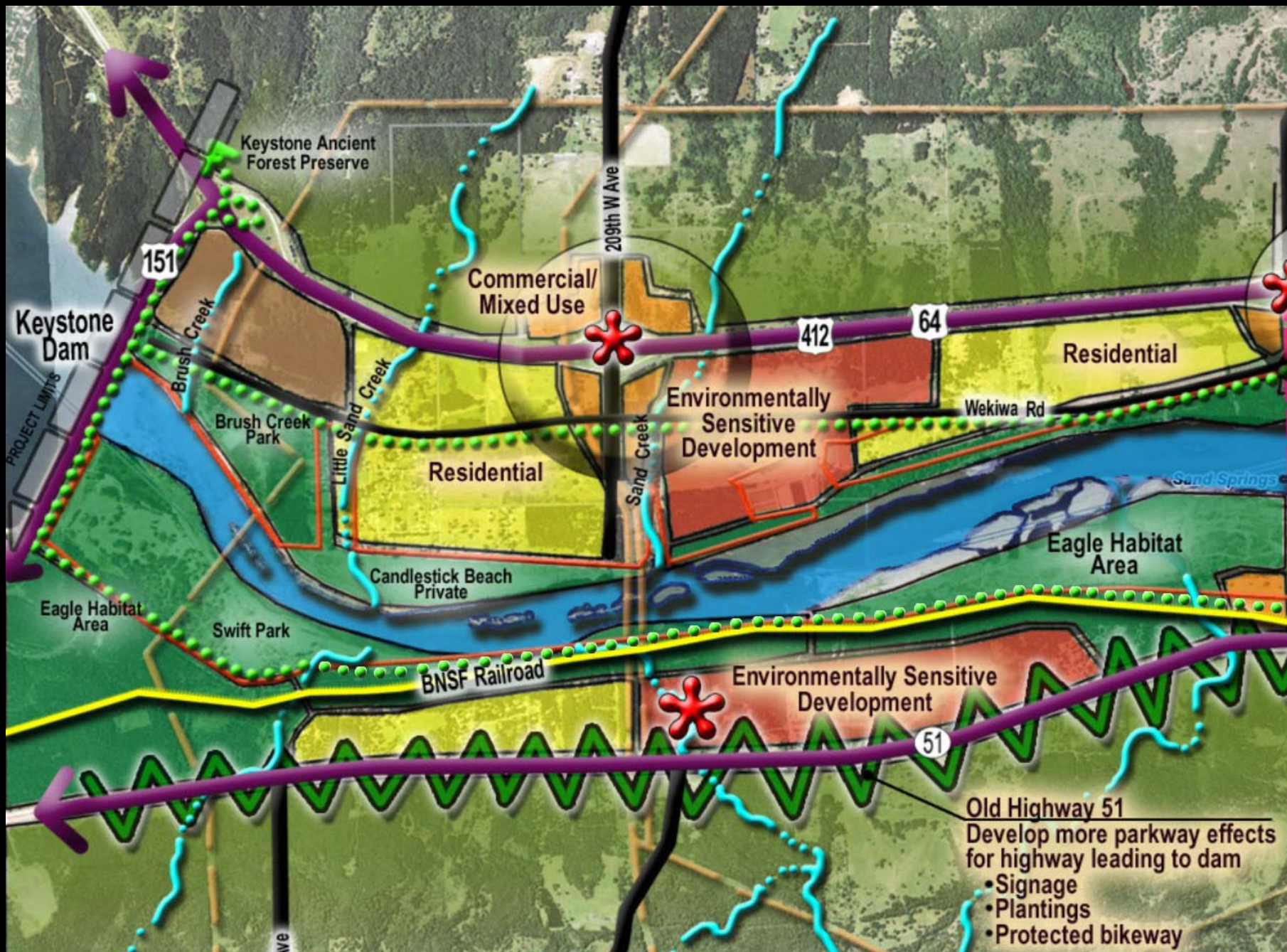
Lower reach

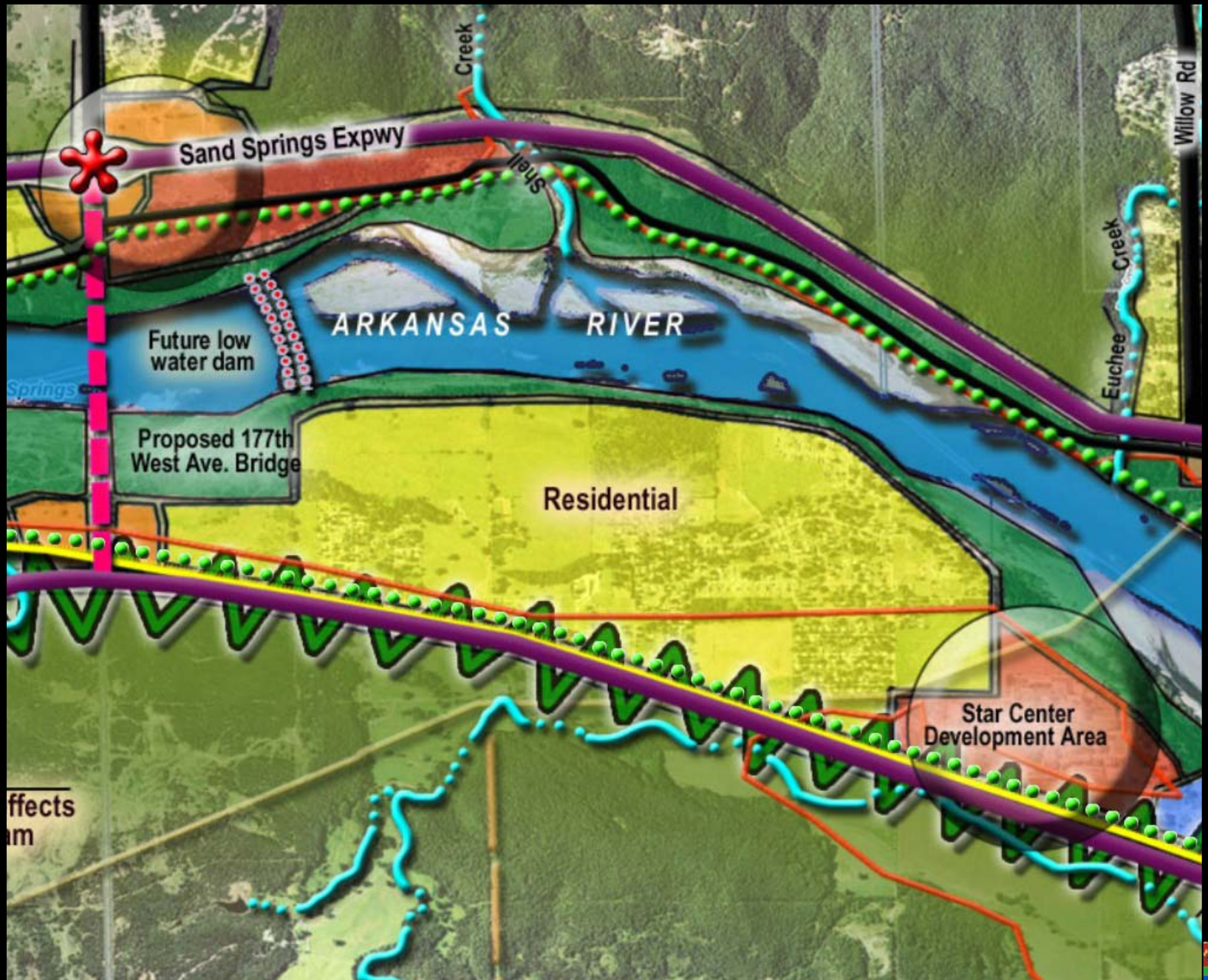


