



Southeast Brandon Drainage Improvements Project



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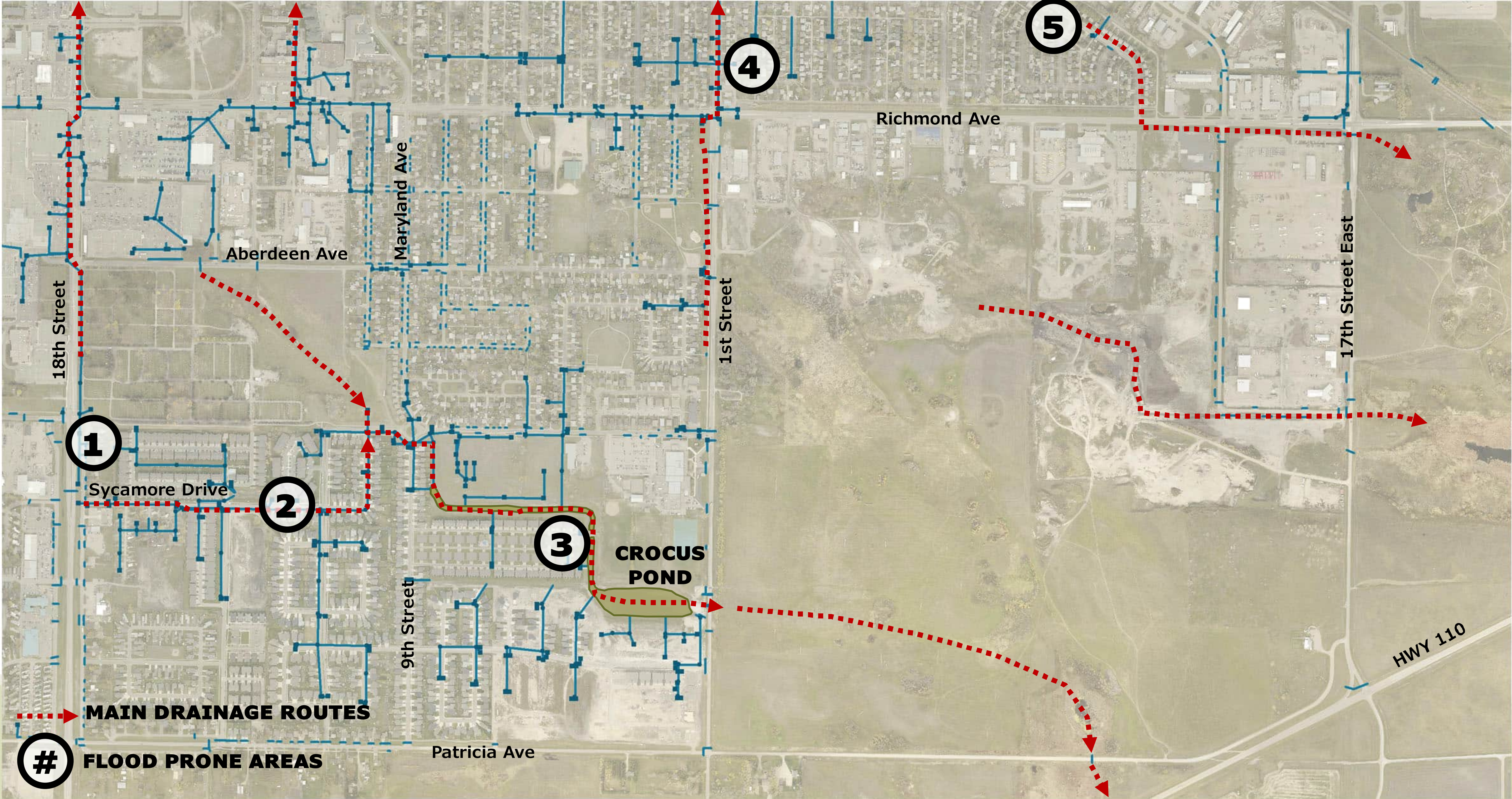
Welcome

- Thanks for joining us at the Southeast Brandon Drainage Improvements Open House.
- Storyboards highlighting the key aspects of the project are setup around the room.
- Representatives from the City of Brandon and our Engineering Consultants are available to speak about the project and answer any questions.
- Please remember to sign in before you leave.

