

Memorandum



CITY OF DALLAS

DATE August 1, 2008

TO Trinity River Corridor Project Committee Members: David A. Neumann, Chair; Dr. Elba Garcia, Vice Chair; Dwaine R. Caraway, Carolyn R. Davis, Linda Koop, Pauline Medrano, Mitchell Rasansky, Steve Salazar

SUBJECT Levee Drainage System – Sump A (Able Pump Station) Briefing

On August 5, 2008, staff will brief the Trinity River Corridor Project Committee on an alternative plan for replacement of the Able Pump Station. Attached are copies of the materials for your information.

Please let me know if you need additional information.

A handwritten signature in black ink, appearing to read 'Jill Jordan'.

Jill A. Jordan, P.E.
Assistant City Manager

c: The Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Thomas P. Perkins, Jr., City Attorney
Deborah Watkins, City Secretary
Craig Kinton, City Auditor
Judge Jay Robinson, Judiciary
Ryan S. Evans, First Assistant City Manager
Ramon F. Miguez, P.E., Assistant City Manager
A.C. Gonzalez, Assistant City Manager
David O. Brown, Interim Assistant City Manager
David Cook, Chief Financial Officer
Jeanne Chipperfield, Interim Director, Office of Financial Services
Edward Scott, Interim Director, Office of Financial Services
Helena Stevens-Thompson, Assistant to the City Manager – Council Office
Rick Galceran, P.E., Director, Public Works and Transportation

Levee Drainage System – Sump A (Able Pump Station)

Trinity River Corridor Project Committee

August 5, 2008





Purpose

- Review 2006 Bond Program plan for Sump A and the Able Pump Station
- Present an alternative plan that is a better solution and will stimulate economic development
- Set the stage to change the aesthetic appeal for development along the Trinity



Background

- When the Trinity River levees were built in the 1930's
- Water flows from creeks and drainage ways to low areas near the levees
- The combination of these channels makes up the sump system
- The channels take that drainage to six pump stations, three on each side of the river
- The pump stations pump water from channel to the other side of the levee and into the river



Trinity River

Thru 1930s



Background (Cont'd)

- These pump stations were upgraded in the 1950's through the 1970's
- Drainage studies have determined the need to pump more water to prevent flooding of the areas near the sumps
- The goal is to provide 100-year protection



Sump A, Able Pump Station Studies

- Part of the Trinity River flood control component
- Build a new pump station near the two existing ones
- Modify the existing larger pump station
- Decommission the existing smaller pump station
- Create a combined pumping capacity of about 640,000 gallons per minute
- Estimated cost is \$56.1M, with design beginning in December 2009