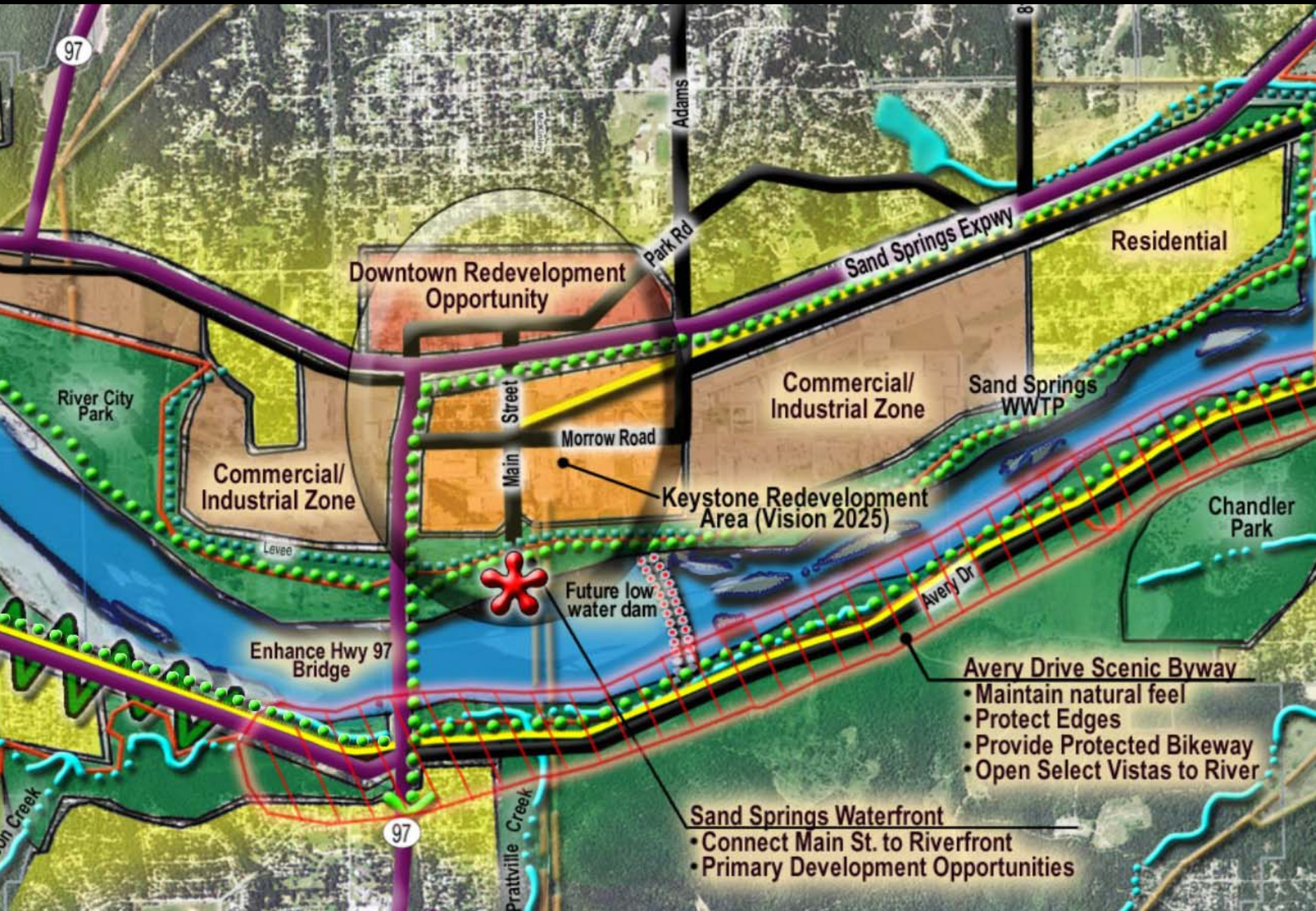
Upper Reach Vision Plan

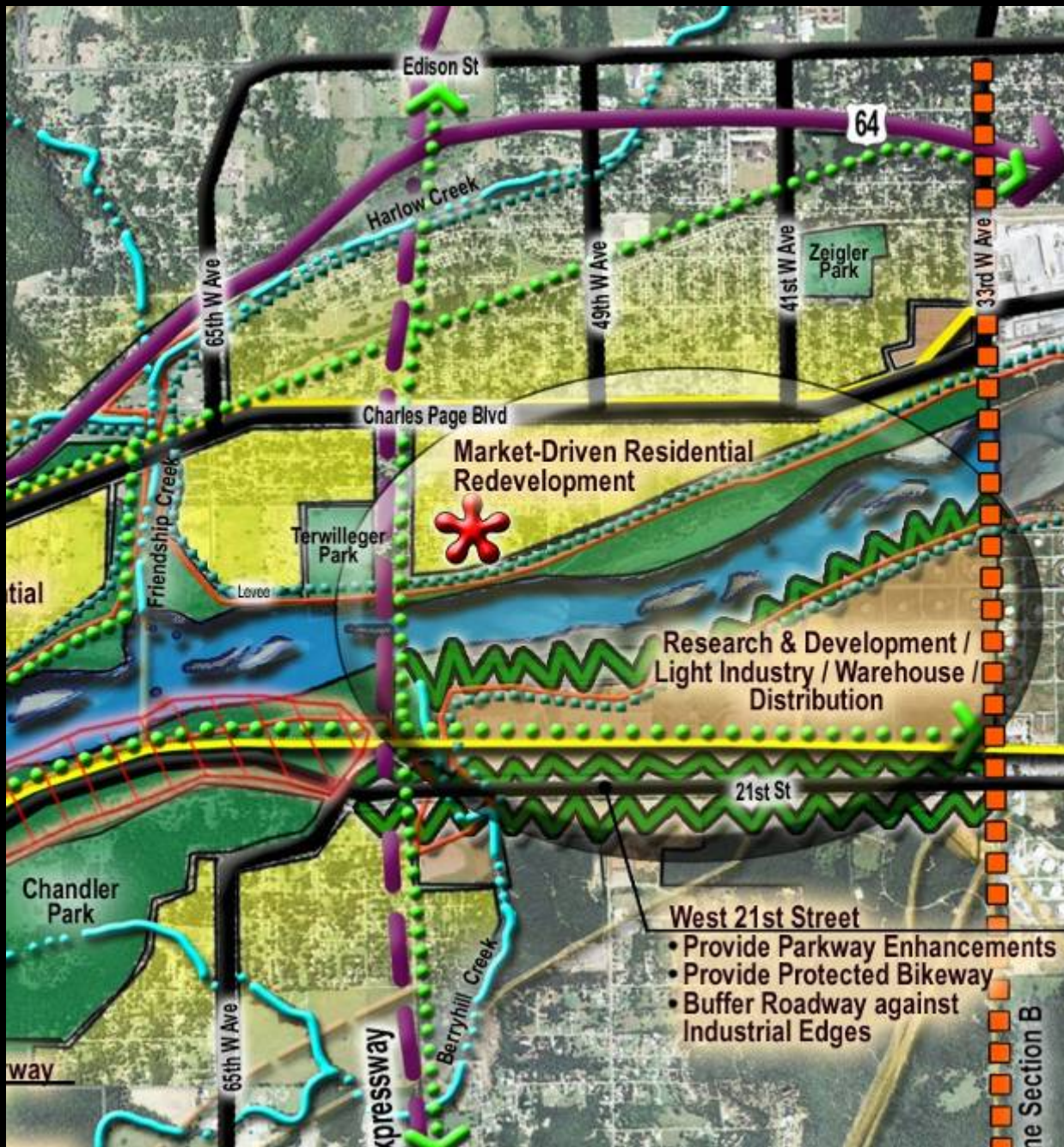
(Keystone Dam – 33rd W. Ave.)





