



Board of Directors Meeting

October 15, 2024





Pledge of Allegiance

I pledge allegiance to the flag of the United States of America, and to the republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

Pledge of Allegiance to the Texas Flag

Honor the Texas flag; I pledge allegiance to thee, Texas, one state under God, one and indivisible.

Agenda Item 2:
Public Comment

Agenda Item 3:
**Consider Approval of the Minutes from the Meetings
Held on September 12, 2024, and September 17, 2024**

Item 4:

Update on Panther Island Form-Based Code

Dana Burghdoff, Assistant City Manager, City of Fort Worth





Panther Island Form-Based Code Update

TRWD Board Briefing

October 15, 2024

Panther Island and Peripheral Zones



Public Sector Partners

- City of Fort Worth
 - Project Manager - Justin Newhart
- Tarrant Regional Water District
 - Doug Powell
- Tarrant County
- Tarrant County College
- NCTCOG
- Trinity Metro
- TxDOT

Consultant Team

- Livable Plans
 - Jay Narayana
 - Mike Huston
- Side Partners
 - Randy Hutcheson
- Kimley Horn
 - Jeff Whitacre
 - Reid Cleeter
 - Wes Sprott



What is a form-based code?

Form-based codes address:

- scale and types of streets and blocks
- relationship between building facades and the public realm
- form and mass of buildings in relation to one another

OVERALL URBAN DESIGN FRAMEWORK

UPDATED STRATEGIC VISION

**DISTRIBUTED OPEN SPACE NETWORK
WITH 14 PUBLIC SPACE OFFERINGS**

**CONTINUOUS PUBLIC WATERFRONT
ACCESS**

**A WALKABLE AND CONNECTED
PEDESTRIAN ENVIRONMENT**

**EFFICIENT & CONNECTED ROAD
NETWORK STRENGTHENING URBAN GRID**

ACCESS TO EFFECTIVE BIKE ROUTES

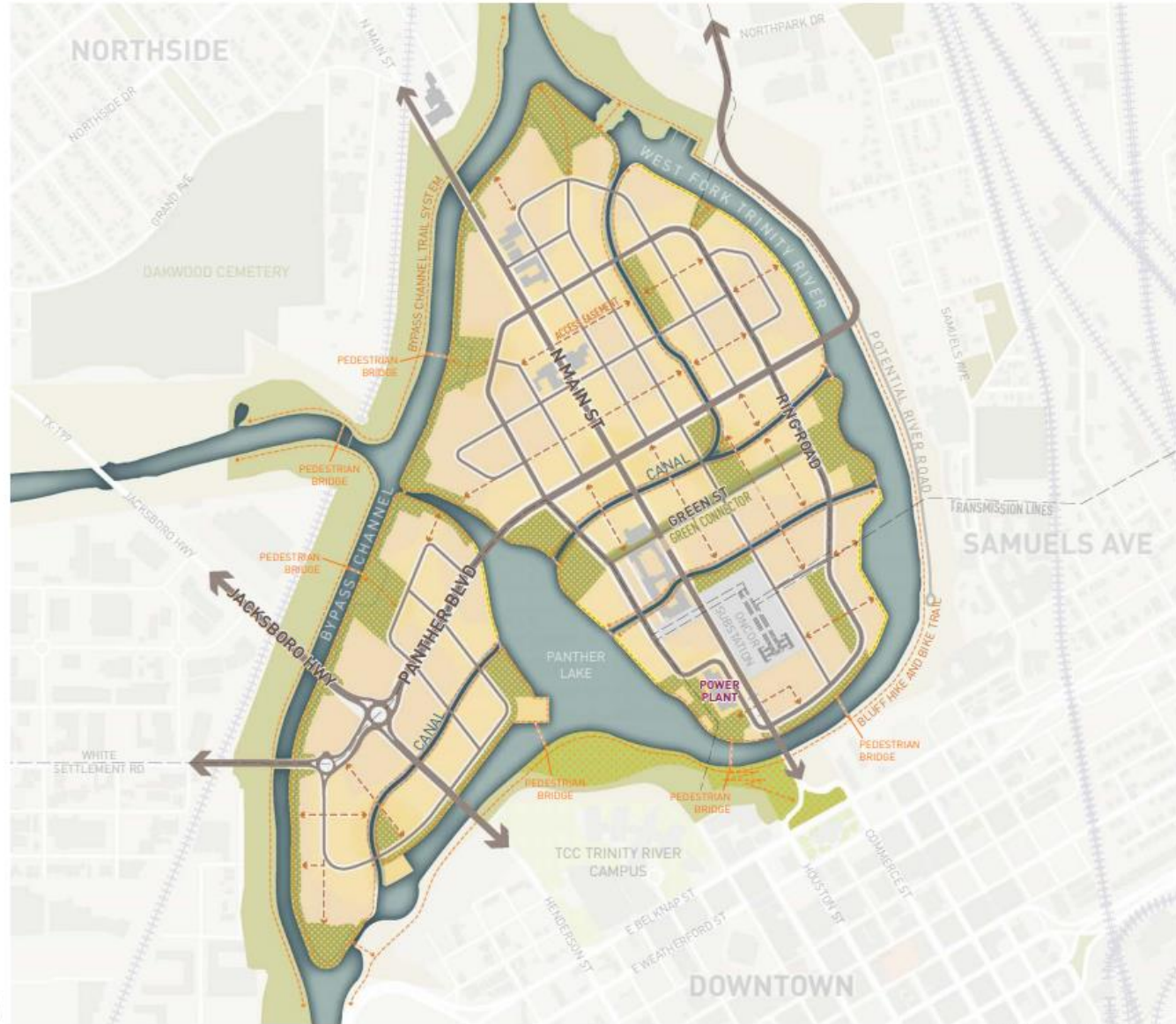
ROBUST PUBLIC TRANSPORTATION

**193 ACRES OF PUBLIC & PRIVATE
DEVELOPABLE LAND**

**INTIMATE & ACTIVE CANALS WITH
DISTRICT STORMWATER STRATEGIES**

LEGEND

- | | |
|--|---|
|  DEVELOPABLE PARCEL |  TRANSMISSION LINES |
|  PEDESTRIAN ROUTE |  WATER BODY |
|  ACCESS EASEMENT |  ROAD |
|  INTERNAL PANTHER ISLAND PUBLIC SPACE |  ADJACENT GREENSPACE |
|  DOWNTOWN ADJACENT PUBLIC SPACE | |



