

The Economic Development of Riverfront Restoration



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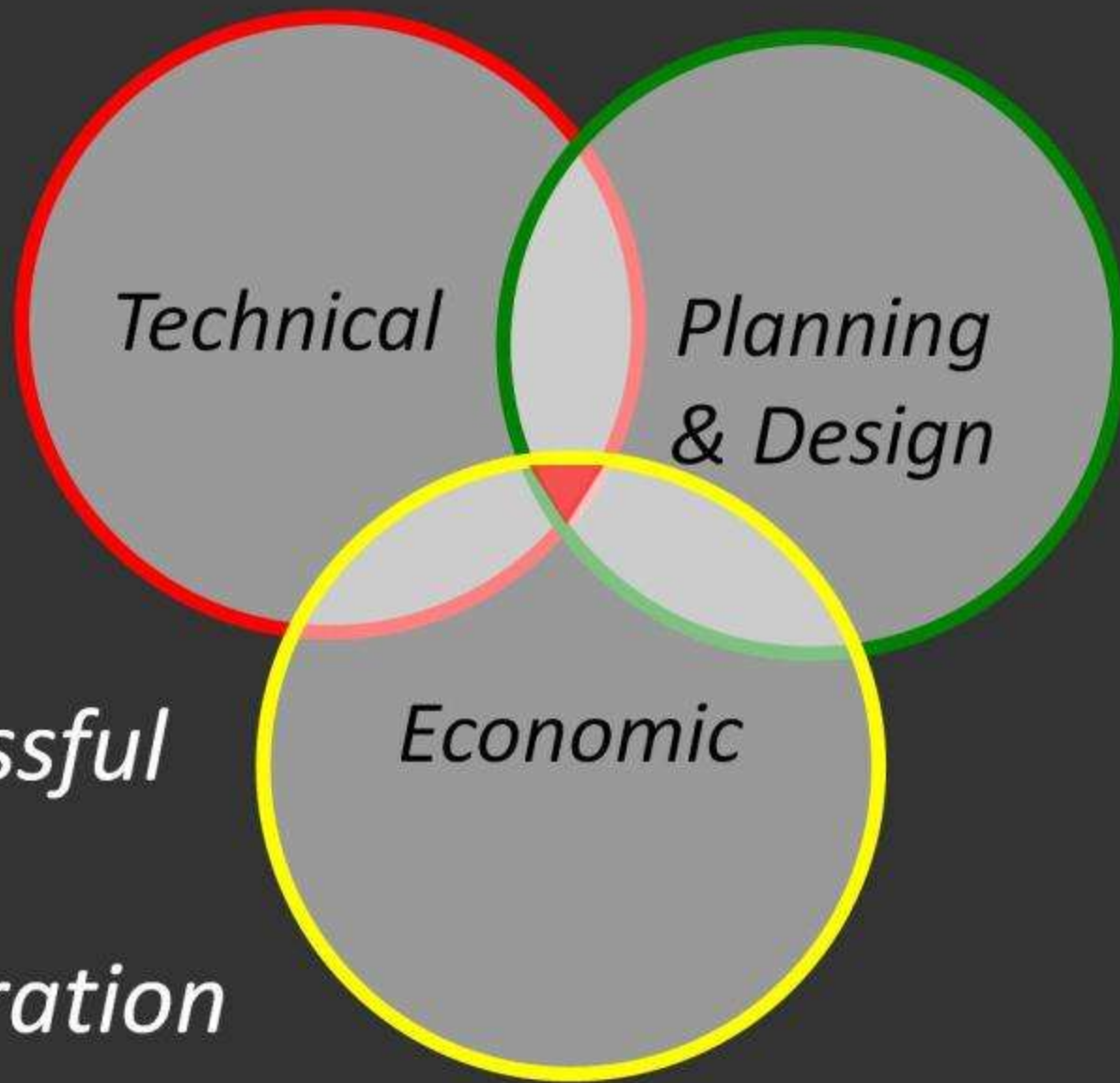


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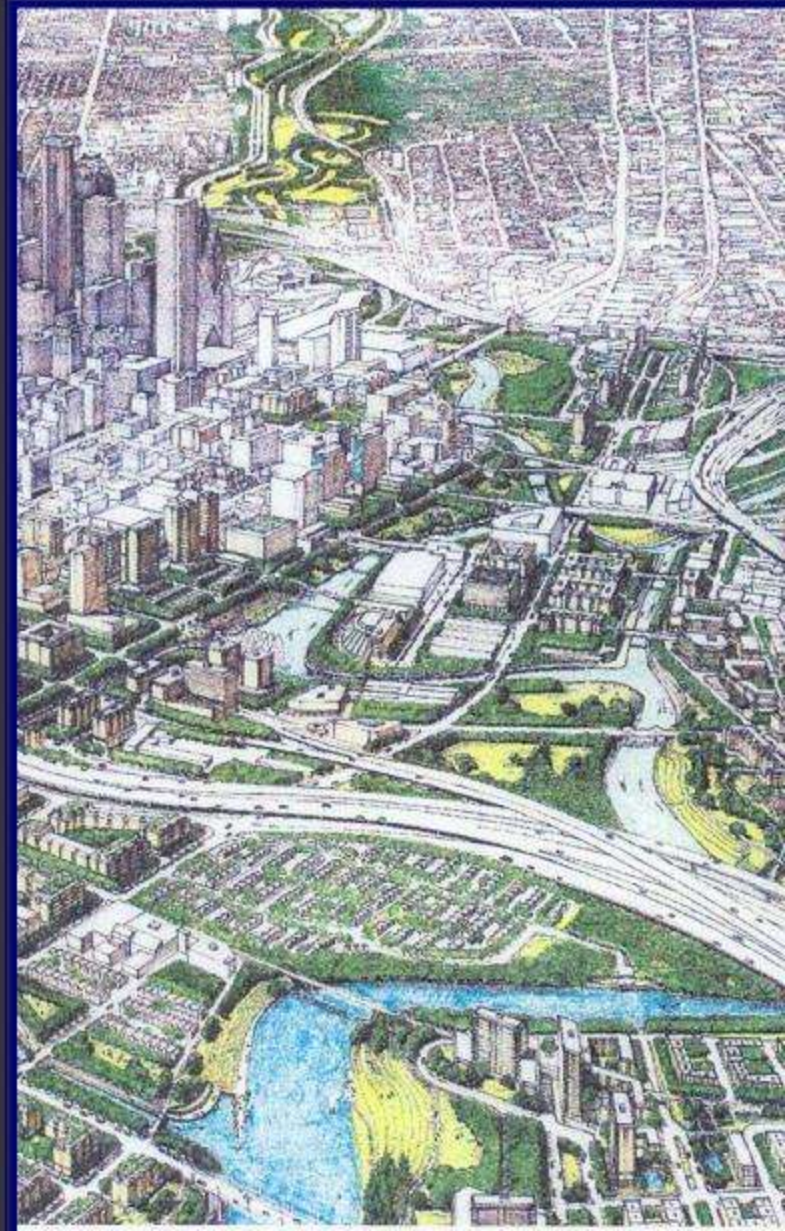
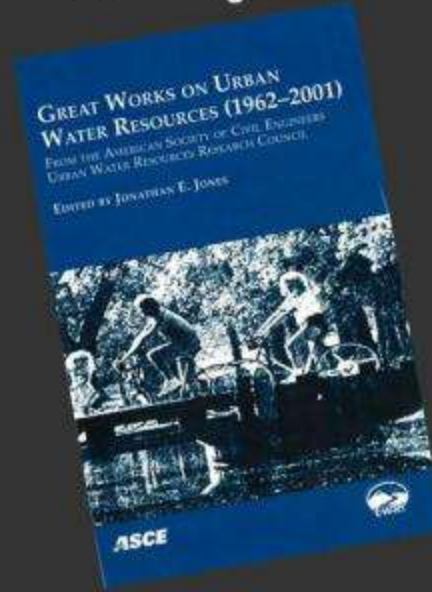
*Successful
River
Restoration*

Jonathon E. Jones, P.E., D.WRE

CEO and Principal, Wright Water Engineers, Inc.

Denver, Colorado

- CEO and Principal of WWE, Celebrating 50 years of Practice in the Rocky Mountain West, and the Nation
- Nationally recognized authority on Water Resources
- EPA Data Base for Stormwater Best Management Practices (BMPs)
- Noted Author

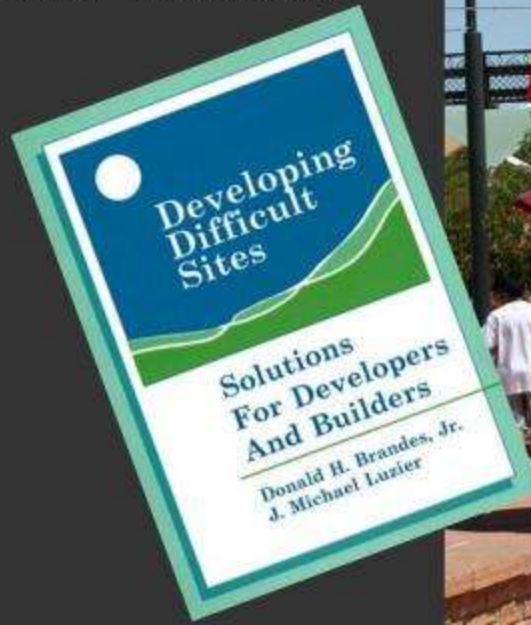


Donald H. Brandes, Jr., RLA

President, Design Studios West, Inc.

Denver, Colorado

- President and Founding Principal of DSW, Celebrating 31 years of Practice in the Rocky Mountain West, and the Nation
- Nationally recognized authority on River Restoration Master Planning
- Noted Author



**DESIGN
STUDIOS
WEST**

Planning &
Landscape Architecture



Thomas J. Martin, AICP

President,

ConsultEcon, Inc.

Cambridge, Massachusetts

- President and Founding Principal of ConsultEcon, Celebrating over 30 years of Practice in the Nation
- Internationally recognized authority on Riverfront Economic Analysis and Project Feasibility
- Noted Author: Adaptive Use: Development Economics, and The No-Action Alternative

ConsultEcon, Inc.









Presentation Outline

1. *Technical, Regulatory and Engineering Issues*
2. *Community Planning and Design Issues and Opportunities*
3. *Economic Implications of Riverfront Projects*

Technical, Regulatory and Engineering Issues

Jonathon E. Jones, P.E.
CEO and Principal
Wright Water Engineers, Inc.

River Revitalization and Restoration in Urban Settings: Common Engineering Considerations

Prepared for Rocky Mountain Land Use Institute
21st Annual Land Use Conference
March 1 and 2, 2012

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Typical Engineering Considerations

1. Public safety
2. Physical and legal water supply and drought planning
3. Beneficial uses, water quality and aquatic life
4. Regulations and permits
5. Floodplain regulation and hazard management
6. Channel types/cross sections and boating

Typical Engineering Considerations

7. Bridge and culvert evaluation and utilities
8. Channel bed seepage
9. Sediment characterization sampling and environmental assessment
10. Operation and maintenance activities and nuisance conditions
11. Construction
12. Costs

Public Safety



Historic Arkansas Riverwalk of Pueblo, Colorado



Denver, Colorado



Salina, Kansas



Little Walnut Creek

Appropriate stream setbacks can prevent the creation of new watershed problems due to erosion.

Reference: City of Austin, Texas



Denver, Colorado



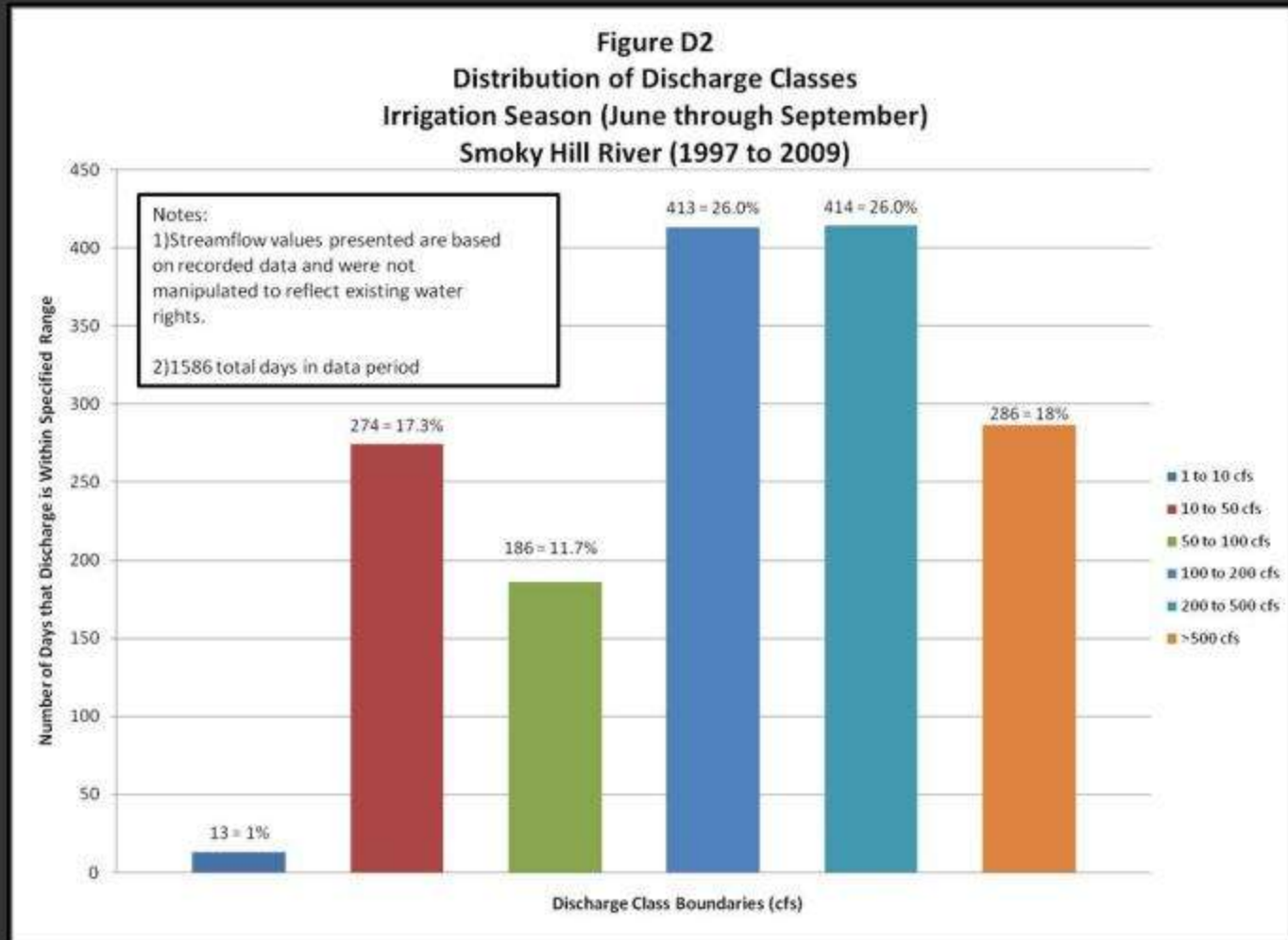
Water Rights and Divertible Flows



Salina, Kansas

Seasonal Analysis

Bracketing of Irrigation Season Stream Flow (1997 to 2009)



Flow in excess of 50 cubic feet per second (cfs)
82% of irrigation season

DRAFT



1 inch = 100 feet



LFH

Well 1

Well 2

LAR

UAR

Well 3

Well 4

Legend

- Existing Ground Wells
- Ground Wells
- Area Studied for 2010/2011

NOTES:

1) Contours were provided by Design Studios West

2) The areas identified on this map are preliminary and are based on cursory fieldwork, topography and aerial imagery. Further investigation will be required in order to collect data to establish boundaries that can be submitted to the U.S. Army Corps of Engineers for their concurrence

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CONCEPTUAL MAP OF CHERRY CREEK AND ASSOCIATED GROUNDWATER WELLS

CITY OF GLENDALE, DENVER COUNTY, COLORADO

PROJECT NO.

091-051.000

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Groundwater Well Locations

Approaches for Addressing Low-Flow or No-Flow Periods



Denver, Colorado

Water Quality



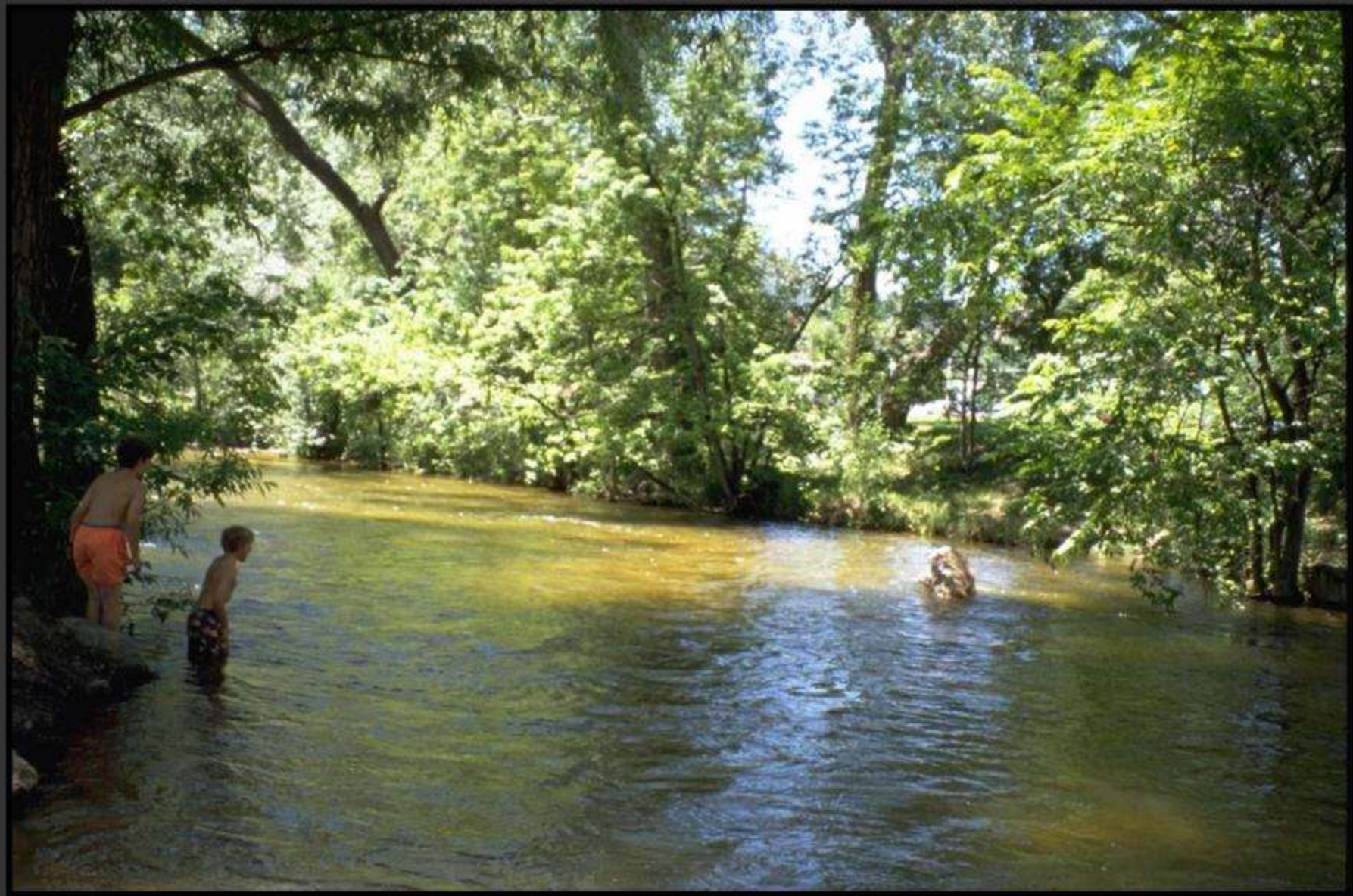
Salina, Kansas

Water Quality

Beneficial uses:

- Aquatic Life
- Primary contact recreation (class A or B)
- Domestic water supply
- Food procurement
- Industrial water supply
- Groundwater recharge
- Irrigation
- Livestock watering

From the Kansas Department of Health and Environment



Four Mile Run, Arlington, Virginia



Snohomish County, Washington



Springfield, Missouri



Chesapeake Bay

Austin Pond/Wetland BMP



Source: Jean Drew, City of Austin, TX



Portland, Oregon

Landscape beds collect and filter roof drainage. Beds have underdrains that drain to drainage swales.



Boulder, Colorado



The parking lot drains to landscaped swales.



Terraces in landscaped areas create a series of small detention basins for infiltration.

Boulder, Colorado





INTERNATIONAL STORMWATER BMP DATABASE

www.bmpdatabase.org

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Retrieve BMP
Studies

Research Tools/
Master Database

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Spreadsheets

Monitoring/
Evaluation

Publications



U.S. Department of
Transportation
Federal Highway
Administration



Project Team



Welcome to the International Stormwater Best Management Practices (BMP) Database project website, which features a database of over 300 BMP studies, performance analysis results, tools for use in BMP performance studies, monitoring guidance and other study-related publications. The overall purpose of the project is to provide scientifically sound information to improve the design, selection and performance of BMPs. Continued population of the database and assessment of its data will ultimately lead to a better understanding of factors influencing BMP performance and help to promote improvements in BMP design, selection and implementation.

The project, which began in 1996 under a cooperative agreement between the [American Society of Civil Engineers \(ASCE\)](#) and the [U.S. Environmental Protection Agency \(USEPA\)](#), now has support and funding from a broad coalition of partners including the [Water Environment Research Foundation \(WERF\)](#), [ASCE Environmental and Water Resources Institute \(EWRI\)](#), [USEPA](#), [Federal Highway Administration \(FHWA\)](#) and the [American Public Works Association \(APWA\)](#), [Wright Water Engineers, Inc.](#) and [Geosyntec Consultants](#) are the entities maintaining and operating the database clearinghouse and web page, answering questions, conducting analyses of newly submitted BMP data, conducting updated performance evaluations of the overall data set, disseminating project findings, and expanding the database to include other approaches such as Low Impact Development techniques. The database itself is downloadable to any individual or organization that would like to conduct its own assessments.

What's New

2007 Data Analysis Report
released in October 2007

Website revised with new,
ease-to-use performance
summary information

Master Database exceeds
300 BMP studies with access
to a new bibliography

Florida Department of
Environmental Protection
BMP Database Integrated into
International Stormwater BMP
Database--searchable online

What Type of User Are You? Let us help you enter our website to find the level of detail you need:

Low-Intensity

Get Basic Performance
Summary Information for
BMPs

Typical Users:
Public officials, casual
users, those seeking
quick/fast answers

Mid-Intensity

Get Detailed Statistical
Analysis for Individual
BMPs

Typical Users:
Consultants, Public
Works Staff, Designers

Researcher

Download the Master
Database to Conduct
Independent Research

Typical Users:
University Professors

Data Provider

Obtain Data Entry
Spreadsheets

Typical Users:
Public agencies,
consulting firms,
university researchers

New to BMP Monitoring

Obtain Monitoring
Guidance

Typical Users:
Public agencies,
consulting firms,
university researchers

Creating a Sense of Discovery.

Multiple walking routes, places, events, and shops will intrigue visitors and invite discovery. Unique to the pedestrian Village are the opportunities to find special outdoor places, surprising views, unusual patches of sunlight, and favorite small shops.

Sun.

