Memorandum

CITY OF DALLAS

DATE August 15, 2008

TO Trinity River Committee Members:

David A. Neumann (Chairman)	Pauline Medrano
Mayor Pro Tem Dr. Elba Garcia (Vice-Chair)	Mitchell Rasansky
Deputy Mayor Pro Tem Dwaine Caraway	Steve Salazar
Carolyn R. Davis	Linda Koop

SUBJECT Trinity River Corridor Project Trinity Lakes Park Design Guidelines

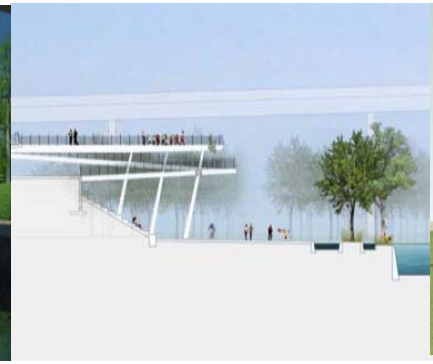
Attached is the Trinity River Park Design Guidelines briefing that was presented at the August 5, 2008 Committee meeting. This will not be briefed at the August 19, 2008 Committee meeting but staff and consultants will be available to answer any additional questions that you may have regarding the material.

Please contact me with questions.

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

c: Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
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 K. Cook, Chief Financial Officer
Deborah A. Watkins, City Secretary
Thomas P. Perkins, Jr., City Attorney
Craig D. Kinton, City Auditor
Judge Jay E. Robinson
Helena Stevens-Thompson, Asst. to the City Manager
Frank Librio, Director, Public Information Office

THE TRINITY
DALLAS



Trinity River Park Design Guidelines
for the Trinity River Corridor Project Committee
August 19, 2008

CH2MHILL

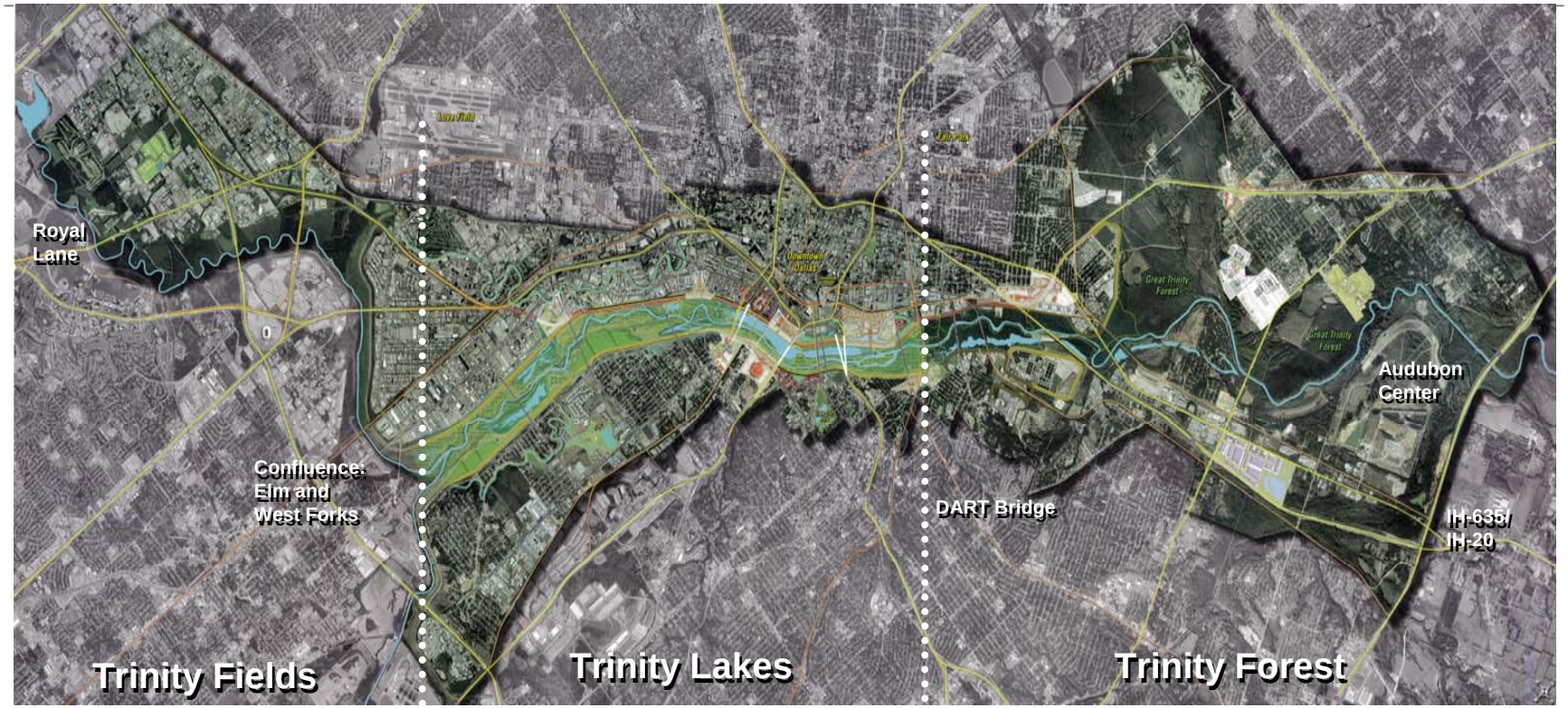
Present Park Guidelines and Concepts

Seek TRCPC Endorsement

Concept

The Trinity River Corridor will be a cultural landscape unlike any other, setting a new bench mark: where art, science and sustainability will coexist throughout the built form, advancing the city's most progressive goals and values…

Trinity River Corridor Guidelines Scope



• Summary of the design concept for a 10,000-acre portion of the Trinity River Corridor from Royal Lane down to IH-635/IH-20 past the Trinity River Audubon Center.

• About two-thirds of the subject area lies within the Trinity Forest.

• By necessity, the guidelines are mostly focused on the Trinity Lakes portion of the corridor—the **Trinity Lakes Park**—about 2,200 acres in extent from the confluence to the DART Bridge.

Design Goals

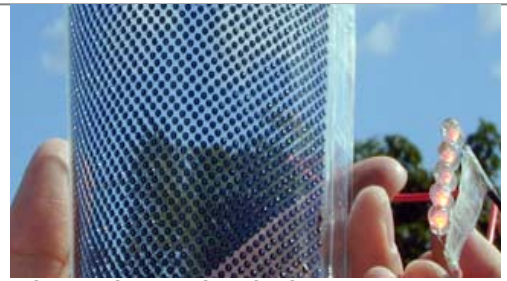
A Park for the Ages…

• The Trinity Lakes portion of the park (between the Confluence and the DART Bridge) is 2.5 times larger than New York's Central Park.

• The park offers a diversity of recreation venues that are active and passive, in land and on water and encompass more than 2,000 acres that will include lakes, wetlands, meadows, woodlands and riparian areas.

Design Goals

Advancing Green Values…



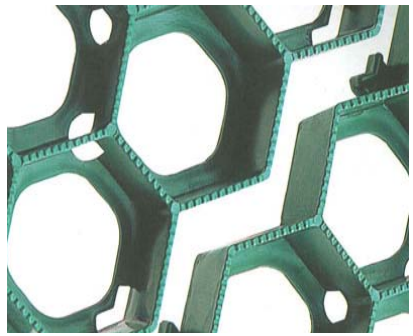
Micro Solar Beads: Shade Structure

Pecan Grove: Urban Agriculture

Hybrid Vehicle: Park Maintenance

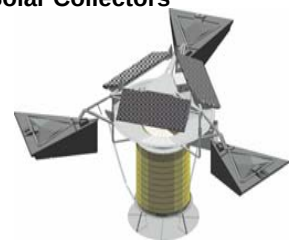
Bio-filtration Ponds

Solar Collectors



Turf Reinforcement: Overflow Parking

Wind Turbines



Solar Powered Lake Aeration

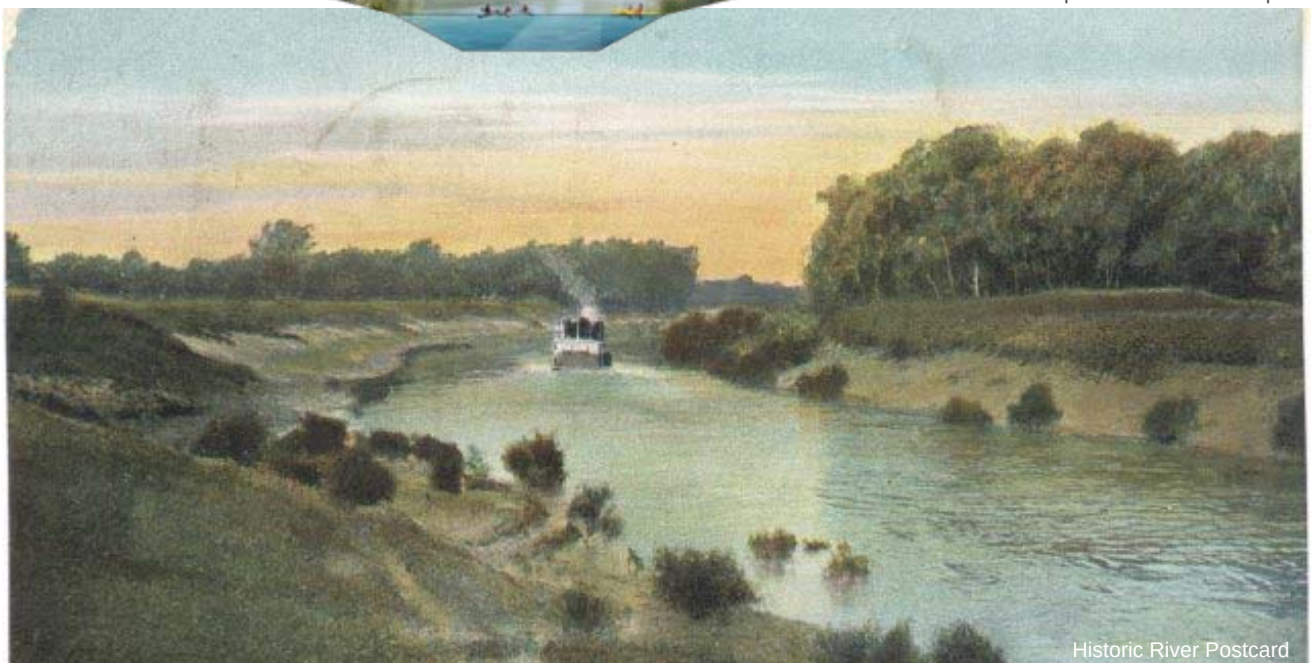
Floating Wetlands

• **Sustainability** is a hallmark of the design for the Trinity River Park, incorporating a range of measures in progressive green technology.

Design Goals

Restoring the Past While Creating the Future…

Proposed River Landscape

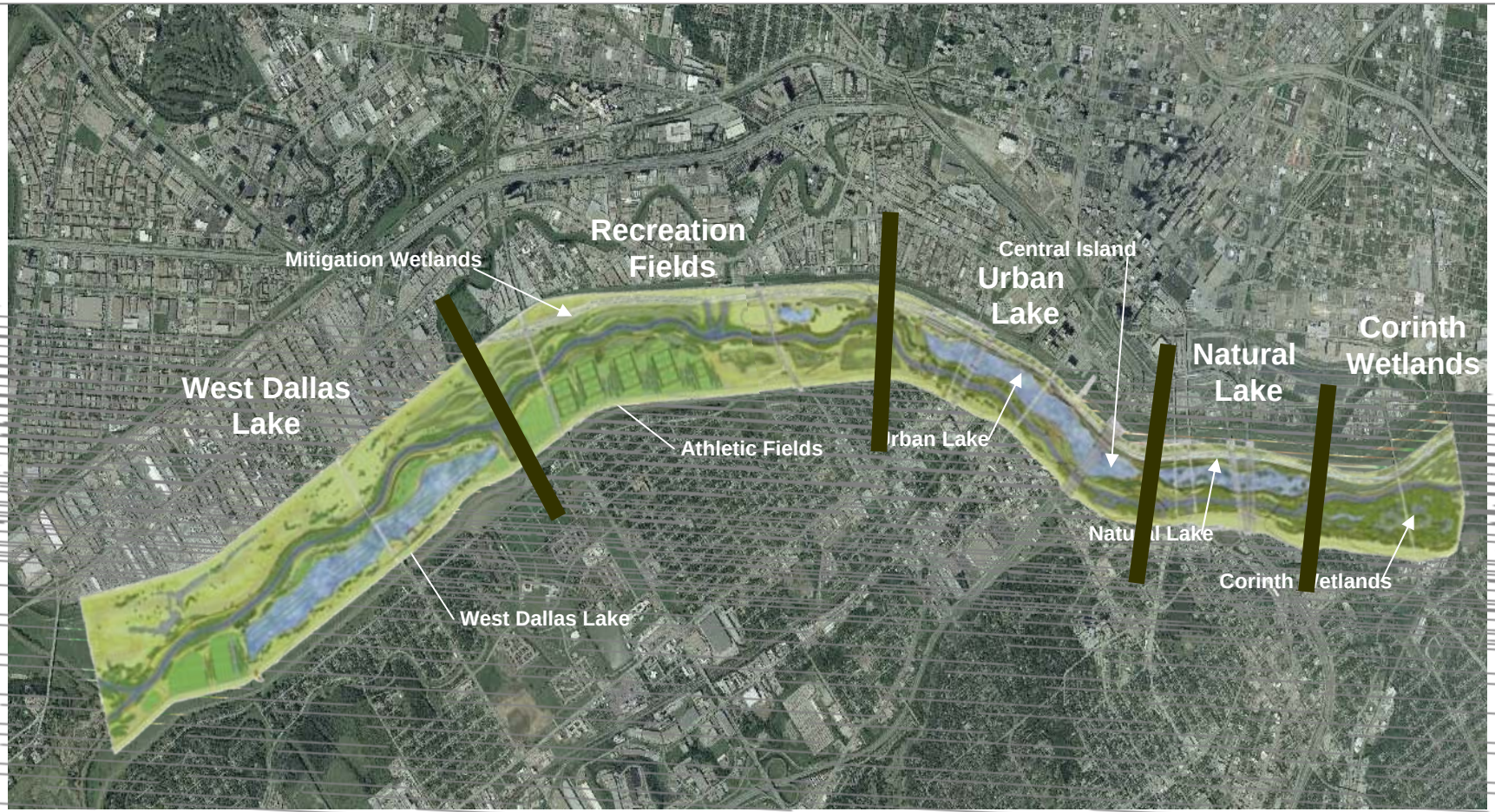


Historic River Postcard

• Recreating the river meanders and vegetated riparian terraces, like the river of yore, is the organizing principle of the park.

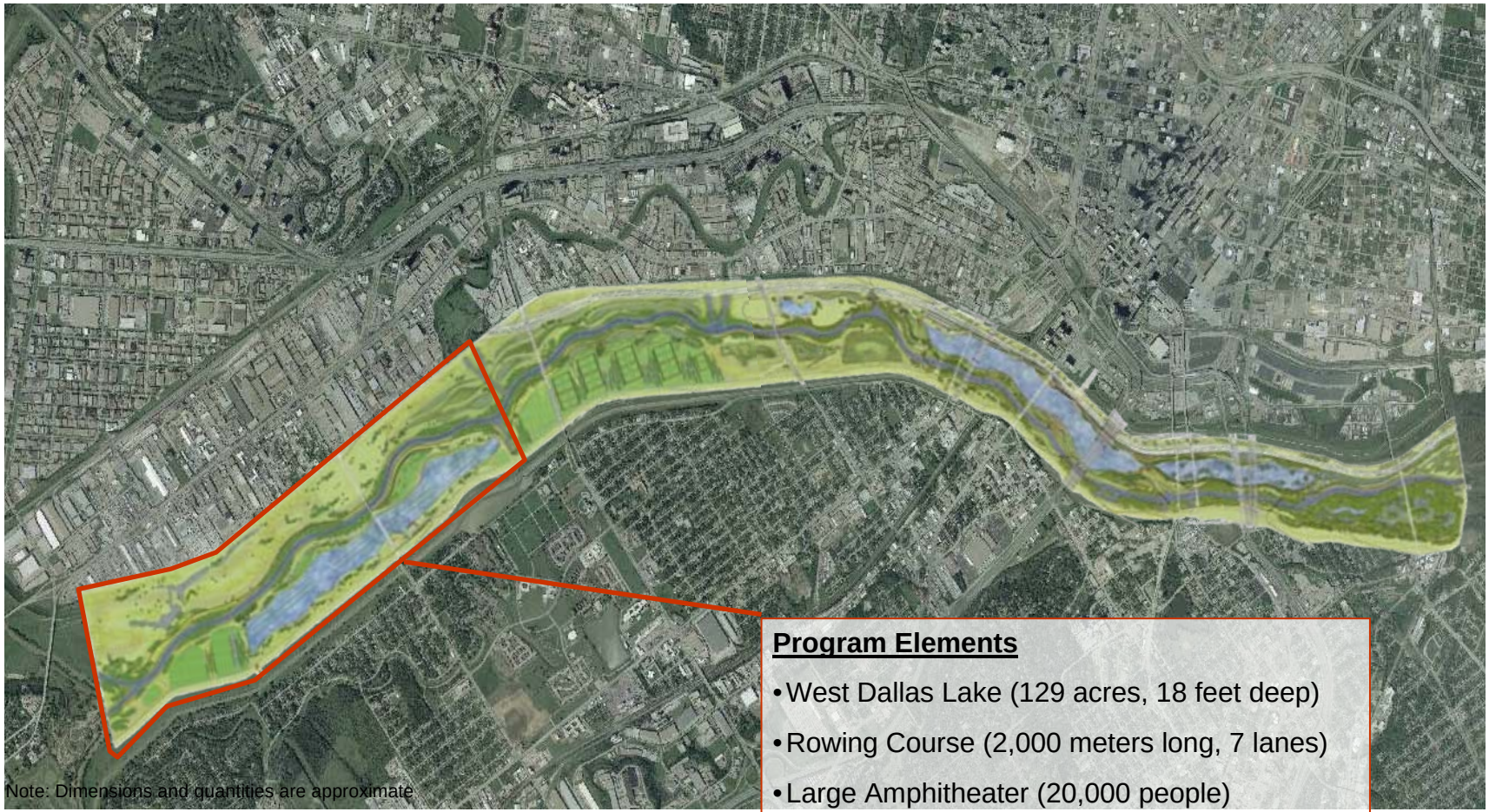
• Experiences include both urban and natural, at times exposed to the wide vistas of the city skyline and at other times to the intimate textures of the Trinity Forest.