Panther Island - Fort Worth, TX 11

Project Goals

- Implement Panther Island Vision 2.0 developed in 2023-24
- Align FBC with other policies (TRWD Canal Design Guidelines, Mayor's Urban Rail Study)
- Balancing flexibility with predictability due to several issues that are outstanding
- Other? (TIF performance, min. densities, etc.)

Project Schedule

Task	Oct.	Nov.	Dec.	Jan. 2025	Feb.	Mar.	April
Review all background data	Active	Light	Light	Light	Light	Light	Light
Work with the City/TRWD on the stakeholder involvement process	Active	Light	Light	Light	Light	Light	Light
Site visit with kick off meeting with key City/TRWD representatives (early November)	Light	Active	Light	Light	Light	Light	Light
Other stakeholder meetings (Nov-Dec)	Light	Active	Active	Light	Light	Light	Light
2-day code workshop (mid Jan)	Light	Light	Light	Active	Light	Light	Light
Draft memo and code amendment recommendations	Light	Light	Light	Light	Active	Light	Light
Develop FBC amendments	Light	Light	Light	Light	Active	Active	Light
First Draft of FBC Amendments	Light	Light	Light	Light	Light	Light	Active

City/TRWD-Consultant project status update calls (bi-weekly)



Project Schedule

Task	April	May	June	July	Aug.	Sept.	Oct.
First Draft of FBC Amendments	Active	Completed	Completed	Completed	Completed	Completed	Completed
Review meetings with City/TRWD staff	Active	Active	Completed	Completed	Completed	Completed	Completed
Stakeholder meetings on draft FBC	Completed	Active	Active	Completed	Completed	Completed	Completed
Final draft FBC	Completed	Completed	Active	Active	Completed	Completed	Completed
Legislative process: begins after July 2025	Completed	Completed	Completed	Completed	Active	Active	Active

City/TRWD-Consultant project status update calls (bi-weekly)

How Panther Island Development Can Help Northside

Provide access for residents to the following:



Downtown and other cultural assets



Waterfront, trails and recreational activities



Job and income earning opportunities



Improved transit and mobility options



Attainable housing and homeownership



Questions/comments?

The background of the slide is a close-up photograph of water. It features a series of concentric, overlapping ripples that create a textured, shimmering effect. The water is a clear, light blue color, and the lighting highlights the individual droplets and bubbles, giving it a sense of depth and movement.

PRESENTATION

TRWD General Ordinance

Stephen Tatum, *General Counsel*

The background of the slide is a close-up photograph of water. It features a large, circular ripple pattern on the left side, transitioning into a dense field of smaller, overlapping ripples and bubbles on the right. The water is clear and bright, with a light blue tint. The lighting creates highlights and shadows on the water's surface, giving it a textured, three-dimensional appearance.