All major pedestrian areas are oriented to maximize sunlight during the busiest period of use. Buildings were located to help define and shelter these sunny outdoor plazas, dining terraces, and walkway areas. Sheltered sunny places throughout the Village, particularly in cooler months, are the places that promote social activities, people watching, and comfortable places to encourage people to sit and stay awhile.

Landscape.

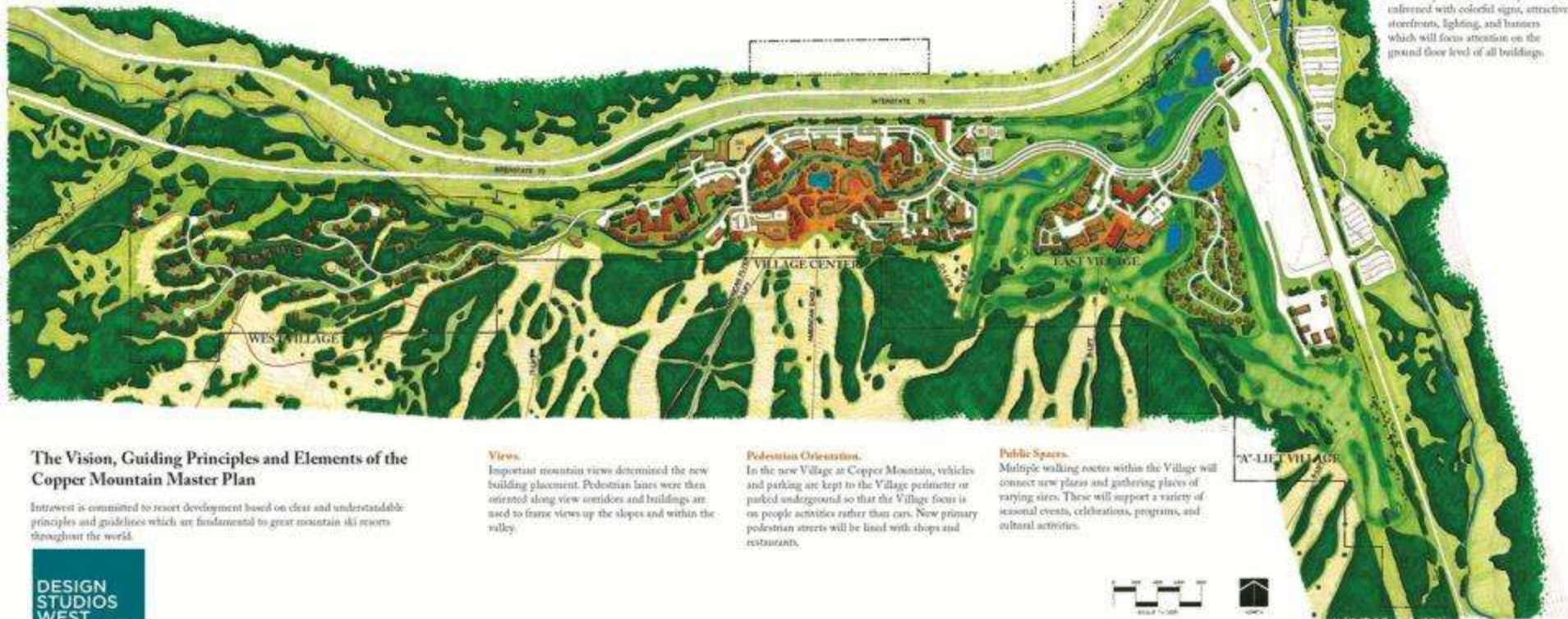
An intensive program of tree planting will introduce clusters of forest trees into the development areas. The reintroduction of the forest landscape will dramatically enhance the environment and scale of Copper Mountain. The use of native trees and shrubs, seasonal flowers, large boulders, and rugged timbers will create a natural connection to the surrounding landscape and an ever changing seasonal character.

Use of buildings to define space.

New buildings in the Village core will introduce variety in building height and character. Ends of buildings will often step down in height to achieve a favorable scale relationship with pedestrian spaces and the adjacent landscape.

Variety and Interest.

The new pedestrian walkways will be enhanced with colorful signs, attractive storefronts, lighting, and banners which will focus attention on the ground floor level of all buildings.



The Vision, Guiding Principles and Elements of the Copper Mountain Master Plan

Intrawest is committed to resort development based on clear and understandable principles and guidelines which are fundamental to great mountain ski resorts throughout the world.

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Views.

Important mountain views determined the new building placement. Pedestrian faces were then oriented along view corridors and buildings are used to frame views up the slopes and within the valley.

Pedestrian Orientation.

In the new Village at Copper Mountain, vehicles and parking are kept to the Village perimeter or parked underground so that the Village focus is on people activities rather than cars. New primary pedestrian streets will be lined with shops and restaurants.

Public Spaces.

Multiple walking routes within the Village will connect new plazas and gathering places of varying sizes. These will support a variety of seasonal events, celebrations, programs, and cultural activities.

Copper Mountain Resort, Colorado

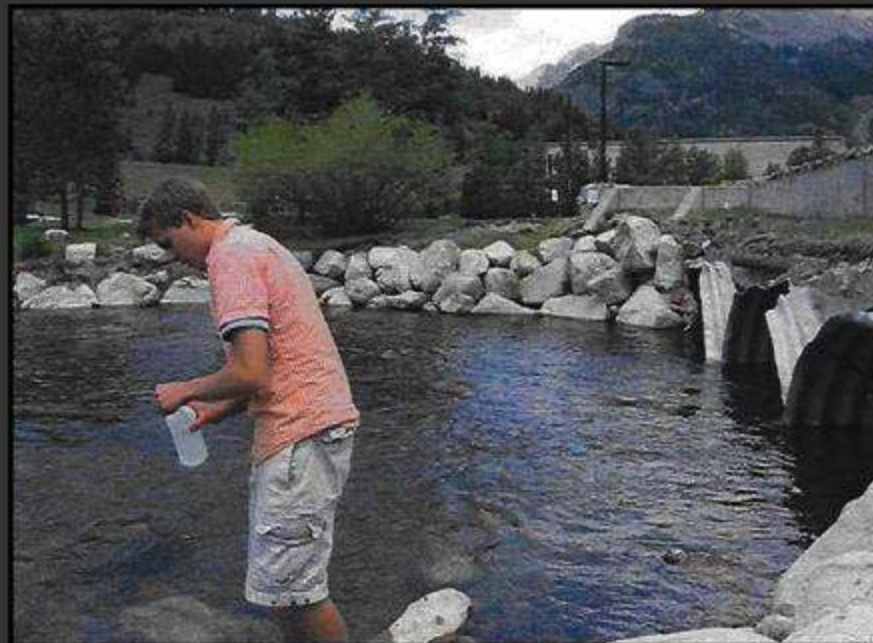


Copper Mountain Resort, Colorado

Monitoring Locations



Upstream of Copper



Above Wheeler Gulch

Copper Mountain Resort, Colorado

Regulatory Section

City of Medford
Medford Urban Renewal District
Historic District
Parks & Recreation
Planning
Stormwater
Engineering

Federal Emergency Management Agency
(FEMA)

100 Year Flood Plain

U.S. Dept. of Commerce
NOAA-NMFS Program

Oregon Dept. of Fish &
Wildlife

Oregon Dept. of
Environmental Quality
Dept.

Oregon Dept. of State
Lands



City of Medford
Storm Water

NPDES Water Quality

50'

Riparian Ordinance

Normal High Water
2 year Flood Elevation

Corps of Engineers

Wetlands

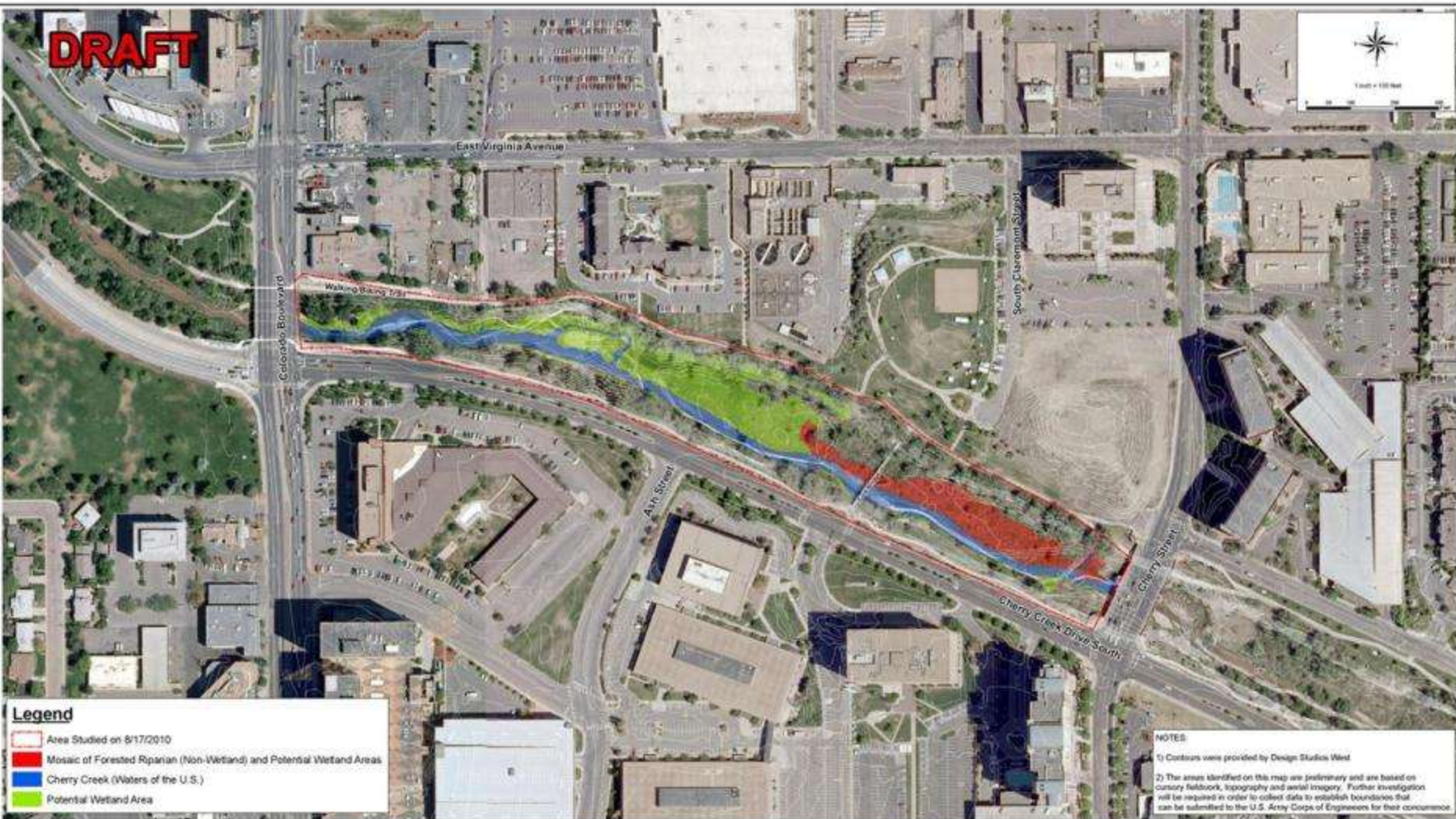
50'

Riparian Ordinance

DRAFT



1 inch = 100 feet



Legend

- Area Studied on 8/17/2010
- Mosaic of Forested Riparian (Non-Wetland) and Potential Wetland Areas
- Cherry Creek (Waters of the U.S.)
- Potential Wetland Area

NOTES

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**CONCEPTUAL MAP OF POTENTIAL FEATURES THAT MAY BE REGULATED
UNDER SECTION 404 OF THE CLEAN WATER ACT
CITY OF GLENDALE, DENVER COUNTY, COLORADO**

PROJECT NO.
091-051.000

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Landscape Architecture

Potential 404 Regulation Features

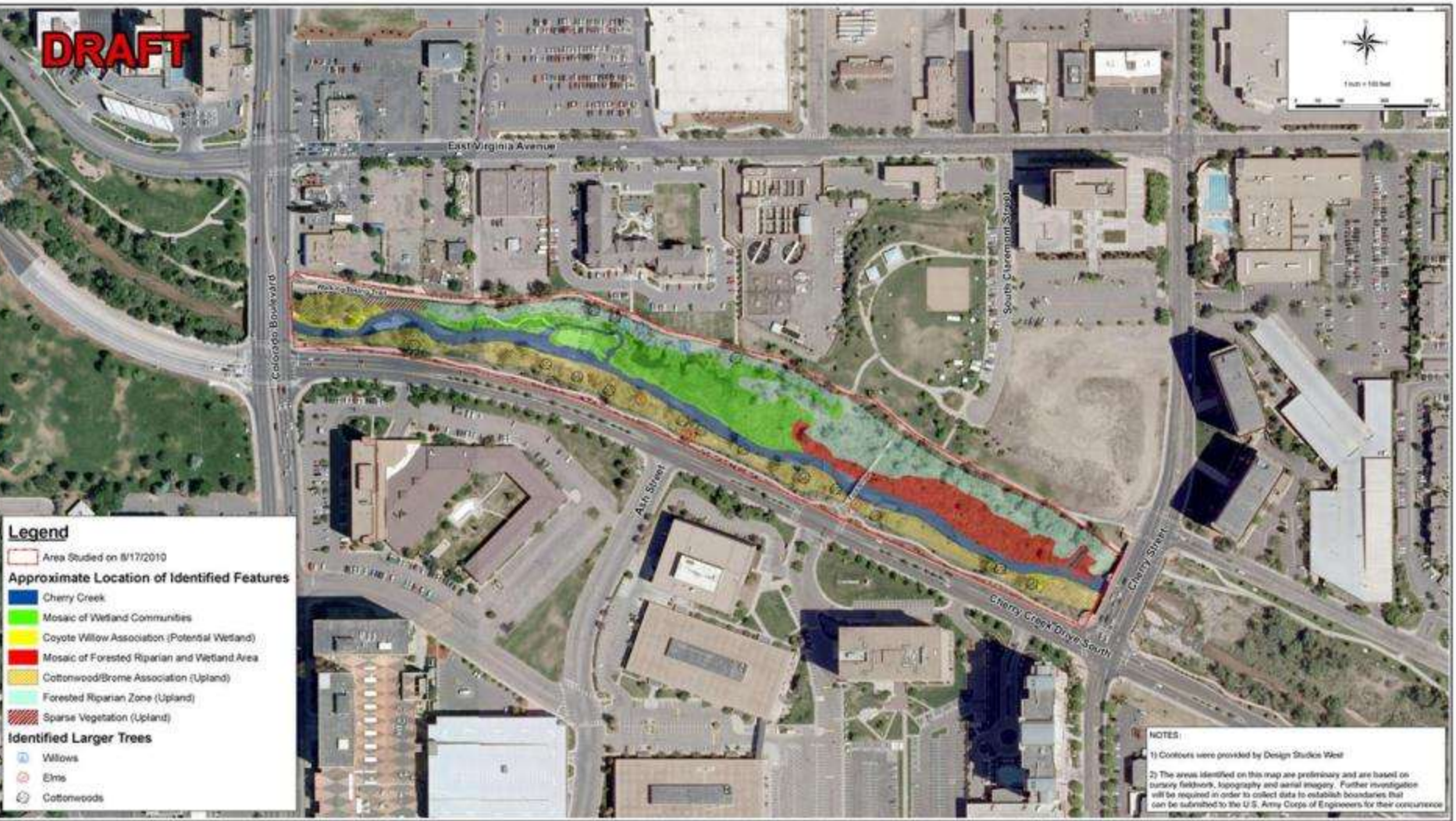


Denver Metro Area, Colorado

DRAFT



1 inch = 100 feet



Legend

Area Studied on 8/17/2010

Approximate Location of Identified Features

- Cherry Creek
- Mosaic of Wetland Communities
- Coyote Willow Association (Potential Wetland)
- Mosaic of Forested Riparian and Wetland Area
- Cottonwood/Brome Association (Upland)
- Forested Riparian Zone (Upland)
- Sparse Vegetation (Upland)

Identified Larger Trees

- Willows
- Elms
- Cottonwoods

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CONCEPTUAL MAP OF CHERRY CREEK AND ASSOCIATED RIPARIAN COMMUNITIES

CITY OF GLENDALE, DENVER COUNTY, COLORADO

PROJECT NO.

091-051.000

DESIGN STUDIOS WEST

Planning & Landscape Architecture

Riparian Communities



Storm Drain Outfalls into Old River Channel
Smoky Hill River, Salina, Kansas



Trailers on James River near Springfield, Missouri
March 19, 2008

Picture taken Wednesday, March 19, 2008,
about 2:00 p.m. by Josh Martin

DRAFT

100-YEAR
FLOOD
CONTAINED
IN CULVERTS

CITY OF GLENDALE

080247

2

BIRCH
EAST
SOUTH

ARAPAHOE COUNTY
UNINCORPORATED
AREAS
080011

VIRGINIA

AVENUE

SOUTH
CLERMONT
ROAD

18 STREET

Cherry Creek

ZONE
AE

CHERRY CREEK
DRIVE SOUTH

ZONE
X

CHERRY

SOUTH

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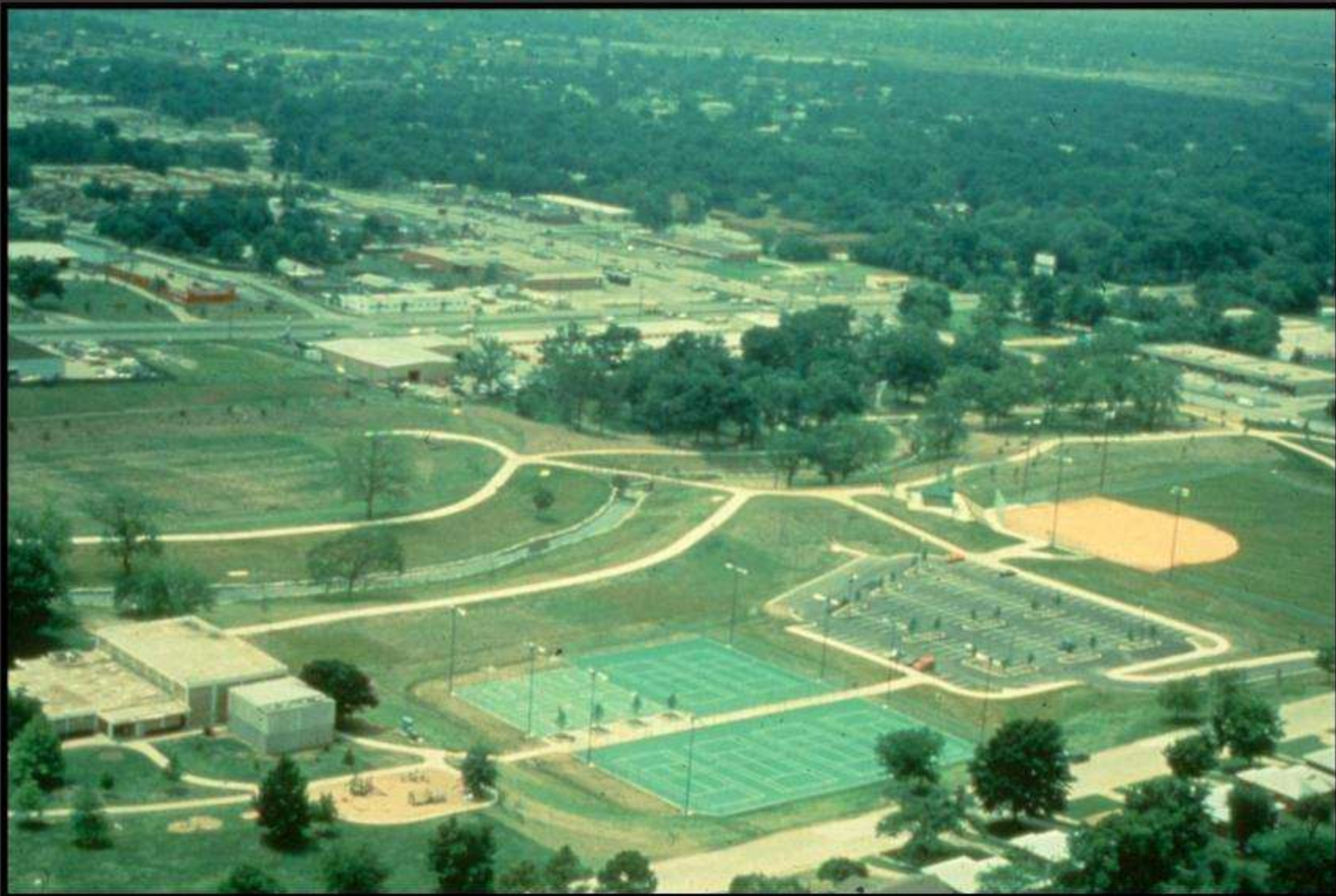
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Sioux Falls, South Dakota