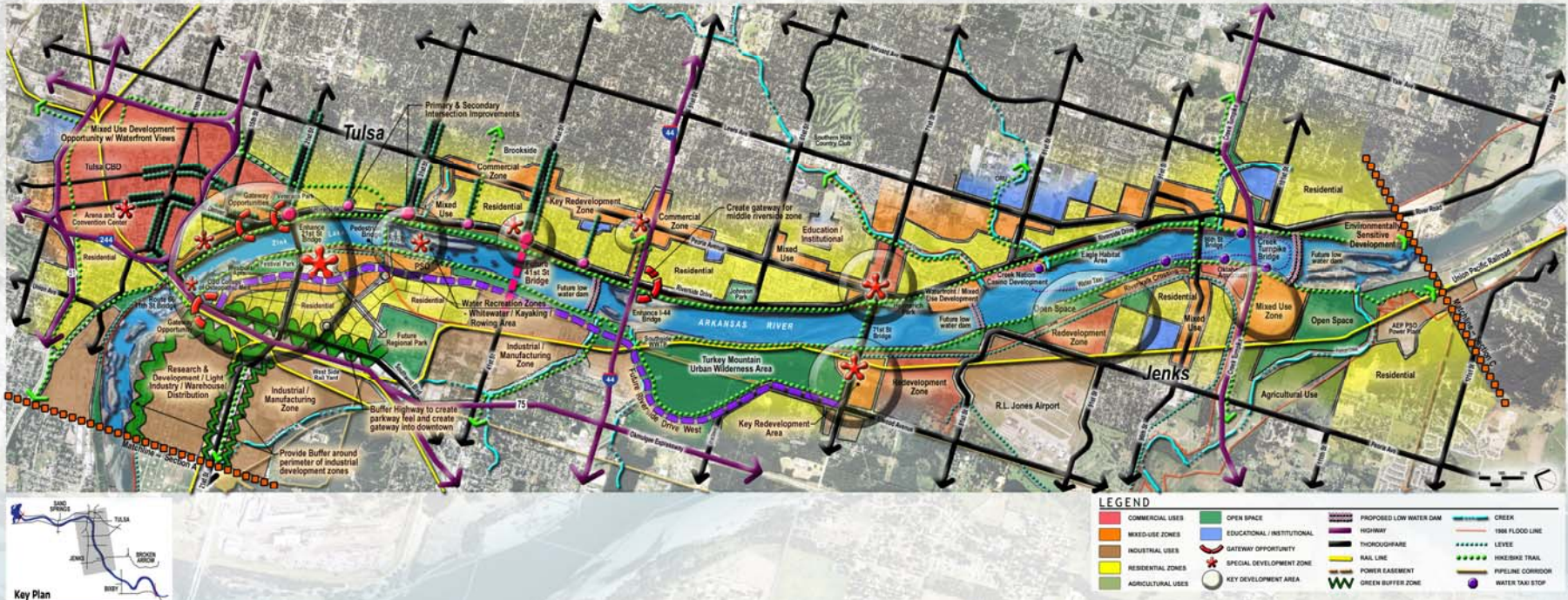






Middle Reach Vision Plan

(33rd W. Ave. – River Road)