Alternative Solution

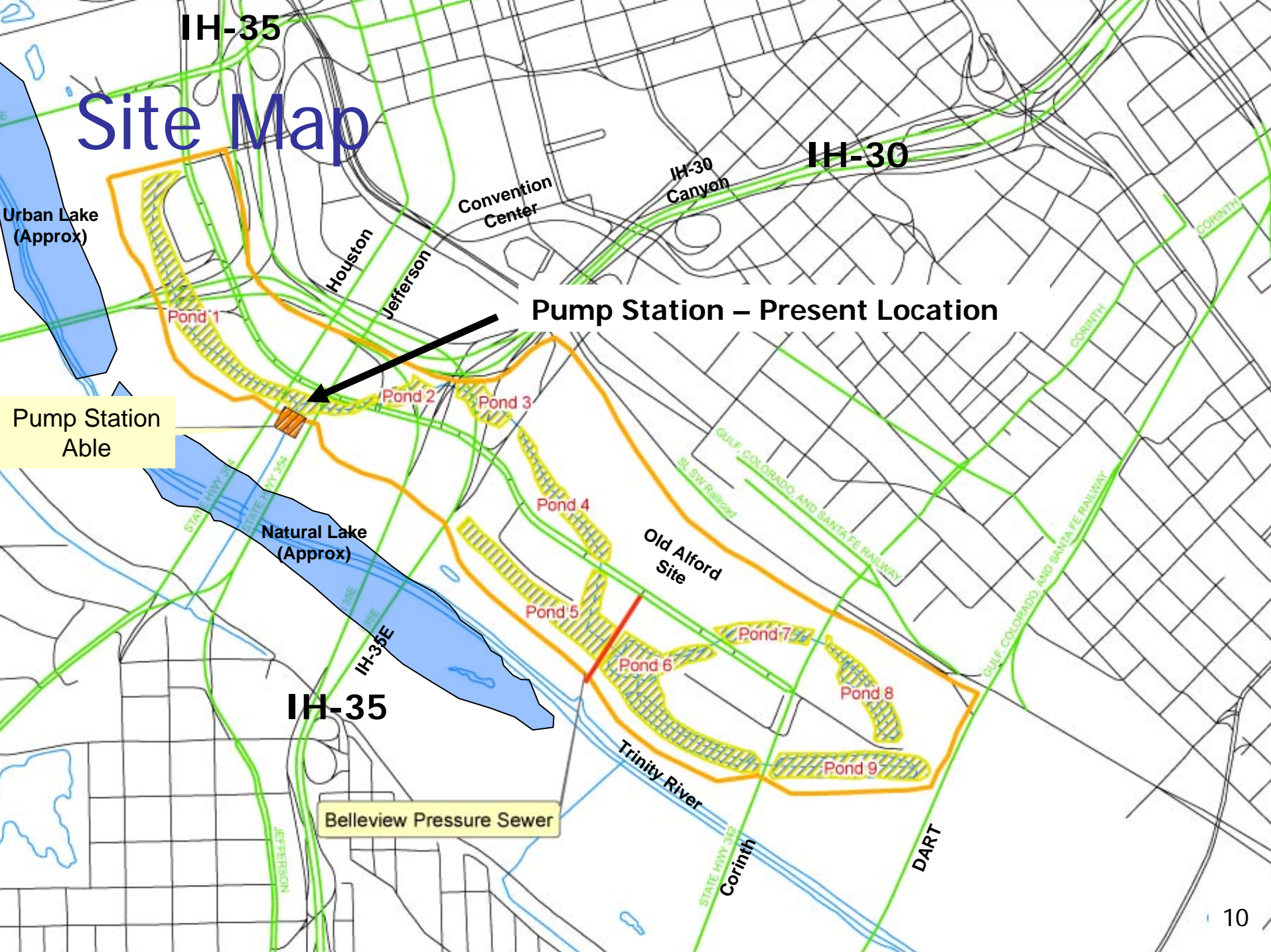
- A developer acquired property in the Lower Cedars area
- The developer's consultant looked at ways to improve drainage and enhance development potential
- The consultant reviewed our drainage report and prepared a new plan



Alternative Solution (cont'd)

- Reduce pump station costs by increasing storm water storage capacity and decrease pump size
- Use some of the savings to provide functional, aesthetic improvements to Sump A
- The Alternative has been reviewed by staff and its own consultants