Trinity Lakes Park



- The objectives of the Balanced Vision Plan set the precedence.
- The Trinity Lakes Plan responds by advancing a design that is reflective of emerging and progressive values.
- All elements within the park are open to naming rights

West Dallas Lake

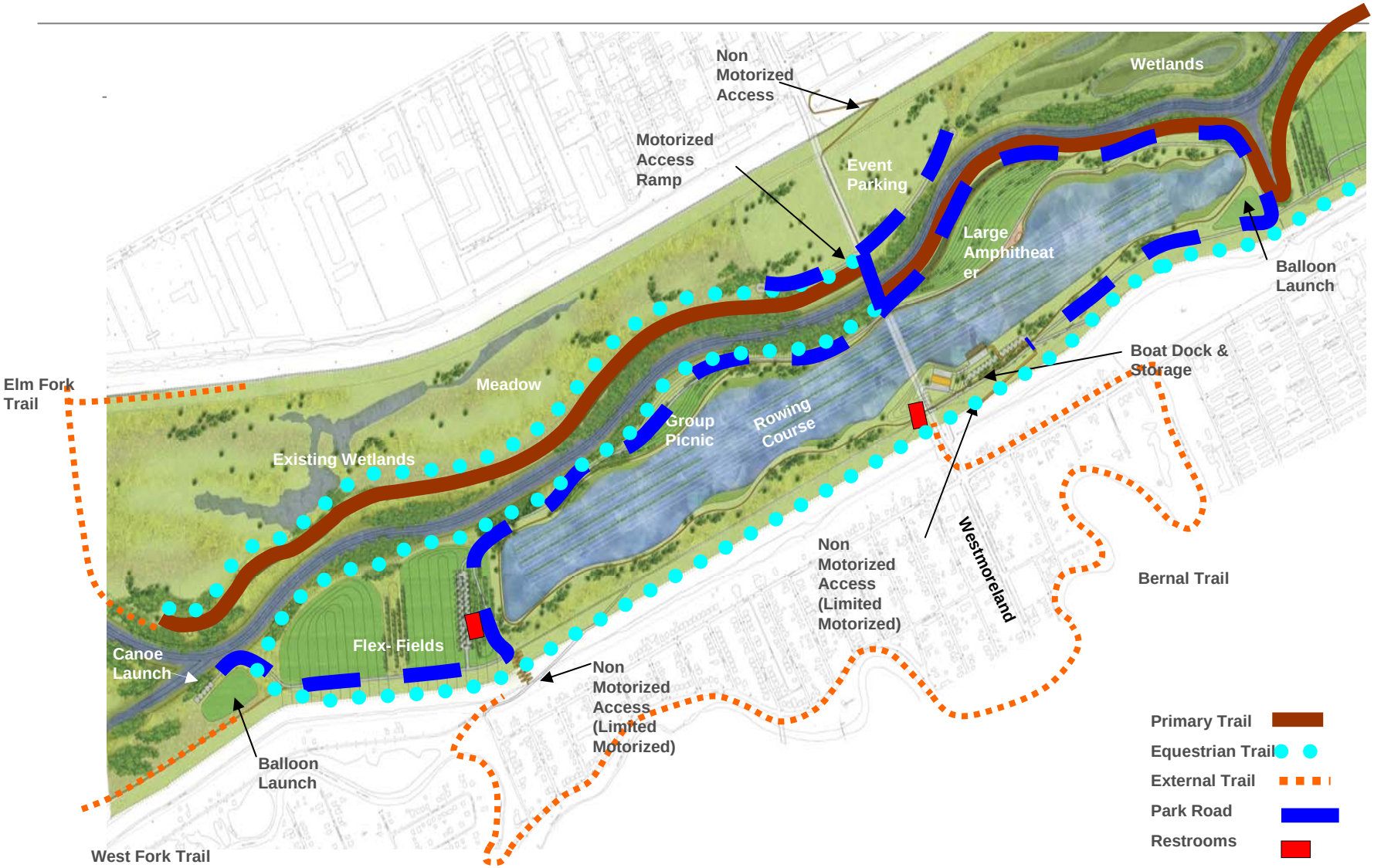


Note: Dimensions and quantities are approximate

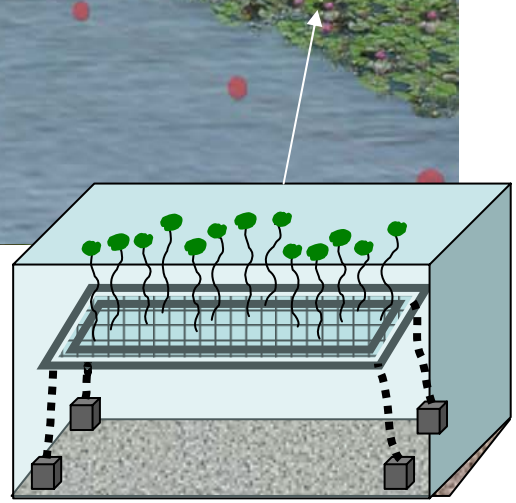
Program Elements

- West Dallas Lake (129 acres, 18 feet deep)
- Rowing Course (2,000 meters long, 7 lanes)
- Large Amphitheater (20,000 people)
- Flex Fields (45 acres)
- Balloon Launch (two 3-acre areas)
- Boat Launch
- Lake Trail (3.5 miles)
- Picnic Areas (5 acres)

West Dallas Lake



West Dallas Lake Rowing



- The West Dallas lake is over 129 acres and over 2000 meters long (meets Olympic standards) that will provide both recreational and competitive boating opportunities for the city and region.
- Submerged wetland island to provide a rooting structure for water lilies.

West Dallas Lake Amphitheater (Afternoon)

• West Dallas Lake Amphitheater used for rowing competition viewing.

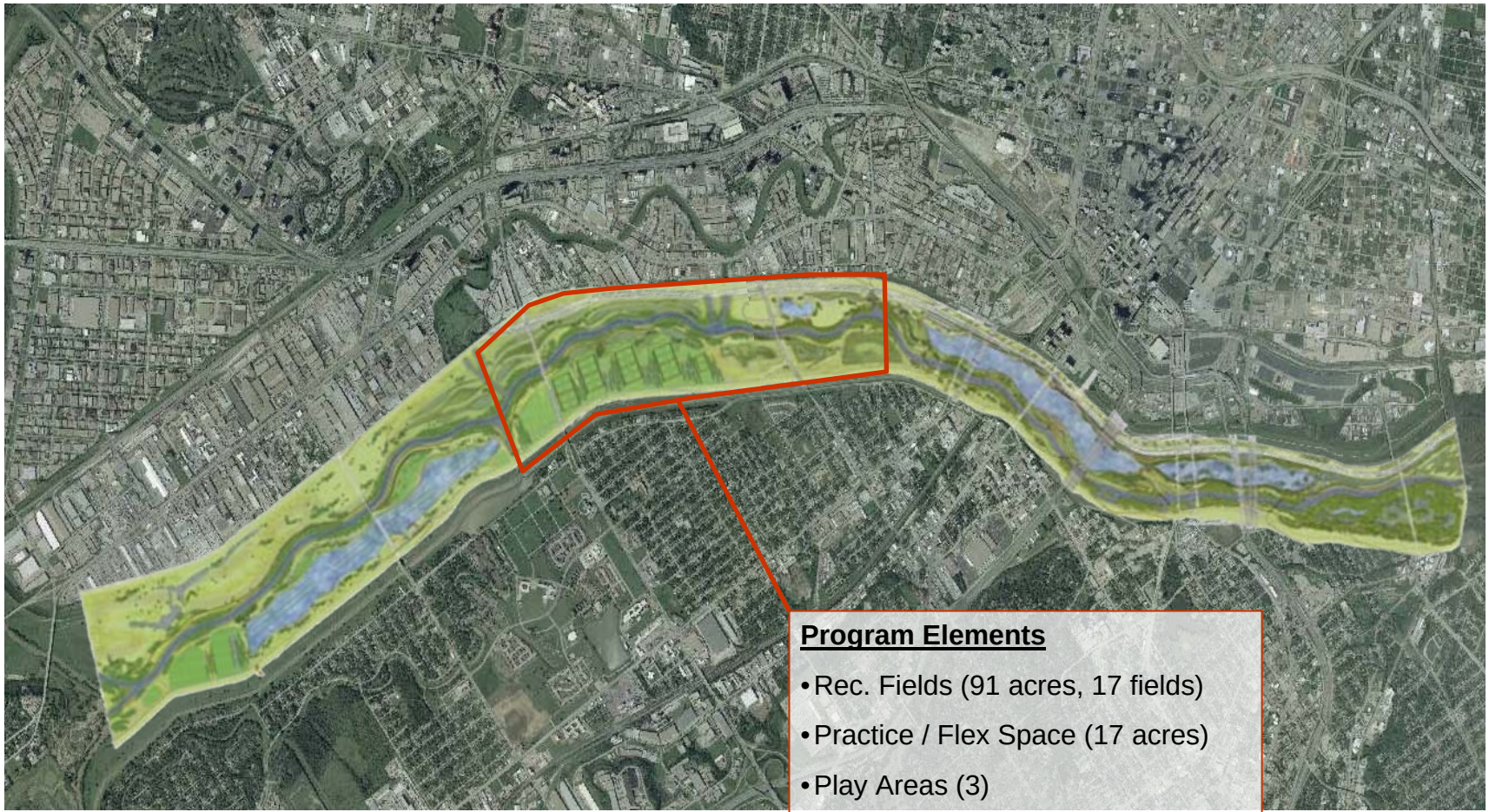
West Dallas Lake Amphitheater (Sunset)

• West Dallas Lake Amphitheater used for passive recreation and view of balloon launch.

West Dallas Lake Amphitheater (Evening)

• West Dallas Lake Amphitheater used for concert venue and fireworks.

Recreation Fields

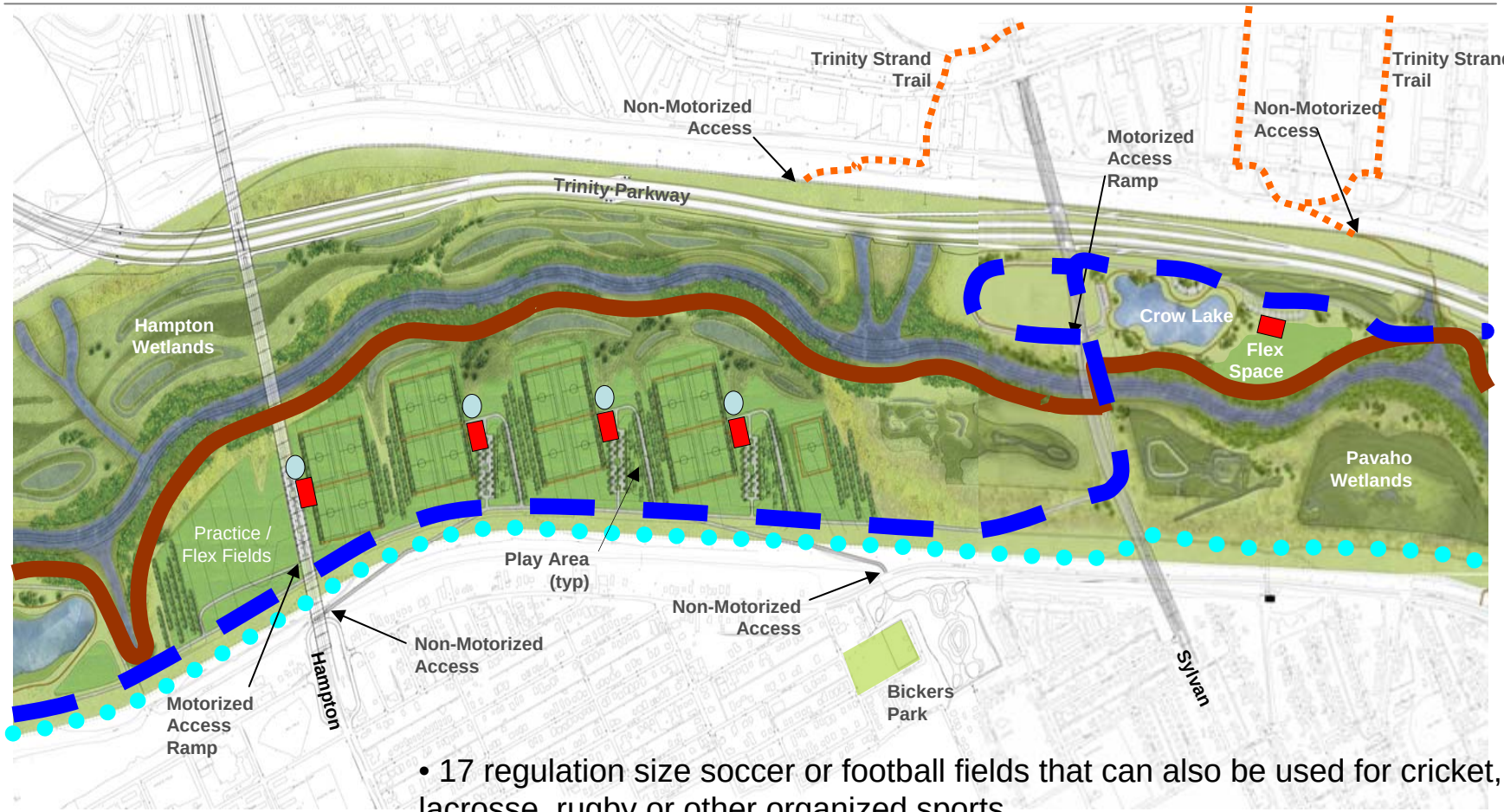


Program Elements

- Rec. Fields (91 acres, 17 fields)
- Practice / Flex Space (17 acres)
- Play Areas (3)
- Crow Lake Park
- Sylvan Boat Ramp
- Hampton Wetlands (142 acres)
- Pavaho Wetlands (50 acres)

Note: Dimensions and quantities are approximate

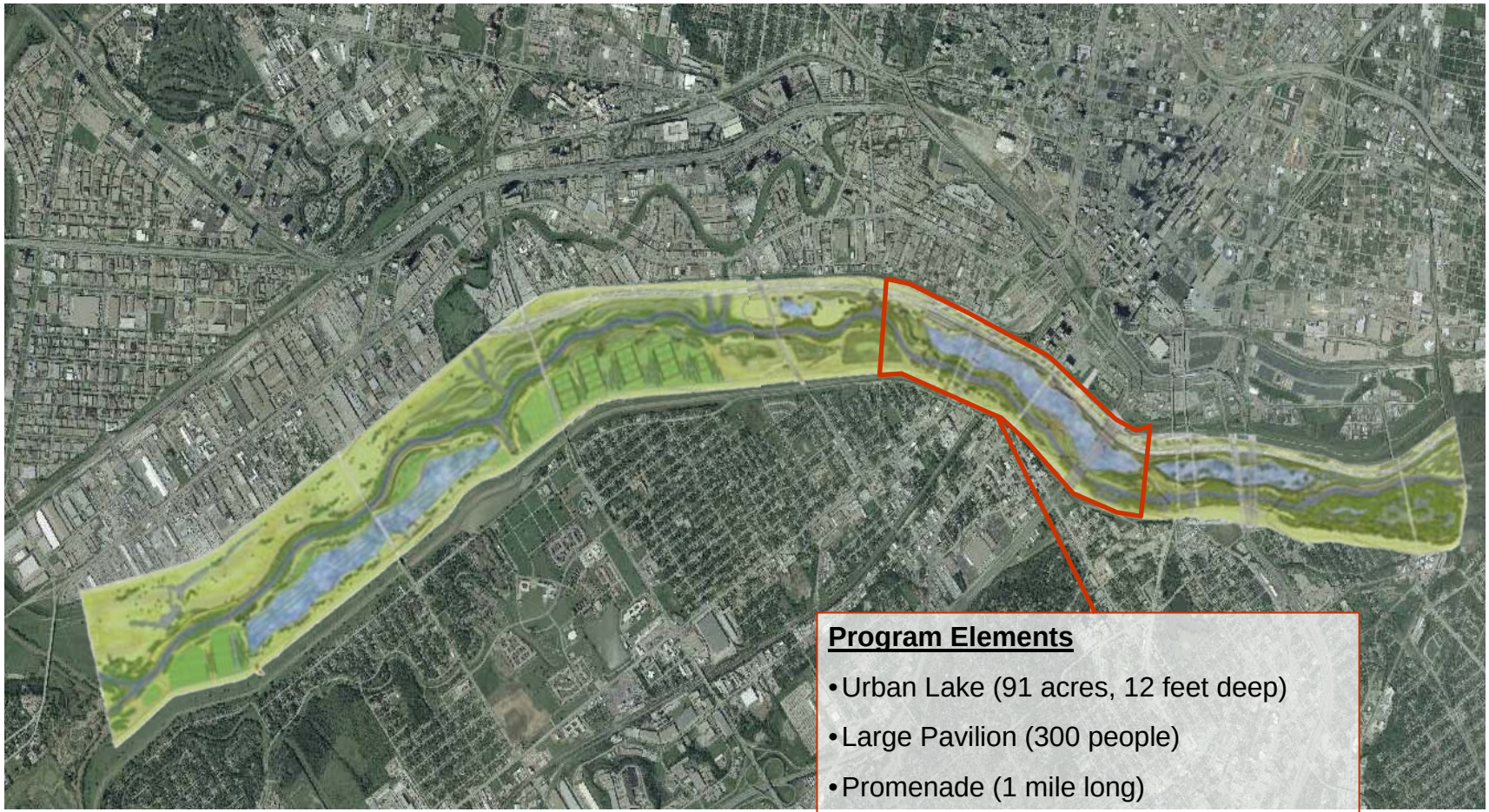
Recreation Fields



Primary Trail
Equestrian Trail
External Trail
Park Road
Restrooms
Concessions

- 17 regulation size soccer or football fields that can also be used for cricket, lacrosse, rugby or other organized sports
- Flex space is intended for informal games, practice or other activities that require large open spaces
- 1600 parking spaces are planned
- Restrooms and concession areas are planned