Arkansas River Corridor Plan







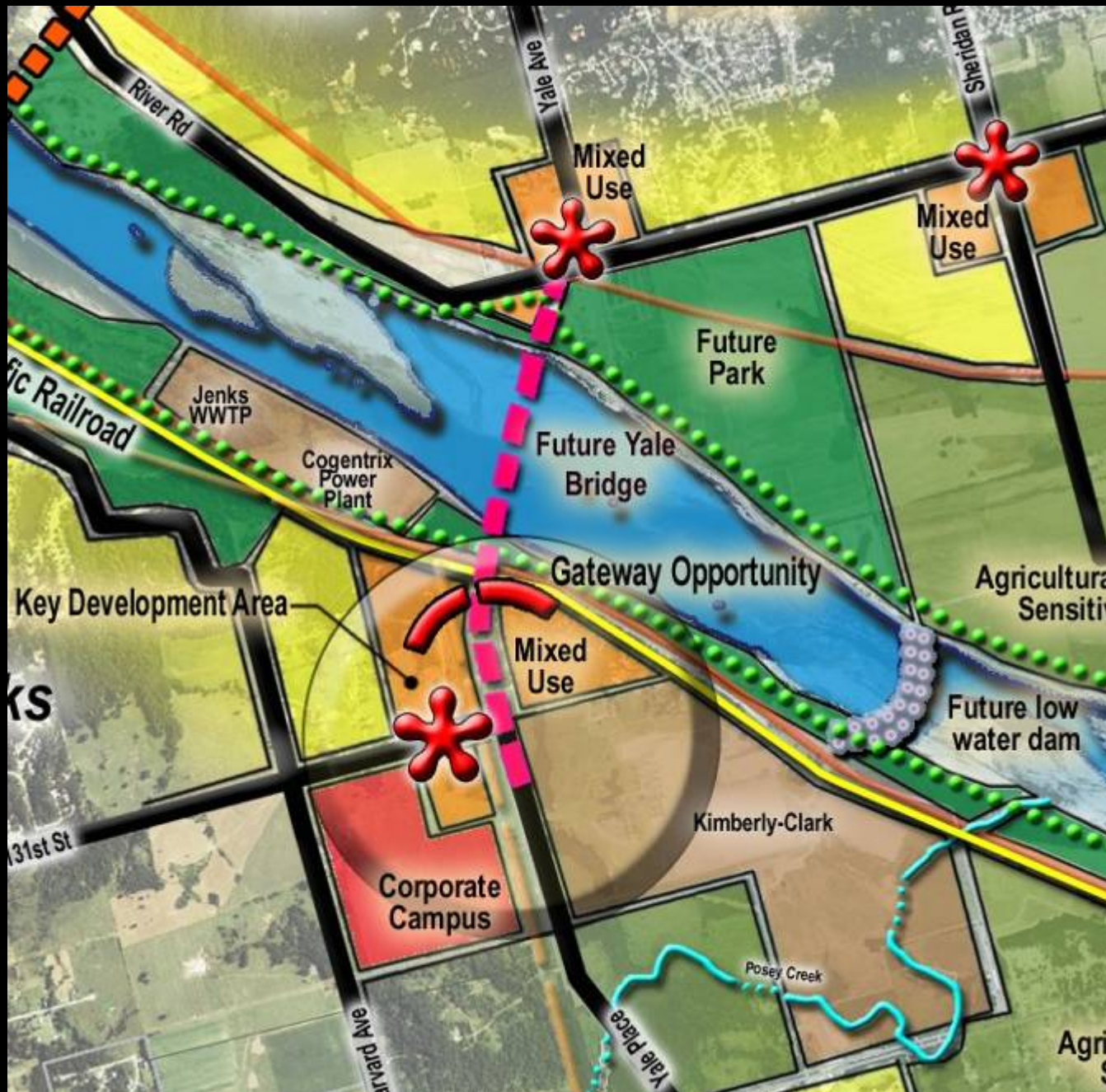


Lower Reach Vision Plan

(River Road – Wagoner County Line)



Arkansas River Corridor Plan







Phase II Master Plan & Pre-Reconnaissance Study

❖ U.S. Army Corps of Engineers, Tulsa District



❖ Indian Nations Council of Governments



❖ C. H. Guernsey & Company



Phase II Intent & Purpose

- ❖ Identify opportunities and constraints
- ❖ Evaluate engineering & environmental issues and new technologies
- ❖ Technical evaluation/**prioritization of low water dams**
- ❖ Address ecosystem restoration in conjunction with river development
- ❖ Develop **conceptual plans for eight key development sites** and two low water dams
- ❖ Master Plan report summarizing Phase II
- ❖ Identify funding mechanisms
- ❖ Identify areas requiring further evaluation

Phase II Milestones

- ❖ Corridor Opportunities and Constraints maps
- ❖ Hydraulics/Hydrology (H&H) report and analysis of low water dams
- ❖ Report on ecological issues
- ❖ List of potential funding sources
- ❖ Draft conceptual plans for key development sites identified in Phase I

Low Water Dam Analysis

- ❖ Analyzed 8 potential dam locations from Phase I
 - Dam 1 - Broken Arrow (near 161st E. Ave)
 - Dam 2 - Bixby (downstream of Memorial Bridge)
 - Dam 3 – Jenks / South Tulsa (downstream of proposed Yale bridge)
 - Dam 4 - Jenks / South Tulsa (downstream of Creek Turnpike)
 - Dam 5 - Tulsa (upstream of 81st St)
 - Dam 6 - Tulsa (upstream of I-44)
 - Dam 7 - Sand Springs (near Main St)
 - Dam 8 - Sand Springs (downstream of 177th W. Ave)
- ❖ Hydraulics/hydrology of all proposed dams analyzed
- ❖ Concurrent INCOG water quality modeling study utilized

Low Water Dam Prioritization

❖ Feasible dams were classified into three categories:

➤ Tier 1 - Short Range

- Dam 4 - Jenks / South Tulsa (downstream of Creek Turnpike)
- Dam 7 - Sand Springs (near Main St)