PRESENTATION

Litter Program

Darrell Beason, *Chief Operations Officer*

Programmatic Solutions

Community Cleanups



Litter Containment / Collection



Education



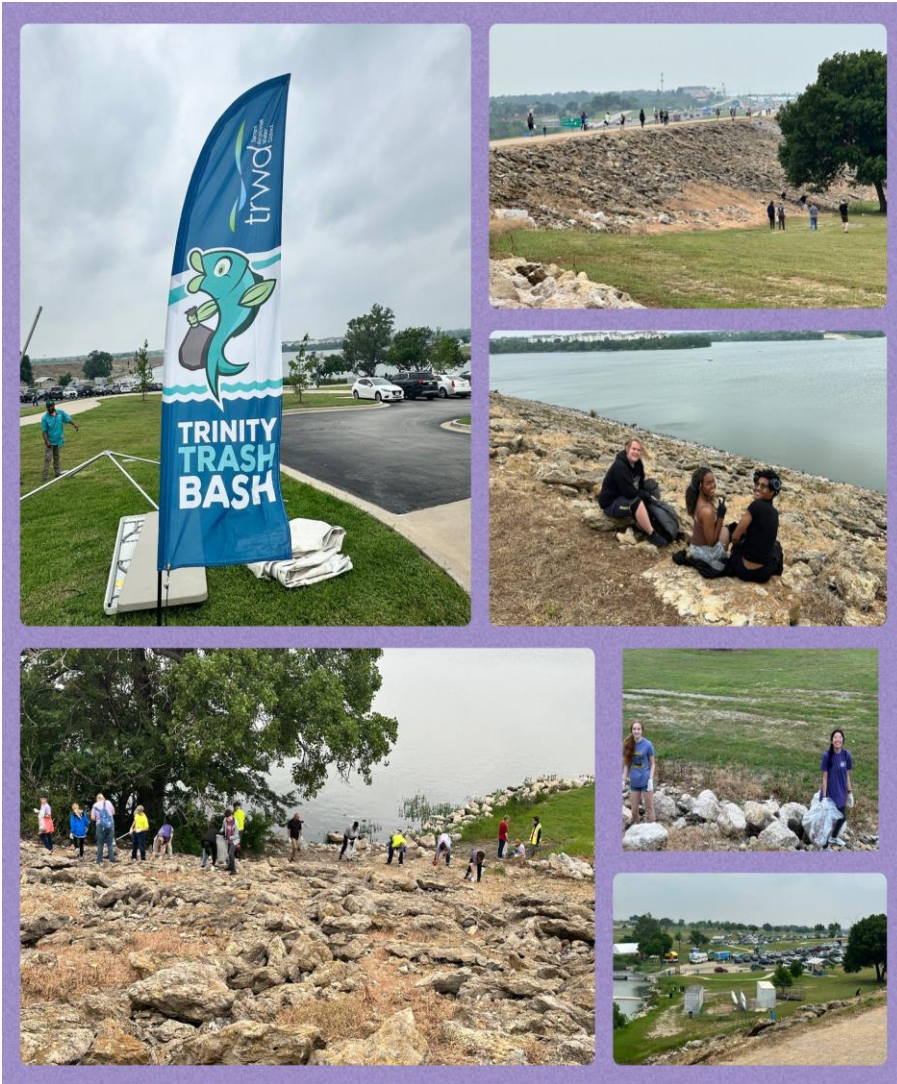
Recycling





TRWD Programs & Events

Trash Bash, Adopt-A-Trail, Adopt-A-River



Trash Bash

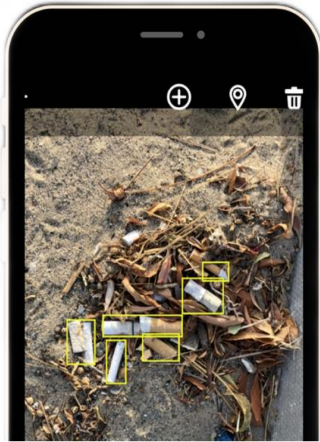
Adopt-A-Trail

Adopt-A-Drain



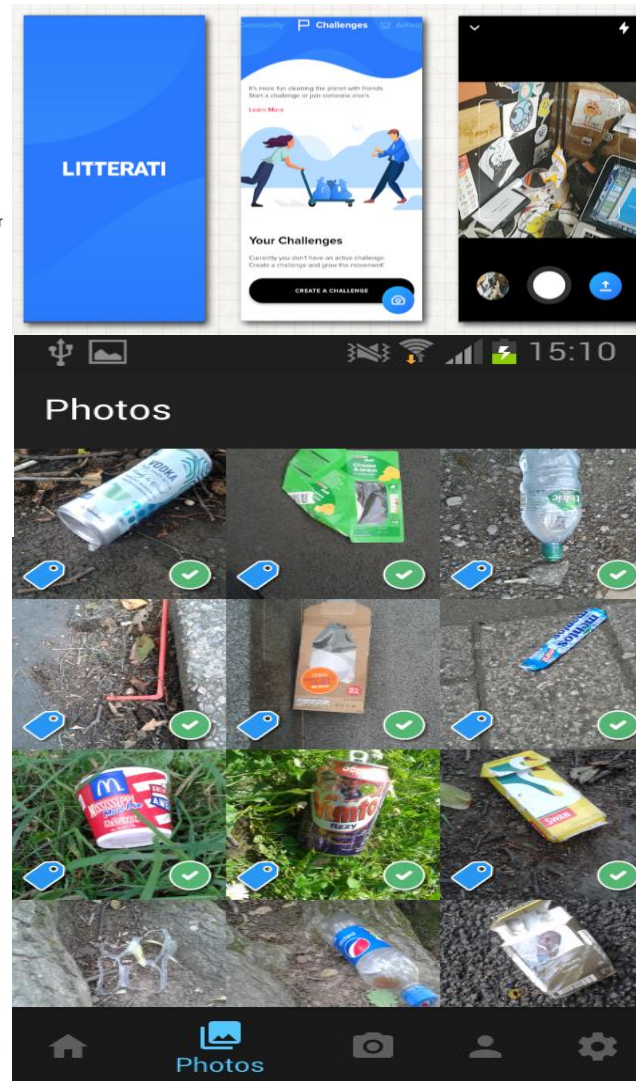
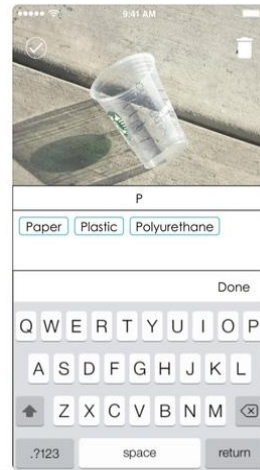
Litterati App

Litter Tracking



Identify Every Object, Material, and Brand

Whether it's a Starbucks plastic cup, Coke aluminum can, or Marlboro cigarette butt, you'll gain exact insight to what's littering your streets, sidewalks, and beaches.