Tulsa, Oklahoma

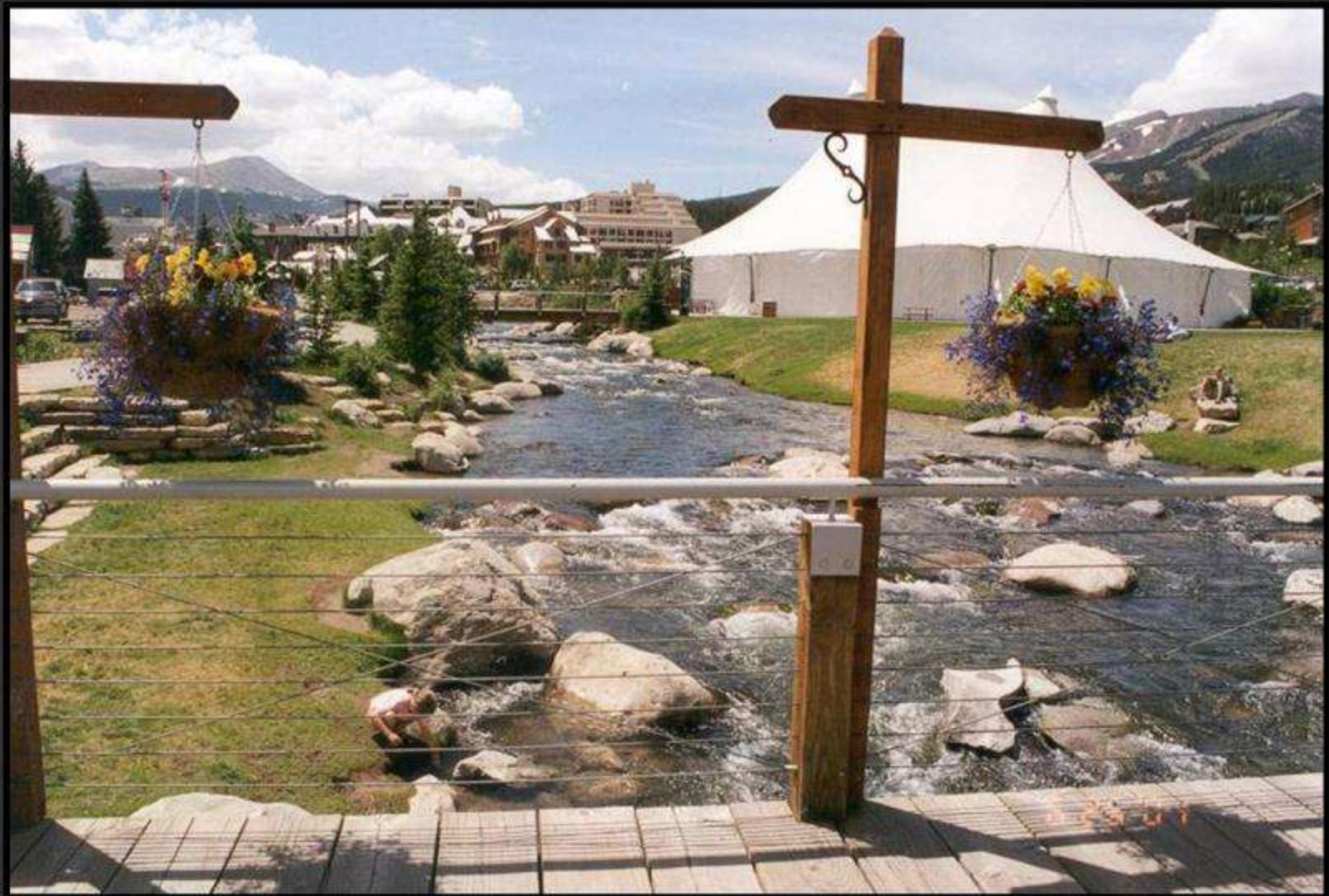


Tulsa, Oklahoma



Tulsa, Oklahoma

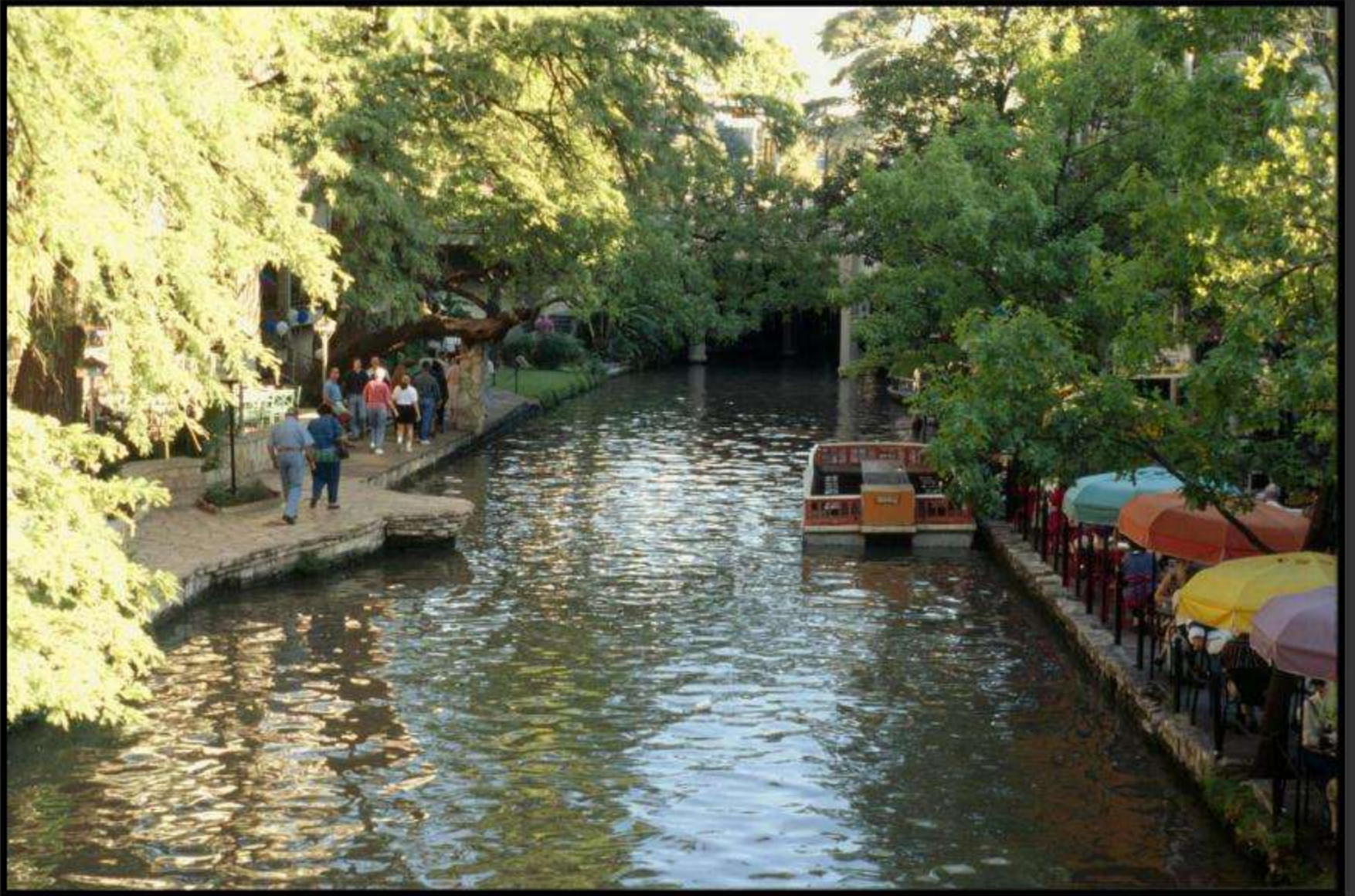
Channel Types



Breckenridge, Colorado

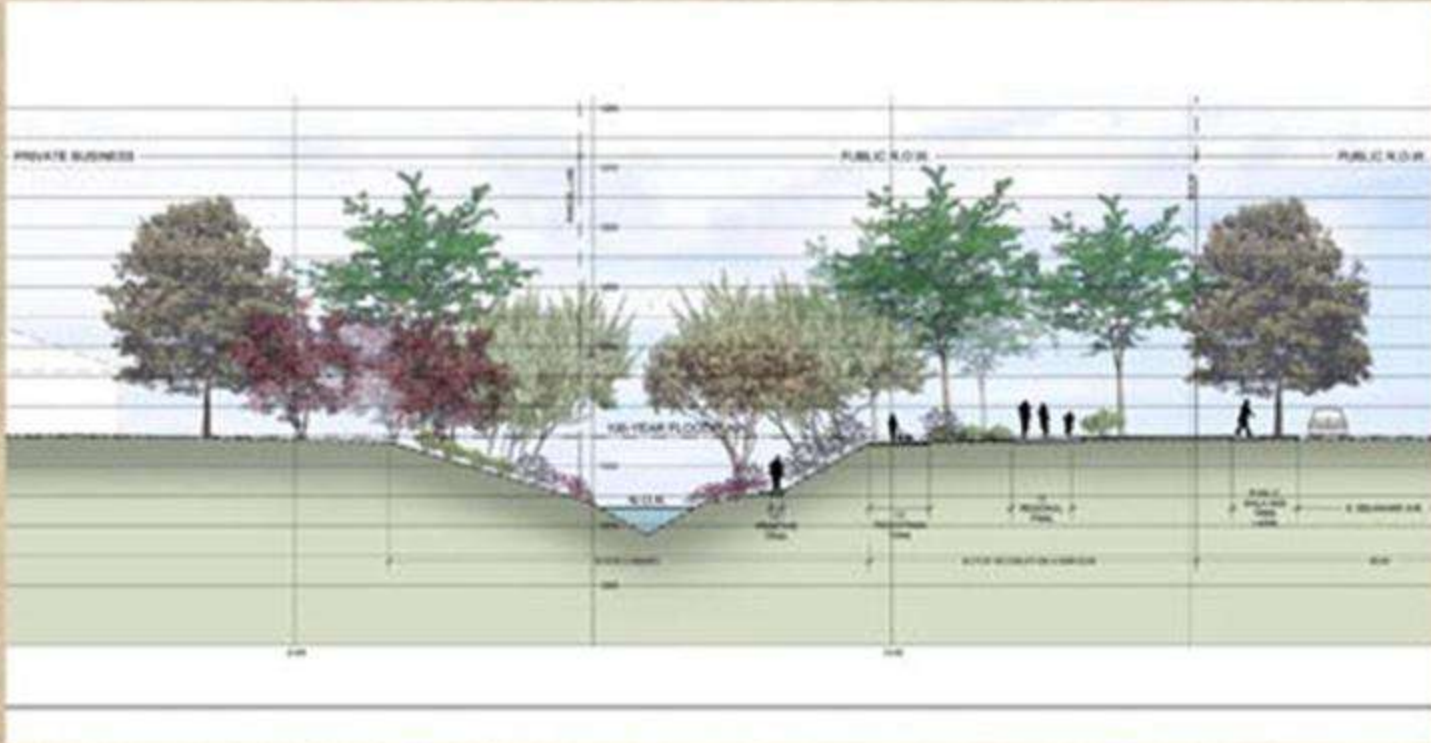


Arkansas River near Garden City, Kansas



San Antonio, Texas

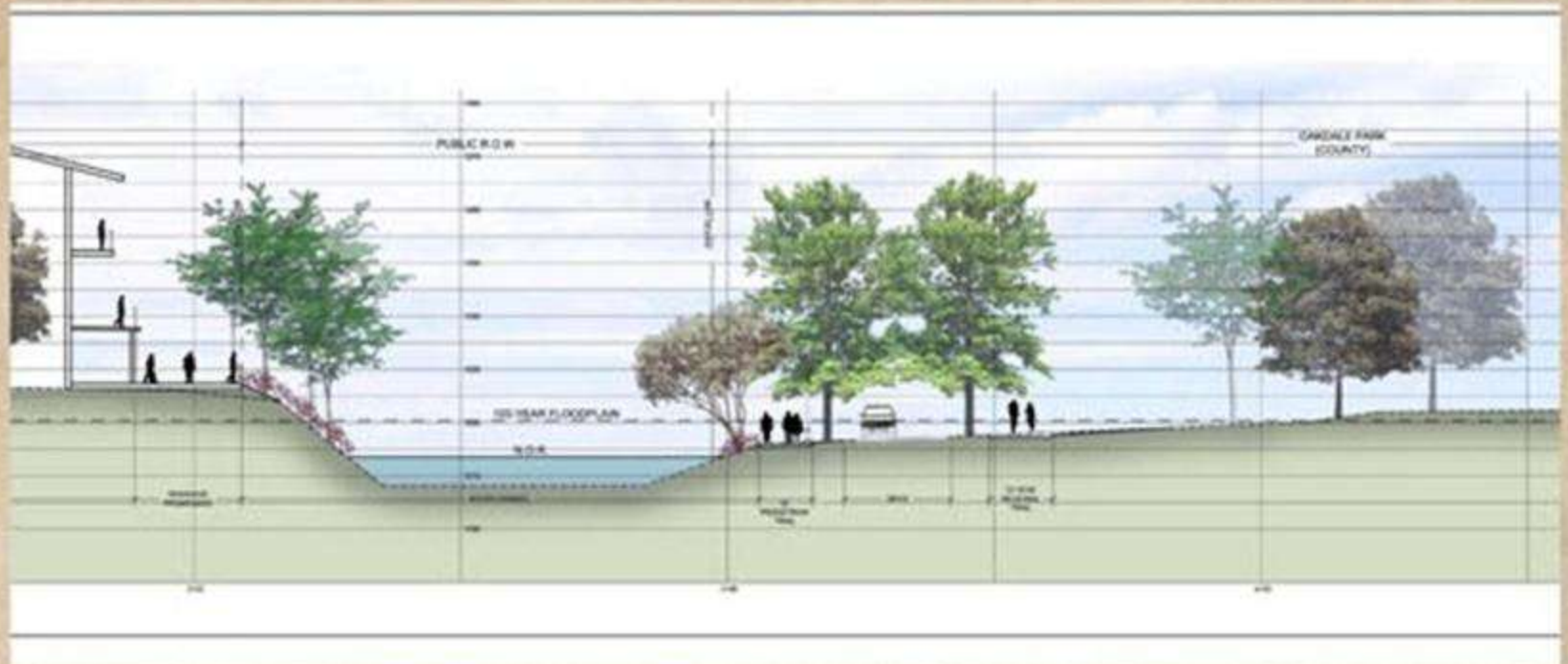
Channel Types



Natural Channel

South and North Reaches

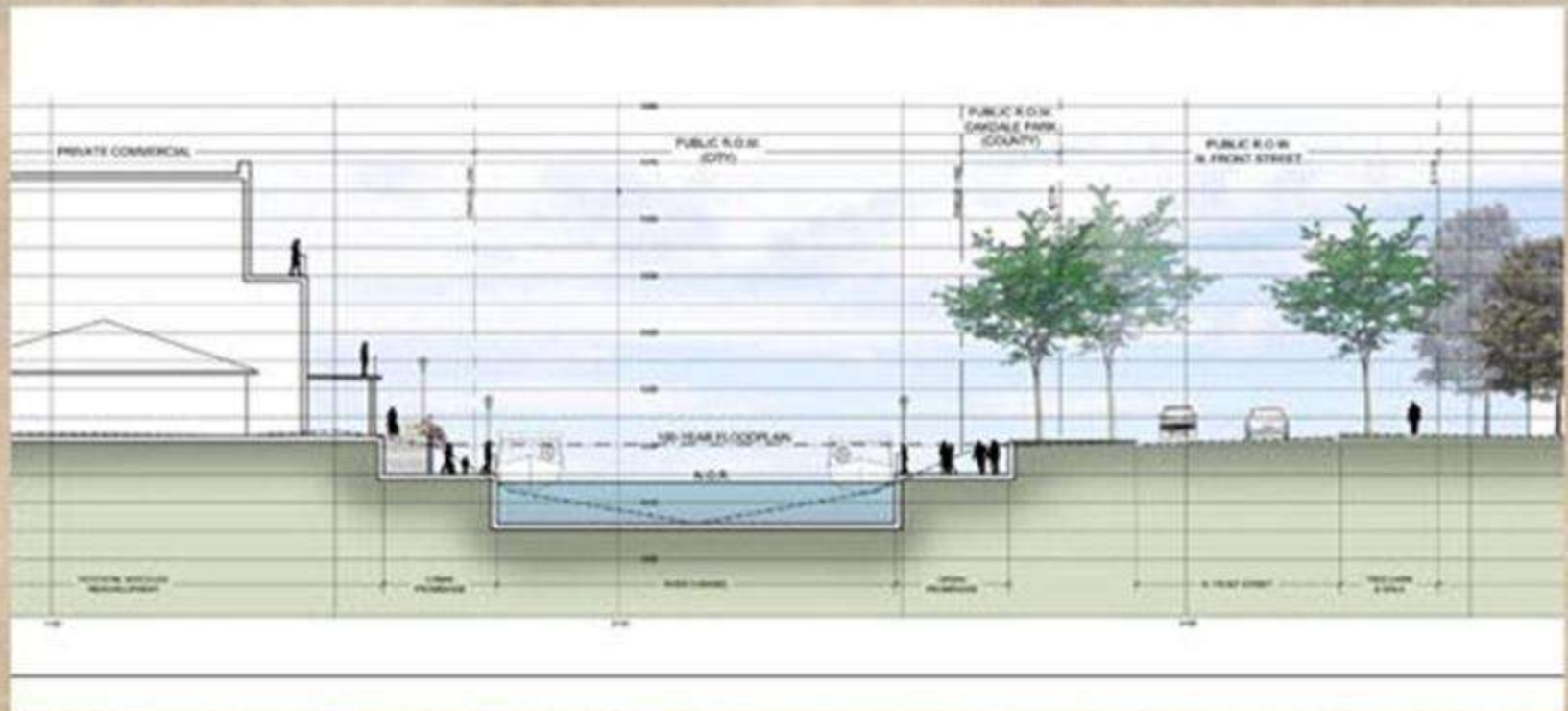
Concept Section for Smoky Hill River Channel, Salina, Kansas



Park-side Channel

Central Reach park settings

Concept Section for Smoky Hill River Channel, Salina, Kansas



Concrete Channel with Riverwalk *Central / Urban*

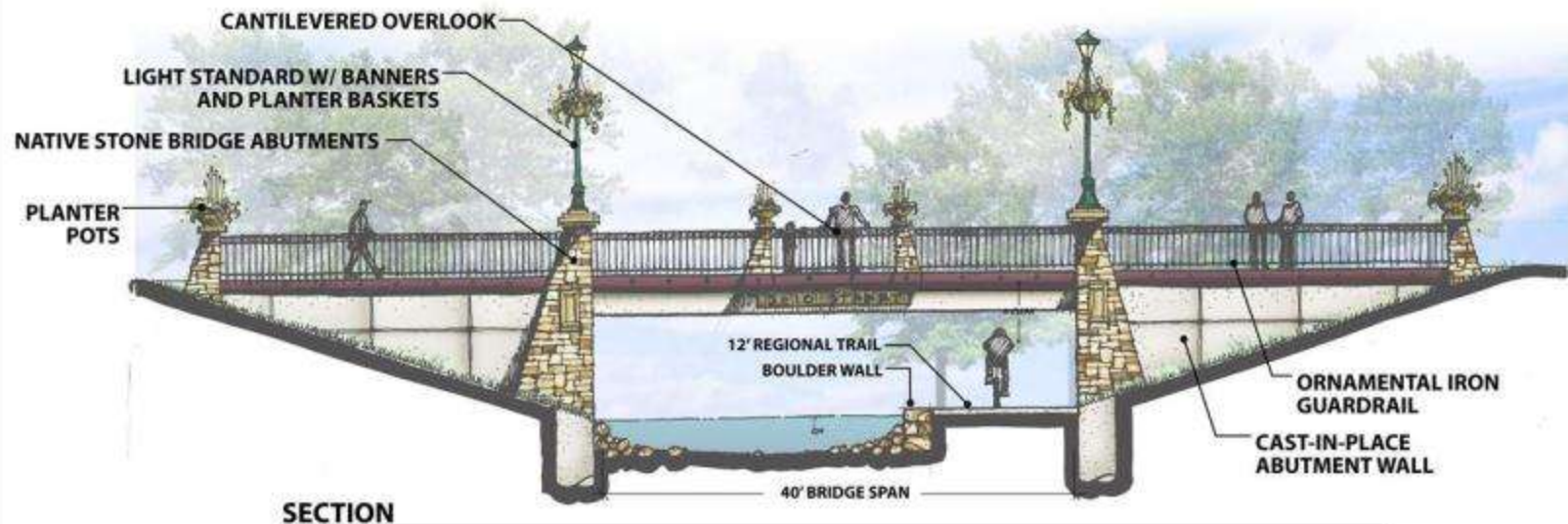
Concept Section for Smoky Hill River Channel, Salina, Kansas

Source: Design Studios West
Denver, Colorado

Bridges and Utilities



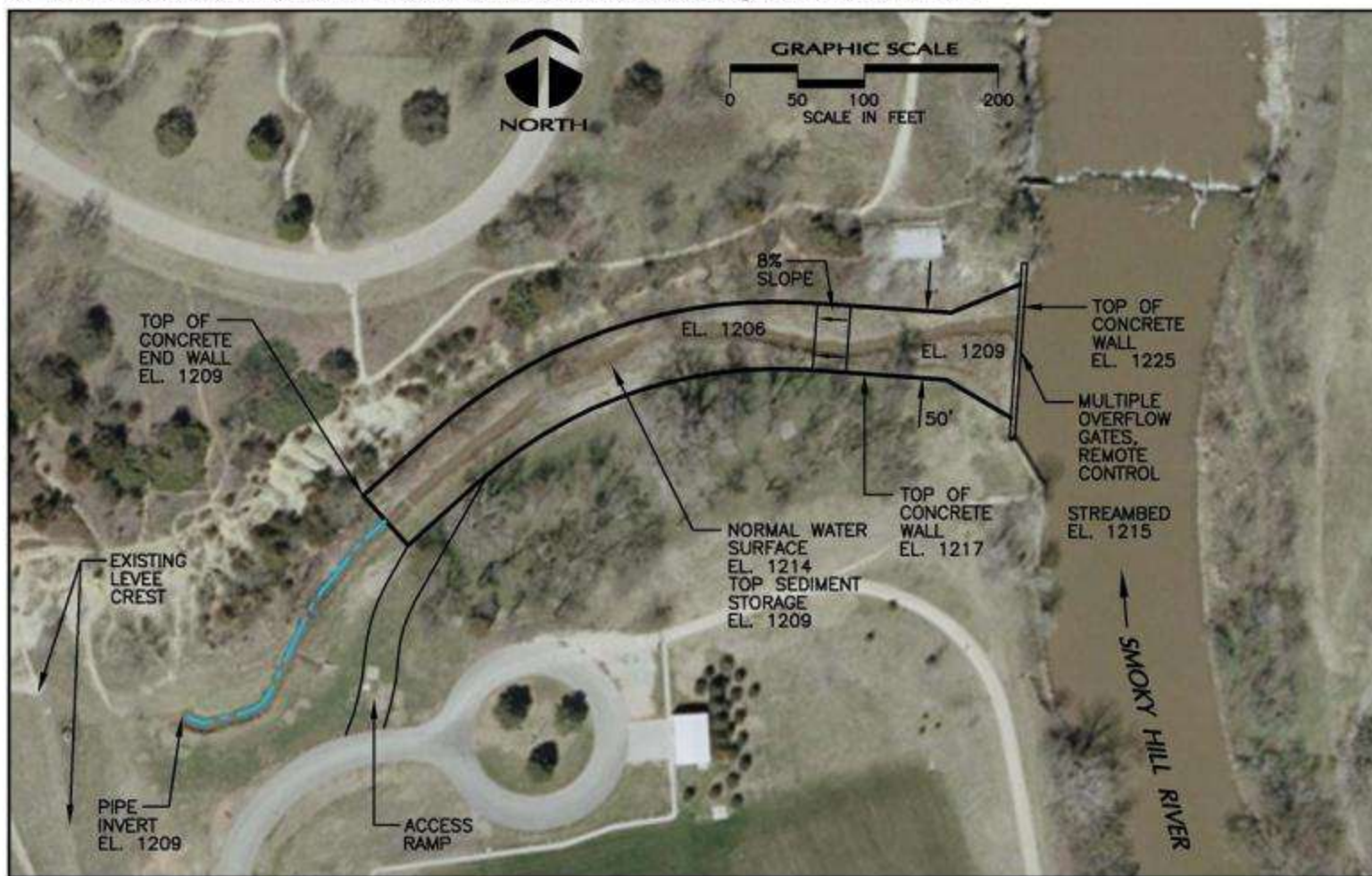
Sioux Falls, South Dakota



Sediment Deposits in Old Smoky Hill River Channel



Salina, Kansas



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DESIGN	KRW/PKF
DETAIL	KAL
CHECK	JED
DATE	08/02/10
SCALE	1"=100'

SMOKY HILL RIVER RENEWAL
SEDIMENTATION BASIN
AND RIVER INTAKE

FIGURE
5-1

Soil Samples Collected
about 25ft North of
Cottonwood
Study Plot



2-inch dia. Cores, from 4 -24ft



2-inch dia. Cores, from 34 -59ft

Salina, Kansas



Salina, Kansas



Superior, Colorado

Trash Removal



Trash Barge, San Antonio, Texas

Use of screens, racks, booms, and comparable devices can be placed in the channel itself to capture trash or route (direct) it to a particular location where it can be cleaned up.