➤ Tier 2 - Mid Range

- Dam 6 - Tulsa (upstream of I-44)

➤ Tier 3 - Long Range

- Dam 1 - Broken Arrow (between 145th and 161st E. Ave)
- Dam 8 - Sand Springs (downstream of 177th W. Ave)

❖ Currently infeasible dams

- Dam 2 – Bixby (downstream of Memorial Bridge) and Dam 3 – Jenks / South Tulsa (Yale Ave) would adversely affect water quality
- Dam 5 – Tulsa (upstream of 81st St) would negatively affect water quality and hydraulics

Dam 4 – Creek Turnpike South Tulsa/Jenks

❖ Key design considerations

- 2.9 mile river lake could be created
- Would include a pedestrian bridge, fishing piers, and boat ramp downstream of dam
- Would include gates and other design elements to allow fish passage and sediment transport
- Would likely create a seasonal impoundment
- Creation of Least Tern islands in pool

Dam 7 – Sand Springs

❖ Key design considerations

- 4.8 mile river lake could be created
- Would include a pedestrian bridge, fishing piers, and boat ramp downstream of dam
- Would include gates and other design elements to allow fish passage and sediment transport
- Would likely create a seasonal impoundment
- Creation of Least Tern islands in pool based upon further evaluation of food source

Ecological Study

- ❖ **Assessment of existing biological resources**
- ❖ **Coordination with agencies:**
 - **US Fish and Wildlife Service**
 - **Oklahoma Department of Wildlife Conservation**
 - **US Army Corps of Engineers**
 - **US Geological Survey**
 - **Oklahoma Conservation Commission**
 - **Natural Resources Conservation Service**
 - **Oklahoma Department of Environmental Quality**

Ecological Study

❖ Protected Species identified in corridor:

- Bald Eagle
- Interior Least Tern
- Piping Plover
- American Burying Beetle

❖ Sport Fisheries

- Striped, sand, and largemouth bass
- Paddle Fish
- Catfish
- Sunfish
- Sauger

❖ Migratory Waterfowl

Ecological Study

❖ Restoration opportunities identified

- Recreation
- Wetlands
- Aquatic habitat
- Riparian habitat

❖ Potential for concern

- Zebra mussels
- Golden Algae

Ecological Study

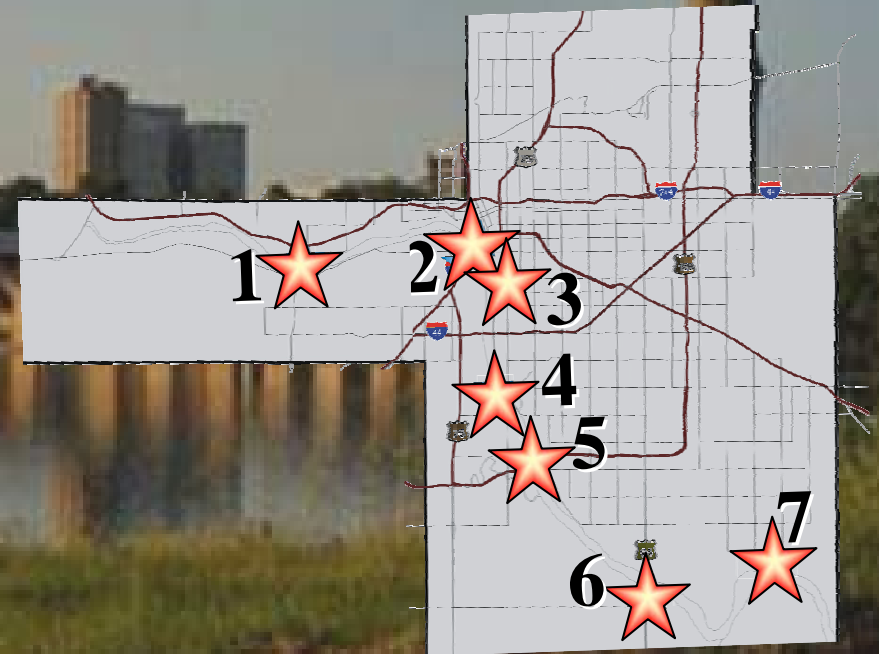
❖ Additional studies required

- Habitat assessment for planned projects
- Downstream effects of dams
- Angling benefits in pools
- Golden algae blooms in pools
- Food supply for artificial tern islands
- Concerns and design constraints for sport fish
- Maintenance / operation of dams
- Angling locations and boat ramp locations