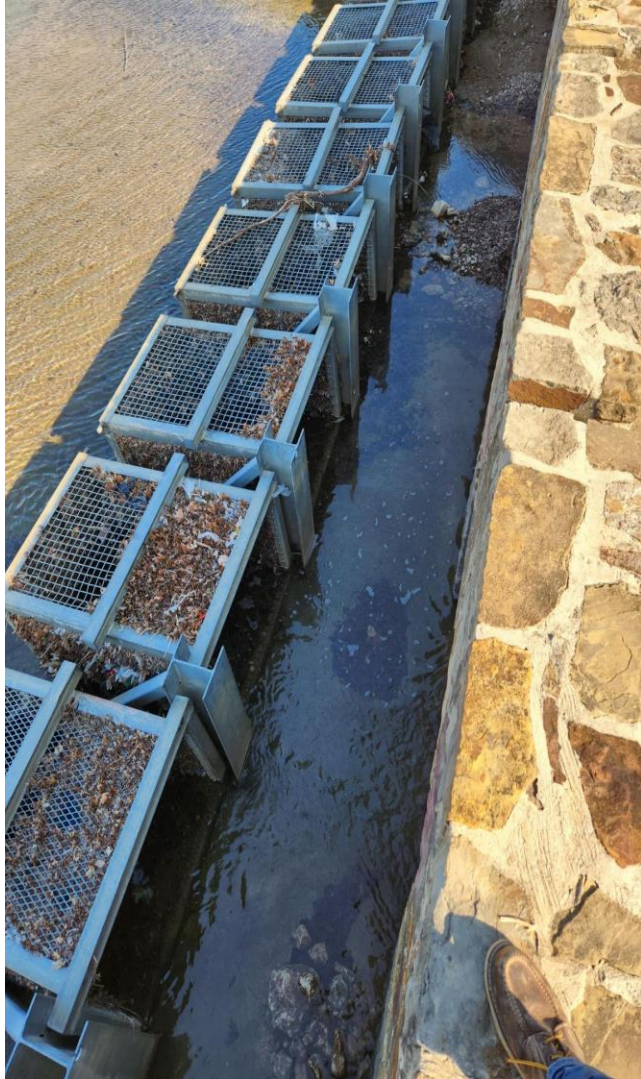


Data Collected Since 2021

- Plastic, paper, and Styrofoam are the most recorded litter type.
- Marlboro, Chick-fil-a, Starbucks, and McDonalds are the highest recorded brands of litter.
- Almost 50,000 litter pieces have been collected and tracked using the app since 2021.

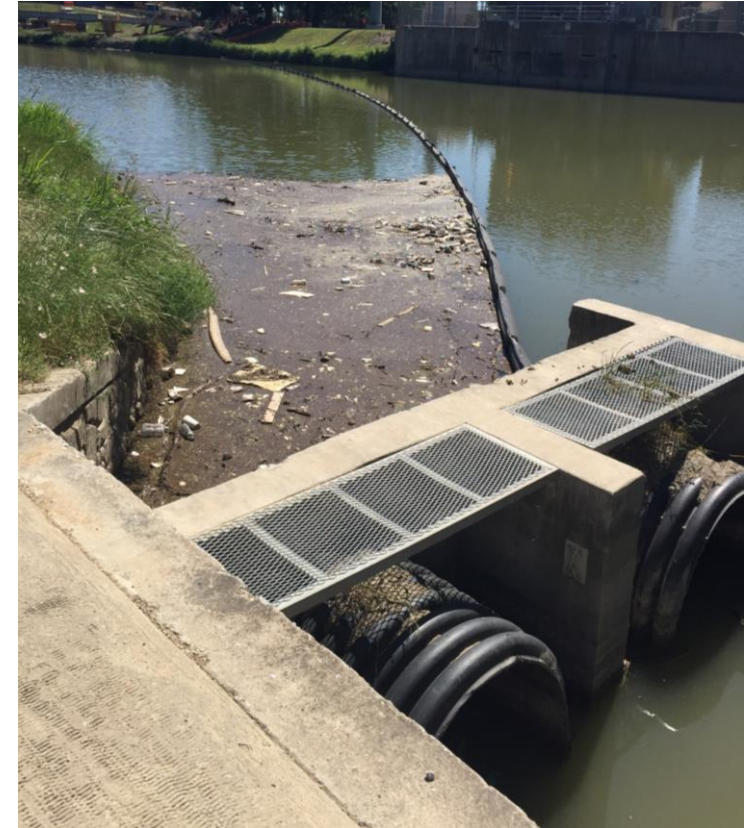


Past Efforts



Large Mesh Bags

- Rosedale Trash Collector
- Floodgate 19 Outfall Pipes





Ongoing Efforts





Ongoing Efforts



Litter Solution Selection

Research Based Solution Selection

Choosing a Litter Device

- Location criteria
- Capacity
- Infrastructure needed
- Vendor customer service
- Manual labor requirement
- Lifetime costs and warranty





Litter Collection Devices

Strategic Planning in Litter Collection Placement

Top Litter Contributors

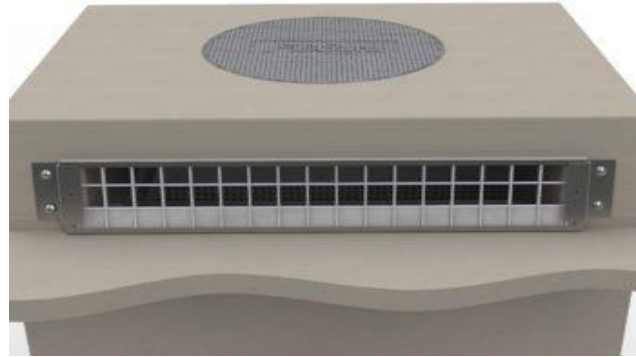
- Sycamore Creek
- Marine Creek (South of the Stockyards)
- Purcey Outfall (Styrofoam Creek)
- Zoo Creek Oxbow
- Overton Diversion Channel
- Colonial Tributary (Floodgate 18)
- Farmers Branch Creek





Multiple Vendor Options

Curb Inlet Catchment



PRO:

- Point-source catchment
- Most effective cleaning
- Lowest-risk catchment option
- Easy maintenance

CON:

- TRWD does not have jurisdiction over inlets
- 30,000+ storm drain inlets in Fort Worth
- High cost
- High maintenance