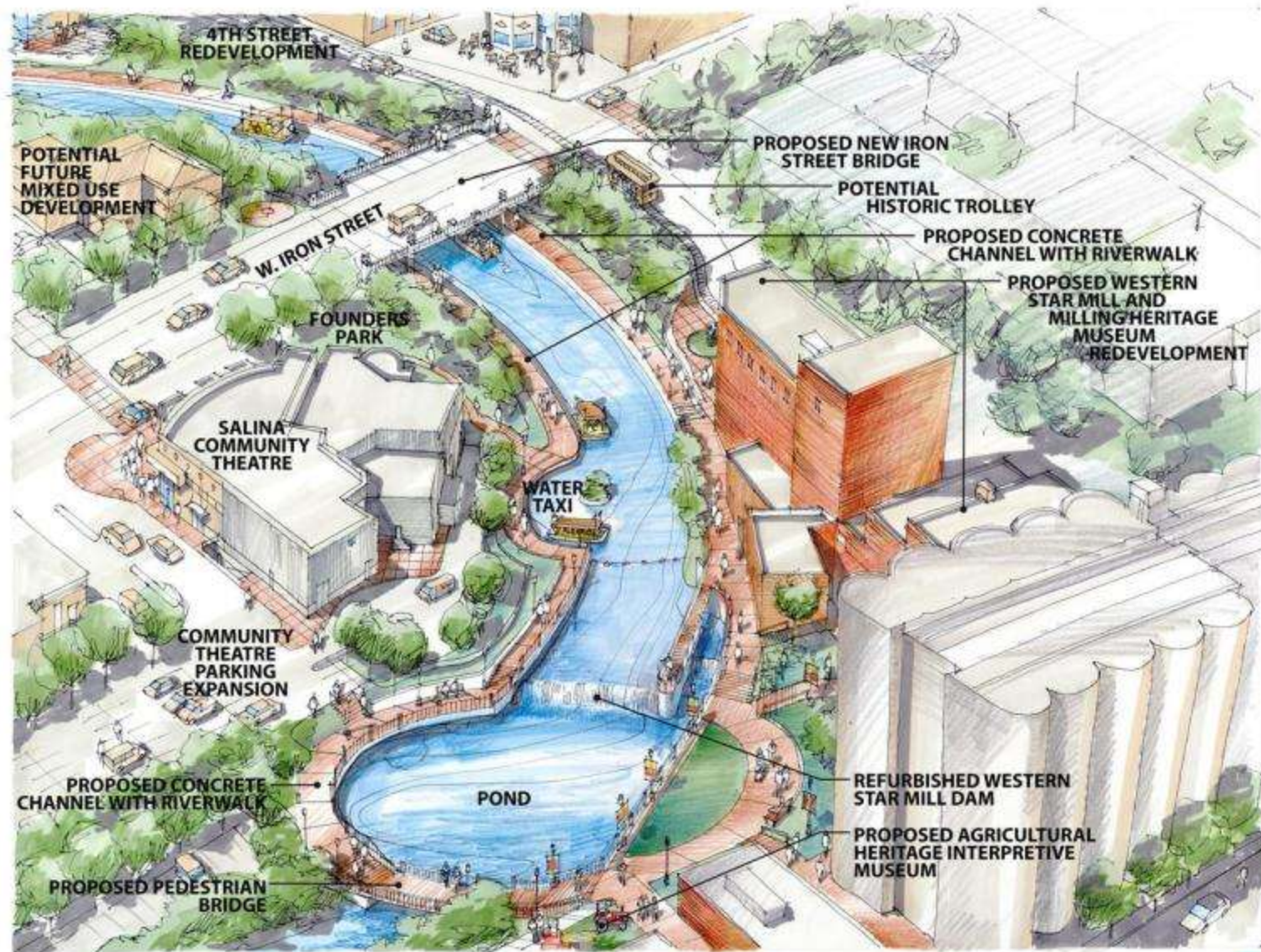
Courtesy of Joseph E. Cruz, Downtown Operations Superintendent
City of San Antonio, Texas



Construction



Historic Arkansas Riverwalk of Pueblo, Colorado



Cultural/Heritage Center at Founders Park

Smoky Hill River Renewal Master Plan Salina, Kansas

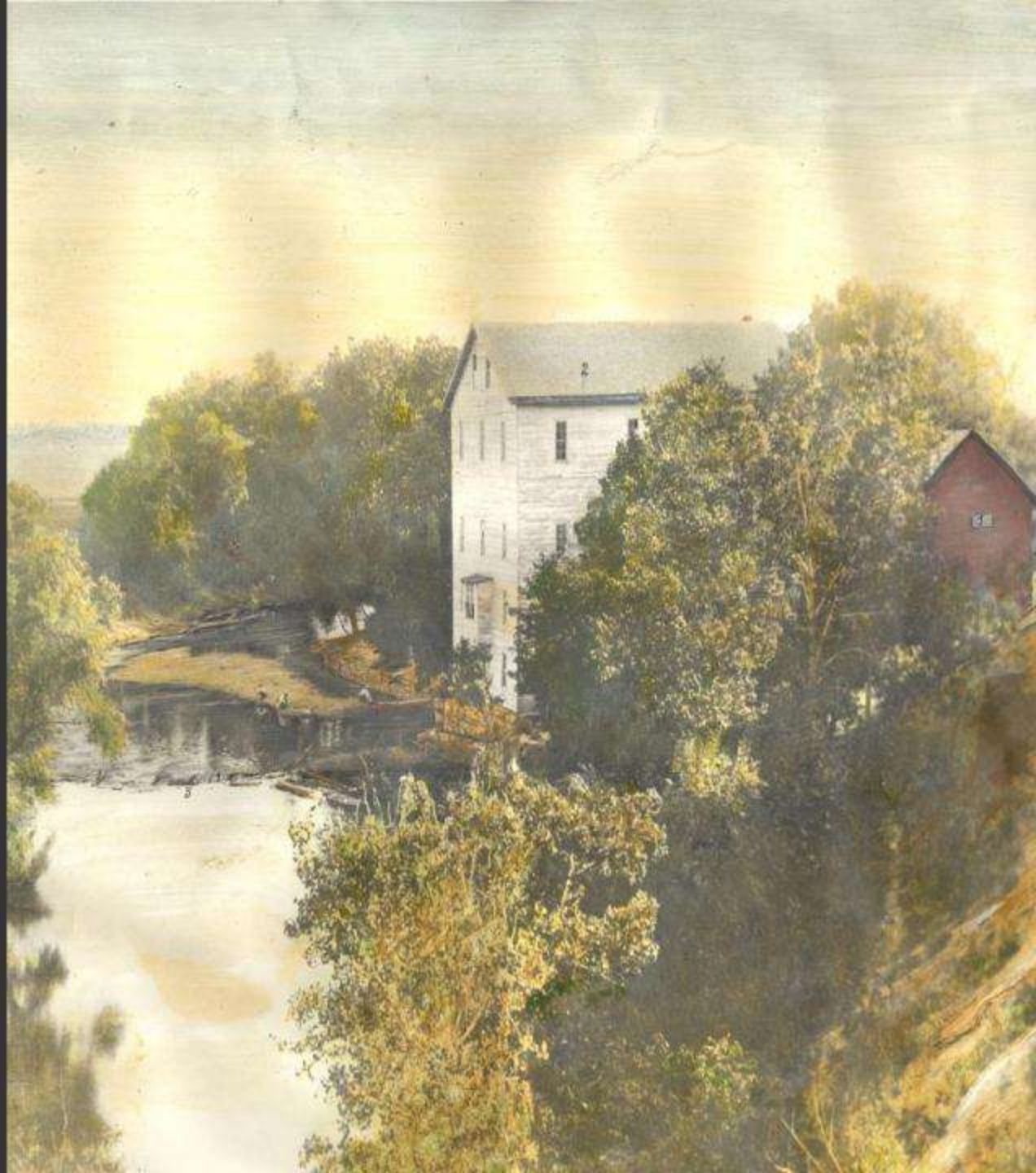
Community Planning and Design Issues and Opportunities

Donald H. Brandes, Jr., RLA
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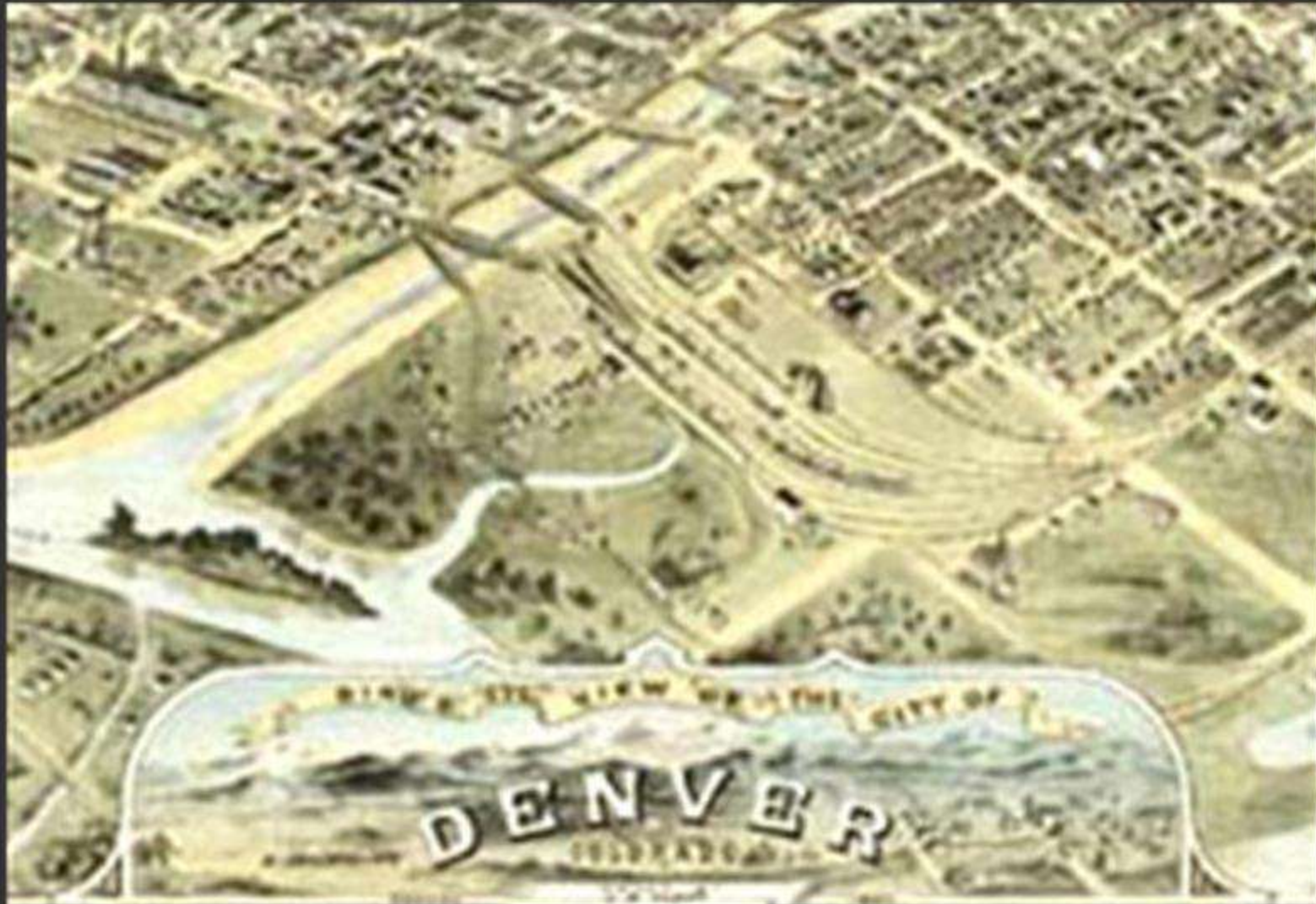
"Here is a land where life is written in Water..."
Thomas Hornsby Ferril, Colorado Poet Laureate, 1940



*Rural
Agricultural
Settlement*



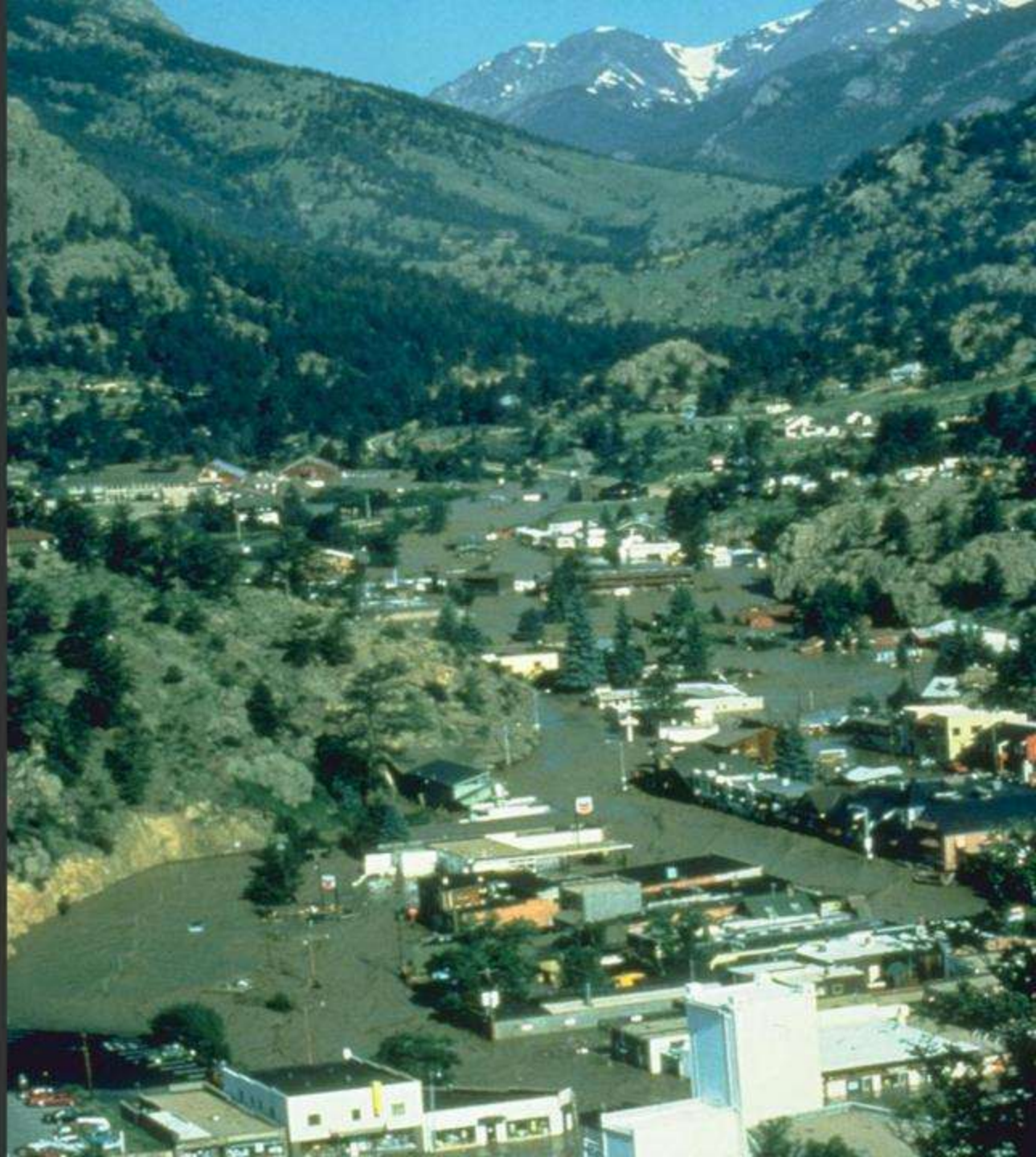
Towns & Cities



Recreation & Leisure



Public Safety



Flood Control



Multi- Purpose Restoration



Planning & Design Considerations

1. Community Benefits
2. Public Engagement Process
3. Demonstrated Economic Value

1. Community Benefits of River Restoration Projects

- Economic
- Recreational
- Community and Neighborhood
- Environmental
- Educational



Economic

- Public/Private investment opportunities
- Retail/Commercial
- Joint partnership
- Increase real property values
- Enhance economic development and tourism





Recreational

- Provide for hiking, strolling, biking and other community-wide recreational activities
- Provide close-to-home/work access to greater proportions of the population than traditional parks
- Promote Charlotte-Mecklenburg as an active and health-conscious community.





Community and Neighborhoods

- Connect and link people to adjacent neighborhoods, landmarks and activity centers.
- Increase pedestrian-oriented accessibility.
- Provide alternative transportation routes by providing bicycling and pedestrian facilities.
- Increase residential safety and property values.
- Greenways as Neighborhood Watch program.





Environmental

- Improve water quality by buffering streams and trapping pollutants.
- Preserve wildlife habitats and biodiversity.
- Provide refuge and safe migration routes for wildlife.
- Reduce flood damage.
- Reduce traffic congestion & promote clean air.
- Provide important open space resources.





Educational

- Promote a Greenway link to schools, cultural, civic and religious centers.
- Create natural, interpretative trails, outdoor amphitheatres and open-air studios.
- Provide environmental awareness & education programs to community schools.



2. Community Engagement Process

Traditional Approach:

- 'Expert' Lectures
- One-way communication
- Limited choices
- Adjacent owners only
- Scheduled at convenience of Consultant



2. Community Engagement Process

Engagement Approach:

- Participatory
- Discussion – oriented
- Multiple choices
- Multi-generational
- Scheduled to be convenient for Public





Committees organized to prepare Goals, Objectives, Uses tailored to Community needs....

Goals, Objectives and Use Images



EC1 Businesses Fronting Creek



EC2 Riverside Convention Center



EC3 Riverside Retail



EC4 Creek Edge



EC6 Festive Night Lighting



EC7 Riverside Restaurant



EC8 Riverside Entertainment



EC9 Riverside Park



EC11 Art Market



EC12 Festival Market



EC13 Tree Covered Cafe



EC16 Tour Boats



EC17 Creek Side Dining



EC18 Kansas Culinary Institute

Friends of the River Foundation Economic Development Committee Goals and Objectives

Goal: To encourage public and private renewal and new development that will create an amenity migration to places where people want to work, to live and to visit.

Objective 1: To improve the Old Channel of the Smoky Hill River as an Economic catalyst for public and private development that will benefit the entire community.

- A. Decrease the size of the flood plain to reduce flood insurance requirements.
- B. Increase the legal and physical supply of water in the Old Channel.
- C. Improve storm water quality and capacity.

Objective 2: To enhance our quality of life with revitalization of the seven miles of Old Channel of the Smoky Hill River in the project area.

- A. Bring back the vitality and restore the legacy of the Old Channel area for future generations.
- B. Reestablish the Old Channel as a means of building community character.
- C. Stabilize and enhance the property tax base of the area with added value for the long term economic benefit of the entire community.

Objective 3: To use the Smoky Hill River Renewal as a stimulus for revitalization and new development.

- A. Create retail business areas fronting the Old Channel including restaurants and cafes.
- B. Plan for adjoining riverside residential zones from single family through apartments and condominiums.
- C. Develop a north side Business Park.
- D. Construct by segments the entire Smoky Hill River Trail project with access to the water and boating opportunities.
- E. Build a riverside office park to include light industrial enterprises.
- F. Consider the development of a riverside convention hotel in Kenwood Park.
- G. Develop a riverside Smoky Hill Museum annex that could include a flour milling institute, an agricultural tourism center or a Kansas Culinary Institute.
- H. Establish an open air Festival Market that could be used for farmers market and other entertainment.

Are there other Goals and Objectives that are important to you?
Please share your ideas:

- with Volunteers
- using our Comment Sheet, or
- by completing our Questionnaire

Uses and Activities - Economic Development

Smoky Hill River Restoration Salina, Kansas

March 2, 2009

Smoky Hill River Foundation



1 Amphitheater



2 Downtown Riverwalk



3 Seasonal Signage



4 Plaza with Special Paving



5 Performance Shelter



6 Fish Pond Area



7 Pedestrian River Crossing



8 Flexible Seating Types



9 Quiet Overlook Area



10 Riverside Dining



11 Wetland Area with Trail



12 Enhanced River Areas



13 Civic Events Plaza



14 Colorful Festive Atmosphere



15 Seasonal Plantings

POTENTIAL USES & ACTIVITIES

Prepared for the City of Sioux Falls
Prepared by Design Studios West, Inc.
November 2003

throughout
downtown

33
throughout
downtown

CLIMBING
WALL / GYM

Mixed
Use
Housing

Mixed
Use
Housing

KEEP THE RAMP
IF IT IS A
FUNCTIONAL
STRUCTURE

REMOVE
DANGEROUS
RAMP
PLEASE

Expose "slow"
RIVER -
REMOVE RAMP

Remove
Ramp

remove
ramp
show
river

save parking
Ramp over
river

Under walking
on bridge
on 10m
+ 11m



Five Days of Engagement Events

Smoky Hill River Festival

June 12, 13, 14th

Stiefel Theater

June 19th

7:00 am – 7:00pm

Central Mall

June 20th

7:00 am – 9:00 pm





Smoky Hill River Festival



Outreach Response

- ✓ Over 3,500 Estimated Attendance
- ✓ 2,753 Data Inputs Mapped
- ✓ 330 Questionnaires Completed

Central - Top Ten

1. Riverwalk
2. Riverside Restaurant
3. Waterside Dining
4. Festive night life
5. Riverside café
6. Riverside Entertainment
7. Multi-level retail
8. Commuter Bike Trail
9. Excursion Boats
10. Monumental Water Feature



Central Zone is a place of:

1. **Urban uses** - On, and around an active, urban Riverfront with multiple-levels
2. **Downtown extension** - Urban uses clustered between Downtown and the River from Center Street to Ash Street
3. **Festive Activity** - Evening and Night time use, as well as daytime activity
4. **Economic Activity** – With restaurants, cafes, and other waterside dining, as well as multi-level shops, riverside hotel and retail uses
5. **Water-related Activities** - With excursion boats, paddleboats and canoes on the water



The thing I cherish most:

“...proximity to downtown and possibilities for future economic development”

“...a potential touch point for all the community to come together”

... “History”

... “the falls behind the Community Theater”

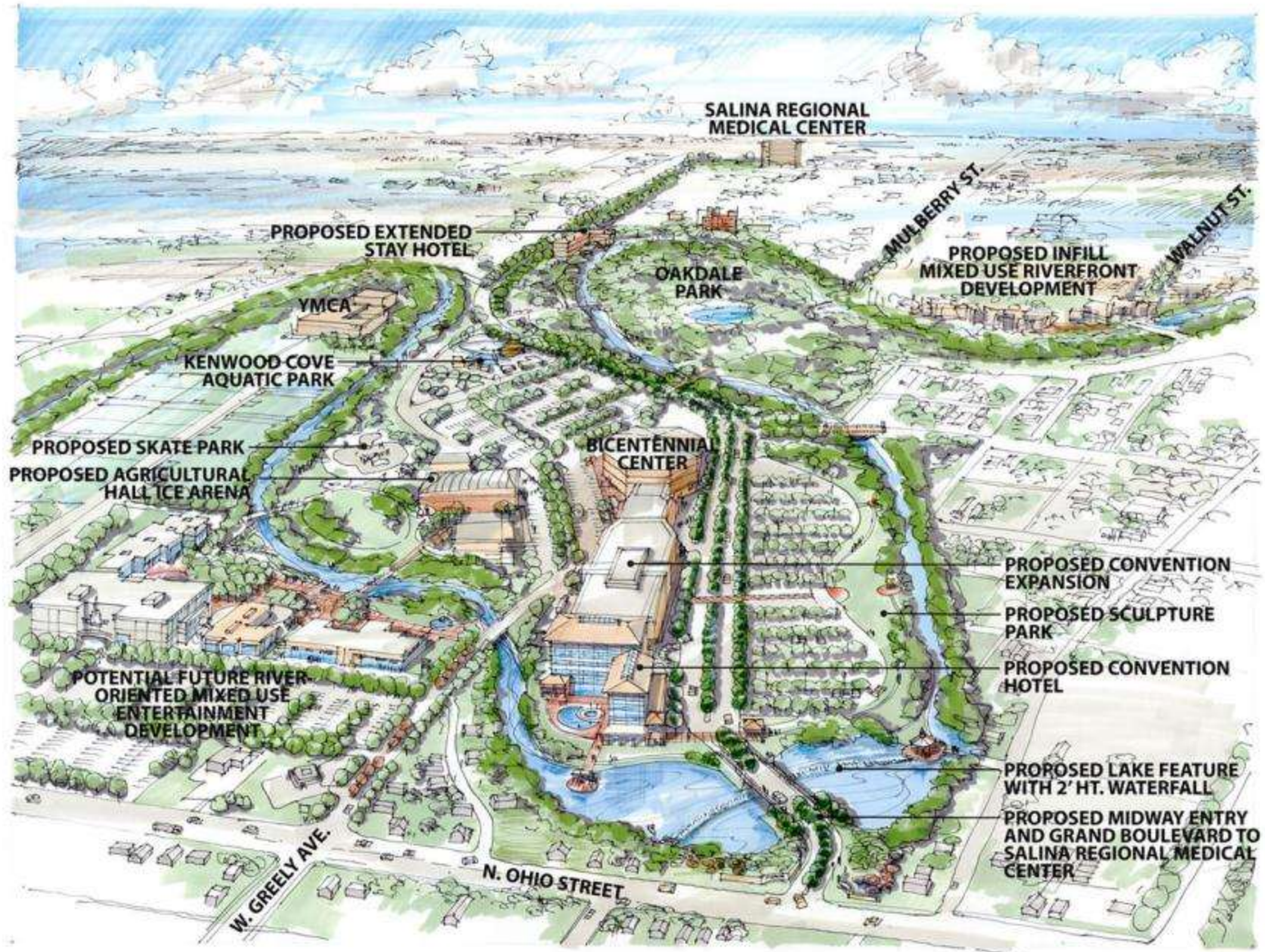
... “it could be the life force of our community”

...enormous potential to improve life in Salina in so many ways...