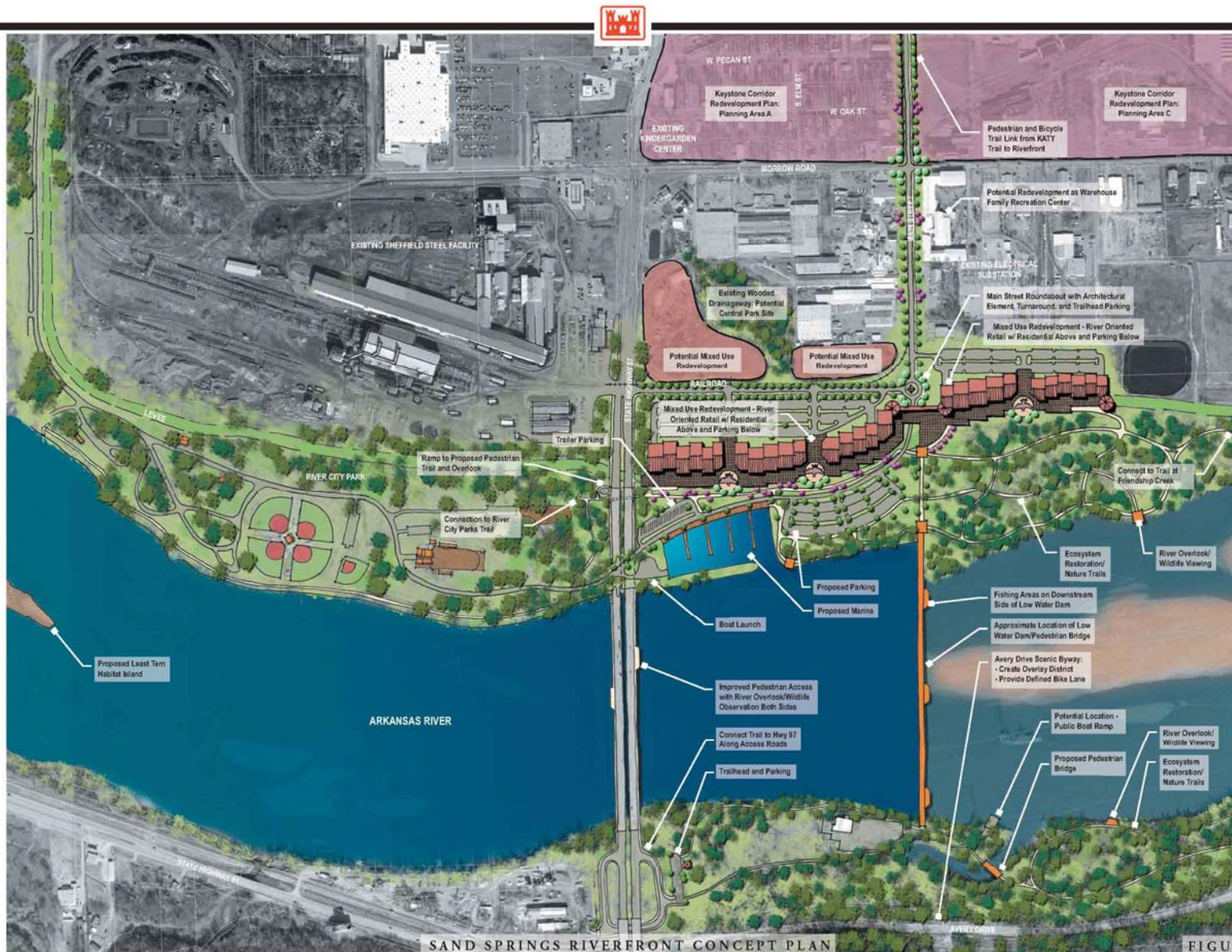
Conceptual Plans

Key Development Sites

1. Sand Springs Riverfront
2. Zink Lake Riverfront
 - West Bank Redevelopment (Southwest Boulevard to 25th)
 - East Bank Redevelopment (11th Street to 21st Street)
3. Crow Creek Corridor
(from Peoria to River)
4. 71st Street Riverfront
5. Jenks / South Tulsa Riverfront
6. Bixby Riverfront
7. Broken Arrow Riverfront



Sand Springs Riverfront



SAND SPRINGS RIVERFRONT CONCEPT PLAN

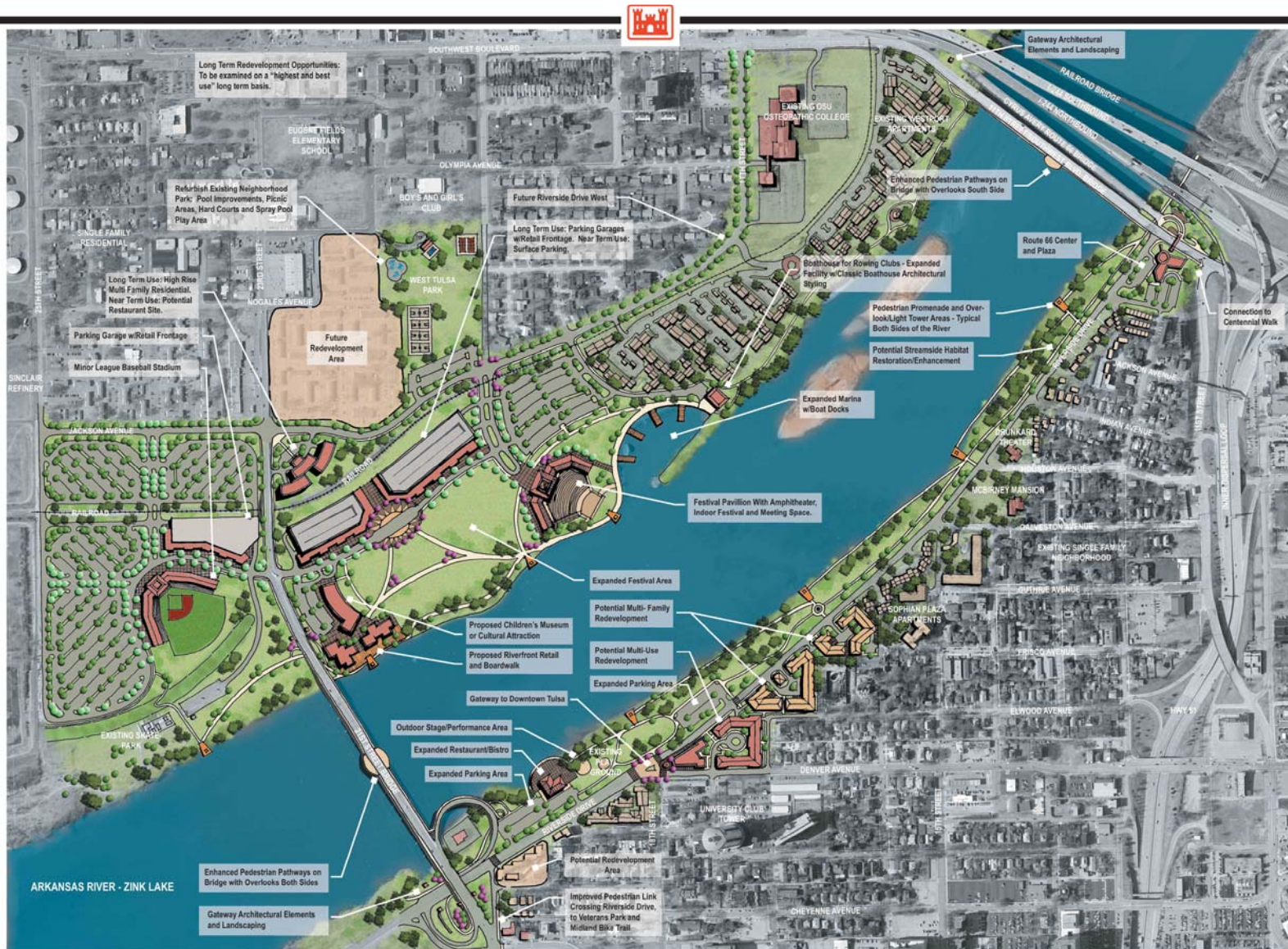
FIGURE 8.