Storm Water Systems

Bandalong Litter Trap – US Based Vendor



PRO:

- Continuous litter collection
- Custom anchoring design to suit the site
- Captures floating debris
- Can collect 30,000lbs of trash annually

CON:

- Manual or heavy equipment required for cleanout
- Geotech needed for determining location
- Specific location requirements



SpillTech Litter Solutions

InvisiBubble – International Vendor



PRO:

- Captures microplastics to 3mm
- Can be paired with any catchment device
- Does not inhibit water navigation
- Low maintenance
- A shelter can be built to house litter under lock and key for easy cleanout

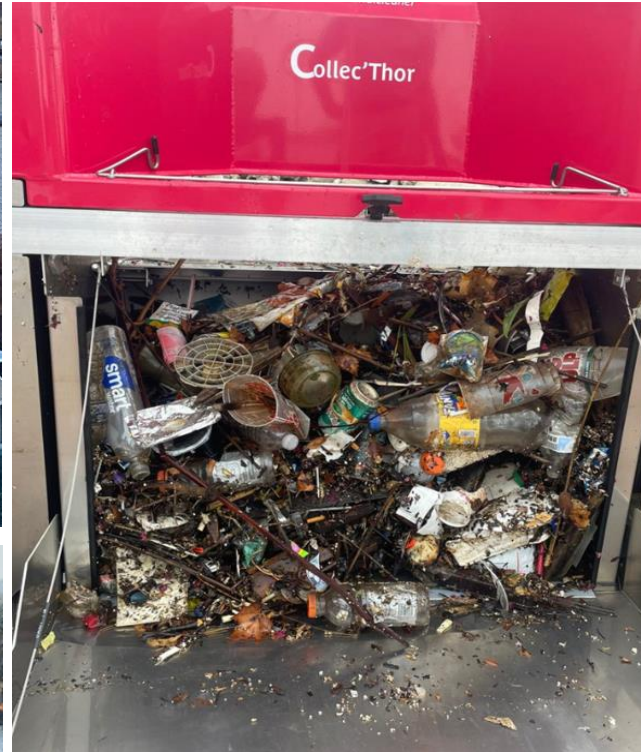
CON:

- Litter loss during storms
- Will need electrical wiring or solar
- Needs daily inspection



SpillTech Litter Solutions

Collec'Thor – International Vendor



PRO:

- Long service life
- Can be fixed or movable
- No litter loss
- Can be wrapped with branding, advertising, or sponsorship
- Captures microplastics to 3mm

CON:

- Not stand-alone system
- Will need electrical wiring or solar
- Needs regular inspection
- Maximum 220lb litter capacity



Aquarius Systems

Aquatic Trash Skimmer – US Based Vendor



PRO:

- Custom made per needs/specifications
- Can capture 7,000-10,000lbs of litter
- For river or reservoirs
- Not in a fixed location

CON:

- Requires a dedicated crew
- Requires boat maintenance
- Requires a trailer for transport
- Would require boat ramps



DESMI Litter Solutions

Rise Series – International Vendor



PRO:

- Loads litter directly into dumpster
- Automatic system
- No capacity limitation

CON:

- Infrastructure needed for cleanout
- Bank height limitation
- Requires electrical service or solar



UpSpire

4- or 5-person cleaning crew



PRO:

- Reliable cleanup schedule
- Effective floodway cleaning
- Provides a social benefit
- Immediate deployment
- Launch program success

CON:

- Do not clean the waterways
- Approx. 200-250K per year



Education

Reducing Litter at the source



LITTER
STOP IT
REPORT IT
PICK IT UP!

A KEEP FORT WORTH BEAUTIFUL INITIATIVE



Texas Trading Post - www.textraders.com



Recycling

What can be recycled?

The infographic features a central white recycling symbol on a dark teal background. Surrounding this symbol are eight categories of items, each with a small icon and a text label:

- PLASTIC BAGS (represented by a white plastic bag icon)
- EMPTY ROLL-ON DEODORANT BOTTLES (represented by a roll-on deodorant can icon)
- LEAFD YOU NO LONGER WEAR (represented by a pair of blue jeans icon)
- PLASTIC WATER BOTTLES (represented by two plastic water bottles icon)
- OLD CLOTHING (represented by a white t-shirt icon)
- EMPTY ICE CREAM CONTAINERS (represented by an ice cream container icon)
- MILK CARTONS (represented by a milk carton icon)
- EMPTY ROLL-ON DEODORANT BOTTLES (represented by a roll-on deodorant can icon)

LEARN MORE AT GLOBALRECYCLINGEAR.COM

Recommendation

- Full-time UpSpire crew for near-term impact
- Education through advertising
- Additional research needed for device selection



The background of the slide is a close-up photograph of water. It features a series of concentric, overlapping ripples that create a textured, shimmering effect. The water is a clear, light blue color, and the lighting highlights the individual droplets and bubbles, giving it a dynamic and fresh appearance.