“it has a mysterious, inviting shade, cool quality”



Over 90% of respondents Agree, or Strongly Agree that the River Renewal is a good idea and should be continued



Kenwood Park East Gateway

Smoky Hill River Renewal Master Plan Salina, Kansas

Master Plan Engagement Response

- ✓ 2,150 – 2,500 Attendance
- ✓ Three (3) days of interaction
- ✓ 465 Questionnaires Completed

Questionnaires & Comments

- Demographics
- Preferences
- Use Patterns
- Funding Alternatives
- Level of Support



Over 90% of
respondents Agree,
or Strongly Agree

...that they support
funding sources
including a
combination of
private donations,
grants and
local sales taxes





3. Demonstrated Economic Value

Case Studies:

1. Big Thompson River

Estes Park, Colorado

2. Little Sugar Creek

Charlotte, North Carolina

3. Big Sioux River

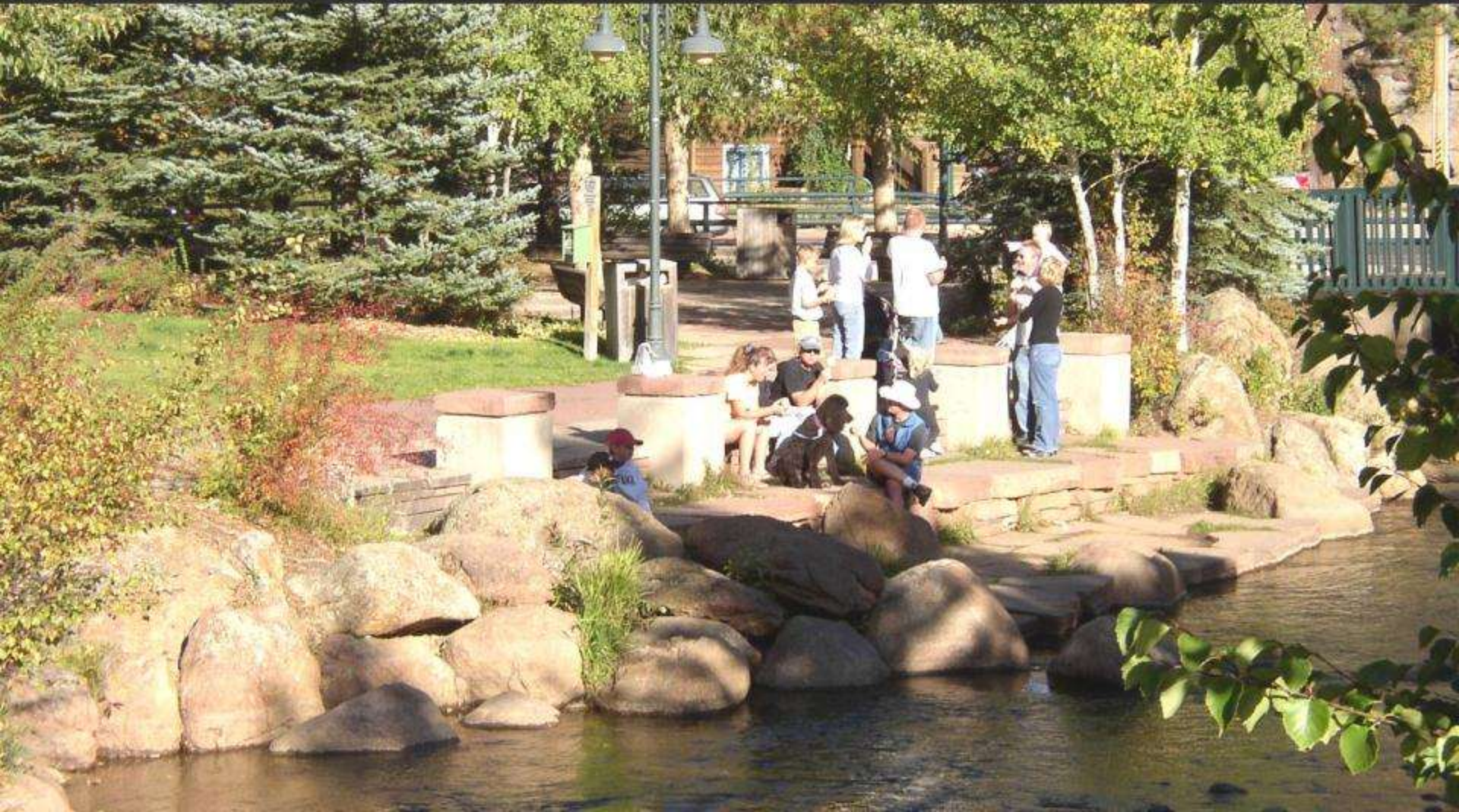
Sioux Falls, South Dakota

4. Historic Arkansas Riverwalk of Pueblo

Pueblo, Colorado

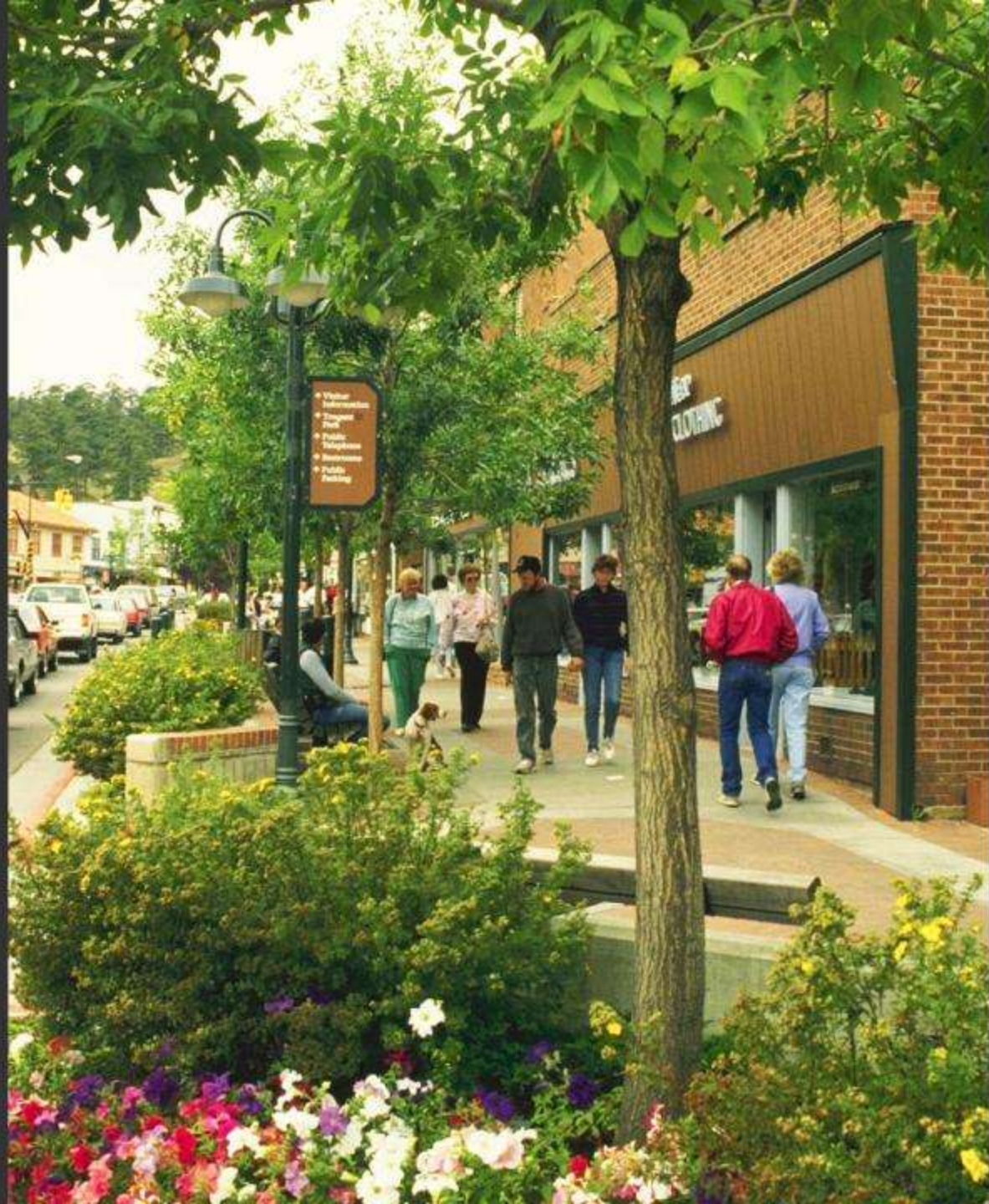
Estes Park Downtown & Riverfront

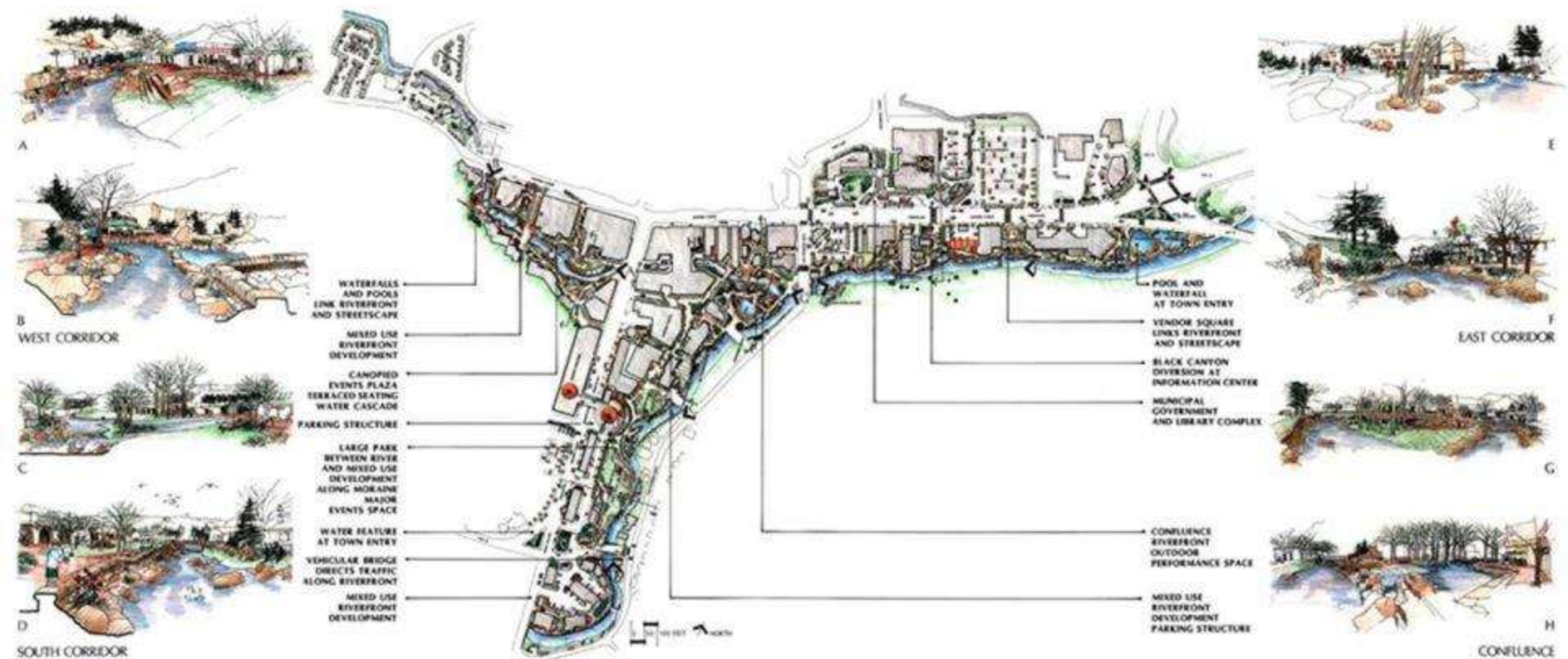
Big Thompson & Fall Rivers
Estes Park, Colorado



Project Highlights

- National Park Gateway Tourism
- Downtown Streetscape & Wayfinding
- Riverfront Business
- Community Image & Destination Identity





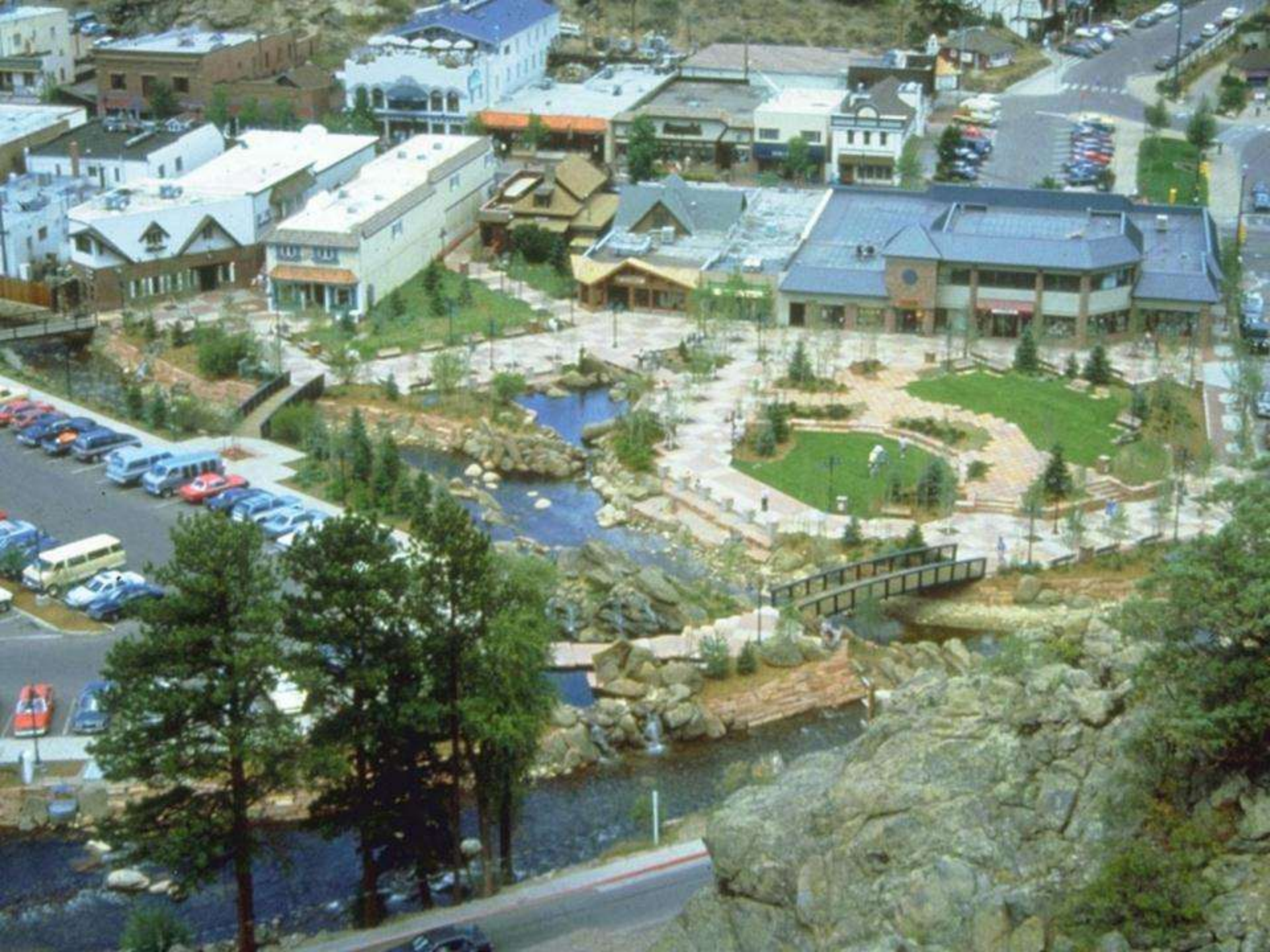
CONFLUENCE

DESIGN
STUDIOS
WEST
Planning &
Landscape Architecture

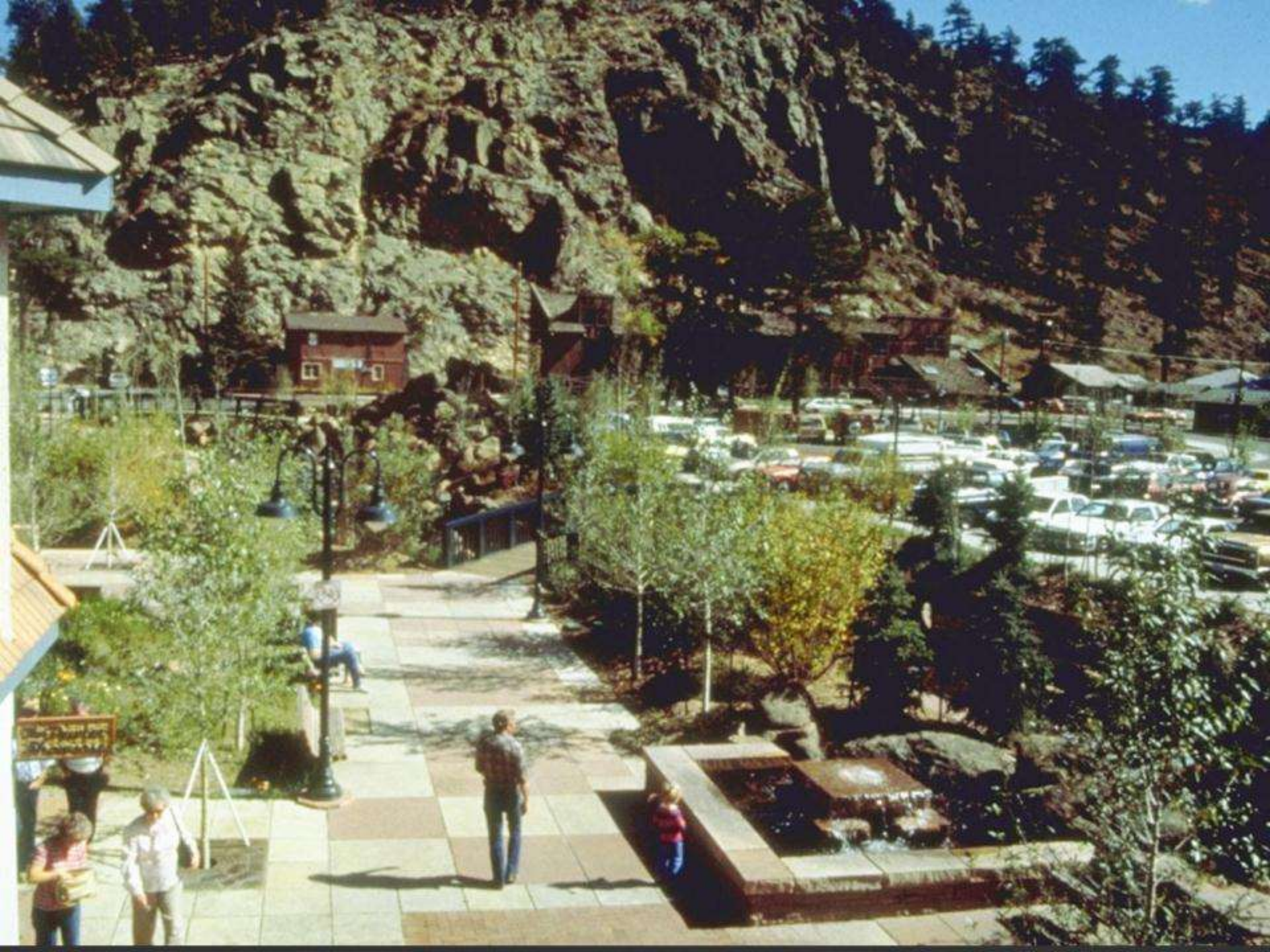
ESTES PARK RIVERFRONT DESIGN MASTER PLAN

TOWN OF ESTES PARK • COLORADO





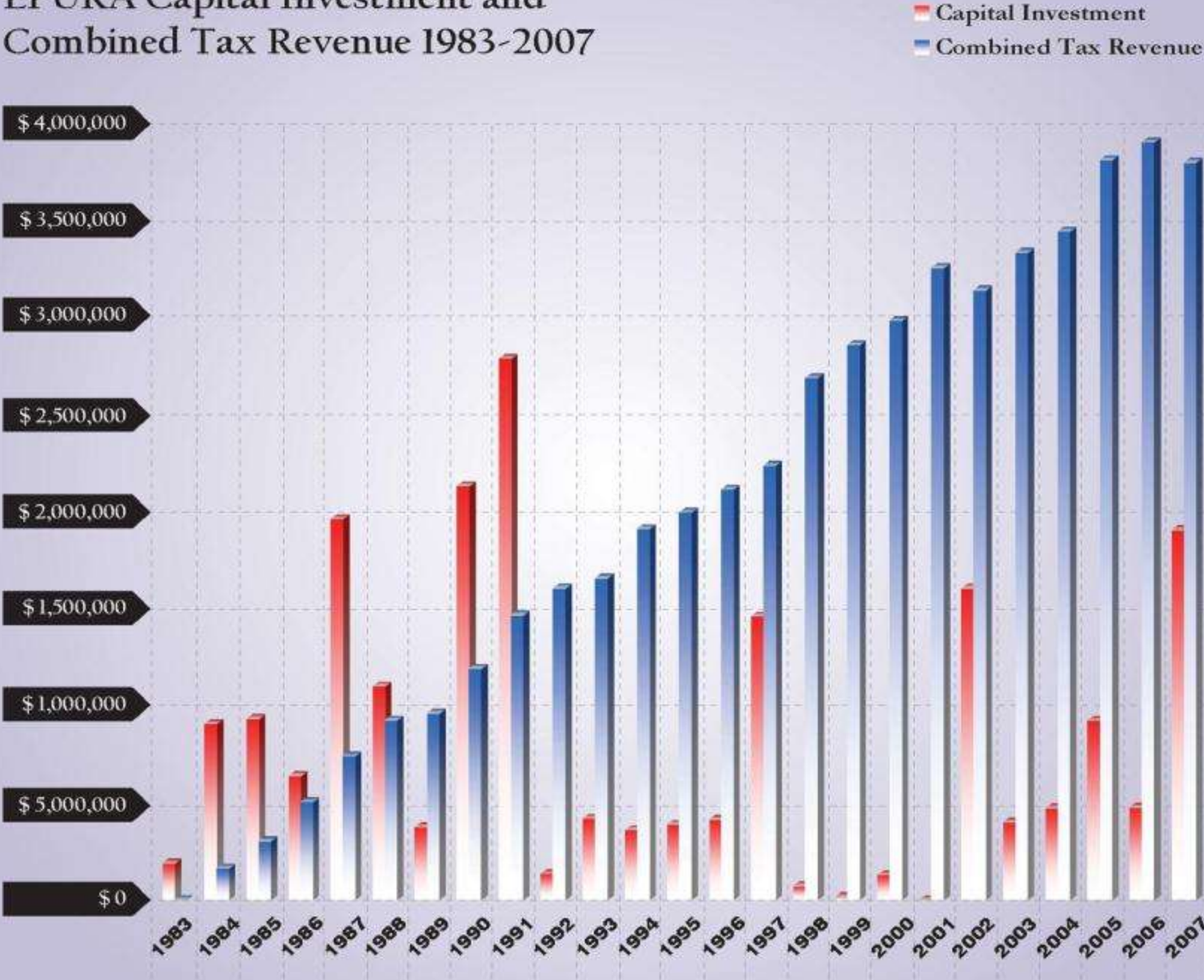








EPURA Capital Investment and Combined Tax Revenue 1983-2007



Capital Investment History and Combined Tax Revenue

YEAR	Capital Investment	Combined Tax Revenue
2007	1,900,000	3,787,417
2006	475,000	3,892,317
2005	920,000	3,800,449
2004	470,000	3,434,529
2003	400,000	3,324,423
2002	1,600,000	3,131,582
2001	0	3,246,521
2000	126,684	2,975,170
1999	15,762	2,850,851
1998	71,128	2,680,974
1997	1,456,773	2,231,368
1996	412,786	2,108,863
1995	387,187	1,989,759
1994	358,794	1,906,372
1993	416,816	1,651,592
1992	134,533	1,599,898
1991	2,780,056	1,461,990
1990	2,125,651	1,186,800
1989	373,330	957,678
1988	1,097,191	922,707
1987	1,955,236	736,925
1986	637,018	502,192
1985	928,856	302,126
1984	903,928	161,178
1983	187,181	
TOTAL	\$20,133,910	\$50,843,681