Site Map



Pump Station – Present Location

Pump Station Able

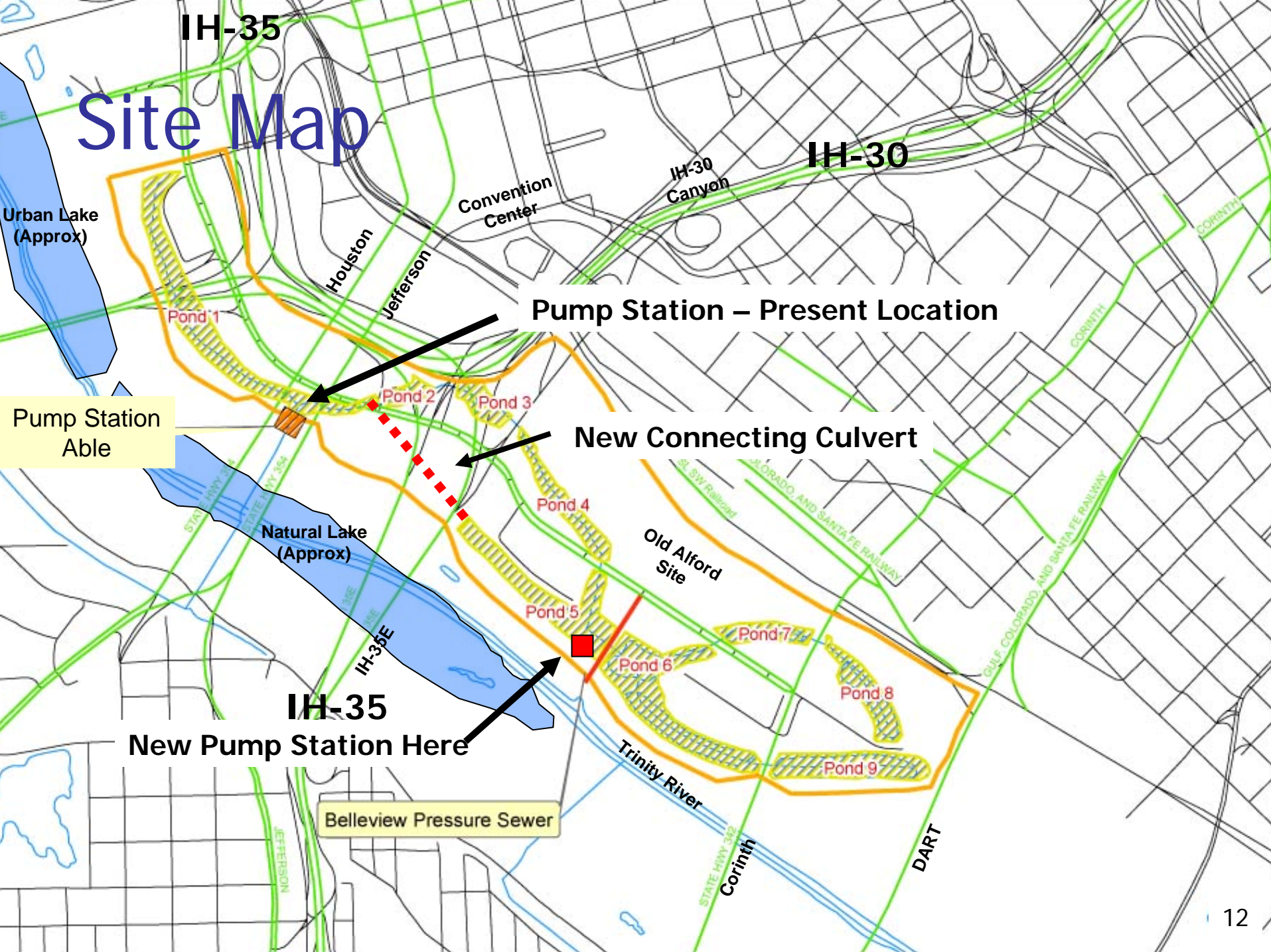
Bellevue Pressure Sewer



The Revised Plan

- Constructs the new pump station near the Belleview Pressure Sewer, and decommission both existing pump stations
- Size the pump station to pump 340,000 gallons per minute from 640,000
- Improved culverts maximize the sump storage

Site Map



IH-35

IH-30

IH-30 Canyon

Convention Center

Pump Station – Present Location

Pump Station Able

New Connecting Culvert

Natural Lake (Approx)

Old Alford Site

IH-35

New Pump Station Here

Bellevue Pressure Sewer



Comparison

- 2006 Plan
 - New pump station
 - Location not ideal
 - Maintain old station
 - 640,000 gpm
 - Low stormwater storage, high pumping rate
 - No enhancements
- Revised Plan
 - New pump station
 - Location better-suited, more space
 - 340,000 gpm
 - High stormwater storage, low pumping rate
 - Sump enhancements
 - Cost saving over \$5M
 - Power cost savings
 - No impact to schedule



Results

- The revised **sump - lake** enhancements includes:
 - Retaining walls
 - Landscaping
 - Trails, viewing areas
- The improvements around the lake are functional as well as aesthetic and will boost opportunities for economic development in the Lower Cedars area

Lake A Today



Lake A Today (Cont'd)