Urban Lake

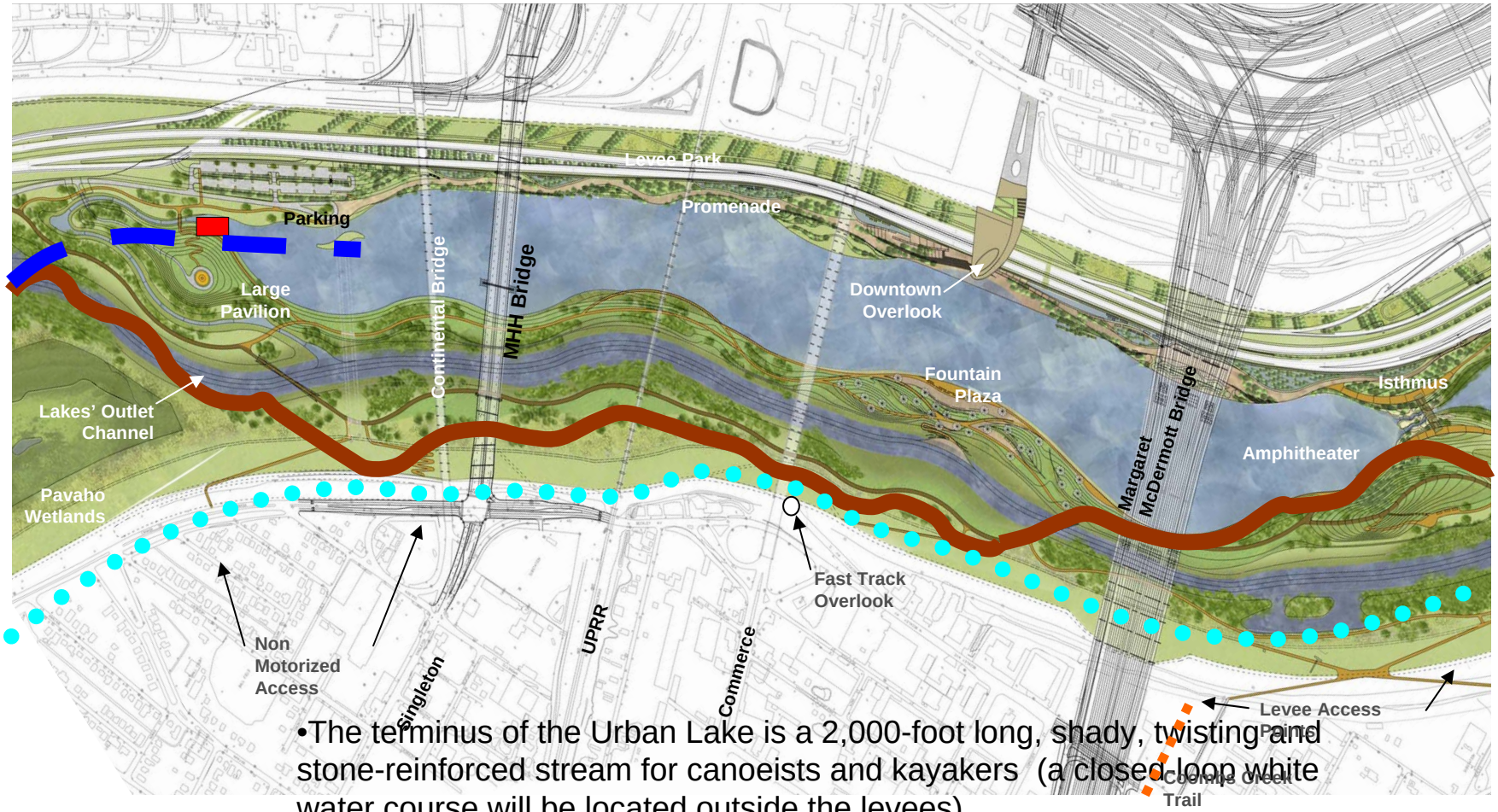


Program Elements

- Urban Lake (91 acres, 12 feet deep)
- Large Pavilion (300 people)
- Promenade (1 mile long)
- Central Island (55 acres)
- Central Island Amphitheater (2,000 people)
- Downtown Overlook
- Fast Track Overlook
- Marina (as a concession)

Note: Dimensions and quantities are approximate

Urban Lake

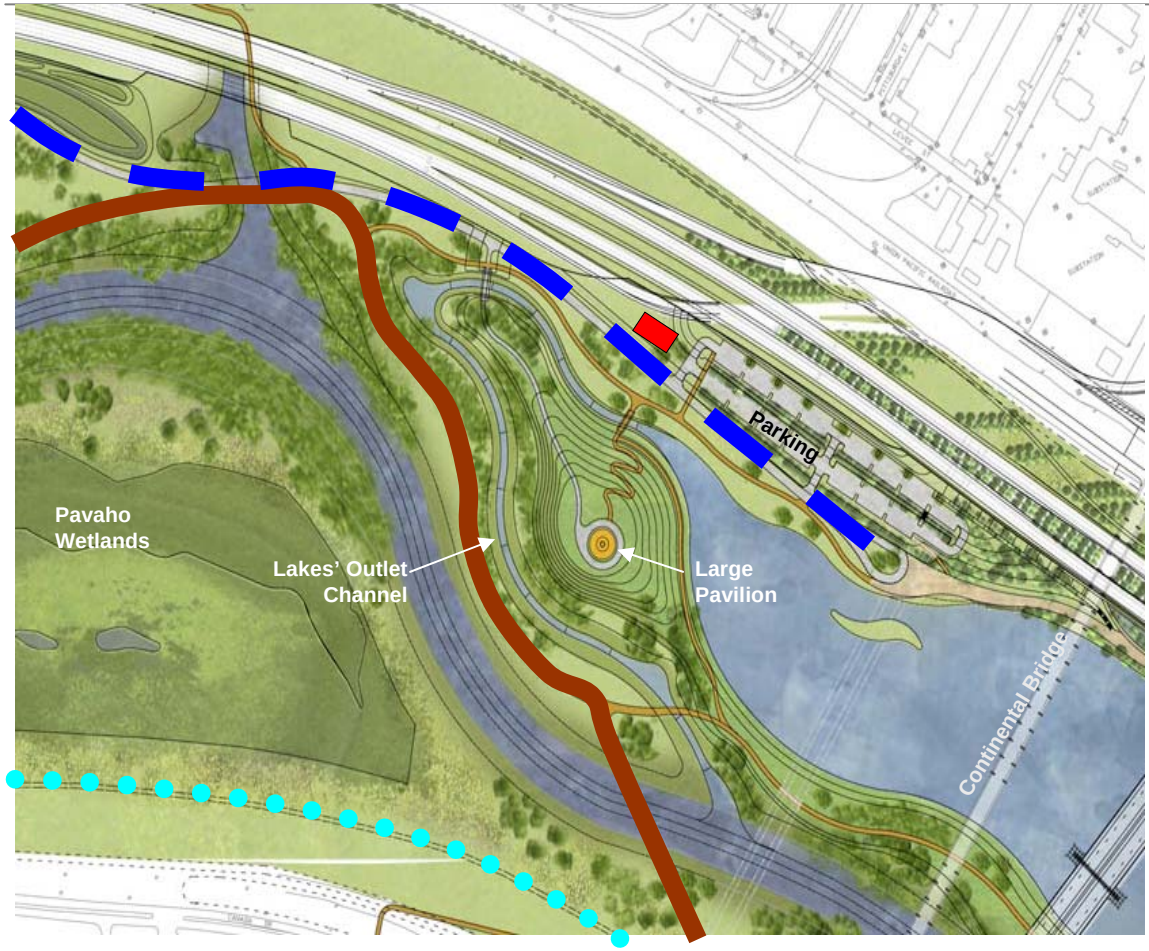


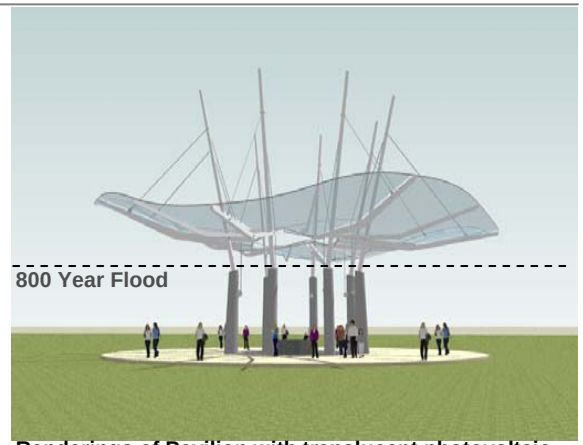
•The terminus of the Urban Lake is a 2,000-foot long, shady, twisting and stone-reinforced stream for canoeists and kayakers (a closed-loop white water course will be located outside the levees).

•An iconic pavilion is perched atop a 15-foot rise with commanding views of the lakes, river and bridges for large groups to gather for picnics, celebration.

•A 300-space parking area serves park uses nearby, while also providing direct service and emergency vehicular access to the promenade.

Urban Lake: Large Pavilion



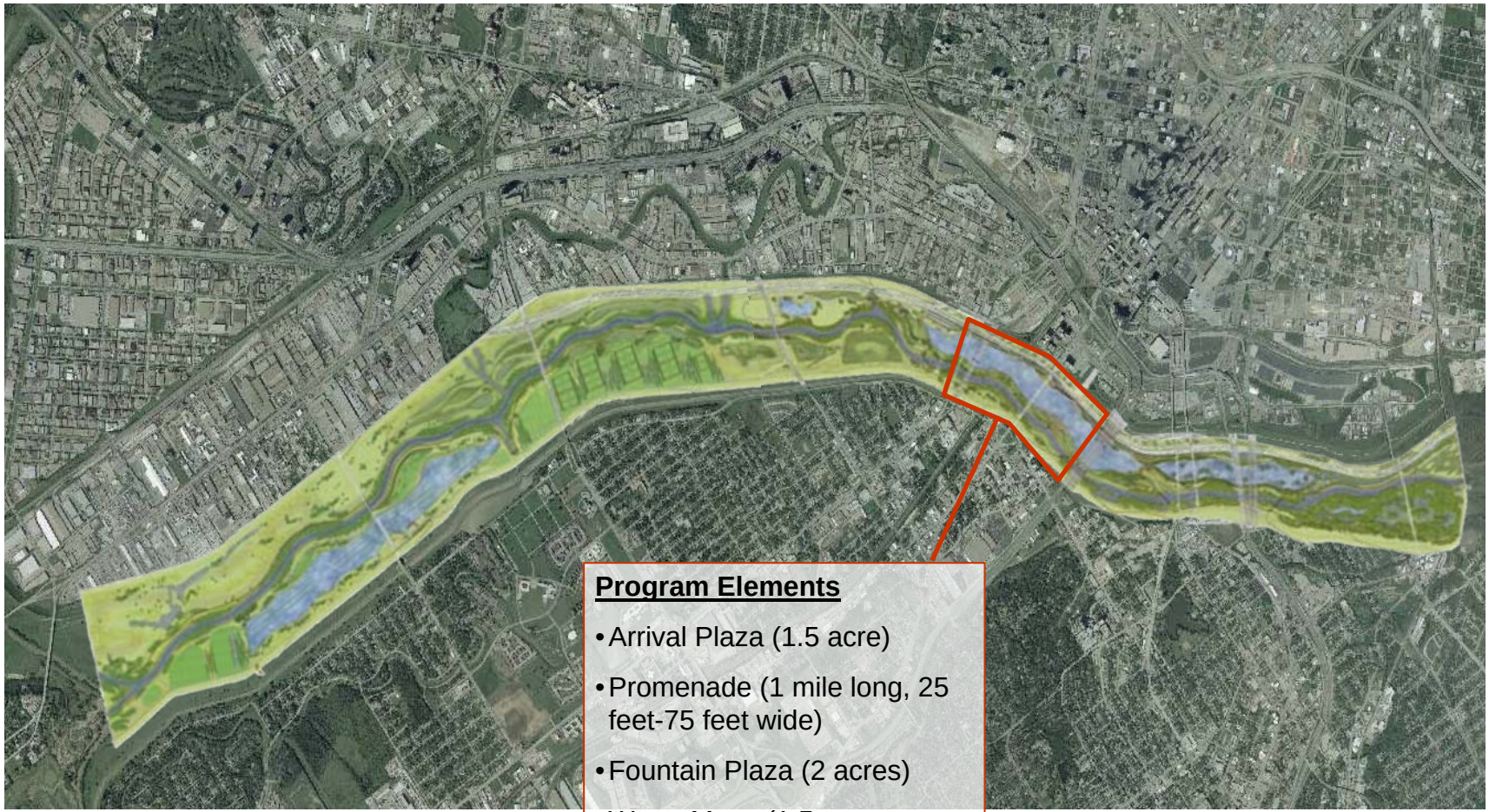


Renderings of Pavilion with translucent photovoltaic fabric to power night time lights

Primary Trail
Equestrian Trail
External Trail
Park Road
Restrooms

- The Urban Lake Pavilion is designed for a 300-person gathering, that can accommodate tables, chairs, cookers and other equipment to be provided by the attending group, based on reservation policies and stipulations.
- The roof structure is above the 800 year flood elevation and would be equipped with photovoltaic fabric to power night time lighting.

Urban Lake Detail

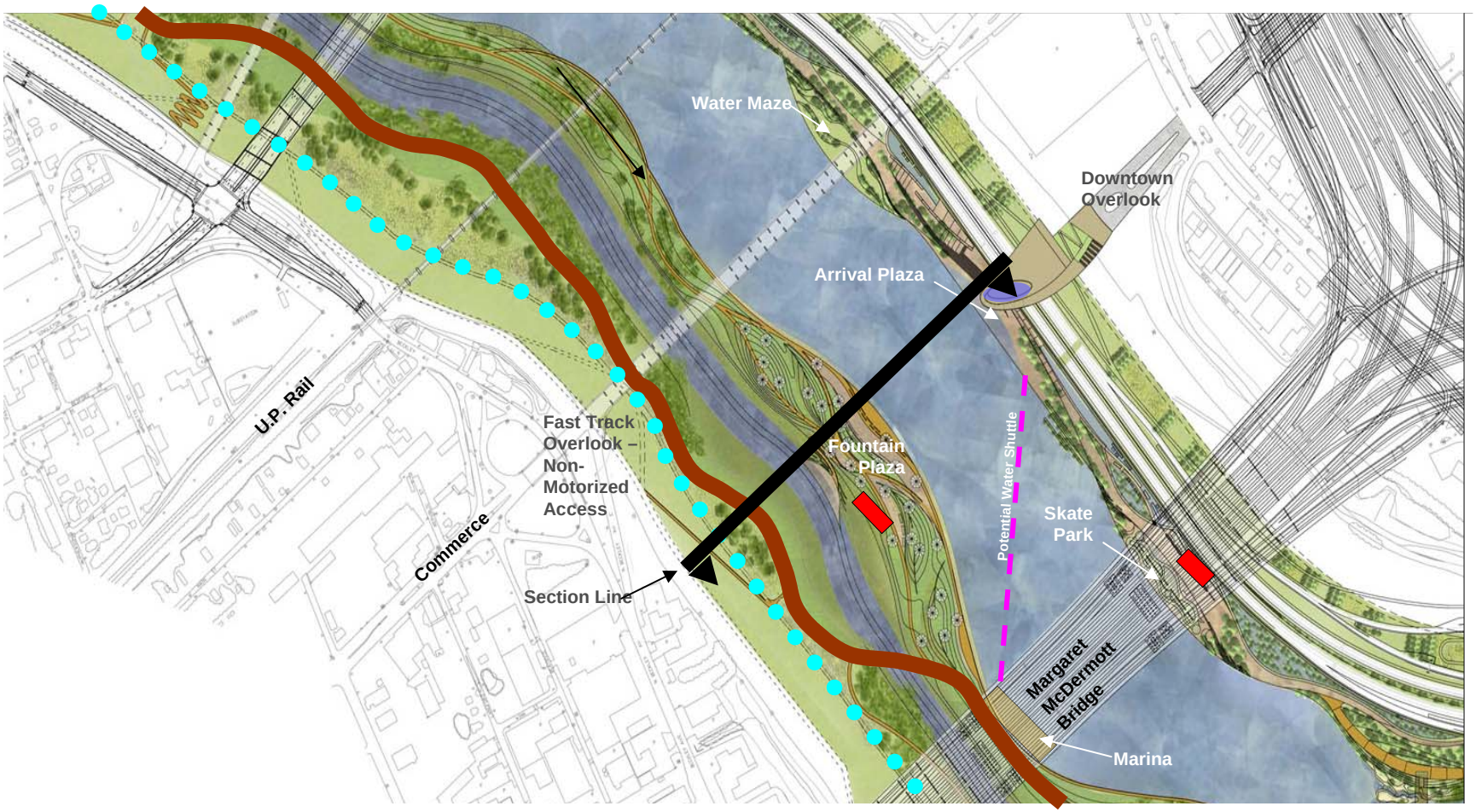


Program Elements

- Arrival Plaza (1.5 acre)
- Promenade (1 mile long, 25 feet-75 feet wide)
- Fountain Plaza (2 acres)
- Water Maze (1.5 acres
- Skate Park (1 acre)
- Marina (as a concession)