Sand Springs Riverfront

- ❖ Low water dam and pedestrian bridge
- ❖ Extension of Main Street boulevard to river
- ❖ Potential redevelopment sites
- ❖ Marina
- ❖ Ecosystem restoration / trails
- ❖ Improved connection to River City Park
- ❖ Creation of Least Tern islands
- ❖ Highway 97 Bridge enhancements
- ❖ Fishing piers / community boat ramp



Zink Lake Riverfront



ZINK LAKE RIVERFRONT CONCEPT PLAN

FIGURE 8

Zink Lake Riverfront

West Bank

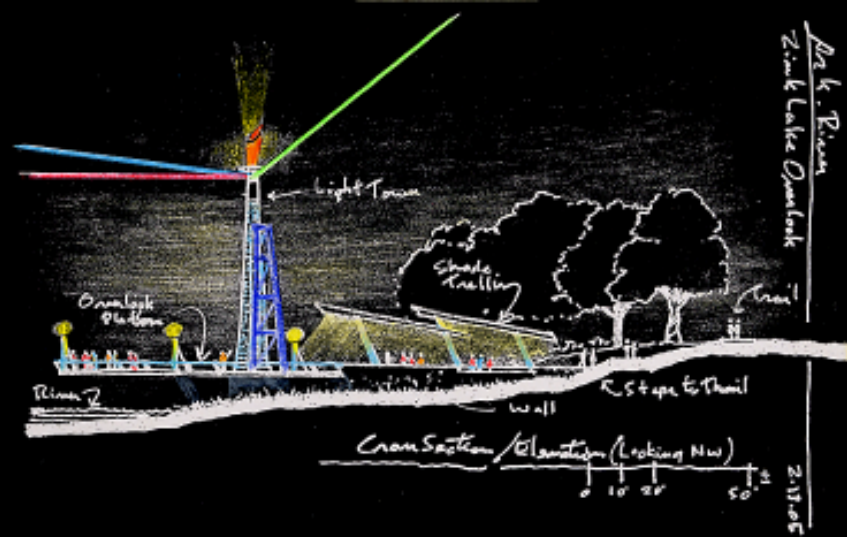
- ❖ Festival Park expansion
- ❖ Expanded marina and boat docks
- ❖ Children's Museum
- ❖ Minor League Baseball Stadium
- ❖ Restaurant/retail
- ❖ Pedestrian promenade with overlooks and light towers



Zink Lake Riverfront

East Bank

- ❖ Multi-use and residential opportunities
- ❖ Route 66 Museum and Plaza
- ❖ Pedestrian promenade with overlooks and light towers
- ❖ Ecosystem restoration / trails



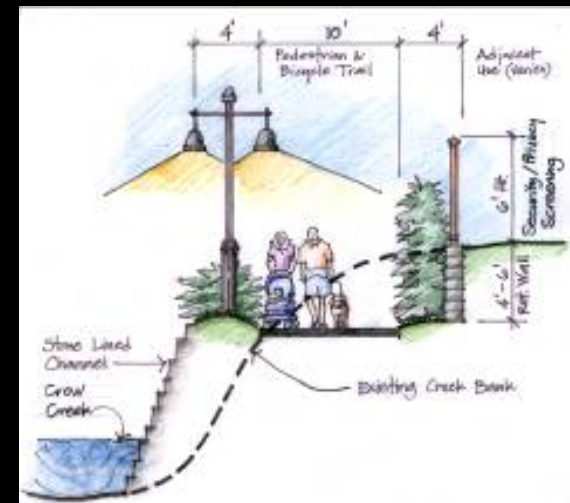
Crow Creek Corridor



CROW CREEK REDEVELOPMENT AREA

Crow Creek Corridor

- ❖ Ecosystem restoration
- ❖ Stream bank stabilization
- ❖ Flood damage reduction
- ❖ Trail connection from River Parks to Brookside
- ❖ Mixed use redevelopment of existing apartment complex
- ❖ Gateway / park at Peoria Avenue
- ❖ Replicate WPA channel aesthetics



71st Street Riverfront



71st Street Riverfront

West Bank

- ❖ Adult soccer complex
- ❖ Improved access to City of Tulsa biosolids facilities
- ❖ Multi-family residential
- ❖ Destination restaurant
- ❖ Ecosystem restoration / trails