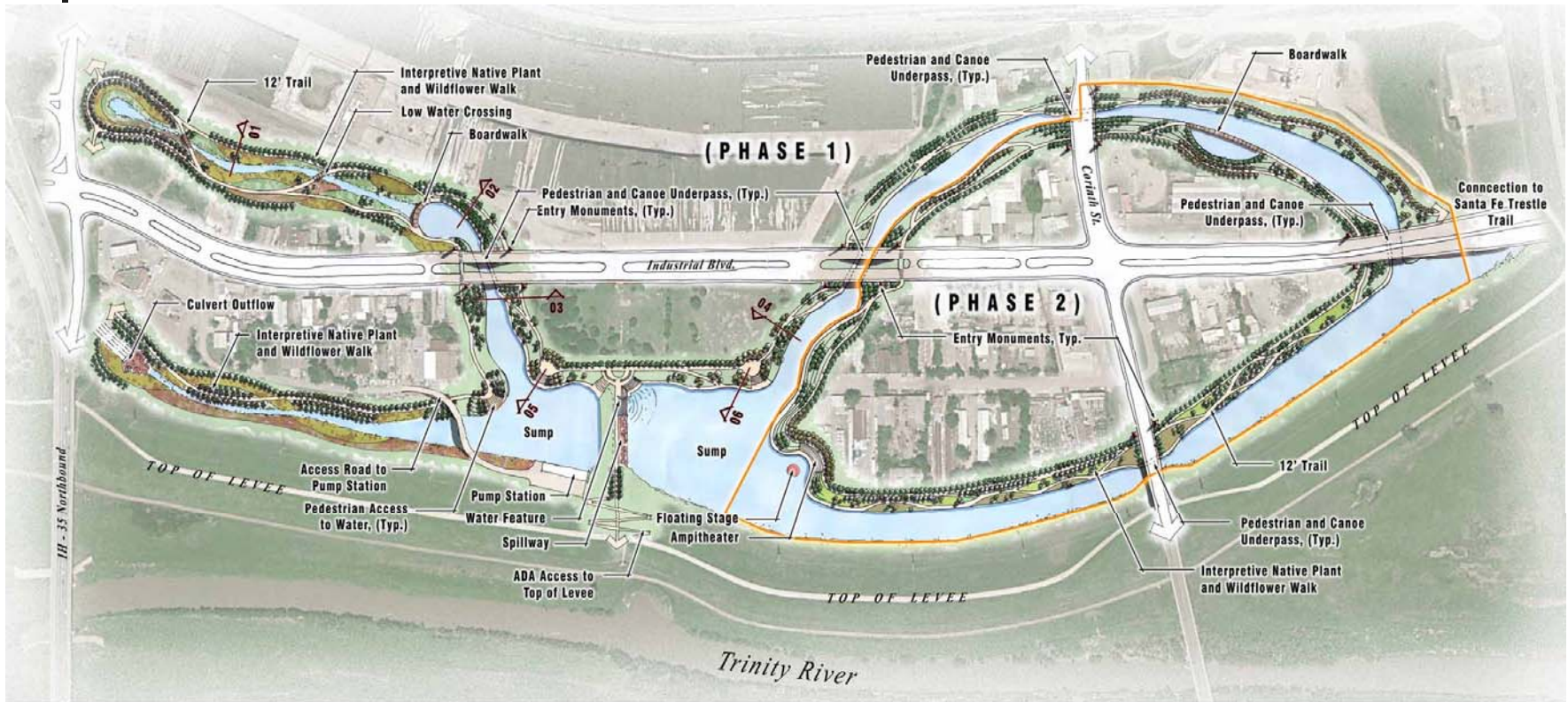
Example of Enhancements Pegasus Park (in Lake B)



Example of Enhancements Pegasus Park (Cont'd)



Example of Development Plan Taking Advantage of Lake Enhancements



January 2008



LOWER CEDARS SUMP EDGE IMPROVEMENT MASTER PLAN

CITY OF DALLAS, TEXAS



Figure 7A



Recommendations

- Proceed with the implementation of the alternative plan for the proposed Able Pump Station
- Accelerate design to begin this year – one year earlier than planned



Next Steps

- Award the design contract in December 2008
 - This schedule would work well for development in the Lower Cedars area and would allow the flood control improvements to be in place sooner
- Include retaining wall, landscaping, and trail improvements in the **Lake** design
 - Aesthetic and functional improvements in the sump provides appeal and will encourage economic development