Note: Dimensions and quantities are approximate

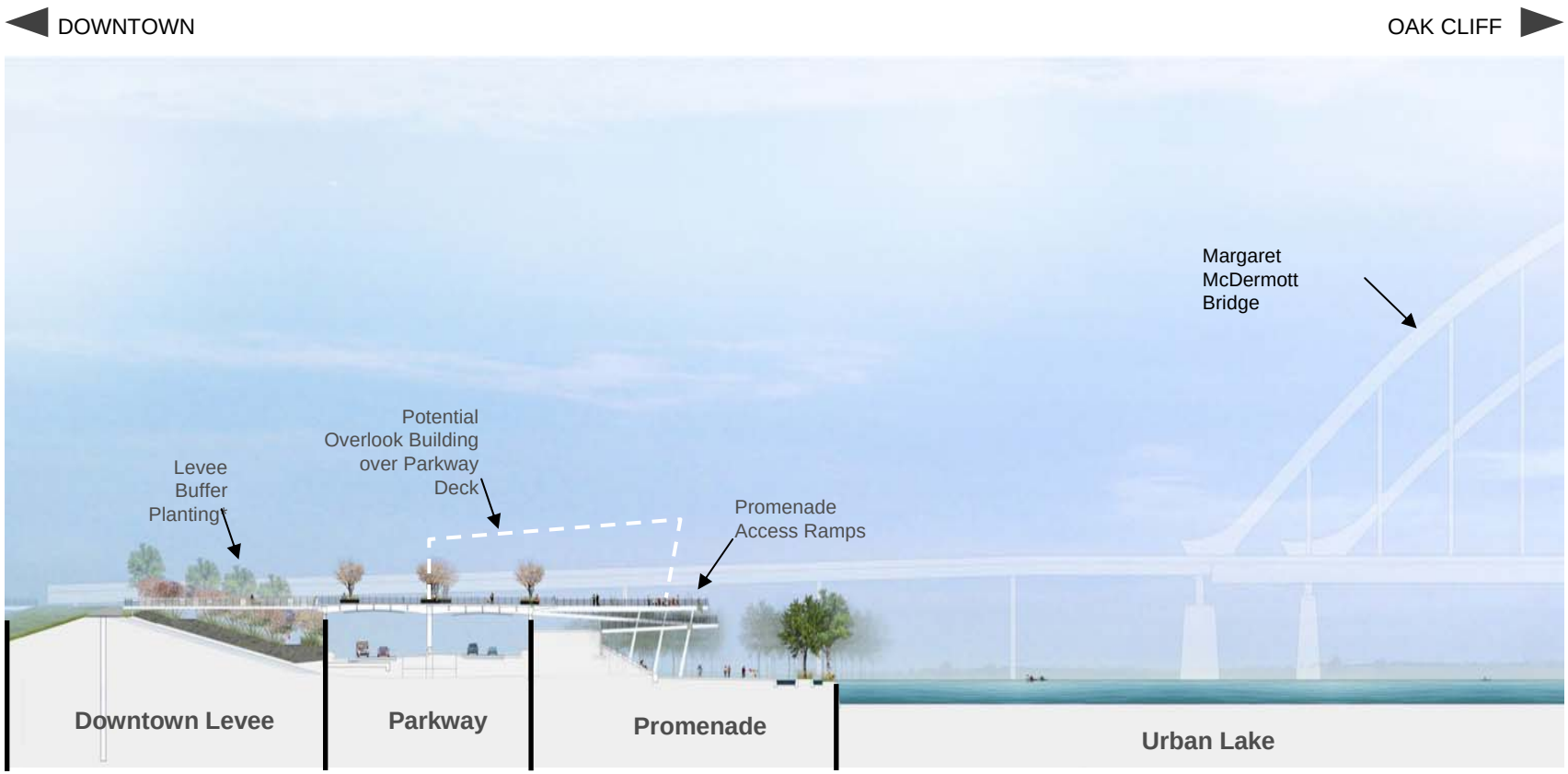
Urban Lake: Central Island & Promenade



Primary Trail
Equestrian Trail
External Trail
Restrooms

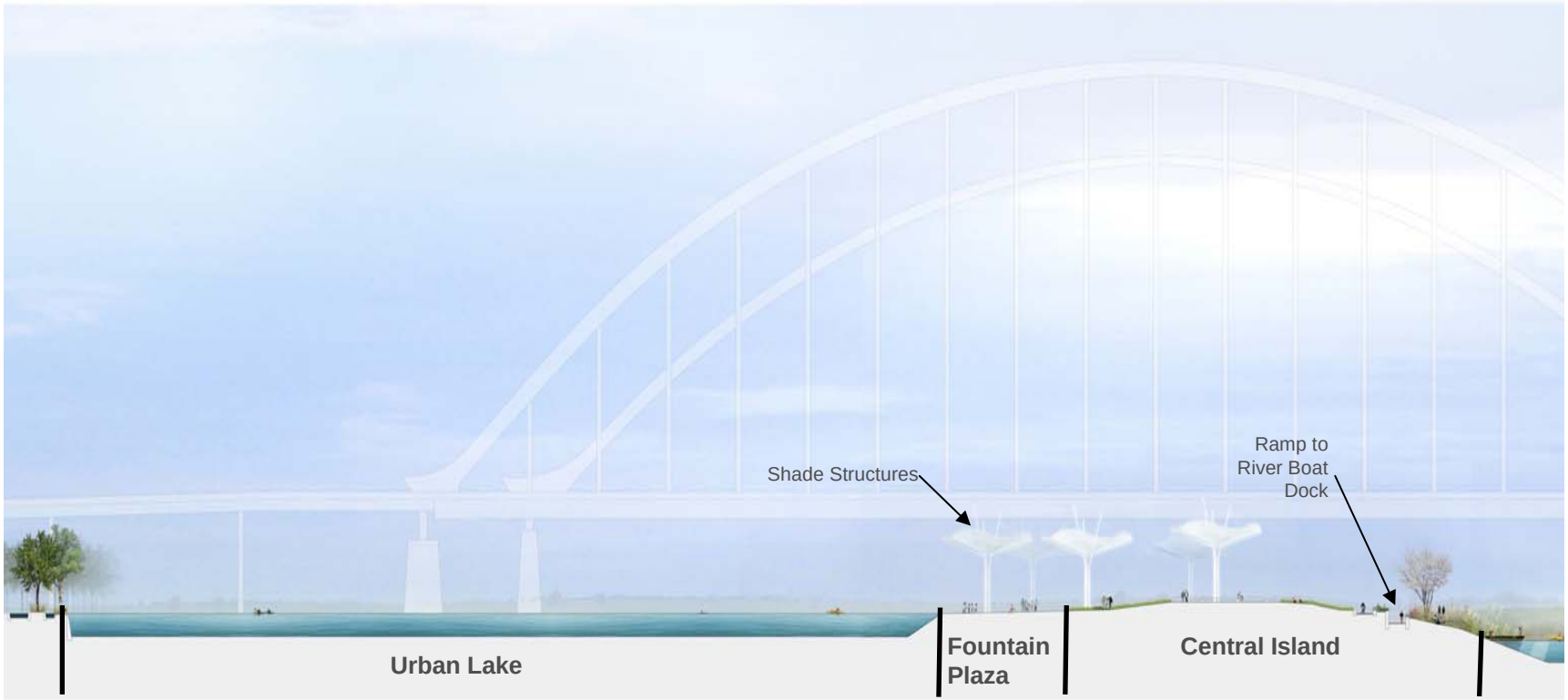
- A wide Arrival Plaza is located at the terminus of the Downtown Overlook and will function as a gathering area for performances and as the start / finish line for race events (5K, 10K and 20K).
- A water maze, a skate park (under the shade of IH-30), and a Fountain Plaza will flank the Arrival Plaza.

Urban Lake: Cross Section

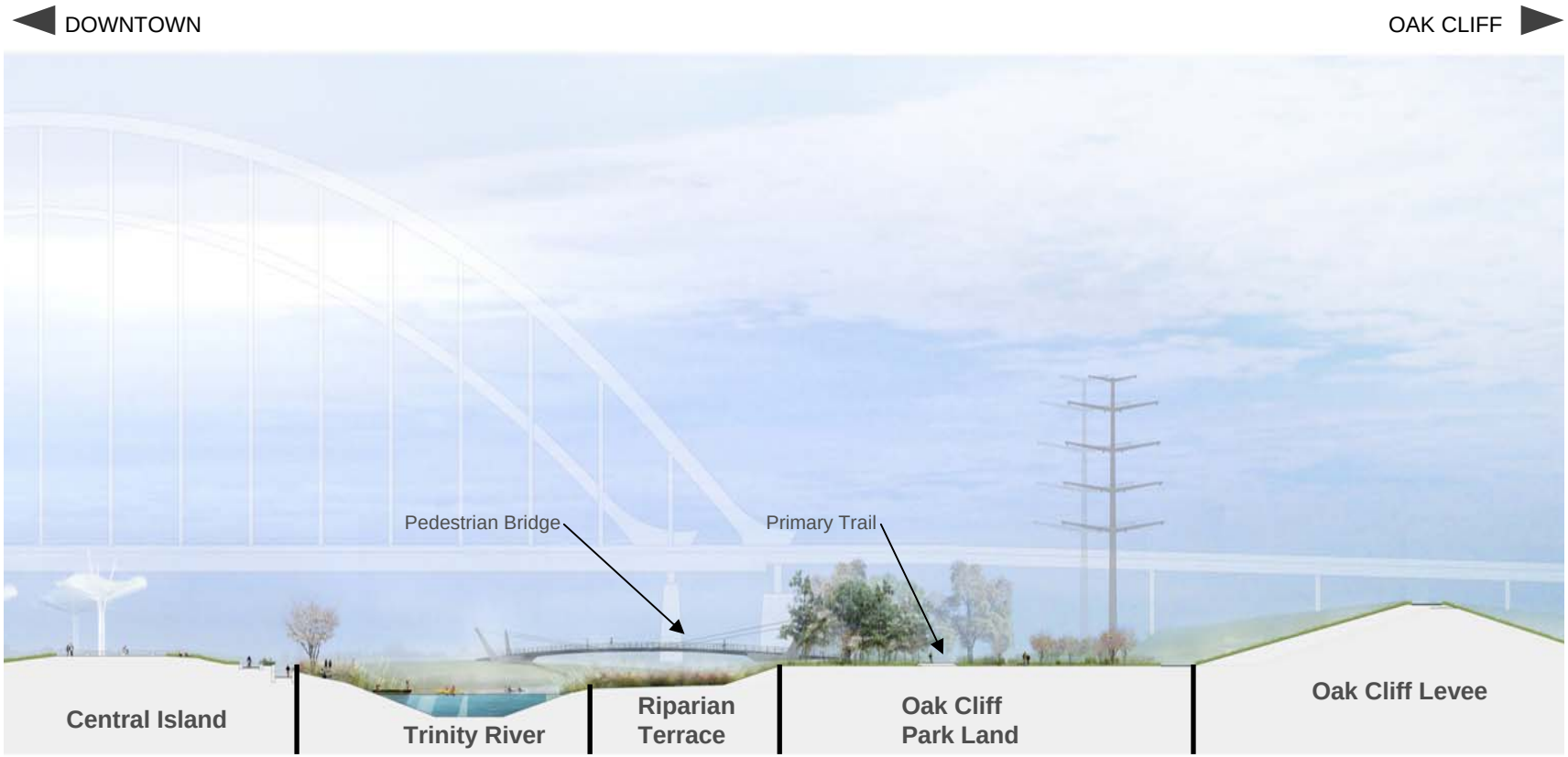


* Subject to USACE Approval

Urban Lake: Cross Section



Urban Lake: Cross Section



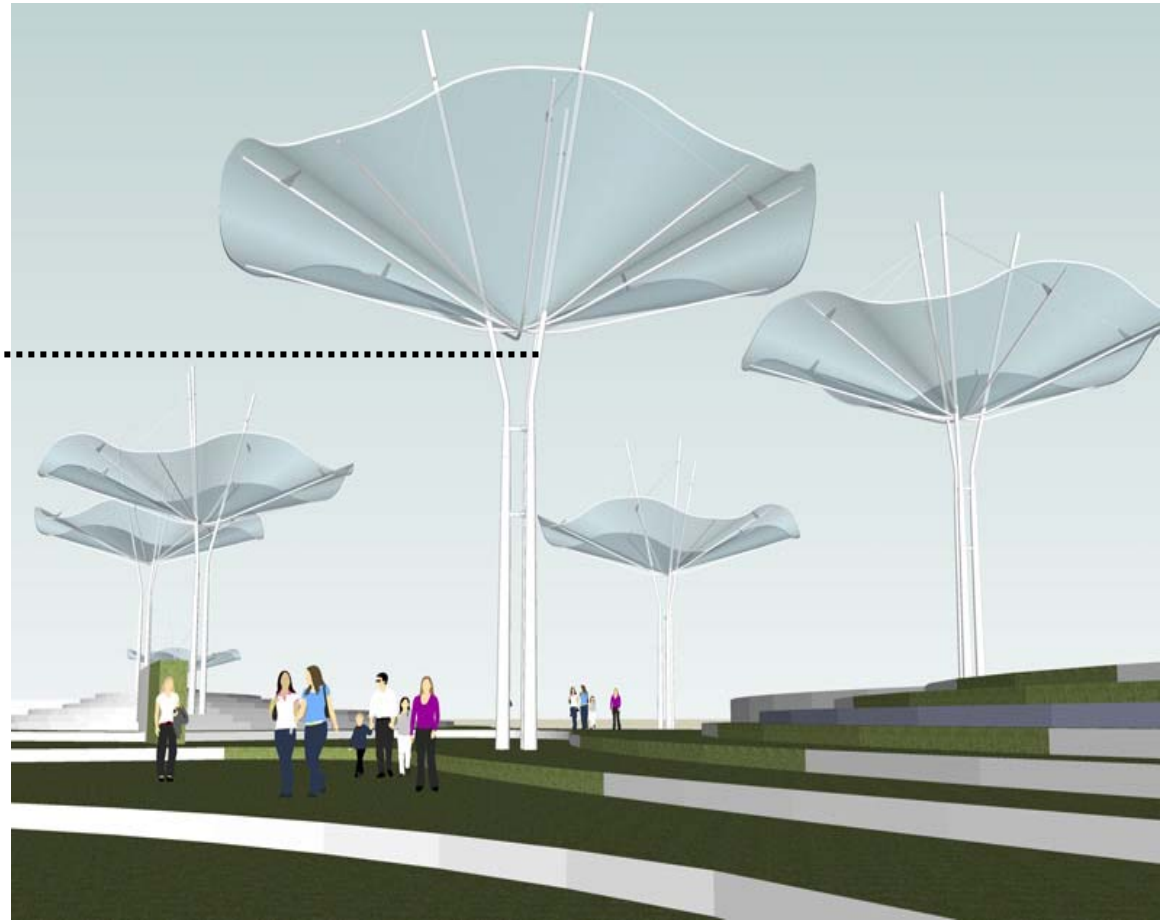
Urban Lake: Central Island

• Shade structures take the place of tree vegetation in this plaza preserving views of the downtown skyline and promenade, while Seating walls are integrated with the topography and provide illumination at night.

• Interactive fountains and dark-colored, exposed aggregate concrete paving slopes into the lake as a beach.

Central Island Shade Structures

100 Year Flood



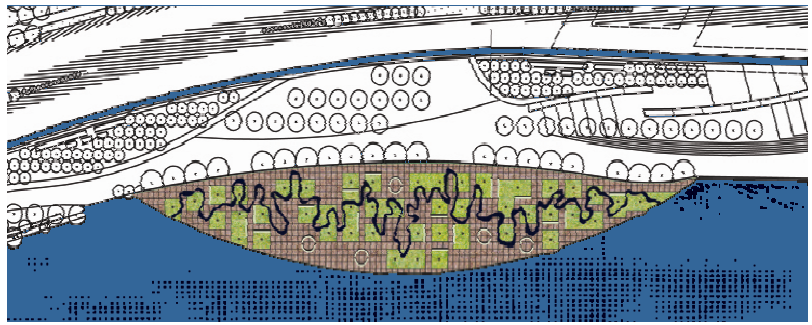
Central Island Night Rendering

• Fountains, seating walls and shade structures illuminated at night

Urban Lake: Promenade & Arrival Plaza

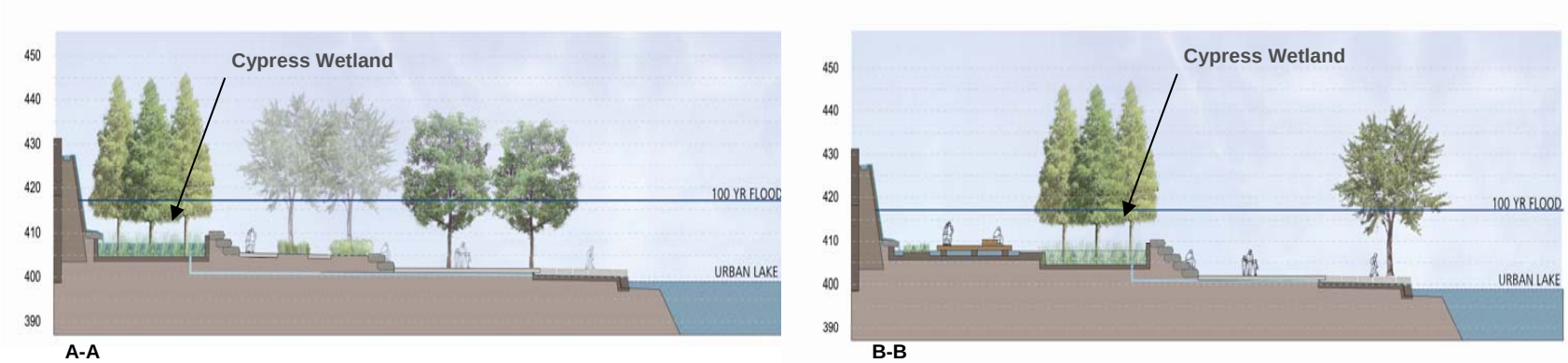
- The promenade will accommodate 19,000 people during peak events and activities
- 80% of the promenade will be shaded throughout the course of the day.

Urban Lake: Water Maze



- Trinity Water Maze encourages children to interact with the meandering river at a scale they can comprehend.
- Water maze is 3 inches in depth and varies in width.