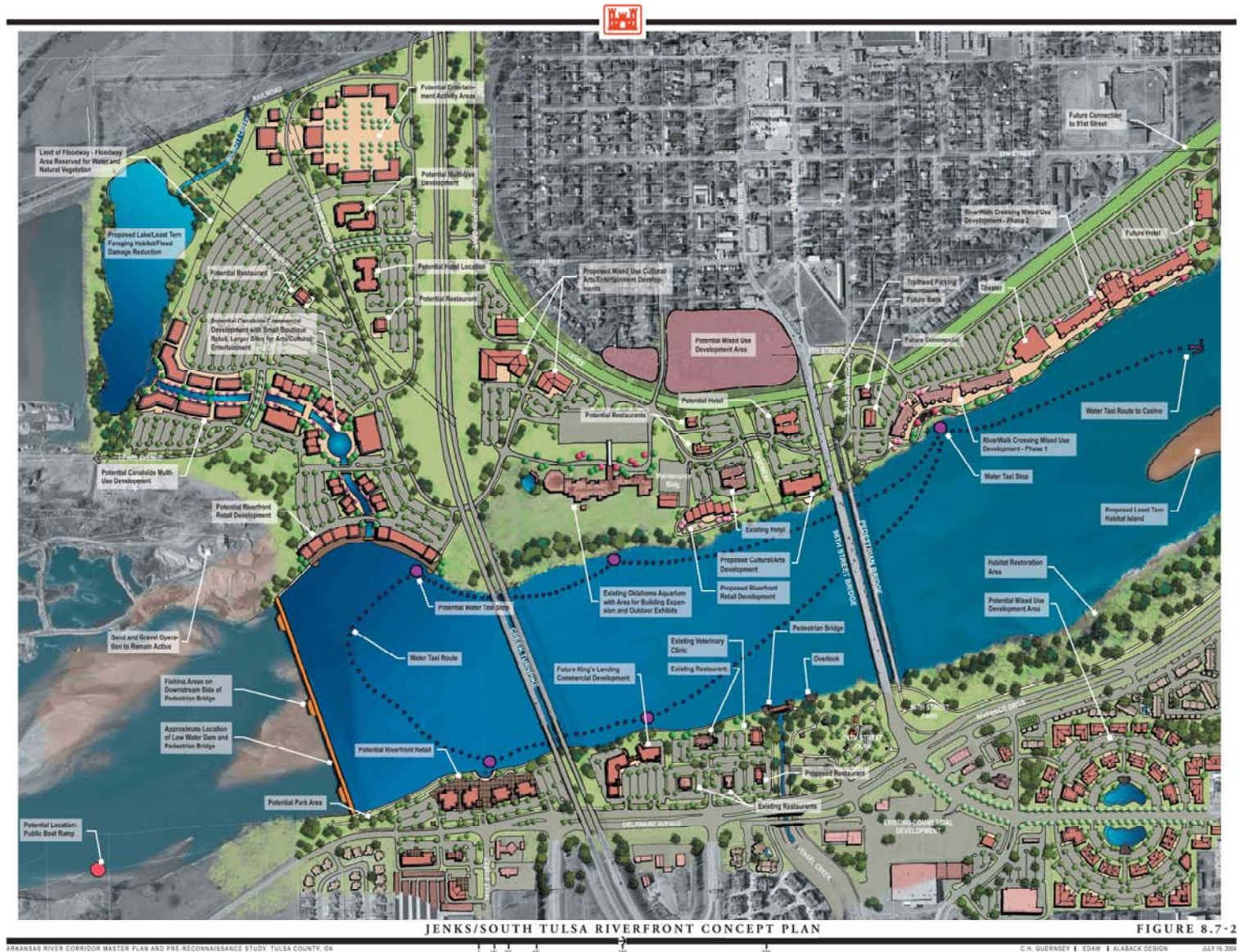
71st Street Riverfront

East Bank

- ❖ Community health and fitness center
- ❖ Riverfront restaurants and plaza
- ❖ Pedestrian promenade and river overlooks
- ❖ Lake and boat dock
- ❖ Enhancement of recreational open space
- ❖ Ecosystem restoration / trails

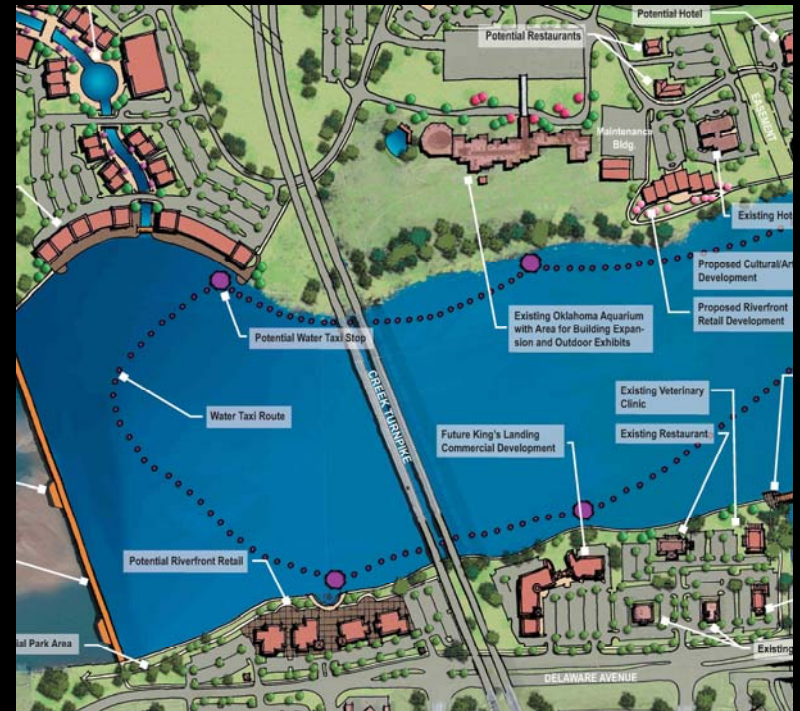


Jenks/South Tulsa Riverfront



Jenks/South Tulsa Riverfront

- ❖ Low water dam and pedestrian bridge
- ❖ Fishing piers and boat ramp
- ❖ Oklahoma Aquarium campus development
- ❖ Ecosystem restoration / trails
- ❖ Least tern foraging habitat and islands
- ❖ Bald eagle habitat
- ❖ Flood damage reduction
- ❖ Commercial riverfront development / water taxi



Bixby Riverfront



BIXBY RIVERFRONT CONCEPT PLAN

Bixby Riverfront

- ❖ Riverfront retail / entertainment area
- ❖ Bentley Park Sports Complex
- ❖ Multi-family development opportunities
- ❖ Commercial redevelopment along Memorial Drive
- ❖ Ecosystem restoration / trails



Broken Arrow Riverfront



BROKEN ARROW RIVERFRONT CONCEPT PLAN

Broken Arrow Riverfront

- ❖ Indoor soccer complex
- ❖ Riverfront shops and restaurants
- ❖ Elevated pier and boardwalk
- ❖ Improvements to sports fields and parking
- ❖ Nature center
- ❖ Ecosystem restoration / trails
- ❖ Least tern habitat



Plan Completion & Implementation

❖ Phase II continuing activities

- Incorporate public input from meetings
- Cost estimates for major public improvements
- Organizational/implementation recommendations
- Draft Master Plan (July 31)
- Final report (August 31)

❖ Plan adoption

❖ Plan implementation

- Corps project participation:
 - Reconnaissance/feasibility study
 - Planning, engineering, and design
 - Real Estate acquisition and construction
- Local public/private investment
- Other Federal participation

Public Information/Input

- ❖ Email address established for public comments
arkansasrivermasterplan@chguernsey.com
- ❖ Phase II information to be posted on INCOG's website (www.incog.org)