Current Status

- ✓ 26 Projects competed – \$20 M invested
- ✓ Return on Investment (ROI) - \$50 M revenue

Awards

American
Society of
Landscape
Architects

2007
President's
Award of
Excellence
For Design

presented by the

Colorado
Chapter

Estes Park Riverwalk

in recognition
of outstanding
professional
achievement

Design Studios West, Inc.



Paul M. [Signature]
Chapter President

10-19-07
Date

American
Society of
Landscape
Architects

2007
Land
Stewardship
Award

presented by the

Colorado
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Estes Park Riverwalk

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Paul M. [Signature] 10-19-07
Chapter President

Riverfront Master Plan
Little Sugar Creek
Charlotte, North Carolina





Project Highlights

- 14 mile Greenway Riverfront Master Plan
- Channel 'daylighting' reclamation of Creek
- College and Hospital Institutional Anchors
- Shopping Mall redeveloped as Mixed Use
- Water Quality / Wetlands restoration

Master Plan

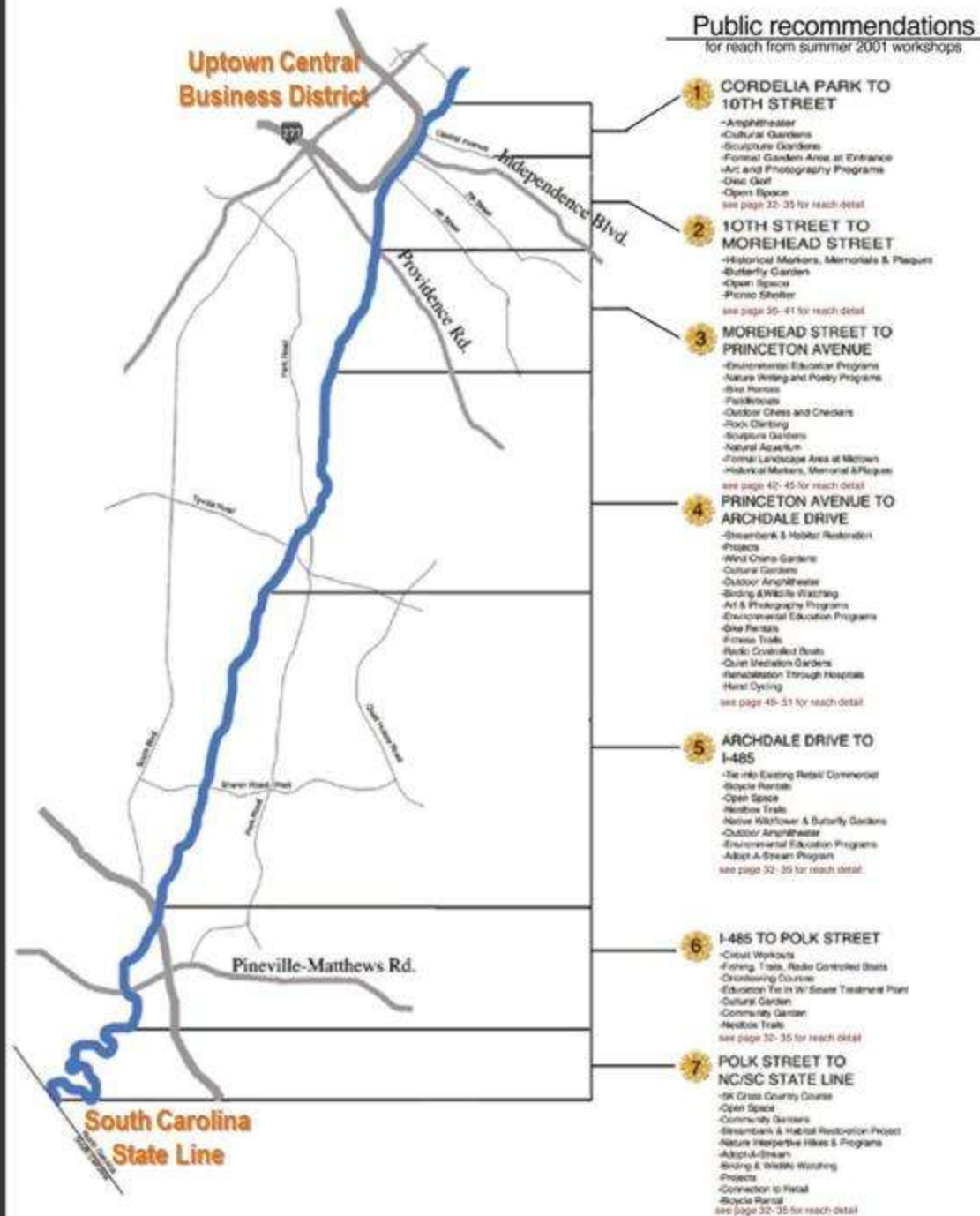
Little Sugar Creek GREENWAY MASTER PLAN



A 100% for development for a 15-mile trail system along Little Sugar Creek



Greenway Riverfront Reaches and Components









CPCC to Morehead Street



Central Piedmont
Community College



CPCC Culinary Arts Center



\$12.4 M

30,612 Sq. Ft.

50 Seat Amphitheater Kitchen

60 & 32 Seat Dining Rooms

CPCC Culinary Arts Center



Little Sugar Creek Greenway & Trail Frontage
Bioretention Rain Gardens
30k Gallon Rainwater Harvest Irrigation Storage





History Walk and Fountain Plaza

Photographed by Henry Pierce, May 2010

CPCC to Morehead Street



Midtown Mall Site
The Metropolitan

Mid-Town Mall / Metropolitan Site



Mid-Town Mall

Before (2002)



The Metropolitan

After (2009)

The Metropolitan Mixed-Use

- Charlotte Mecklenberg has invested \$6.9M City Infrastructure & Parking Garage
- Since 2004, Pappas Properties (local) in association with Collette & Associates and Colonial Properties Trust has invested \$225M in Phase One Construction



The Metropolitan along Little Sugar Creek Greenway

The Metropolitan Mixed-Use

Residential

- 60 Met Lofts, (Flats and 2-Story Lofts)
- 41 Met Terrace Condos
(Overlooking Little Sugar Creek)

Office

- Met Plaza 10-Story, Class A, Office Tower
- Carolinas Healthcare System (Corporate),
AON Insurance, Cherry Bekaert & Holland,
New Dominion Bank

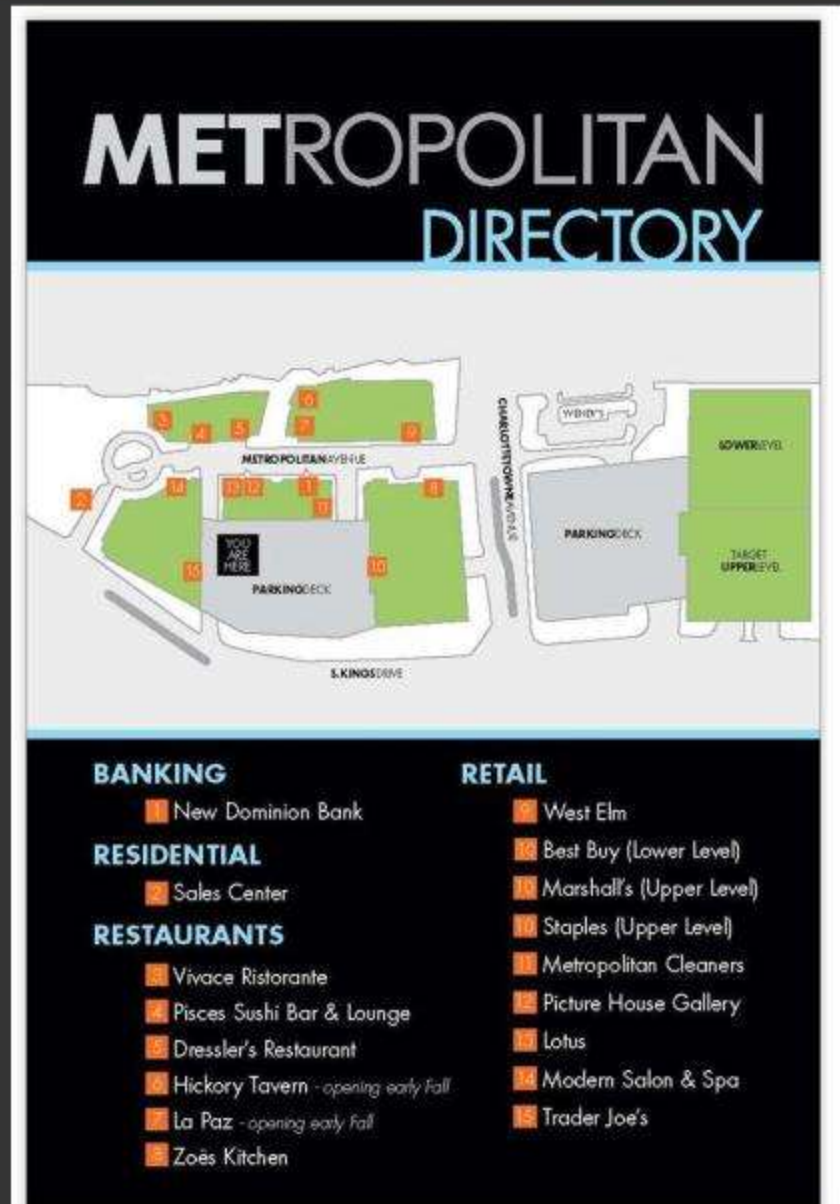


The Metropolitan Greenway Shops

The Metropolitan Mixed-Use

Retail

- Target (Upper Level)
- Best Buy (Lower Level)
- Trader Joe's
- Marshall's
- West Elm
- Retail Shops
- Restaurants



CPCC to Morehead Street



Kings Drive
Esplanade



Kings Drive Central Fountain

Kings Drive Esplanade



Before (2002)



During Construction (2009)



Kings Drive Esplanade Art Walk Festival



Kings Drive Esplanade Art Walk Festival

Current Status

- ✓ Kings Drive and CPCC Channel completed
- ✓ Midtown Reach dedication April 2012

Sioux Falls Greenway & Riverfront Master Plan

Big Sioux River

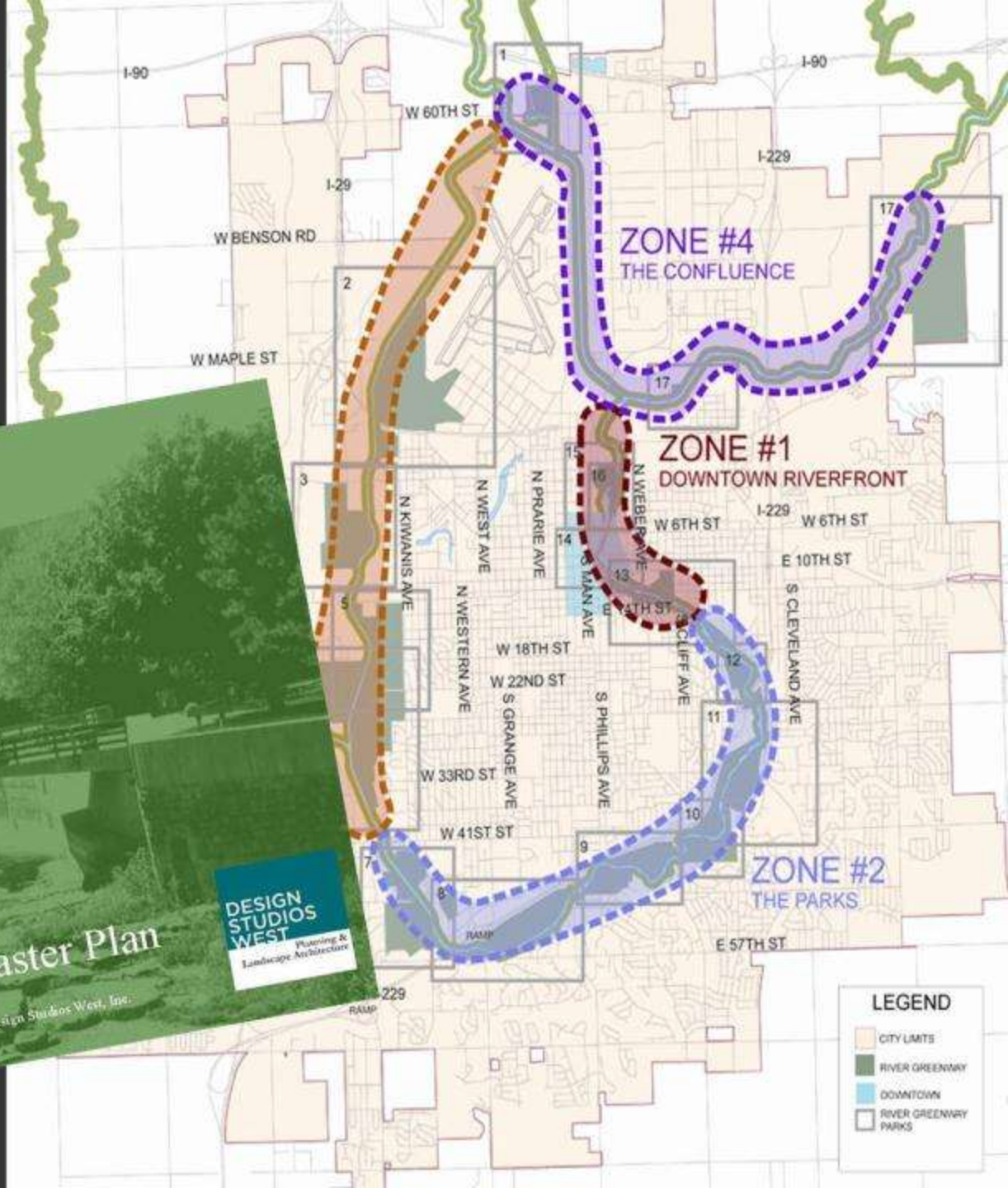
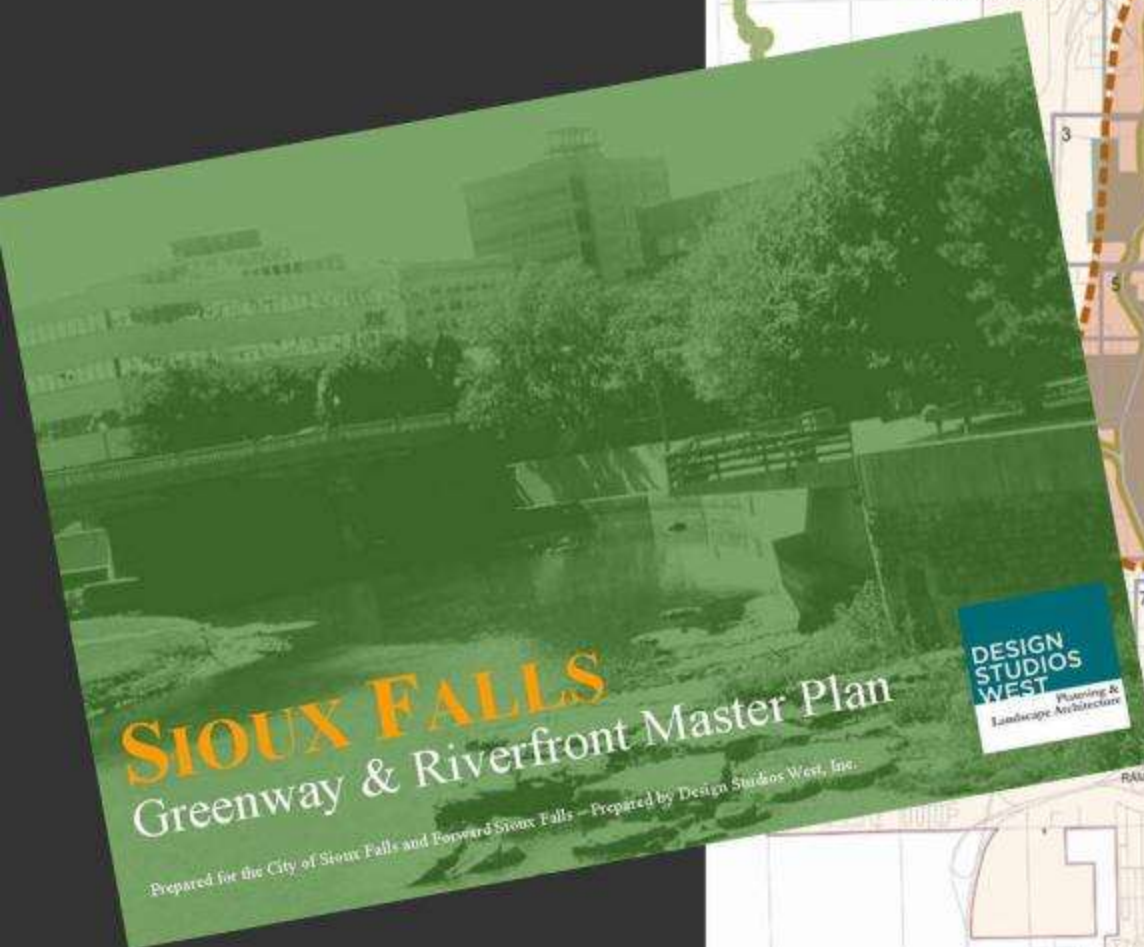
Sioux Falls, South Dakota



Project Highlights

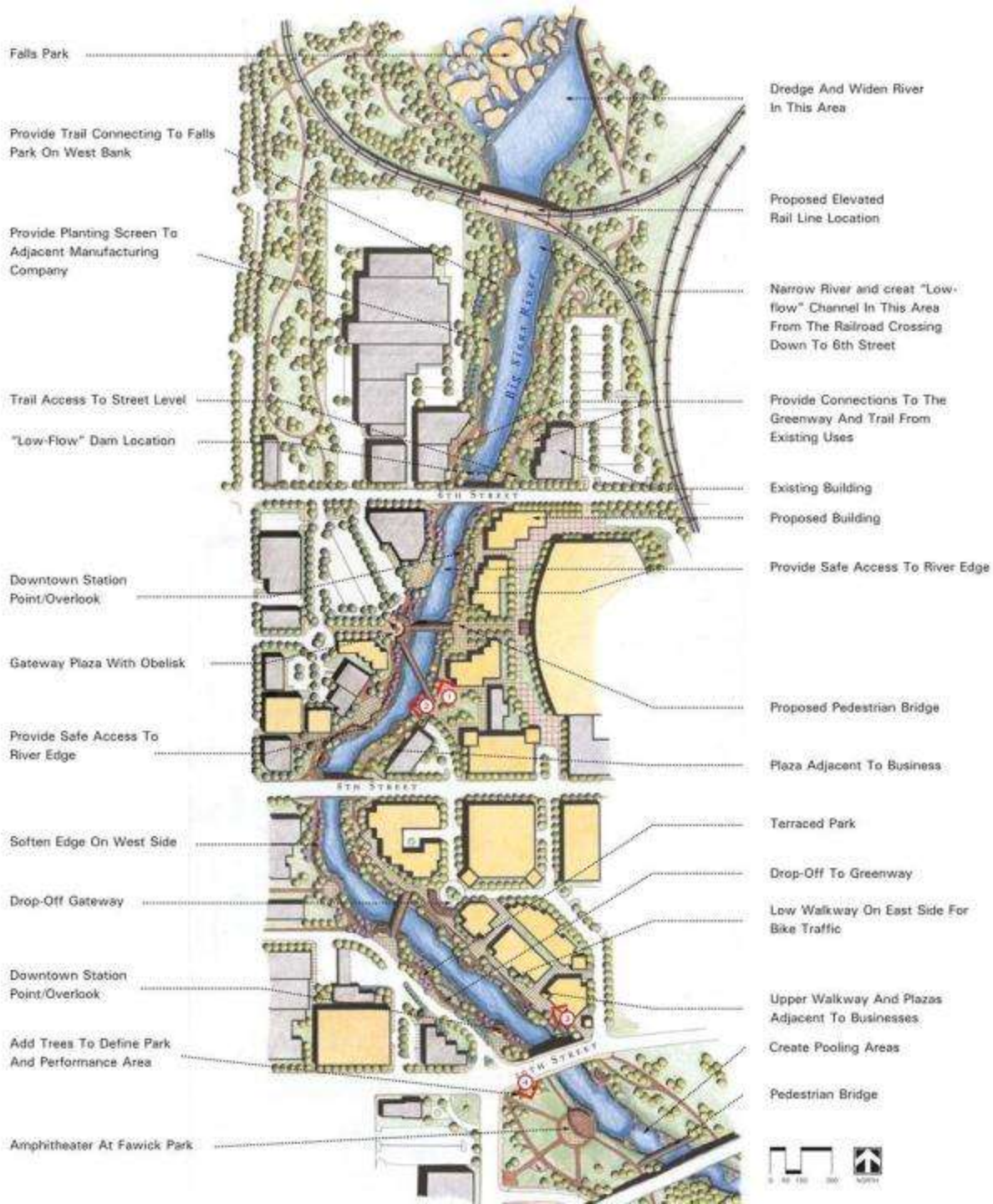
- ✓ 26.2 Mile Greenway Master Plan
- ✓ Downtown riverfront under-utilized
- ✓ Business community initiated