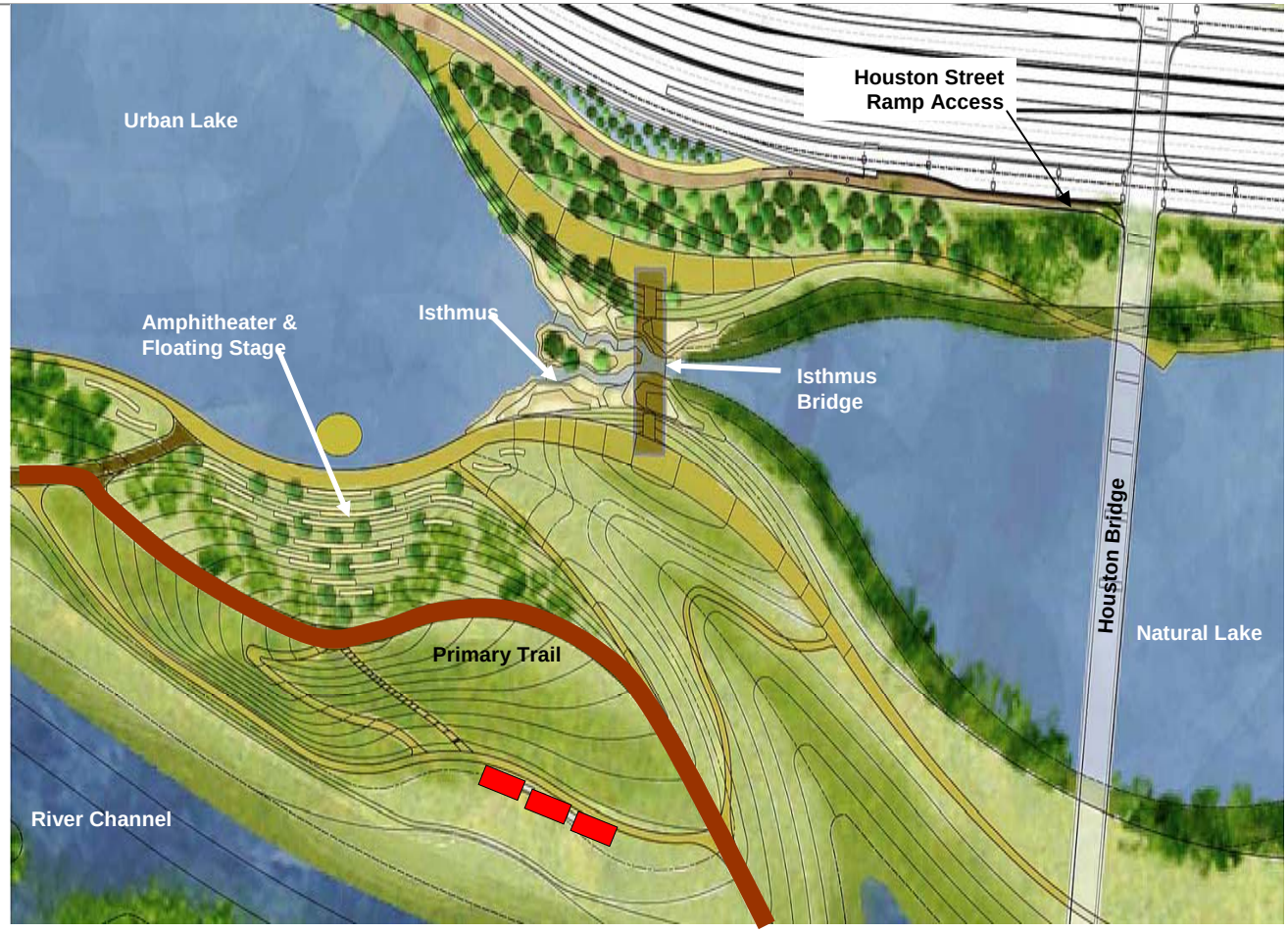
Urban Lake: Cypress Wetlands



- 3.5 acres of perched Cypress Wetlands will help improve the Urban Lake water quality.
- The Cypress Wetlands will provide shade on the promenade cooling both the promenade and the constructed wetland habitat.

Urban Lake: Isthmus & Amphitheater

Houston Street Ramp: Pedestrian & Emergency Access



Primary Trail
Equestrian Trail
External Trail
Restrooms

- The Isthmus provides access from the Natural to the Urban Lake through a braided channel laced with native Texas limestone.
- The Houston Street ramp will provide pedestrian and emergency access to the Isthmus, Amphitheater and Promenade areas.

Isthmus (connection between Natural Lake and Urban Lake)

Lueders Limestone (potential material for Isthmus out-cropping)

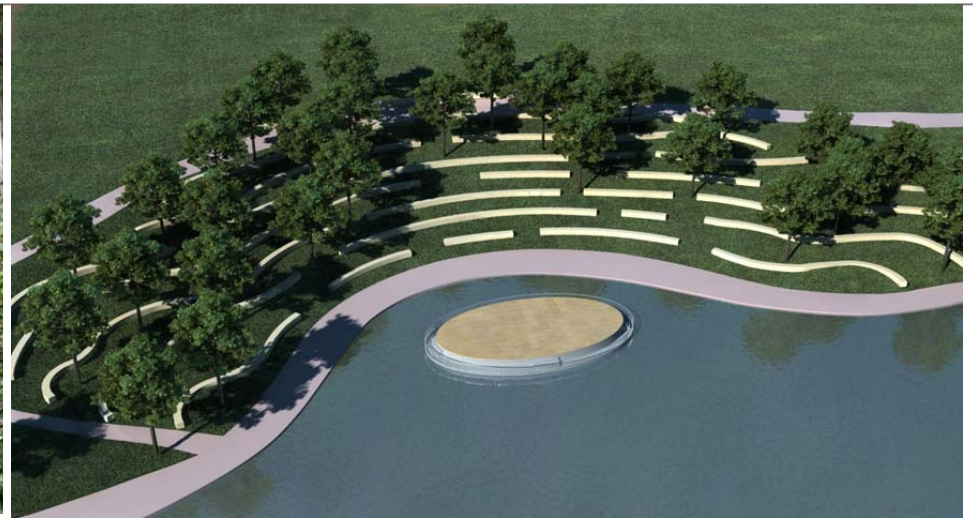
- This area is an active observation and recreational amenity where canoeists and kayakers can navigate between two water courses (3’ drop), one option being more challenging than the other.
- The design of the Isthmus is inspired by the local limestone geology and bedrock shoals as seen throughout streams and creeks in Dallas.

Isthmus Water Channels

- The approach to the Isthmus from the Natural Lake would be lined with wetland plants to highlight the passage from the natural to the urban environments.

Central Island Amphitheater

Swathmore College



Concept Rendering

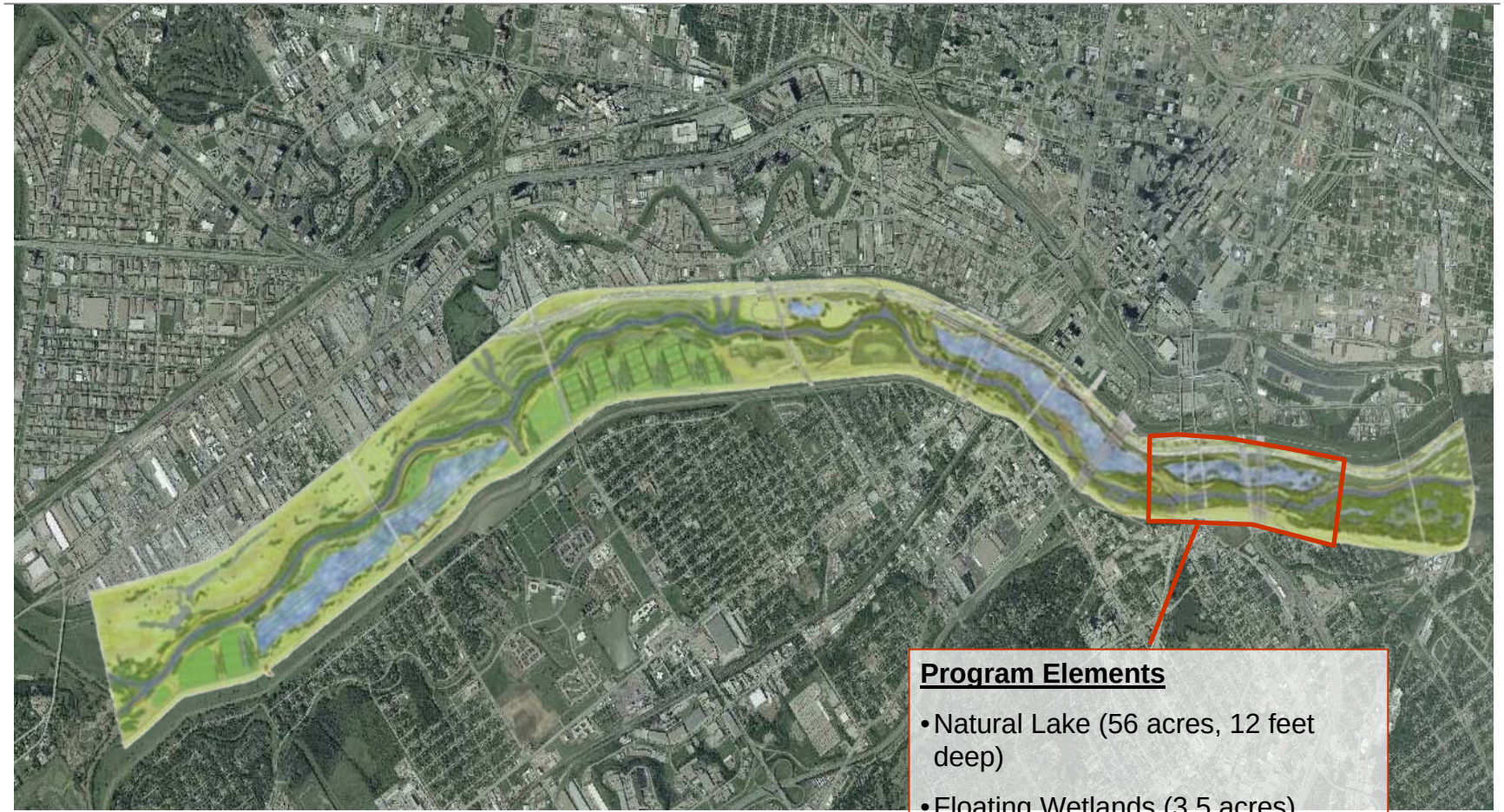
Floating Stage

Concept Rendering

•Located to strategically capture views of the downtown skyline, the Central Island Amphitheater is intended as an intimate performance venue for a spectator capacity of 3,000.

• Stone steps and ledges visually connect this amphitheater with the shoals of the Isthmus, while the stage would consist of a floating moveable platform with a potentially artist-designed canopy to serve performances at other lake locations, including the large pavilion.

Natural Lake

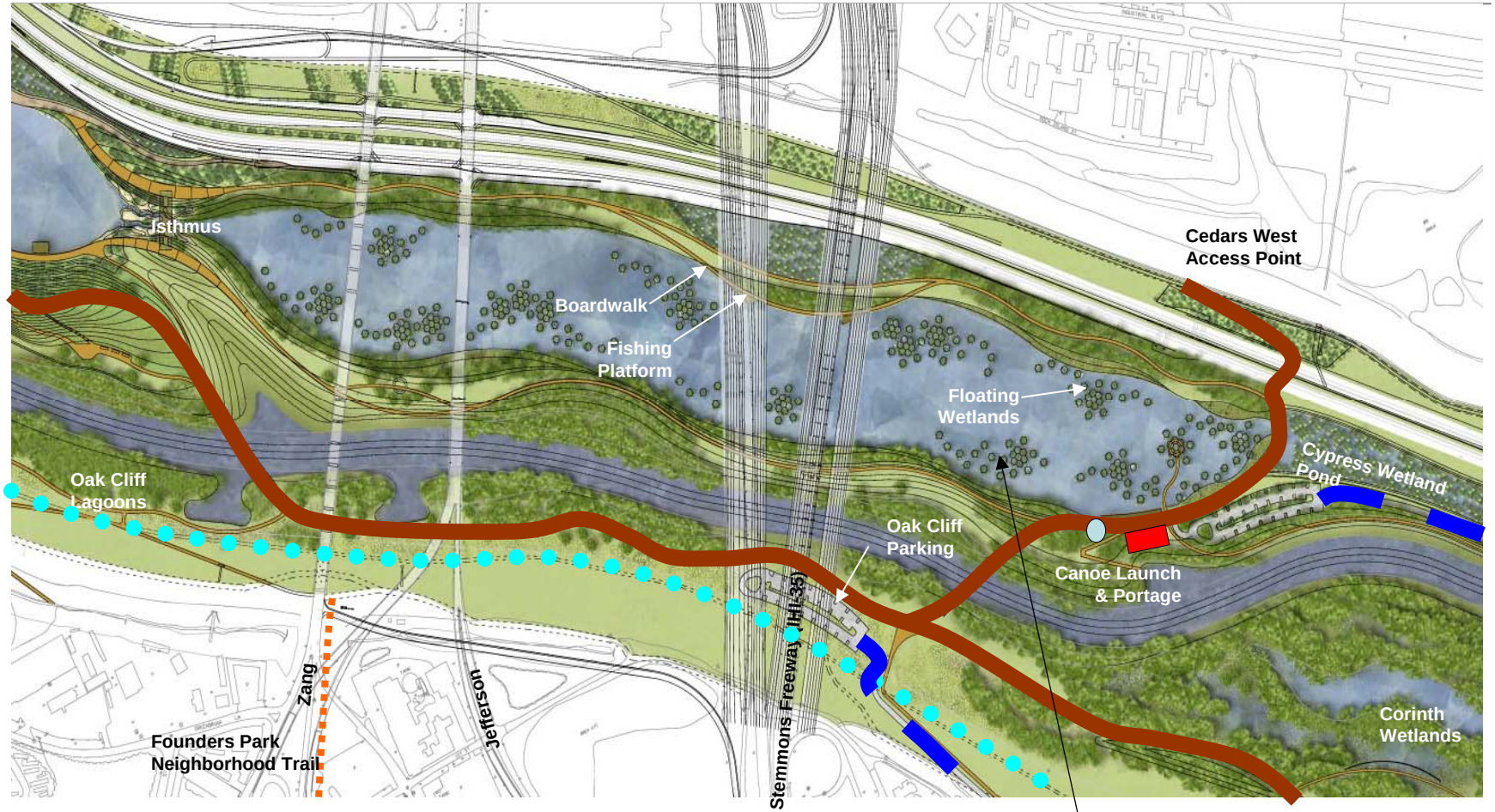


Program Elements

- Natural Lake (56 acres, 12 feet deep)
- Floating Wetlands (3.5 acres)
- Cypress Wetland Pond (2 acres)
- Canoe Launch
- Boardwalk (1,000 feet long)
- Fishing Platforms (2)

Note: Dimensions and quantities are approximate

Natural Lake



Primary Trail
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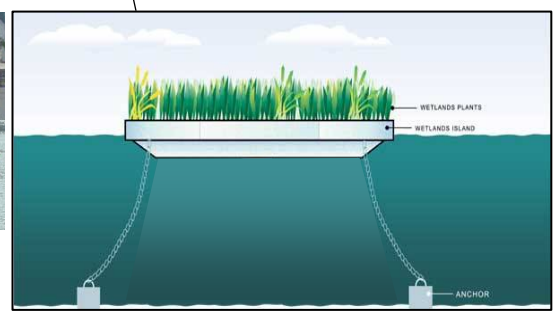
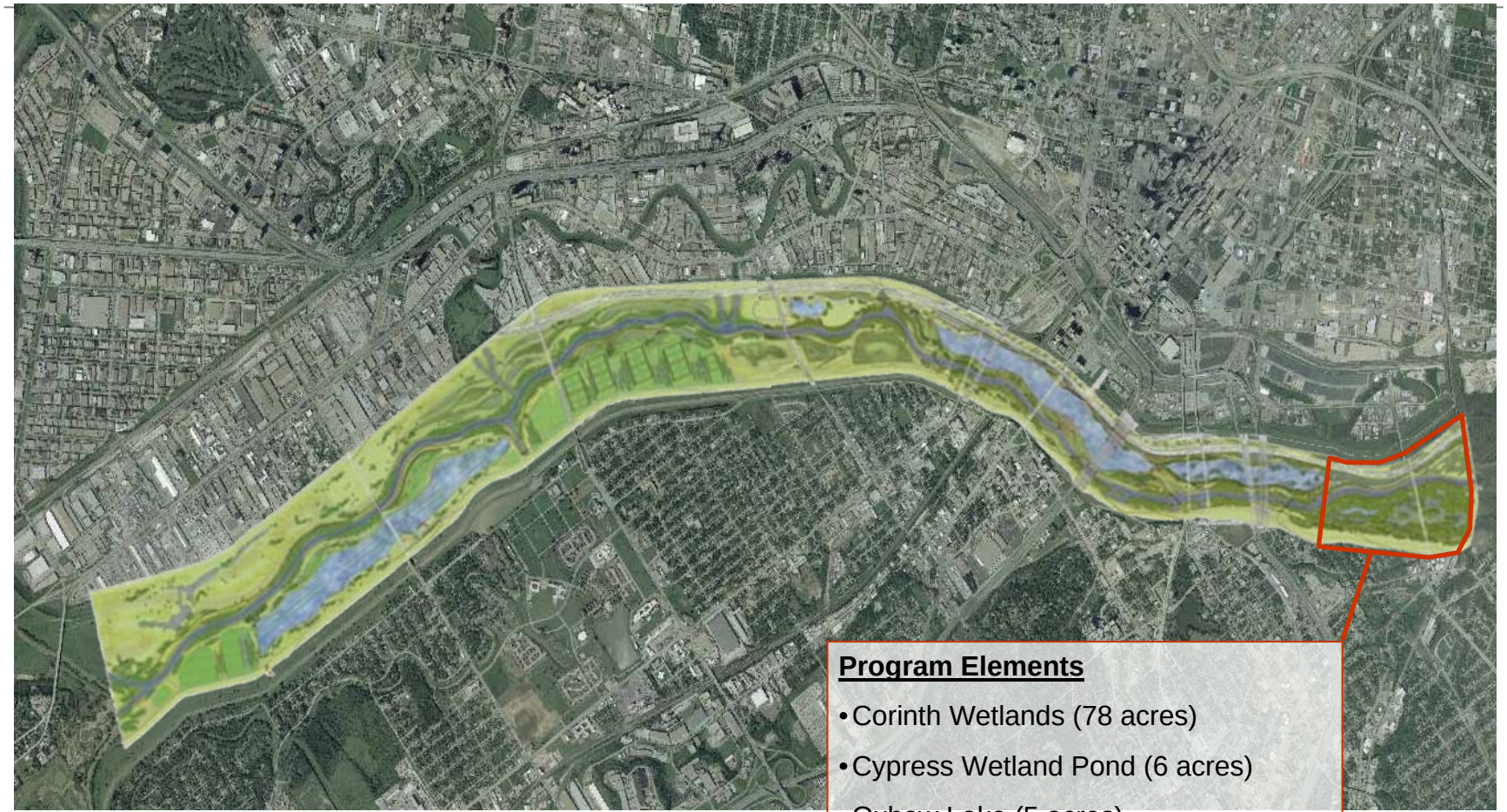
Park Road
Concessions



Natural Lake Floating Wetlands

- The floating wetlands are multifunctional, serving as a design aesthetic, educational demonstration, habitat and water quality improvement measure.