PRESENTATION

Trail Lighting

Darrell Beason, *Chief Operations Officer*

Solar Lighting

Research Based Solution Selection

Criteria for Choosing a Solar Light Product

- Lighting output
- Durability
- Costs
- Vendor responsiveness
- Settings
- Ease of installation and ability to be serviced

Potential Lighted Loop

Riverside Park



Solar Lighting



Solar Lighting Companies

- ClearWorld LLC
- First Light Technologies LTD
- Fonroche Lighting America
- Green Frog Systems

ClearWorld LLC

RetroFlex Solar LED – Metairie, LA



Data Collected:

- 10year warranty and a 28year lifespan
- Approximately \$200,000-225,000 per mile
- Darksky compliant
- TRWD Staff Feedback (Scale 1-10)
 - Ease of installation: 2
 - Ability to be serviced: 2
 - Durability: 2

First Light Technologies LTD

SCL2 Series – Victoria, BC Canada (International Vendor)



Data Collected:

- 15year warranty and a 10year battery warranty
- Approximately \$200,000 to \$225,000 per mile
- Darksky compliant
- TRWD Staff Feedback (Scale 1-10)
 - Ease of installation: 9
 - Ability to be serviced: 8
 - Durability: 8

Fonroche Lighting America

Smartlight - Fort Worth, TX



Data Collected:

- 5year warranty and a 10year battery warranty
- Approximate \$160,000-\$190,000 per mile
- Darksky compliant
- TRWD Staff Feedback (Scale 1-10)
 - Ease of installation: 4
 - Ability to be serviced: 7
 - Durability: 3

Green Frog Systems

Aeromax/Defender-55 – Plano, TX



Data Collected:

- 6year warranty & 10year battery warranty
- Approximately \$90,000-105,000 per mile
- Darksky compliant
- TRWD Staff Feedback (Scale 1-10)
 - Ease of installation: 9 / 9
 - Ability to be serviced: 8 / 7
 - Durability: 8 / 9

Solar Lighting

Pilot Program



Project Background

Improving safety for the Trinity Trails



Agenda Item 6:
Executive Session

Item 7:

Consider Approval of Memorandum of Understanding Agreement with North Texas Municipal Water District for Water Conservation Strategic Services

Linda Christie, Government Affairs Director



Water Conservation

Program Evaluation

- 2x/Week Savings = up to 2 billion gallons/year
- Landscape Ordinance Savings = 5-20% over previous standards
- Agreement for Water Conservation Strategic Services

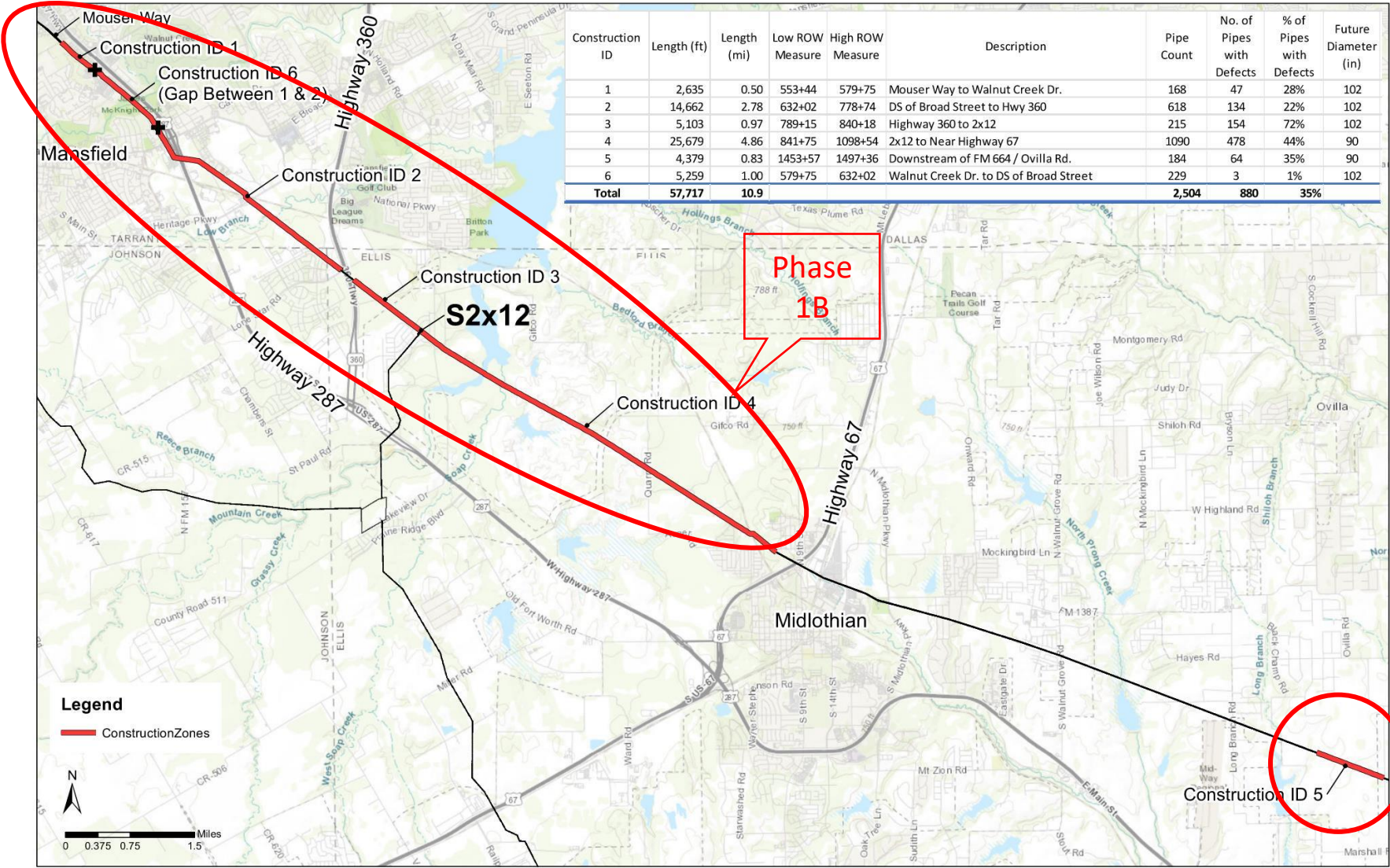
Item 8:

Consider Approval of Contract with Accurate Inspections, LLC for Manufacturing Inspection and Testing Services of Cedar Creek Section 2 Pipeline Replacement Phase 1A and 1B Projects

Jason Gehrig, Infrastructure Engineering Director



Cedar Creek Pipeline Replacement Project Area



Phase 1B

Phase 1A

Cedar Creek Section II Pipeline Replacement

Phases 1A and 1B Pipe Manufacturing Inspection and Testing Services



Magnetic Particle Testing (MT)



Ultrasonic Testing (UT)



Dye Penetrant Testing (PT)

Cedar Creek Section II Pipeline Replacement

Phases 1A and 1B Pipe Manufacturing Inspection and Testing Services



Hydrostatic Testing

Cedar Creek Section II Pipeline Replacement

Phases 1A and 1B Pipe Manufacturing Inspection and Testing Services



Surface blast (prep for coating)

Cedar Creek Section II Pipeline Replacement

Phases 1A and 1B Pipe Manufacturing Inspection and Testing Services



Cement Mortar Lining (CML) Thickness



Polyurethane Coating Application

Cedar Creek Section II Pipeline Replacement

Phases 1A and 1B Pipe Manufacturing Inspection and Testing Services

- Phase 1A
 - 4,600 LF 90-inch steel pipe
 - 2 Monolithic Isolation Joints
- Phase 1B
 - 55,000 LF 90-inch and 102-inch
 - Valves & 6 Monolithic Isolation Joints



Item 9:

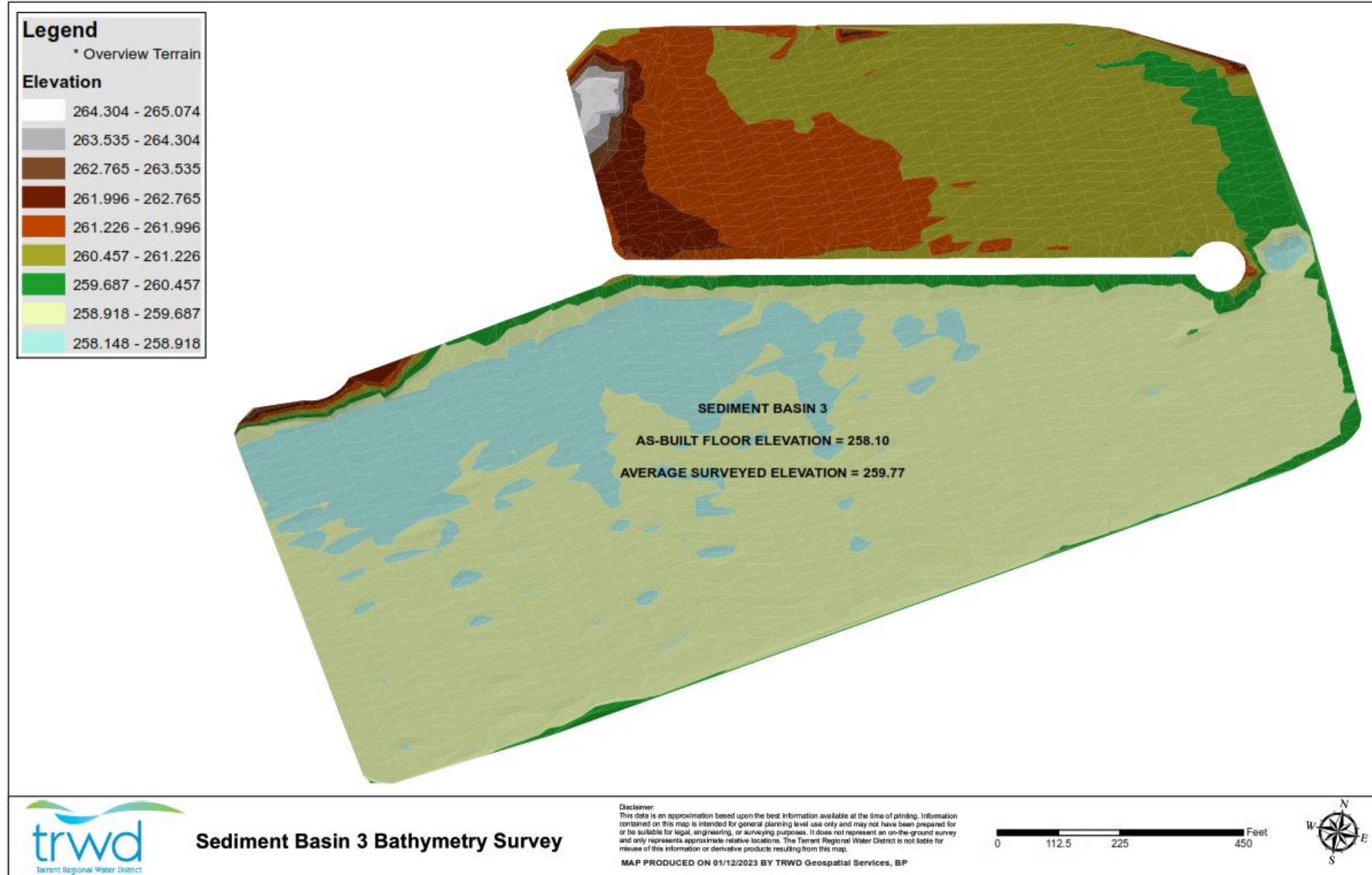
**Consider Approval of Contract with FCS
Construction for Silt Removal from George W.
Shannon Wetlands Sedimentation Pond - Phase I**