Master Plan



Zone 1

Downtown Riverfront



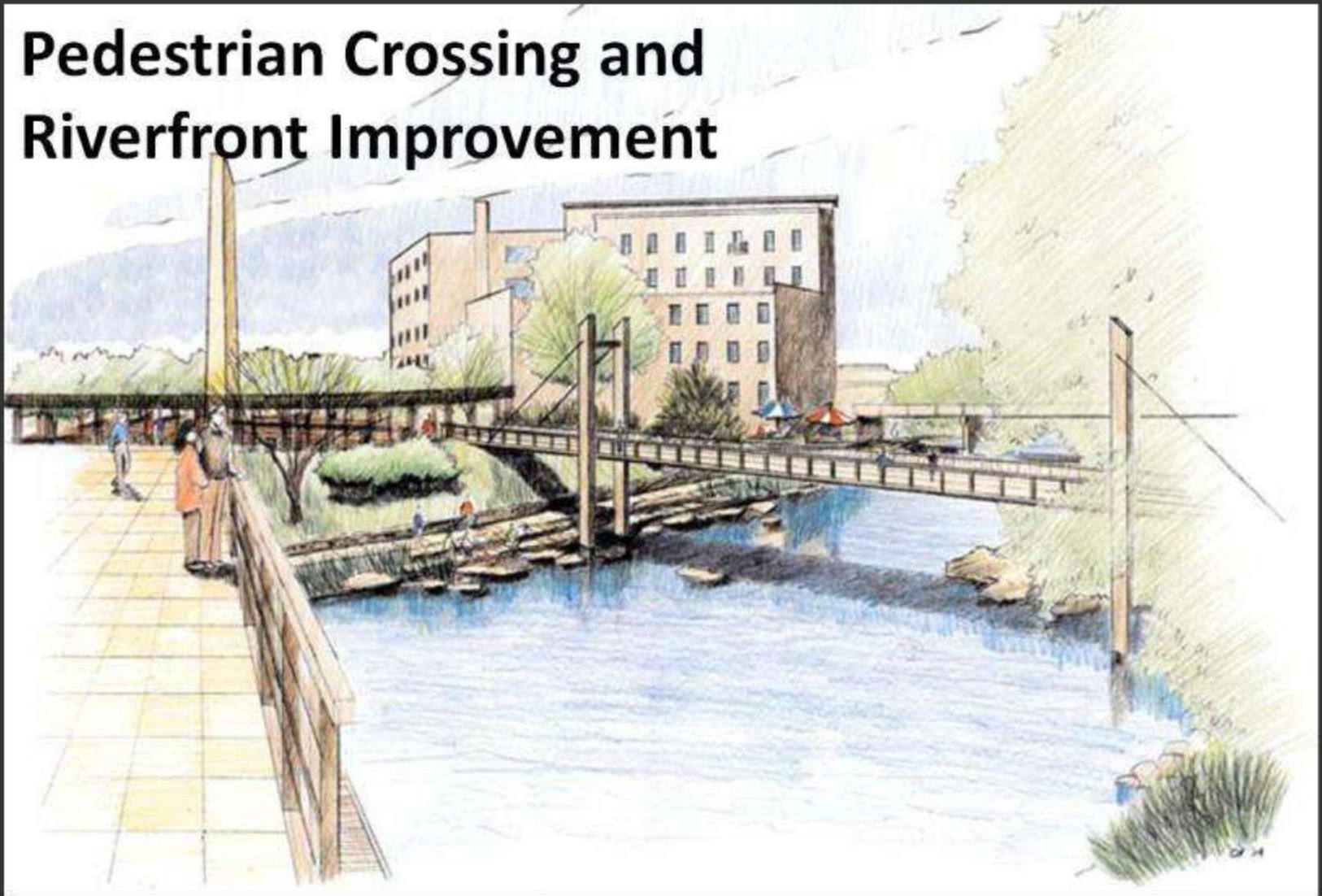
Zone 1 Before

Pedestrian Crossing and Riverfront Improvement



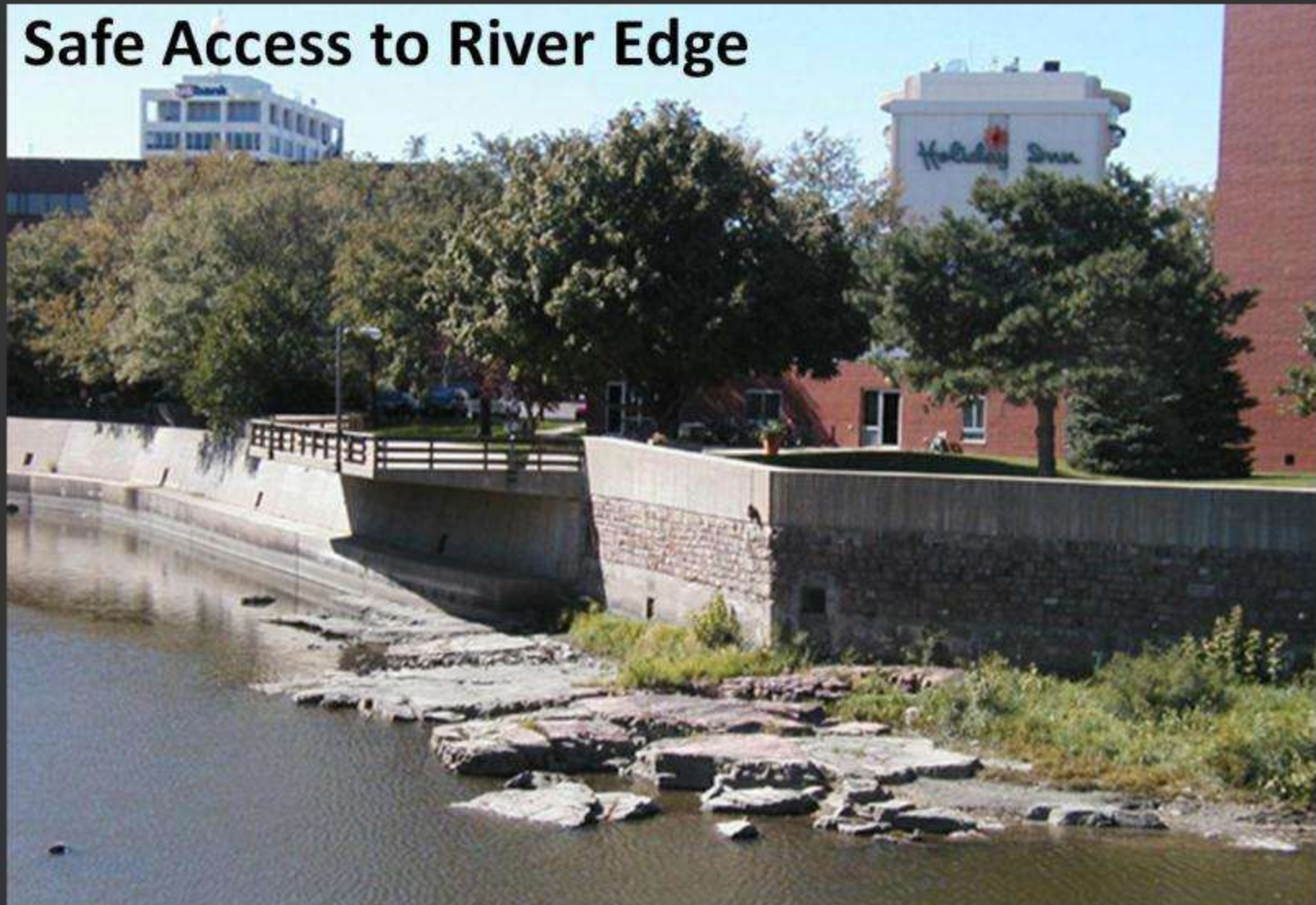
Zone 1 -After

Pedestrian Crossing and Riverfront Improvement



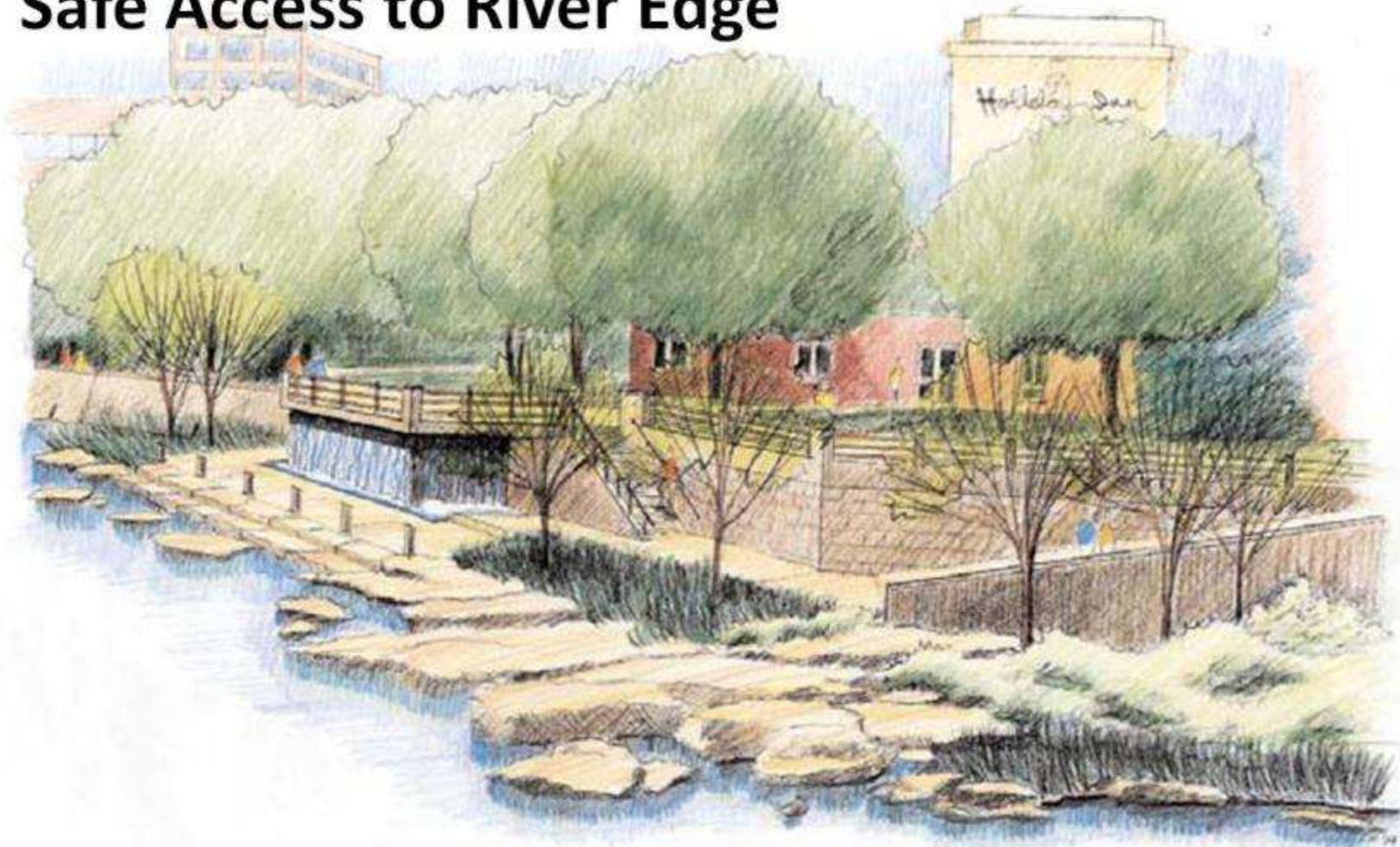
Zone 1 Before

Safe Access to River Edge



Zone 1 - After

Safe Access to River Edge



Cherapa Place

Cherapa Place

- 120k Sq. Ft.
- USGBC
LEED Certified

Country Inn & Suites

- 72 Guest Rooms
- Riverfront
Meeting Rooms

Cherapa Tenants

- CoreTrust Bank
- Sanford Health Plan
- Great Plains Brokerage
- TLC Advantage
- Human Engineering
Solutions
- Morgan Stanley
- 605 Magazine
- Howalt-McDowell
Insurance
- RAS
- Insurance Alternatives



Cherapa Place Riverfront Fountain and River Steps



Country Inn
& Suites

Downtown

Phase 1 –
East Bank and
Riverwalk Construction

Country Inn
& Suites

Cherapa Place

Pedestrian Bridge

Waterfront Fountain

Phase 1 - East Bank and Riverwalk Construction



Current Status

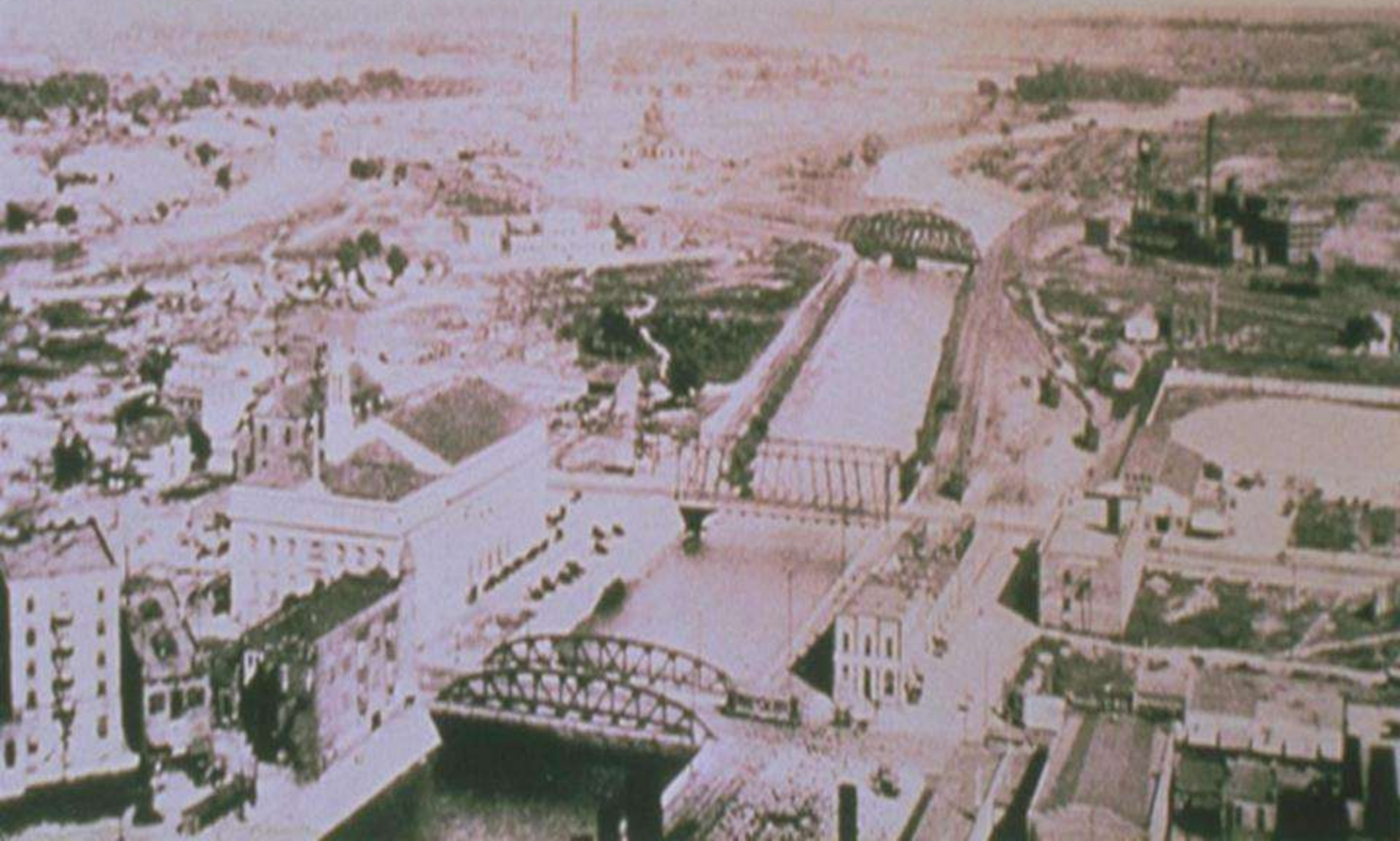
- ✓ Two phases of construction near completion
- ✓ 2011 Grant for \$1.9 M for further phases