Corinth Wetlands

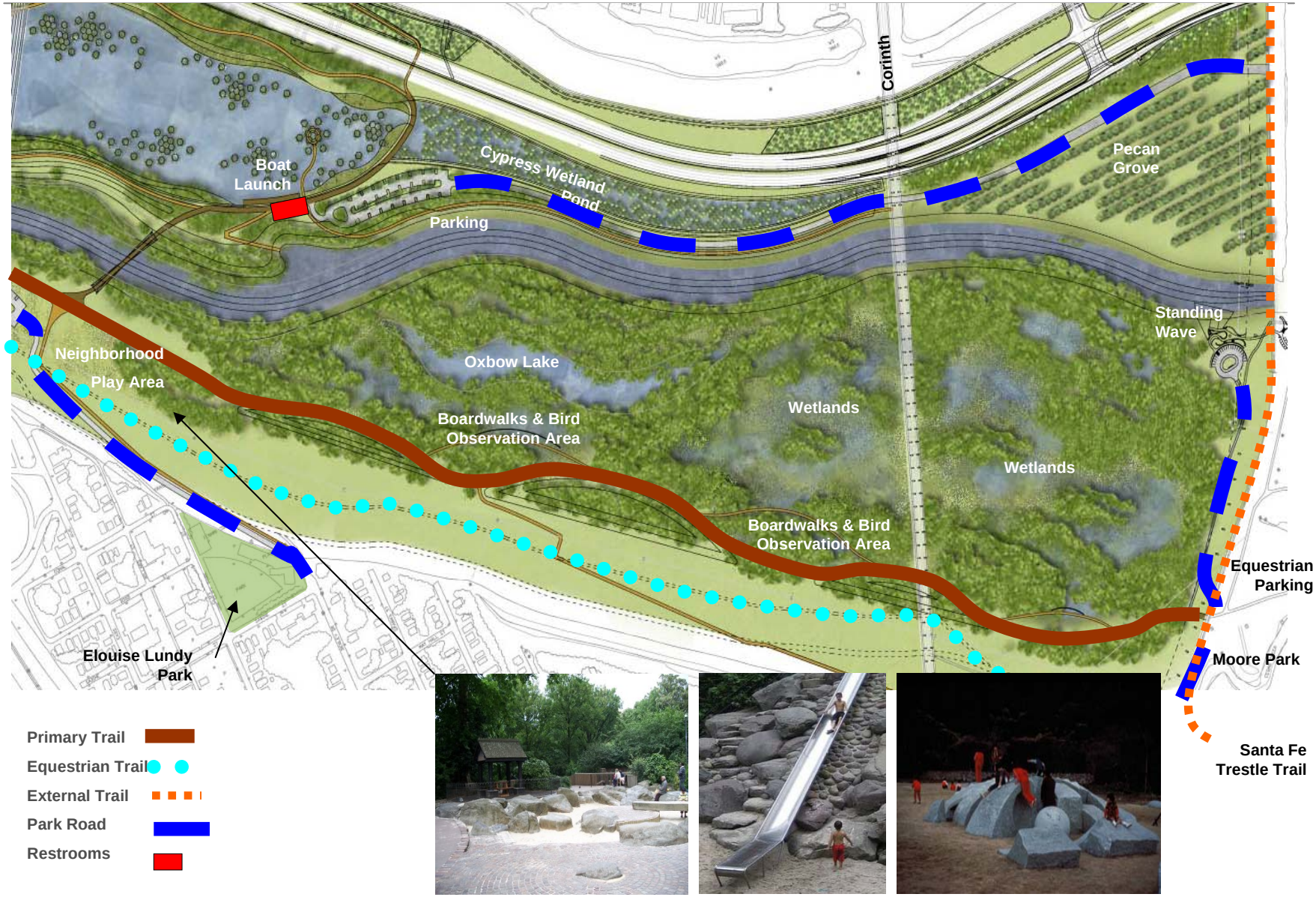


Program Elements

- Corinth Wetlands (78 acres)
- Cypress Wetland Pond (6 acres)
- Oxbow Lake (5 acres)
- Pecan Grove (12 acres)
- Standing Wave
- Neighborhood Play Area
- Boardwalks and Bird Observation Area

Note: Dimensions and quantities are approximate

Corinth Wetlands



Corinth Wetlands

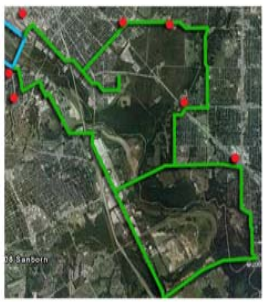
• The Corinth Wetlands and Oxbow Lake area is designed to be a passive observation area for understanding and appreciating wetland habitats and systems.

• This environment will be a magnet for migratory birds and other aquatic and riparian wildlife and birding observation areas, boardwalks, tree groves and shaded respites are planned for this area.

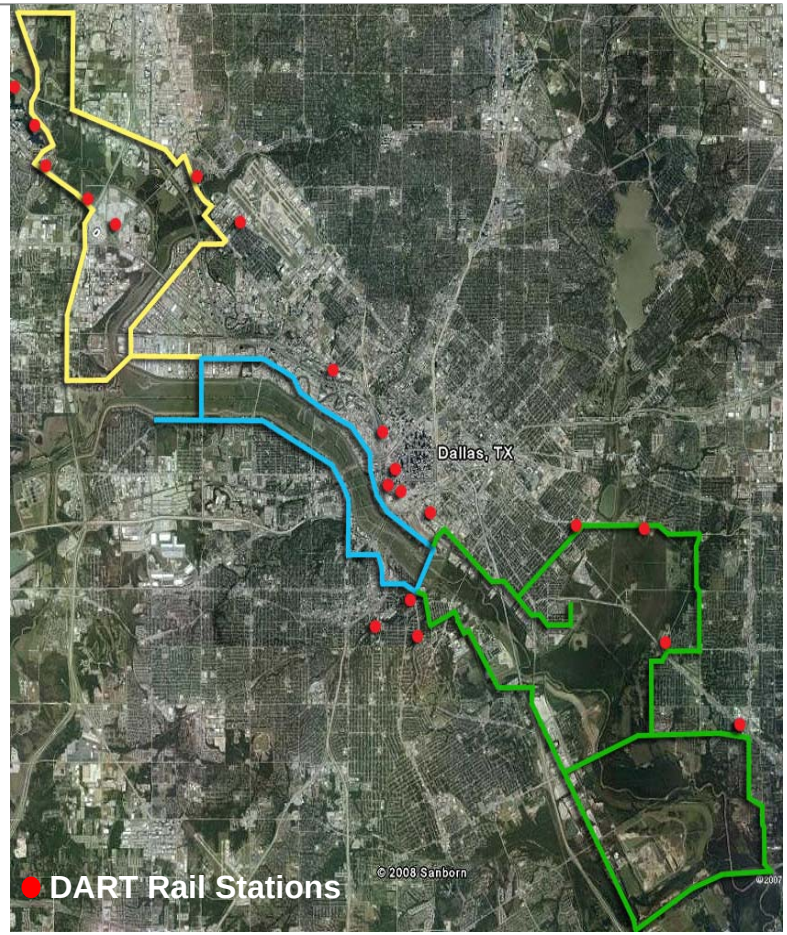
Trinity Corridor Loop Road System

Trinity Fields Loop Road & DART Stations

Trinity Lakes Loop Road & DART Stations

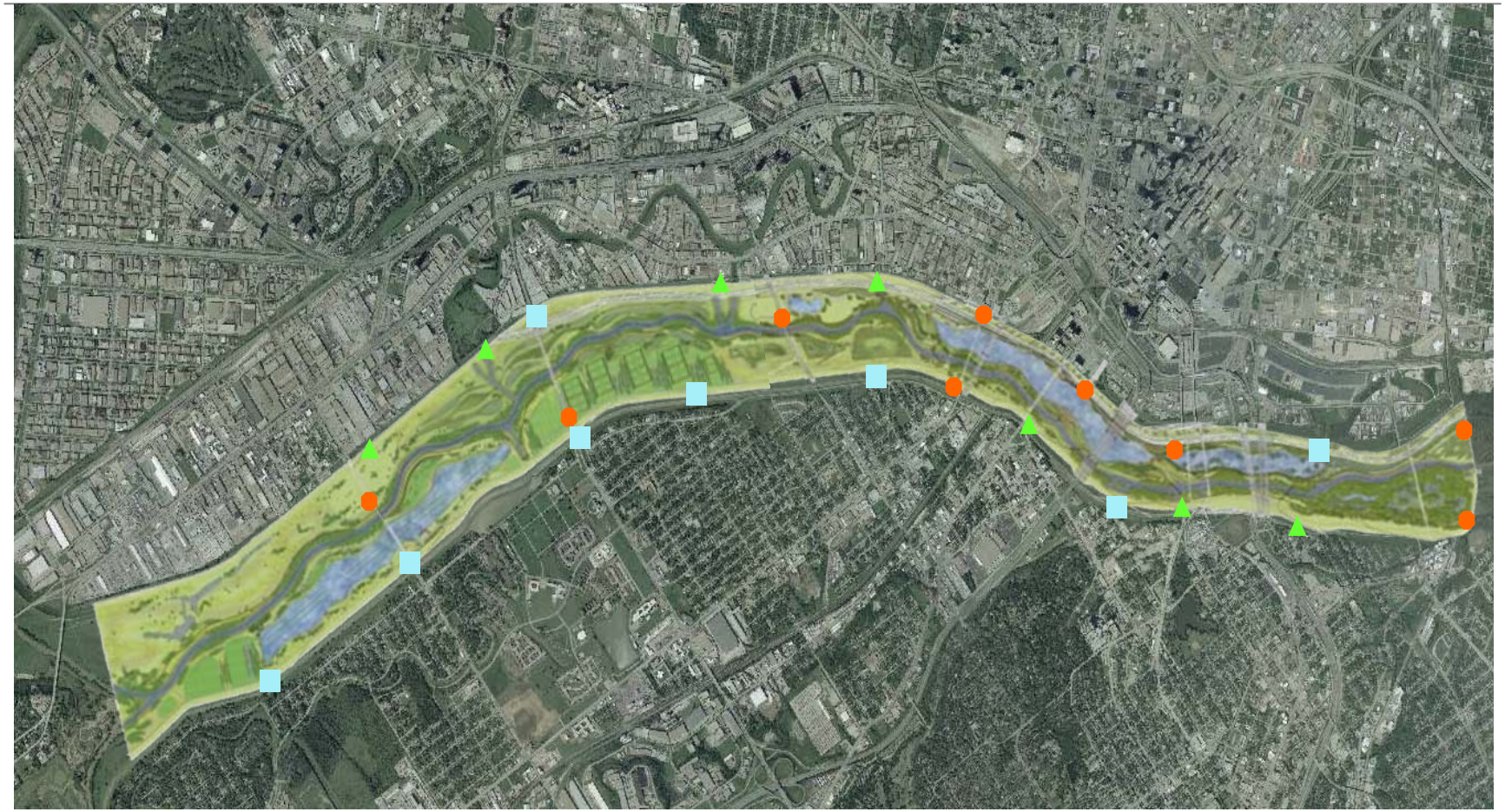


Trinity Forest Loop Road & DART Stations



- The Trinity Corridor Loop Road System defines the Trinity Fields, Lakes and Forest as an extension of the Trinity identity, way-finding and signage program.
- The signage program should include the DART Rail System for public transportation interface to the park, while the loop roads can be used for tourists activities (driving tours).

Gateways

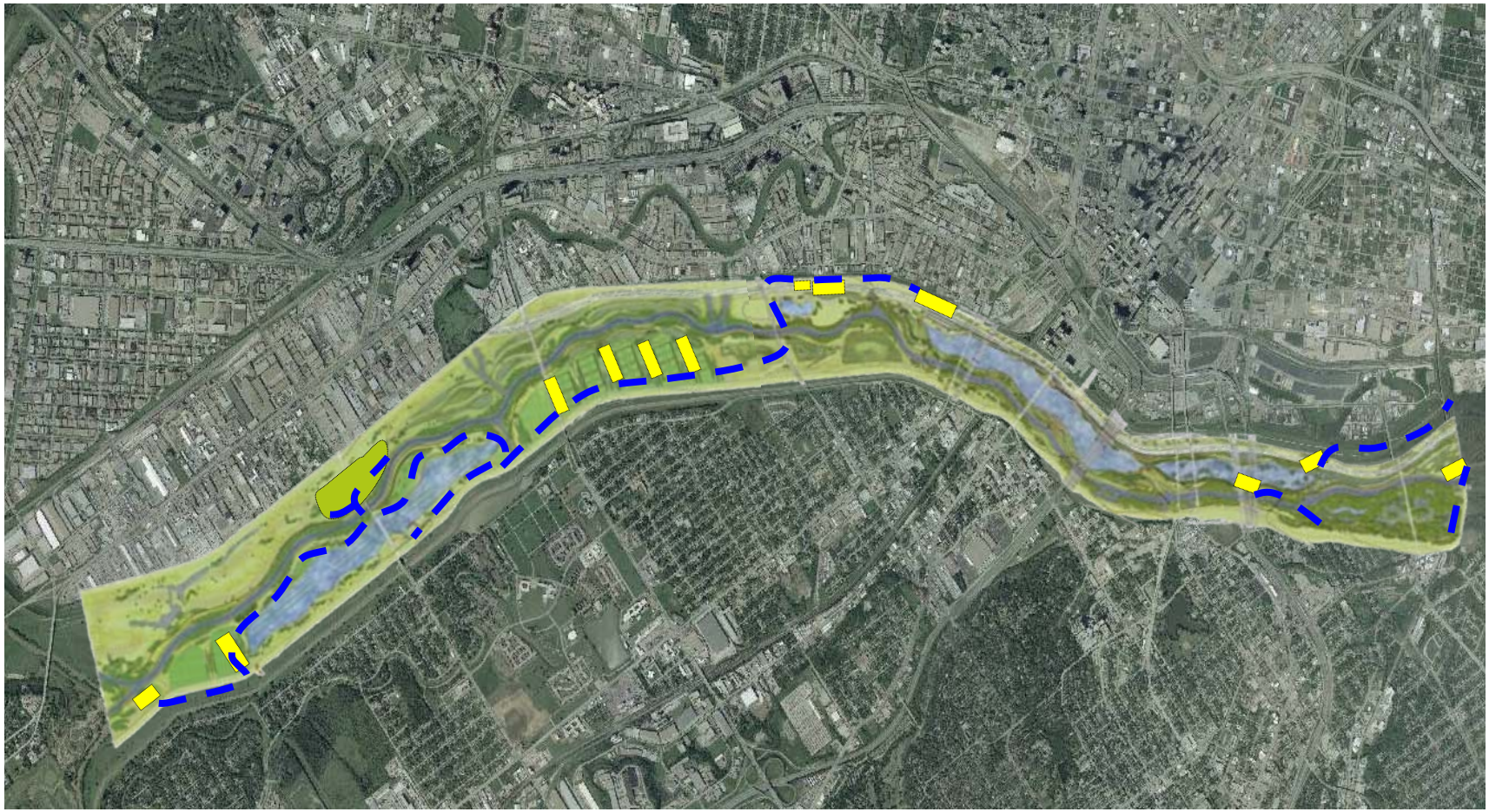


Regional Gateways – : Westmoreland, Hampton, Sylvan, Continental North, West Dallas / Continental, Downtown Overlook / Reunion, Houston Ramp, Industrial, Moore Park

Community Gateways – : Mockingbird North, Charlie Pump / Trinity Strand, Baker Pump / Trinity Strand, Oak Lawn / Trinity Strand, Commerce / Fast Track, Oak Cliff / Founders Park, Eloise Lundy,

Neighborhood Gateways – : Pluto / Bernal, Westmoreland South / Bernal, Inwood, Hampton South, Pavaho, Cornet, Coombs Creek, Belleview / Cedars West