Darrell Beason, Chief Operations Officer



George W. Shannon Wetlands Silt Removal From Sedimentation Pond

Phase I



George W. Shannon Wetlands Silt Removal From Sedimentation Pond

Phase I

Summary

- Removal of 80K cubic yards silt from Sedimentation Pond #3.
- Transport removed sediment to the district's Trinity River Pump Station (TRPS).
- Project Duration: approximately 49 days
- Contract cost \$950,000
Prime: FCS Construction
DB Firm: Reeder Fuel Distributer
(DB participation 9.5%)
- Budget \$1,400,000



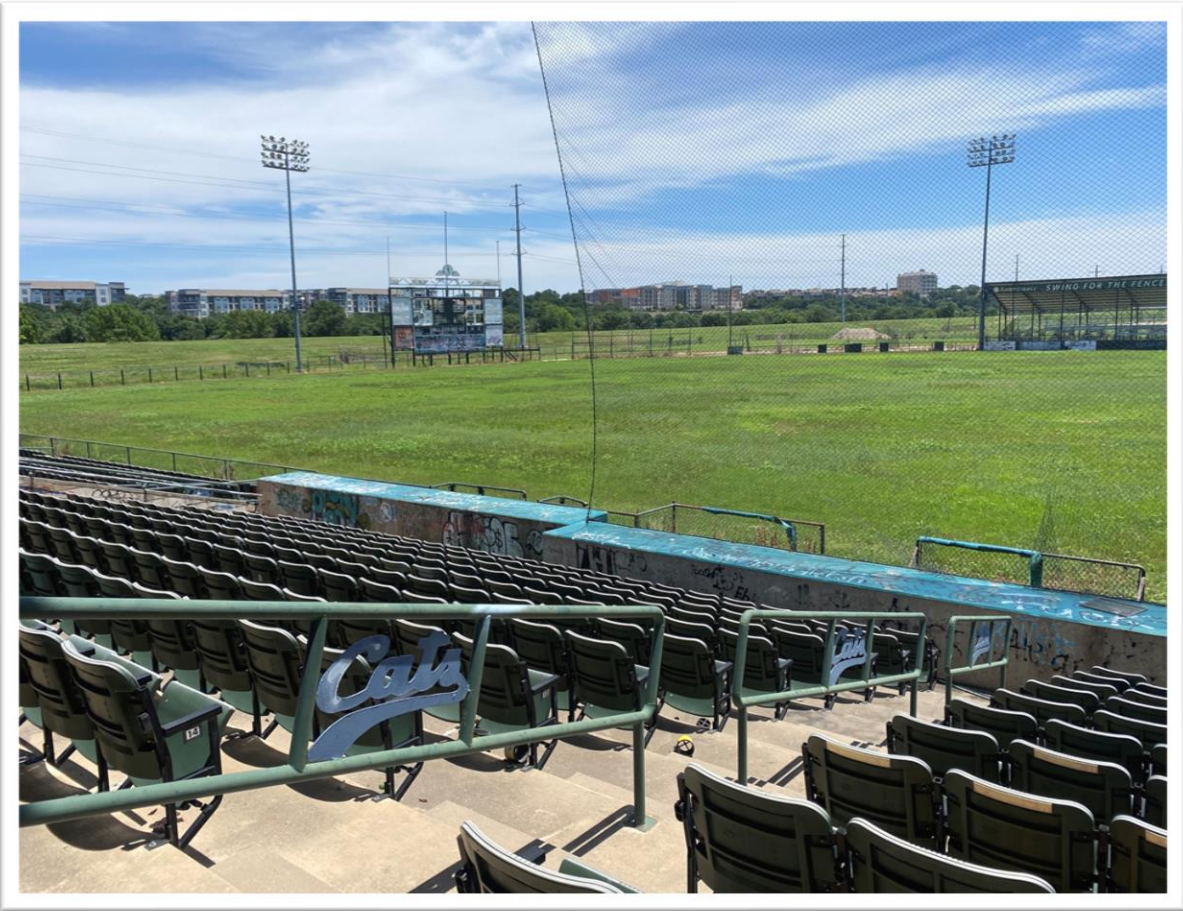
Item 10:

Consider Approval of Contract with Lloyd D. Nabors Demolition for Demolition of LaGrave Field

Darrell Beason, Chief Operations Officer



LaGrave Field Demolition



Item 11:

Consider Approval of Change Order to Contract with Huitt-Zollars, Inc. for Design and Construction Documentation Professional Services

Mick Maguire, Chief Administrative Officer



Item 12:

Consider Approval of Resolution Authorizing the Issuance, Sale, and Delivery of Tarrant Regional Water District, a Water Control and Improvement District, Water Revenue ECP Series A Refunding Bonds, Pledging Revenues for the Payment of the Bonds, Approving an Official Statement, and Authorizing Other Instruments and Procedures Relating Thereto

Sandy Newby, Chief Financial Officer



Item 13:

Consider Approval of Order Authorizing the Issuance of Tarrant Regional Water District, a Water Control and Improvement District, Unlimited Tax Refunding Bonds; Levying an Ad Valorem Tax in Support of the Bonds; Establishing the Procedures of Selling and Delivering the Bonds; and Authorizing Other Matters Related to the Issuance of the Bonds

Sandy Newby, Chief Financial Officer



Agenda Item 14:
**Consider Approval of Contract with Martindale
Consultants, Inc. for Oil and Gas Audit**

Carol Tackel, Risk and Internal Audit Director



Agenda Item 15:
Future Agenda Items

Agenda Item 16:
Schedule Next Board Meeting

November 19, 2024 at 9:00 AM



Agenda Item 17:
Adjourn