Historic Arkansas Riverwalk of Pueblo

Arkansas River
Pueblo, Colorado



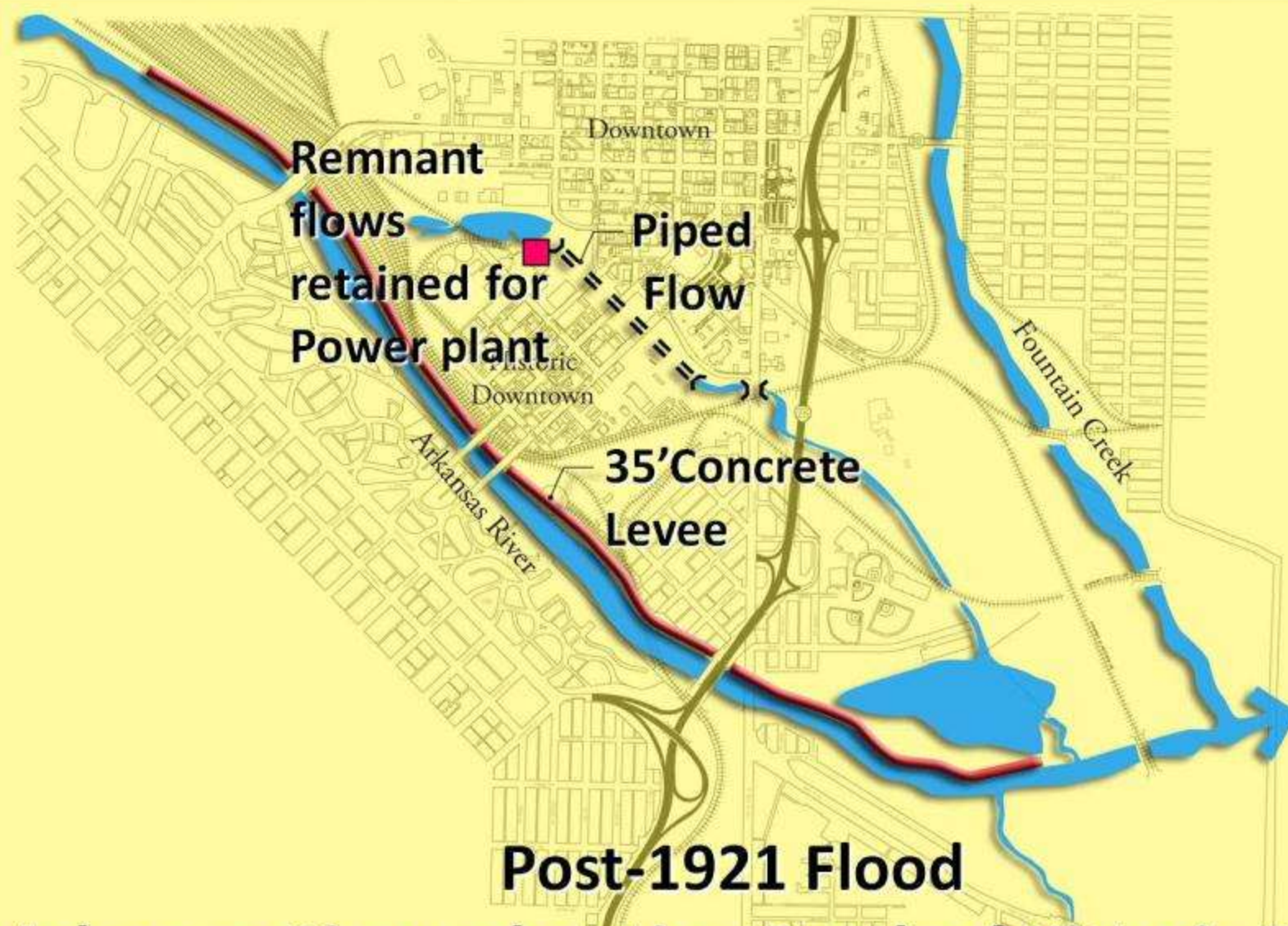
Pueblo Pre-1921



The Flood of 1921

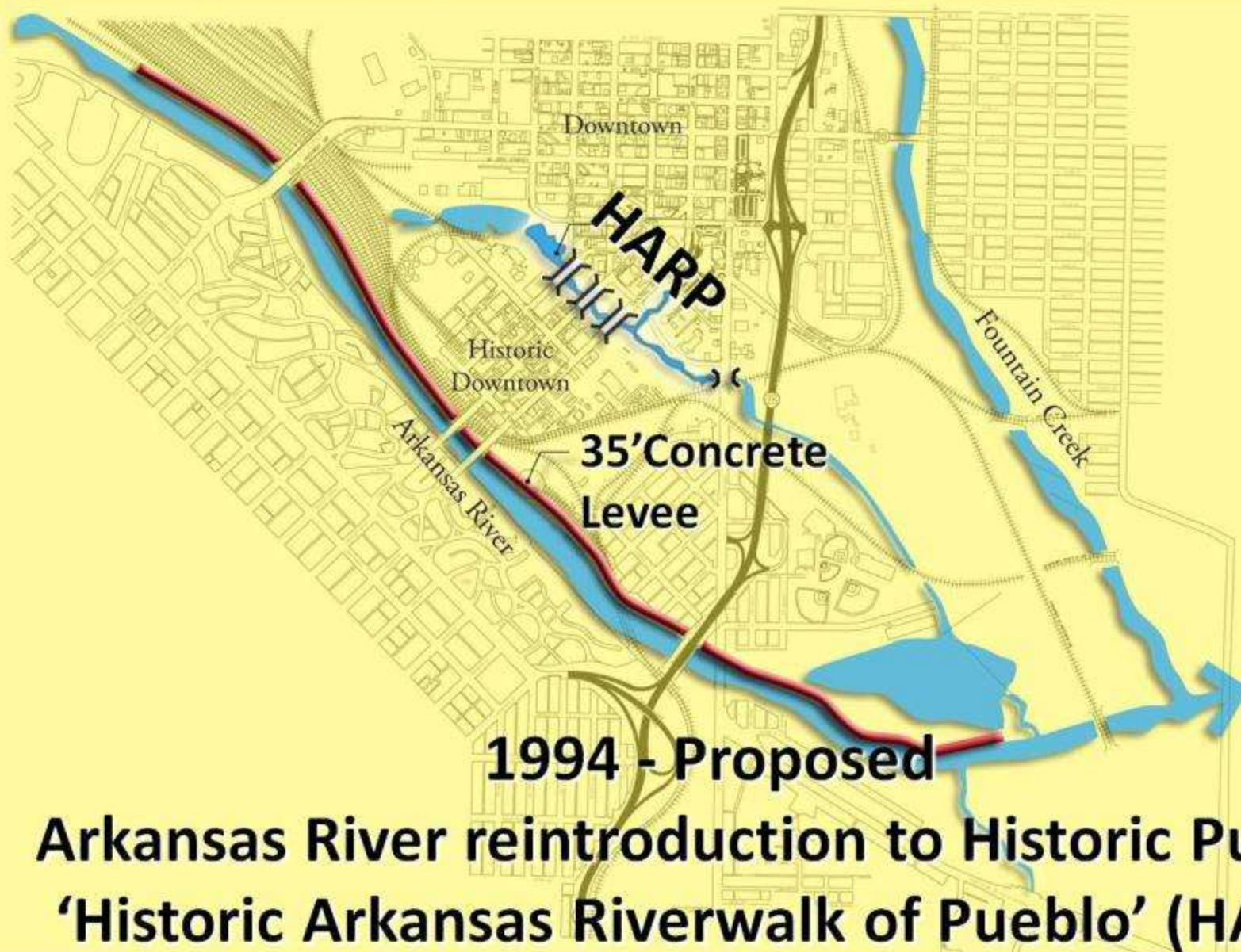


Arkansas River Channel



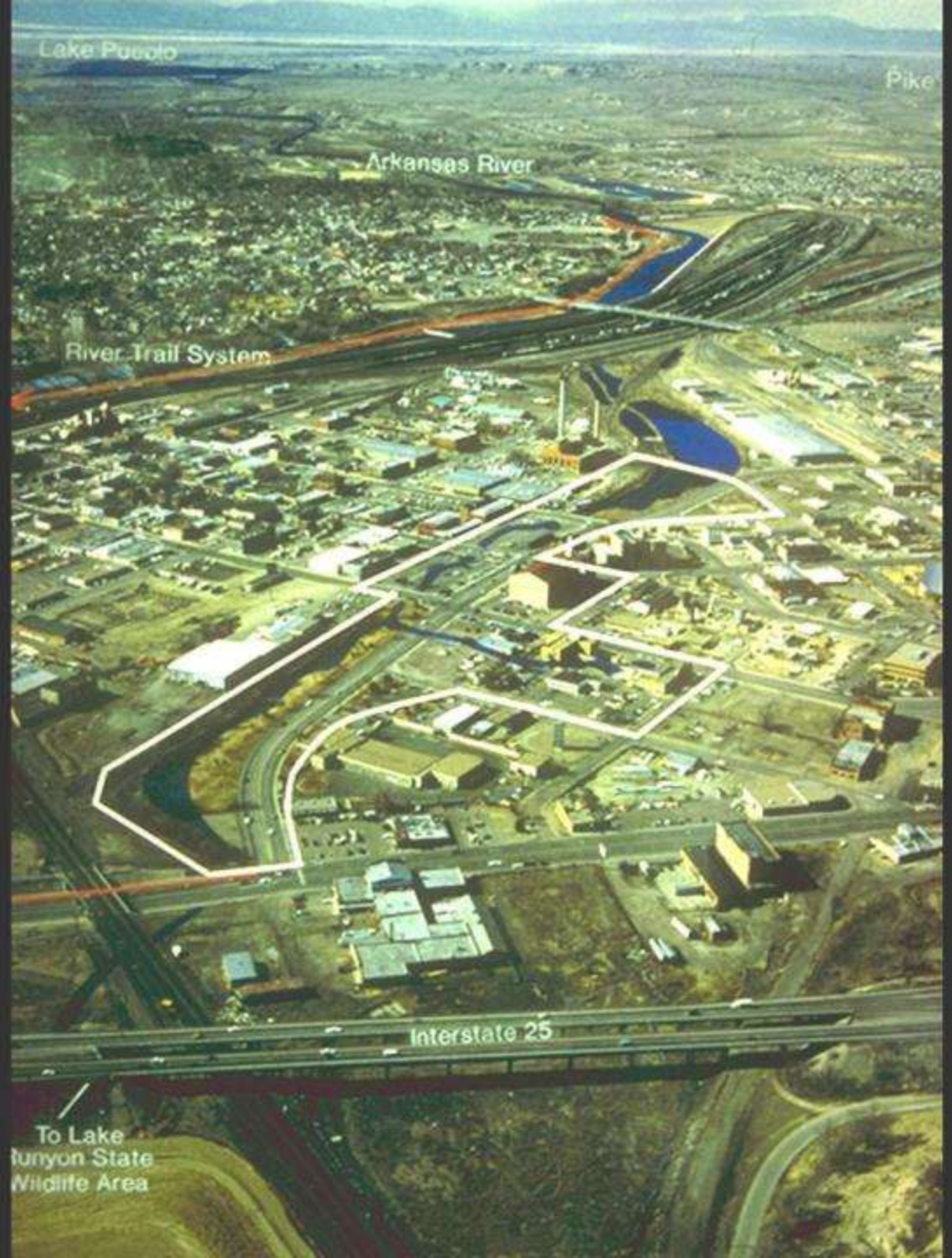
Arkansas River relocation South of Historic Pueblo

Arkansas River Channel



1995 Proposed HARP District

Channel overlaid
on existing Aerial
Photo looking
West





The Pueblo Chieftain

128 years...and still on the job

STATE ELECTION

Colorado voters overwhelmingly defeat the state contracting with private prisons to house overflow inmates. CITY/REGION



MOUNTAIN SPIRIT

A Salado couple have turned their hobby of making wine into a business, and their first batch is in the bottles. 1C



BEST IN NL

Don Baylar is named of the year after directing Colorado Rockies to playoff berth. 1D

ELECTION '95

Pueblo on the move

- * Riverwalk
- * Pueblo West high school
- * 1/2-cent sales tax
- * Library improvements



Pat Kelly (right) celebrates passage of the Historic Arkansas Riverwalk Project with Vera Ortelon.

River rolls!

Puebloans vote yes on HARP

By JUAN ESPINOSA
The Pueblo Chieftain

It was a squeaker, but it looks like Pueblo will have its Downtown riverwalk after all.

Voters narrowly approved the \$12.85 million Historic Arkansas Riverwalk Project on Tuesday's election. The final vote was 11,711 in favor, 10,840 against.

By the time the final votes were tallied, HARP supporters knew they had dodged a HARPster. Early results showed the ballot question losing by a close margin for the first time in vote counting. When the tide turned and the "yes" vote started pulling ahead, HARP supporters began hugging one another and dancing

on the remnants of the Pueblo County Courthouse.

"This was a terrible night — what a bummer," said Pat Kelly, who as chairwoman of the HARP Commission spearheaded the campaign.

She said design work on the project will begin immediately.

"We're sending our planners back to Denver (today) and they're going to start on our construction designs so we can get started with construction in June," Kelly said.

Dean Dennis, vice president of the Convention and Visitors Council of the Pueblo Chamber of Commerce, watched nervously as HARP began to emerge victorious after about 70 percent of the vote had been counted. He said the

vote was an example of Pueblo's newfound momentum.

"Now's the time to do it," he said. "Pueblo's on the move right now. You can go anywhere in the state and people ask, 'What's going on in Pueblo?' What are you doing down there?"

"We've got the half-cent sales tax (for job development) and we've got HARP," Dennis said. "Puebloans are saying, 'We've got to do it for ourselves.'"

In supporting HARP, voters approved an annual expenditure of up to \$1.1 million for 20 years to retire a \$12.85 million bond issue that would finance most of the public portion of HARP. That \$1.1 million is above what the city Please see HARP, Page 2A

ISSUES

Sales tax passes

Pueblo West to get

Library mill









Current Status

- ✓ \$32M of construction
- ✓ \$165M new public/private investment
- ✓ 2011 State Regional Tourism Zone
Grant application to expand:
 - Convention,
 - Hotel,
 - Entertainment facilities
 - and Riverwalk Channel Extension



LEGEND

Existing

- 1. HARP Riverwalk Visitors Center
- 2. Union Avenue Historic District
- 3. Southeast Colorado Heritage Center
- 4. Arkansas River Whitewater Park
- 5. Rawlings Public Library
- 6. Professional Bull Riders (PBR) World Headquarters
- 7. El Pueblo Museum
- 8. Pueblo Plaza Ice Arena
- 9. Buell Children's Museum
- 10. Sangre de Cristo Arts Center
- 11. Pueblo Convention Center
- 12. City Hall
- 13. Main Street Parking Garage
- 14. Congressional Medal of Honor Memorial Plaza *
- 15. Veteran's Bridge *
- 16. Center for American Values *
- 17. Founders Plaza *
- 18. Hotel
- 19. Memorial Hall Theater

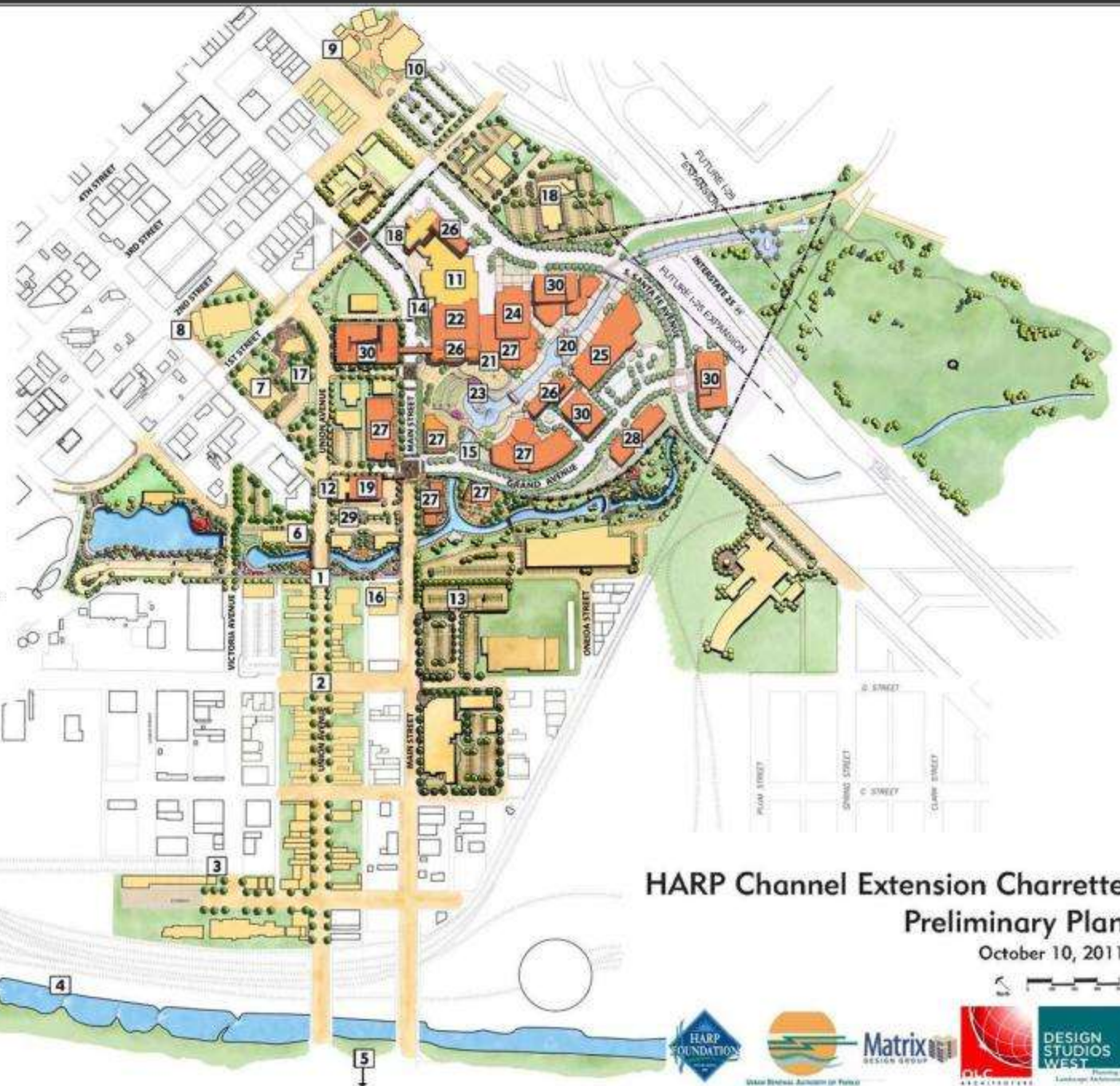
Proposed

- 20. HARP Grand Canal
- 21. Gateway Park Welcome Center
- 22. Exhibition Hall
- 23. Heritage Plaza Event Space
- 24. PBR Multi-Sports Complex
- 25. Regional Aquatics Center and Indoor Water Park
- 26. Mixed Use Hotel Development
- 27. Mixed Use Commercial Development
- 28. Zebulon Pike National Historic Trail Visitor Center*
- 29. Woodrow Wilson Commemorative Plaza*
- 30. Parking Structure

*Denotes stop on Walk of Valor

LEGEND

- Proposed
- Existing



HARP Channel Extension Charrette
Preliminary Plan

October 10, 2011



Awards

American
Society of
Landscape
Architects

presented by the

Colorado
Chapter

in recognition
of outstanding
professional
achievement



2010

**Merit
Award**

Historic Arkansas
Riverwalk of Pueblo

**Donald H. Brandes, Jr.,
ASLA**

Design Studios West, Inc.

[Signature]
Chapter President

10.14.10
Date

Economic Implications of Riverfront Projects

Thomas J. Martin, AICP
President
ConsultEcon, Inc.

Who We Are

- ConsultEcon is a management and economic consulting firm founded in 1991, located in Cambridge, Massachusetts. We provide services to a wide range of clients both domestically and internationally.
- Thomas J. Martin is the President and Founder of ConsultEcon, Inc.

Outline of Presentation

1. Importance of Economic Analysis in Planning, Design and Project Implementation
2. Types of Economic Impacts
3. The Role of Water and Case Studies

1. Importance of Economic Analysis in Planning, Design and Project Implementation

- Project Feasibility
 - Cost/benefit
 - NPV
- Project Business Planning
 - ROI
 - NPV
- Project Economic Impact
- Techniques
 - RIMS Modeling
 - Input-Output Models
 - Money Generation Model

2. Types of Economic Impacts

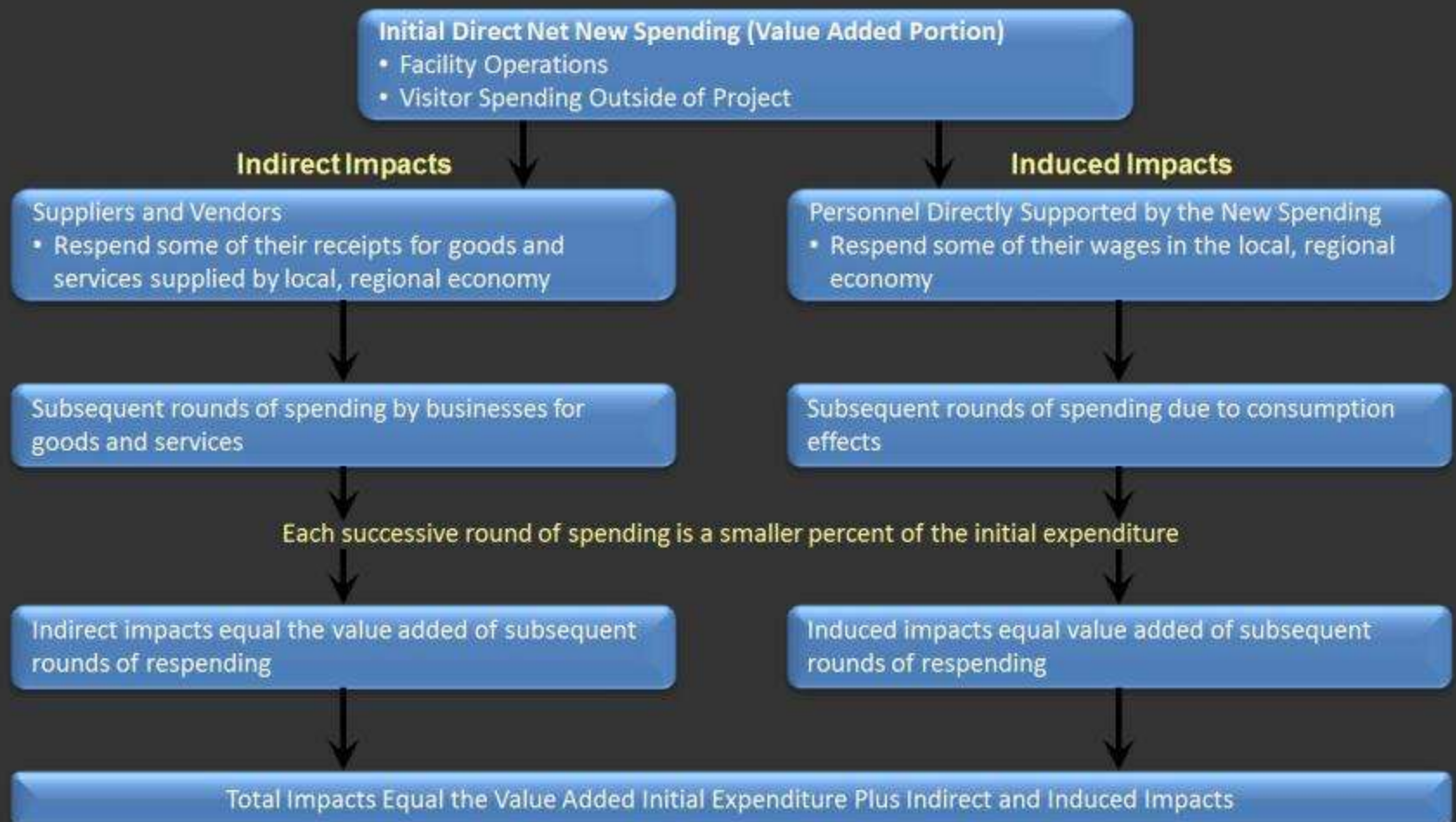
- Economic Impacts are affects on the level of economic activity in a given area.
 - Jobs
 - Personal income
 - Business outputs (sales)
 - Value added
 - Wealth (including property values)
- Defining the geographic area of the impacts is crucial to any impacts

2. Types of Economic Impacts

- Direct Impact
 - Economic activity created by/at Project.
- Indirect Impact
 - Economic activity experienced by businesses (and government) as a result of purchases made by employees, visitors.
- Induced Impact
 - Economic activity created as a result of employment and spending

2. Types of Economic Impacts

Diagram of Economic Impacts Process



3. The Role of Water in the West

- The availability and use of water has been a defining issue in the American west.
- Water in the west is often a scarce resource.
- People are drawn to the water and the land/water interface has been an important location for economic development.

3. The Role of Water in the West

- One of the first projects to harness this relationship was the development of the Riverwalk in San Antonio, Texas, starting in 1937, with the creation of the San Antonio River Authority.
- A special tax in 1938 leveraged WPA funds to start the project.
- The economic impact is in the billions of dollars.



3. Case Studies

- Trinity River, Texas
The Wilderness in the City
- Las Vegas Springs, Las Vegas, NV
Celebrating Water
- Rio Salado, Phoenix, AZ
Creating Water in the City
- Rio Nuevo, Tucson, AZ
Revitalizing the City Center

3. Trinity River, Texas

The Wilderness in The City



A project within the Dallas – Ft. Worth Metroplex.

- Flood Control
- Recreation
- Transportation
- Economic Development

In Dallas alone over 10,000 acres, creating the largest urban park in the U.S.

Reportedly the largest urban bottom land in the world at 6,000 acres – Great Trinity Forest.

Audubon Nature Center

Three Calatrava bridges

Equestrian Center

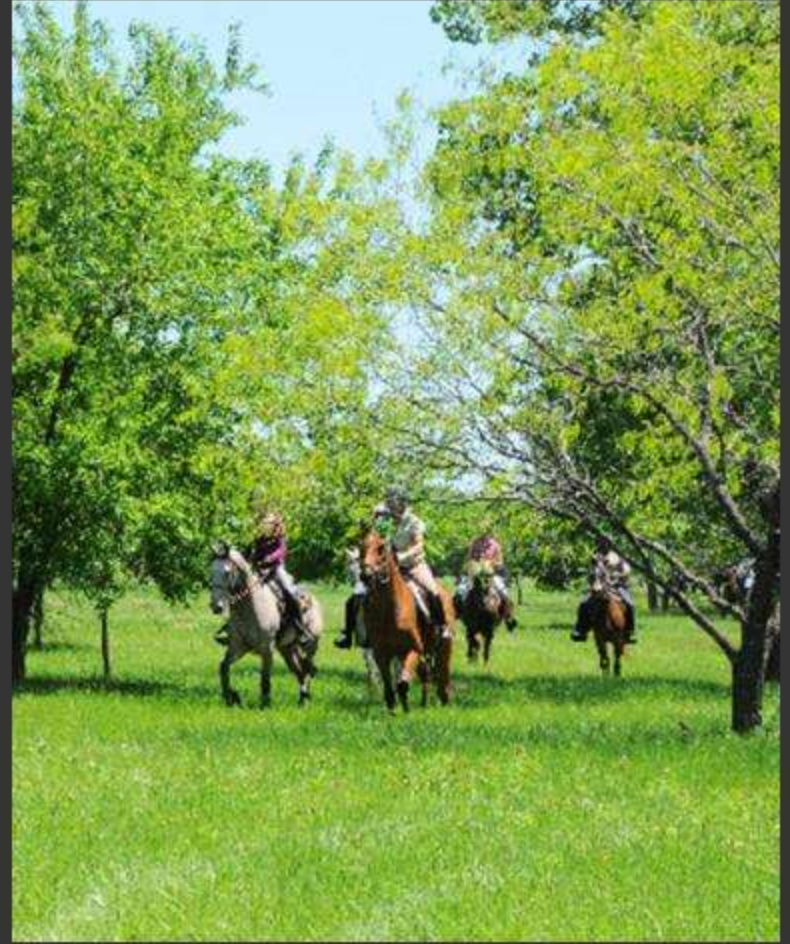
3. Trinity River, Texas

The Wilderness in The City



3. Trinity River, Texas

The Great Trinity Forest



3. Las Vegas Springs, NV Celebrating Water



- A 100 acre site, location of the natural spring that was the basis for the settlement of Las Vegas
- Redeveloped by the Las Vegas Water District to focus on issues of water use, recreation, conservation and economic development.

3. Rio Salado, AZ

Creating Water in the City



- The organizing feature of the Phoenix metropolitan area
- Dry most of the year, but subject to flooding
- Extensive floodable park lands and associated redevelopment
- Town lake developed in Tempe as part of this overall plan



3. Rio Nuevo, AZ

Revitalizing the City Center



- Like Phoenix, an organizing feature of the Valley – traditionally used as a dumping ground
- Santa Cruz River rises in the U.S., flows south into Mexico and then back north into the U.S.

3. Rio Nuevo, AZ

Revitalizing the City Center



- Redevelopment Plans focusing on the “greening” of the Santa Cruz River corridor and clustering of civic uses
- Origins Park & Heritage Gardens
- Science Center
- State History Museum
- Recreated Convento/Presidio

3. Rio Nuevo, AZ

Revitalizing the City Center



*Thank
you...*

DESIGN
STUDIOS
WEST
Planning &
Landscape Architecture

WWE
WRIGHT WATER
ENGINEERS, INC.

ConsultEcon, Inc.