Vehicular Roads & Internal Parking

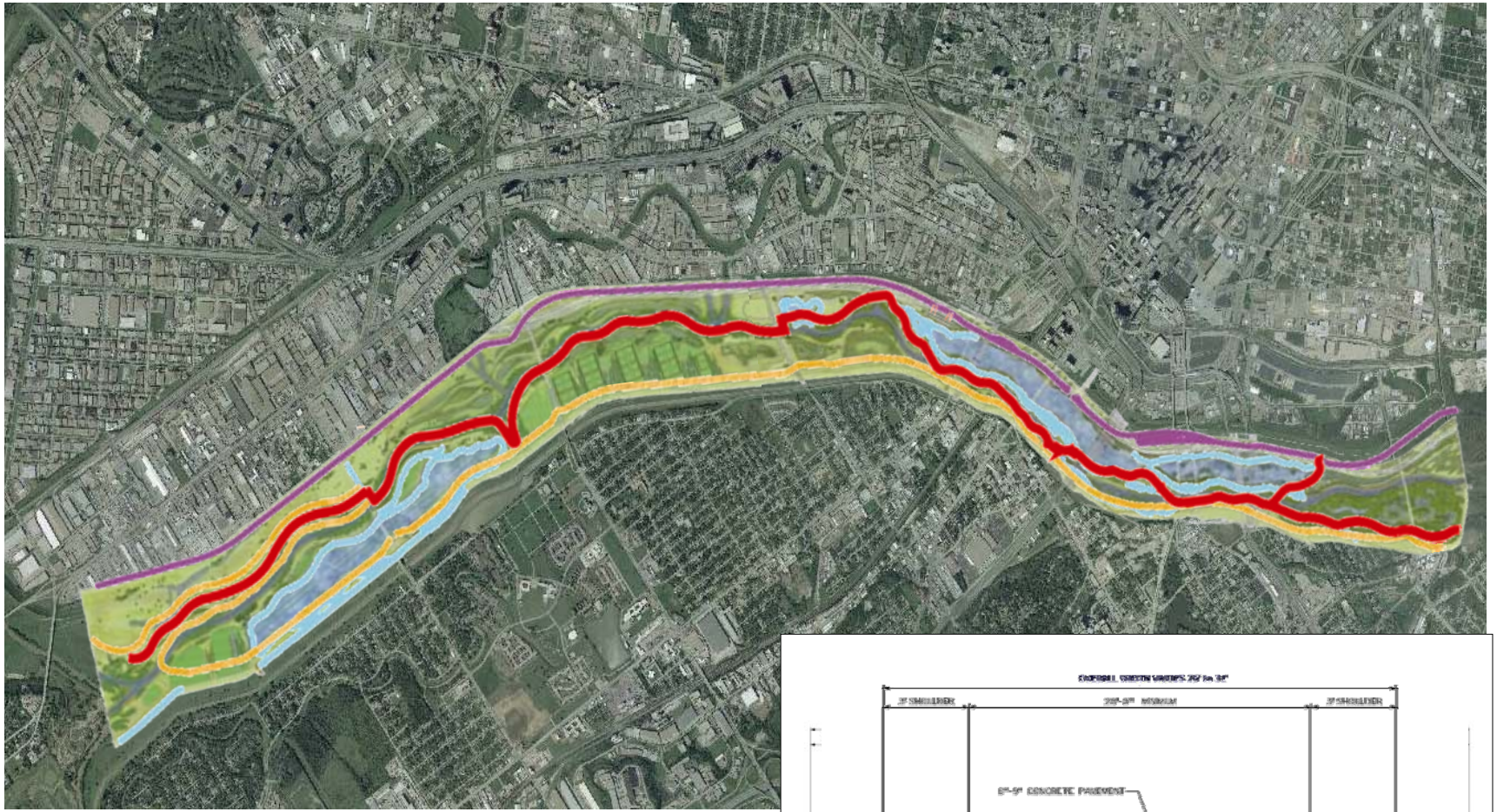


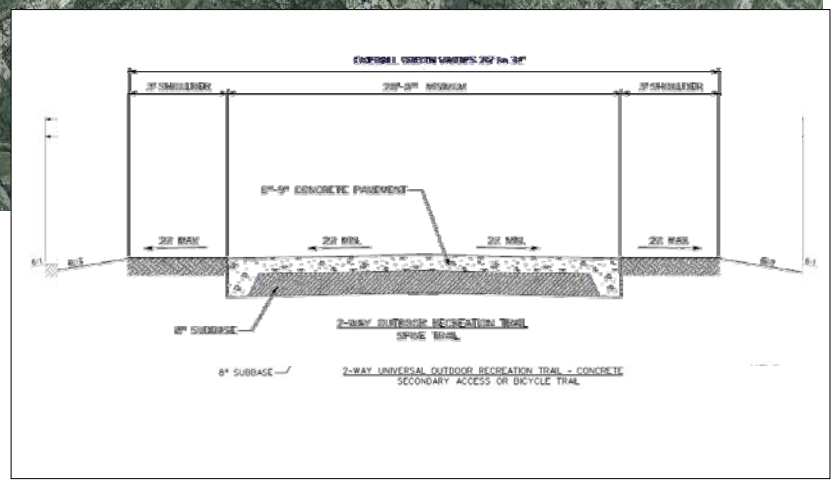
Internal Roads – 8 miles

Internal Parking (paved) – 16 acres

Internal Parking (turf) – 35 acres

Trail Network





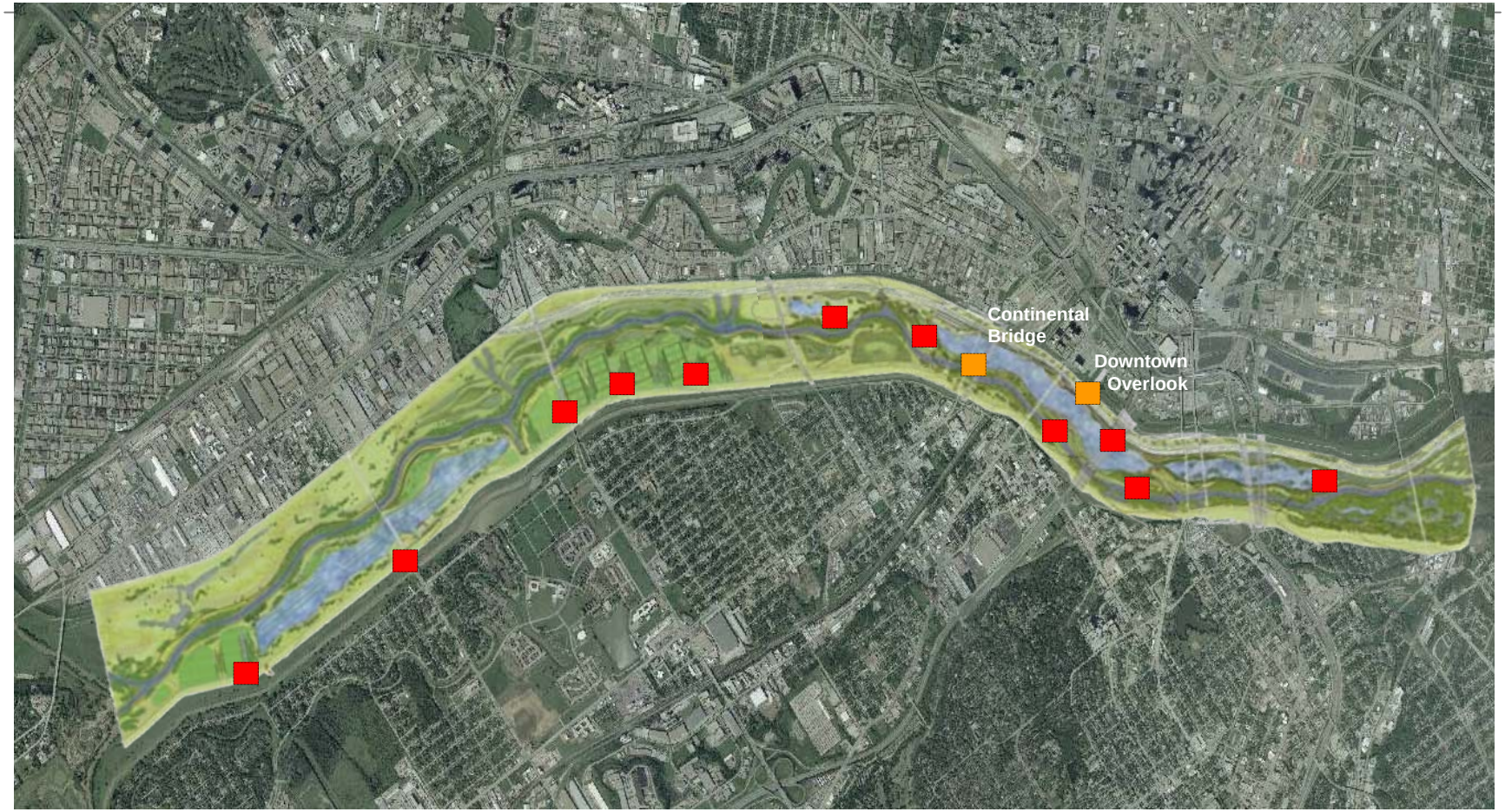
Downtown Levee Top Trail – 9 miles

Secondary Trail – 14 miles

Equestrian Trail – 11 miles

Primary Trail – 9 miles

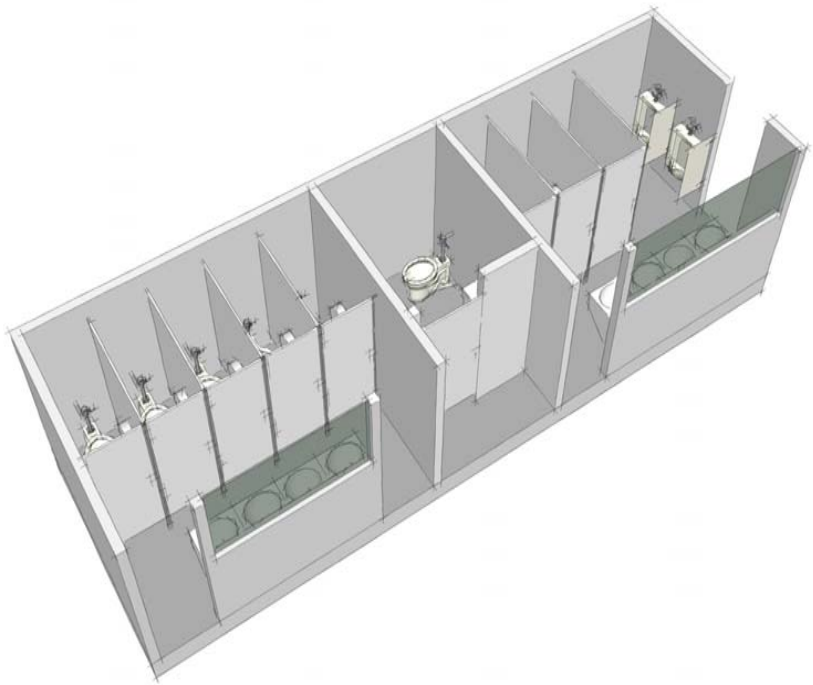
Restroom Locations



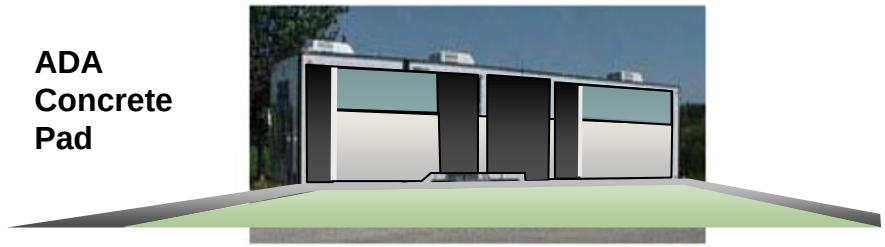
Mobile restroom locations

Fixed restrooms above 800 year flood

Restroom Facilities

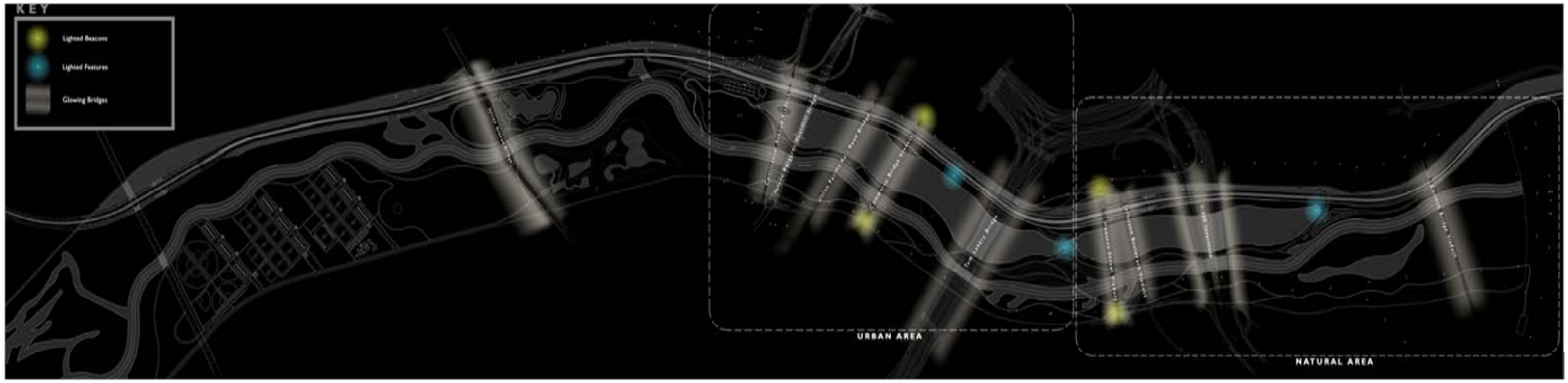


ADA Concrete Pad

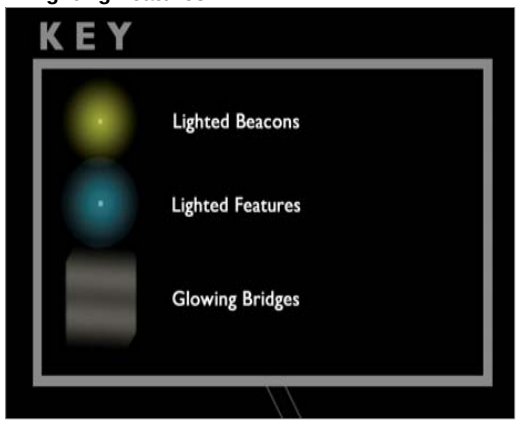


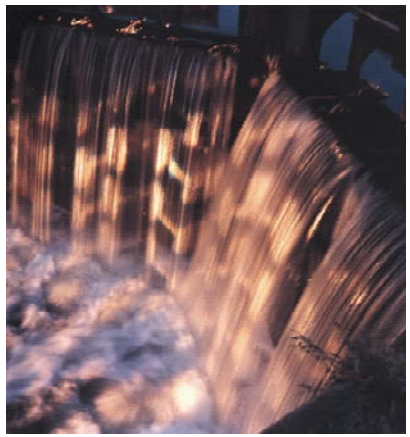
- The restrooms will be mobile units with separate men's, women's and handicapped/family stalls, supplied with water and sewer hook-ups.
- Placed on 2- to 3-foot raised and paved areas, the units will be towed to higher ground during flood events of two- three year frequencies and permanent ramps and steps will be added to facilitate access and reduce removal time.
- During the detailed design phase of the park the restroom units will be custom designed for vandal resistance, solar power supply and improved aesthetics.

Conceptual Lighting Feature Plan



Lighting Features





Concept Images

- Lighting under the existing and new bridges.
- This illumination program will enhance the structures providing security and reversing perceptions of ‘being under a bridge’.
- The illumination will also greatly assist with directionality and way-finding in the twilight hours.

Conceptual Lighting Plan

• West Dallas Ball Fields & Rowing Facility (stadium lighting) plus Promenade along Urban Lake (see options next page)

• Primary Trail from Cedars West to Crow Park, including Oak Lawn, Fast Track Overlook, Houston Ramp, Founders Park, Elouise Lundy and Cedars West Park Gateways (18 feet tall light poles 80 feet on-center).

Promenade Lighting Options

• **175 feet tall mast lights** spaced about 600 feet, casting an even glow over the area.

• The mast lights would require less maintenance; fewer in number. They also would provide residual lighting on the parkway deck and Levee Park beyond.

• Subject to more detailed study to improve the fixtures' performance and appearance.

• **30 feet pole lights** along promenade about 75 feet on-center

• Poles would provide focused light on walking and gathering areas

• Increased maintenance due to higher flooding exposure, more fixtures

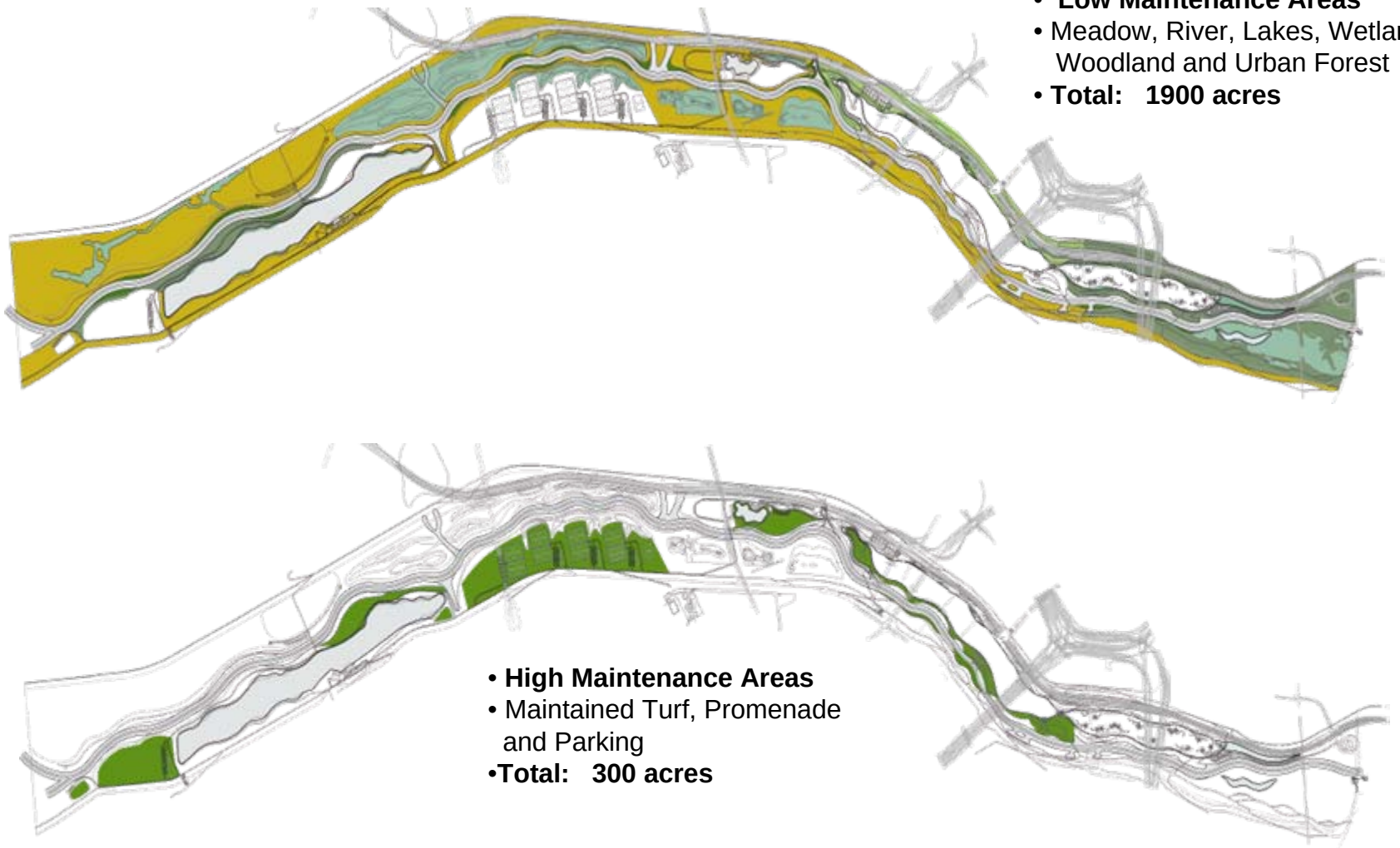
Art Program: A Three Part Approach

• **TEMPORARY** and **SITE-SPECIFIC** works placed throughout the park on a seasonal basis—potentially a biennial event attracting national and international attention

• Artist designed **COUNCIL RINGS**, placed in choice locations throughout the Fields, Lakes and Forest for small gatherings, landscape interpretation, meditation and readings.

• A single, **MAJOR ART WORK** by a renowned artist conceived as part of the Fountain Plaza, possibly the water feature itself.

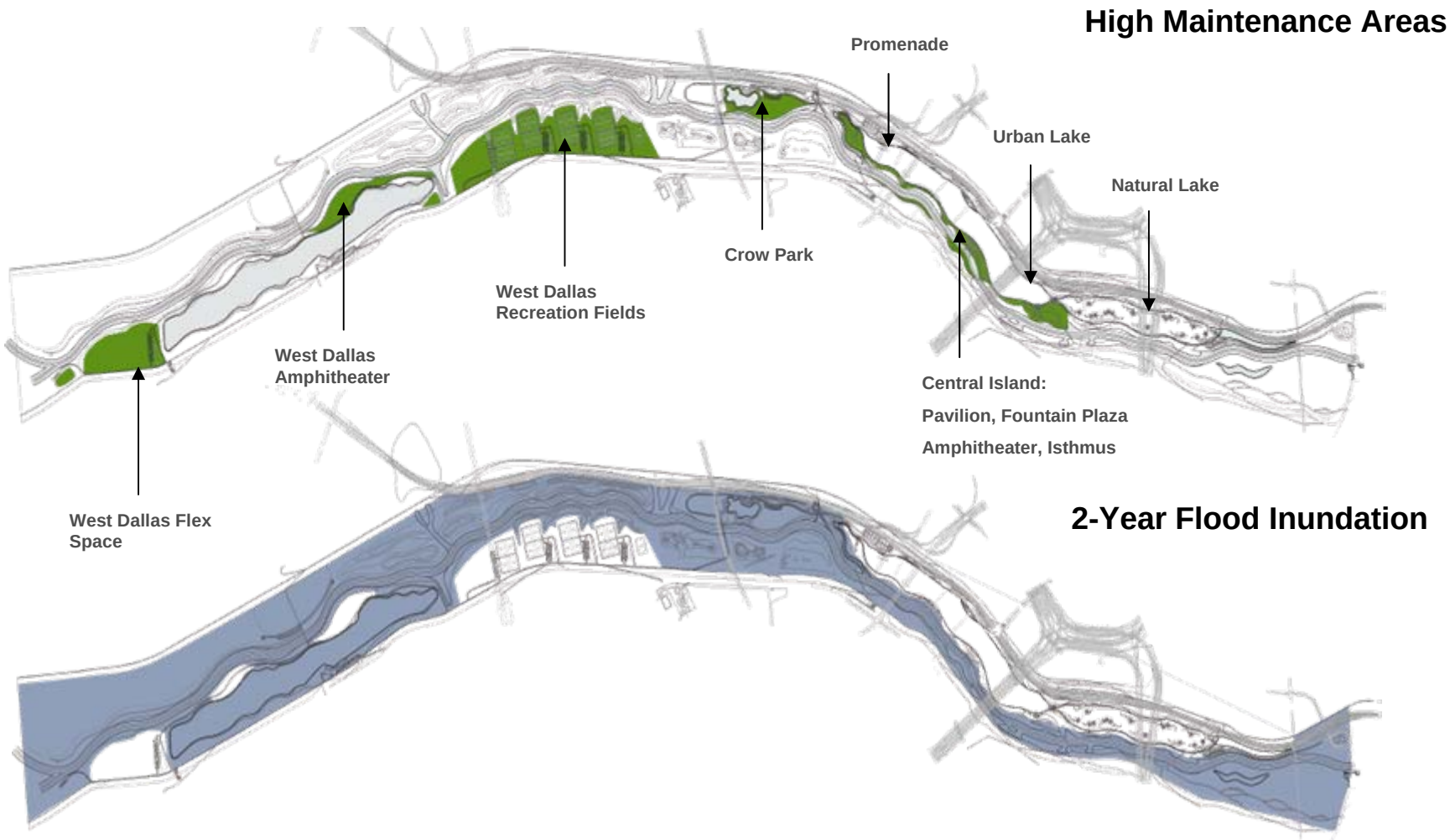
Landscape Maintenance



- **Low Maintenance Areas**
- Meadow, River, Lakes, Wetland, Woodland and Urban Forest
- **Total: 1900 acres**

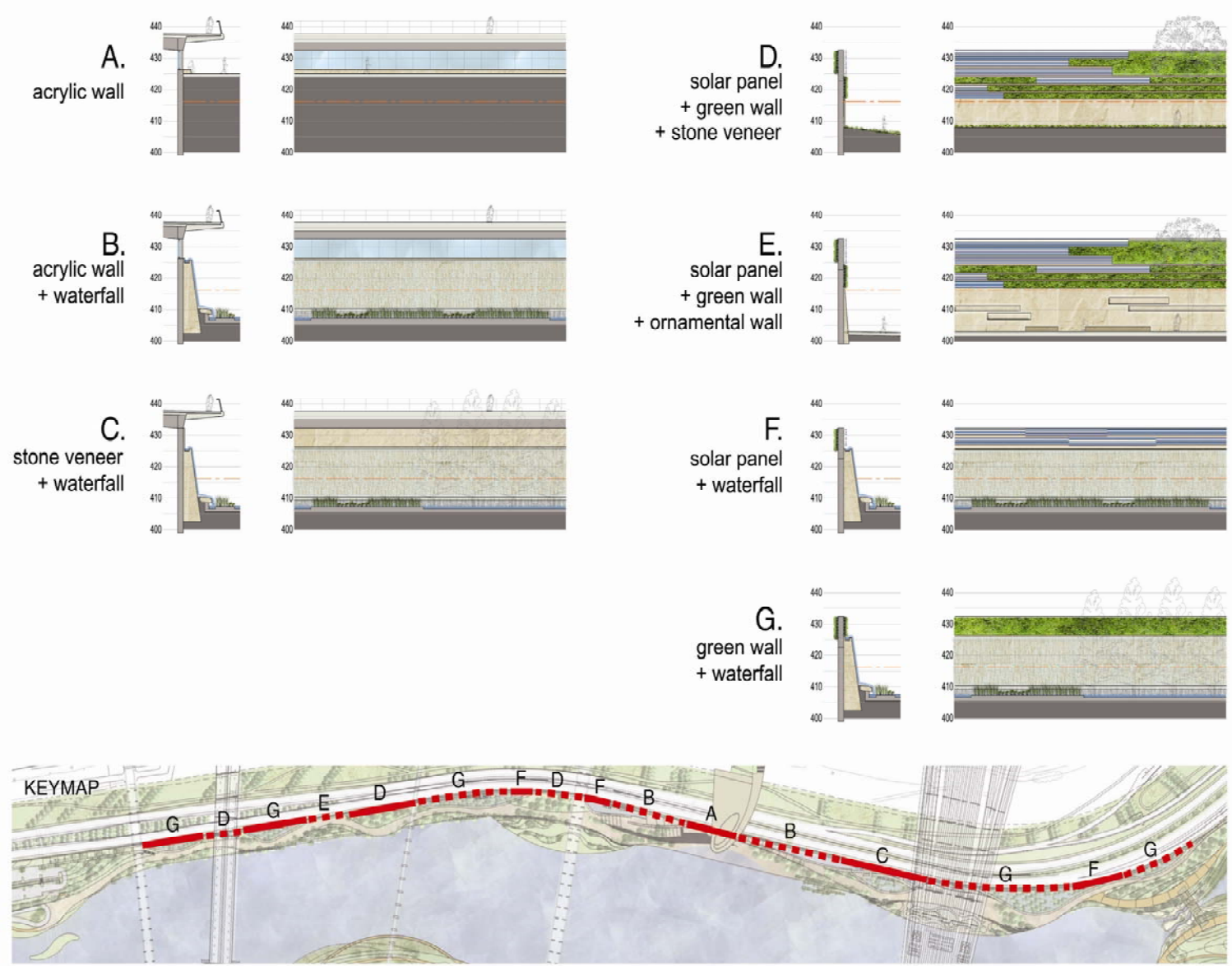
- **High Maintenance Areas**
- Maintained Turf, Promenade and Parking
- **Total: 300 acres**

2 Year Flood


High Maintenance Areas
Promenade
Urban Lake
Natural Lake
Crow Park
West Dallas
Recreation Fields
West Dallas
Amphitheater
Central Island:
Pavilion, Fountain Plaza
Amphitheater, Isthmus
West Dallas Flex
Space
2-Year Flood Inundation

Comments and Questions

Appendix: Wall Treatment Materials along Promenade



Appendix: Materials Palette

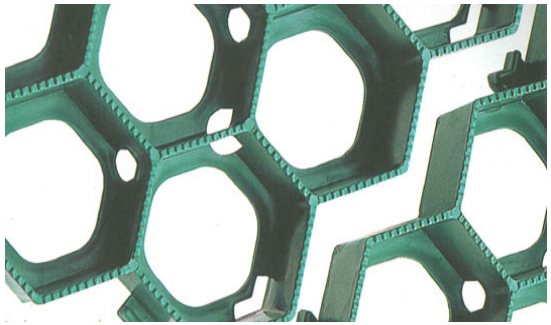
Solar Louver Panels

Green Walls

Water Walls

Stone Veneer Walls

Appendix: Materials Palette



Reinforced Turf – event and roadside parking

Concrete Paving – trails, roads

Stone Paving – promenade, isthmus…

Appendix: Materials Palette

Benches

Recycling & Trash Receptacles

Bicycle Racks

Appendix: Plants

PLANT DATABASE

Canopy Trees

American Sycamore
Platanus occidentales

White Oak
Quercus alba

Overcup Oak
Quercus lyrata

Bur Oak
Quercus macrocarpa

Chikapin Oak
Quercus muehlenbergi

PLANT DATABASE

Canopy Trees

Pecan
Carya illinoinensis

Texas Ash
Fraxinus texenis

Honey Locust
Gleditsia triacanthos

Sweetgum
Liquidambar styraciflua

Fastigiate Sweetgum
Liquidambar styraciflua 'Slender Silhouette'

PLANT DATABASE

Canopy Trees

Bigtooth Maple
Acer grandidentatum

Caddo Maple
Acer barbatum

Bowhall Maple
Acer rubrum 'Bowhall'

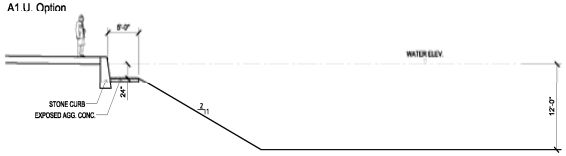
Red Maple
Acer rubrum var. tridens

Hornbeam
Carpinus betulus-'Columnaris'

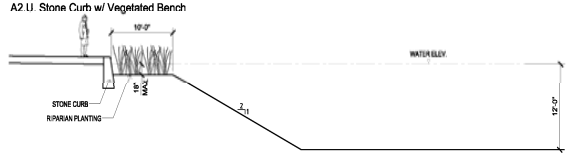
Appendix: Urban Lake Edge Prototypes

A1.U. Stone Curb w/ Bench & Wall

A1.U. Option

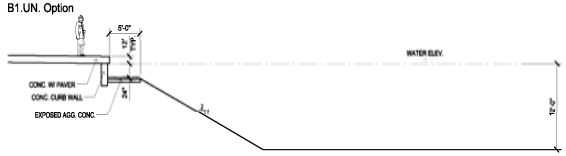


A2.U. Stone Curb w/ Vegetated Bench

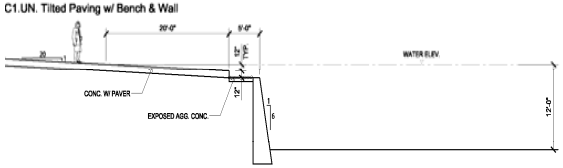


B1.UN. Paving w/ Bench & Wall

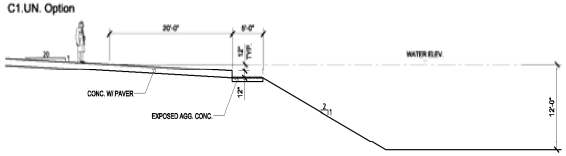
B1.UN. Option



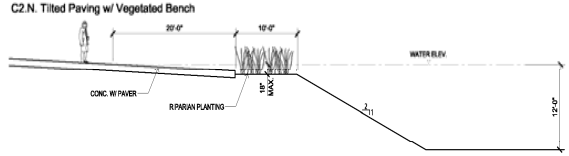
C1.UN. Tilted Paving w/ Bench & Wall



C1.UN. Option

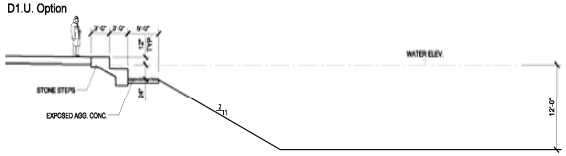


C2.N. Tilted Paving w/ Vegetated Bench

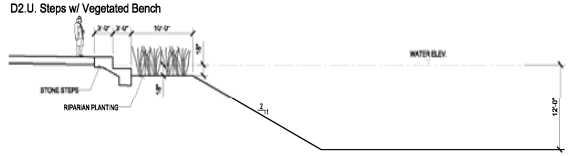


D1.U. Steps w/ Bench & Wall

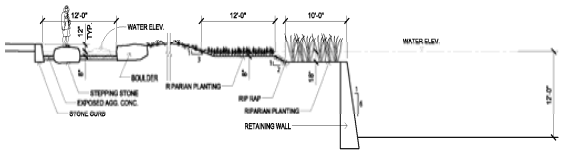
D1.U. Option



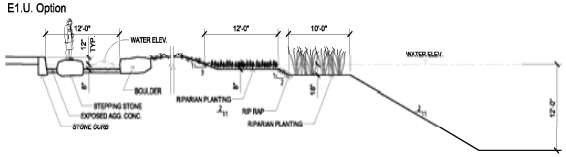
D2.U. Steps w/ Vegetated Bench



E1.U. Island w/ Wall



E1.U. Option

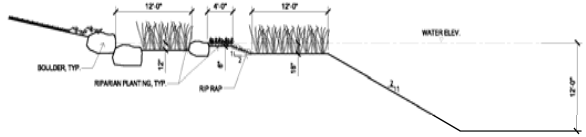


Appendix: Natural Lake Edge Prototypes

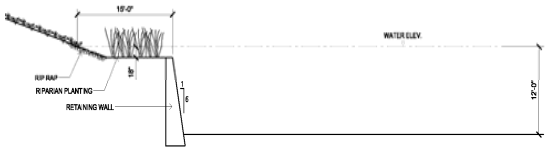
Boulder Bank w/ Vegetated Bench & Wall

F1.N. Option

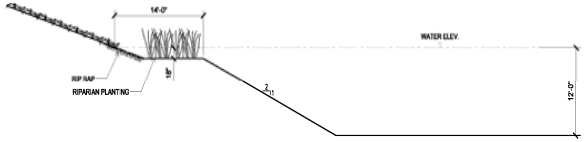
F2.N. Boulder Bank w/ Vegetated Benches



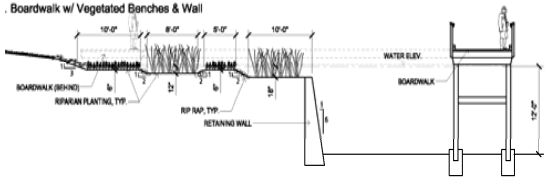
. RIP-RAP Bank w/ Vegetated Bench & Wall



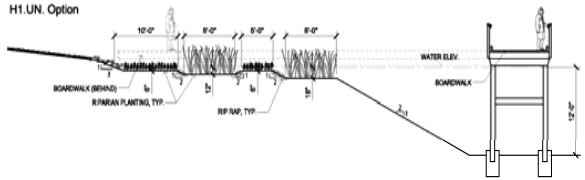
G1.UN. Option



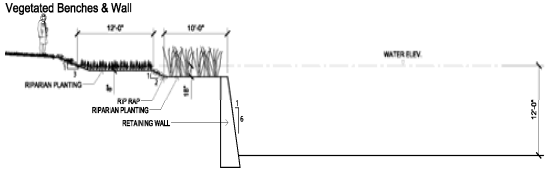
. Boardwalk w/ Vegetated Benches & Wall



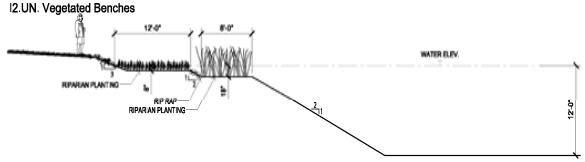
H1.UN. Option



Vegetated Benches & Wall



I2.UN. Vegetated Benches



Appendix: Natural Lake Edge Prototypes

Park Feature	Material	Finish
Access and Circulation		
Primary Trail - 20' Wide	Concrete	Broom
Seconday Trails - 12'	Concrete	Broom
Seconday Trails - 12'	Decomposed Granite	1/4" or Less
Equestrian Trail - 10'	Decomposed Granite	1/4" or Less
Boardwalks - 10'	Sustainable Decking	Weather Resistant
Park Roads 24'	Concrete	Broom/No Curbs
Parking	Concrete	Broom/No Curbs
Internal Bridges	Concrete & Steel	Broom/Powder Coated
Key Park Features		
Promenade	Lueders, Limestone, Granite, Concrete	NA
Isthmus	Lueders Limestone, Structural Concrete	NA
Fountain Plaza	Concrete, Natural Stone	NA
Urban Lake Outfall	Limestone Armoring, Concrete	NA
Central Island Amphitheater	Lueders Limestone, Structural Concrete	NA
West Dallas Amphitheater	Retained Fill,Turf	NA
River and Lake Armoring	Lueders, Limestone, Concrete	NA