Background

- The Southeast Drainage project proposes improvements and expansion of the existing drainage network east of 18th St and south of Richmond Ave within the City.
- Inadequacies have been identified in the existing drainage network including:
 - Lack of pond storage for large rain events.
 - Insufficient pipe capacity for Sycamore, Richmond and 1st Street (north of Richmond).
 - Limited outflow from Crocus Pond.
- Additional Benefits of completing the work include:
 - Accommodate future residential and industrial development along the route east of 1st Street.
 - Rerouting of surface water to support habitat of endangered Small White Lady's Slipper wildflowers.
- The City of Brandon has hired Tetra Tech and Burns Maendel to undertake preliminary and detailed design works.

Background Map (Existing Drainage System)



Issues

- In recent years, more frequent severe weather events have resulted in overland flooding.
- Overland flooding has caused damage to private and public property, resulting in significant repair costs.
- Flooded roads are unsafe and impassable.
- Wastewater sewers are overwhelmed by inflow, risking sewer backup.



Park Avenue East



1st Street Near Brock



18th Street Near Cemetery

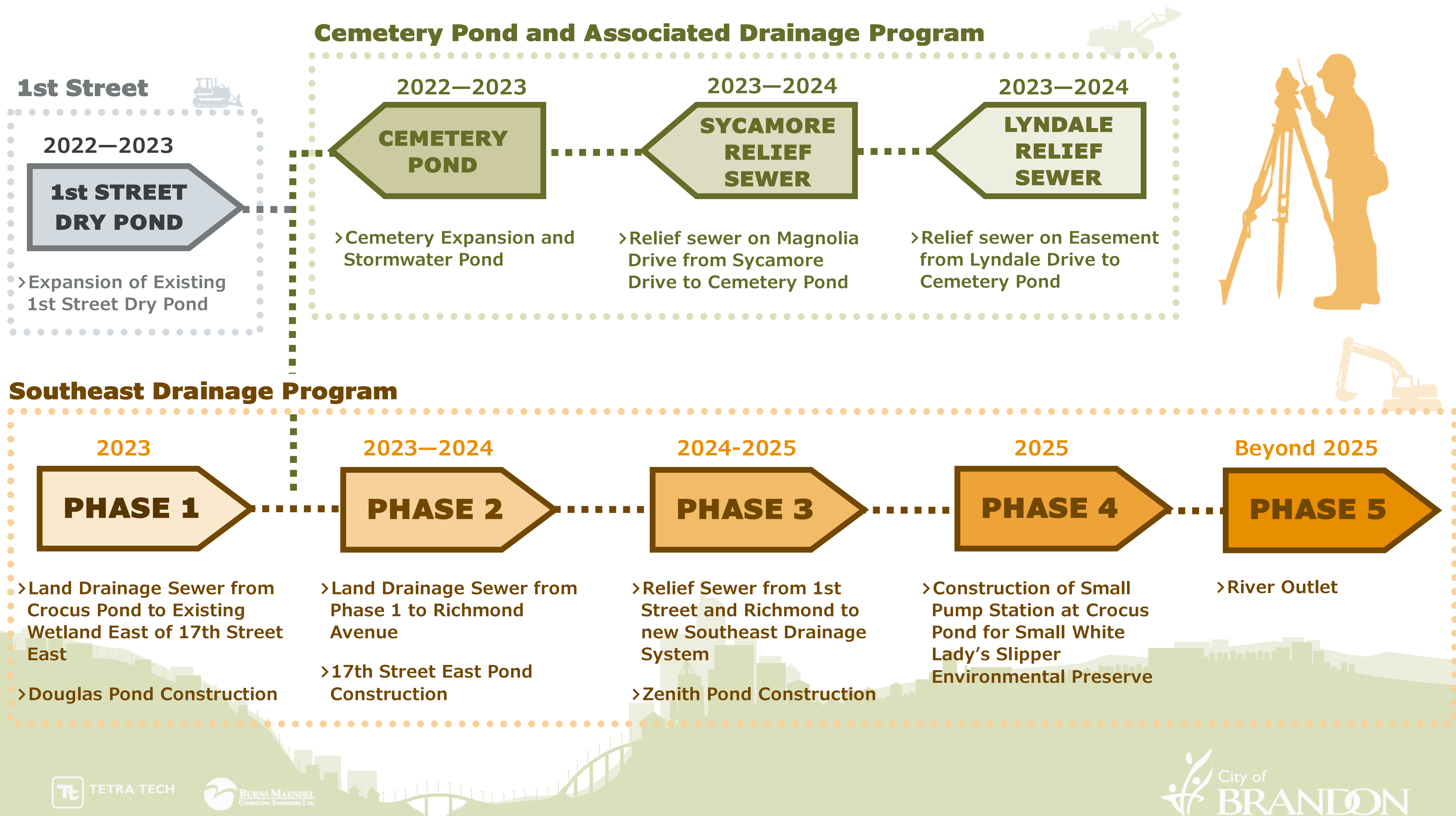


Sycamore Drive

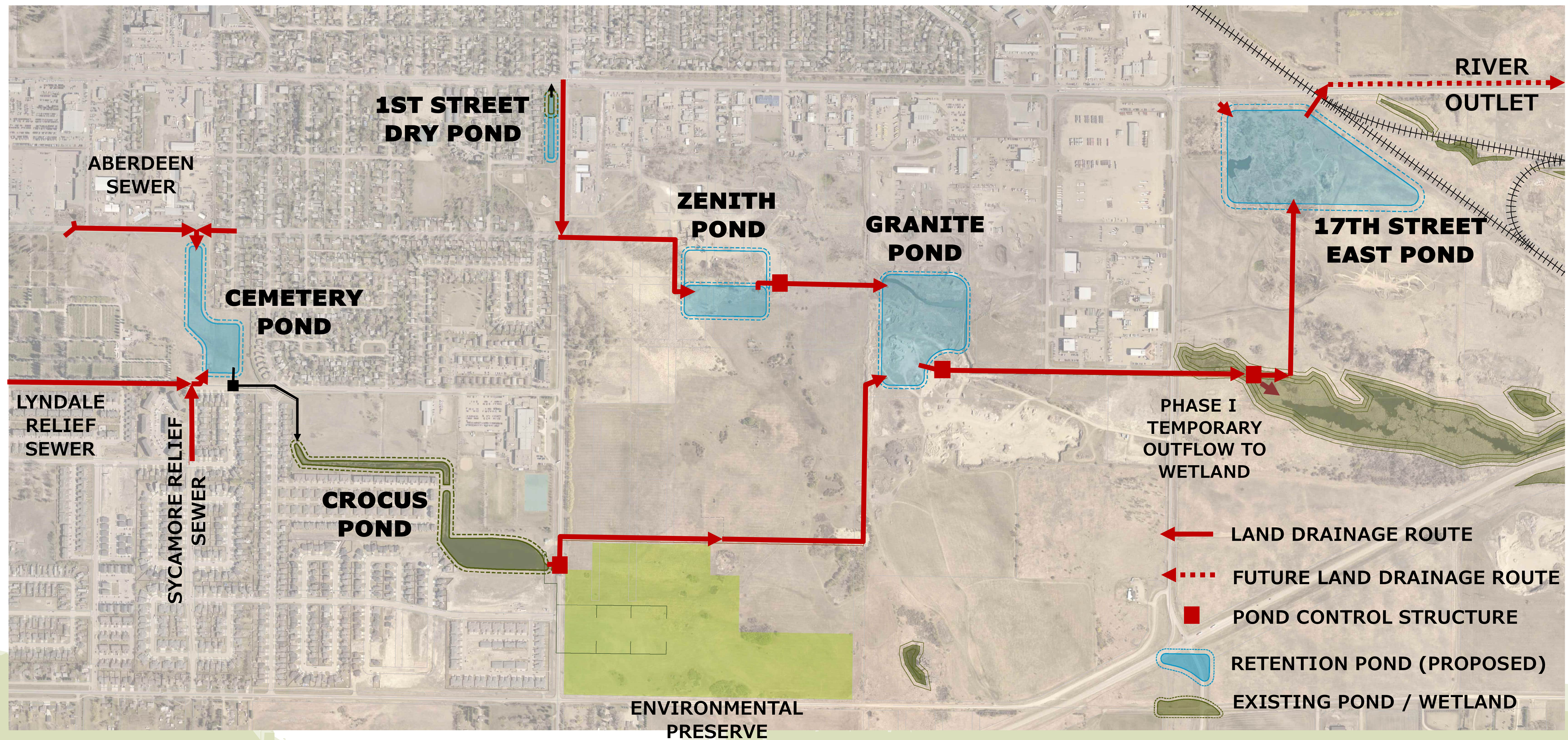


Crocus Pond

Solution Phased Construction Programs



Overall Map



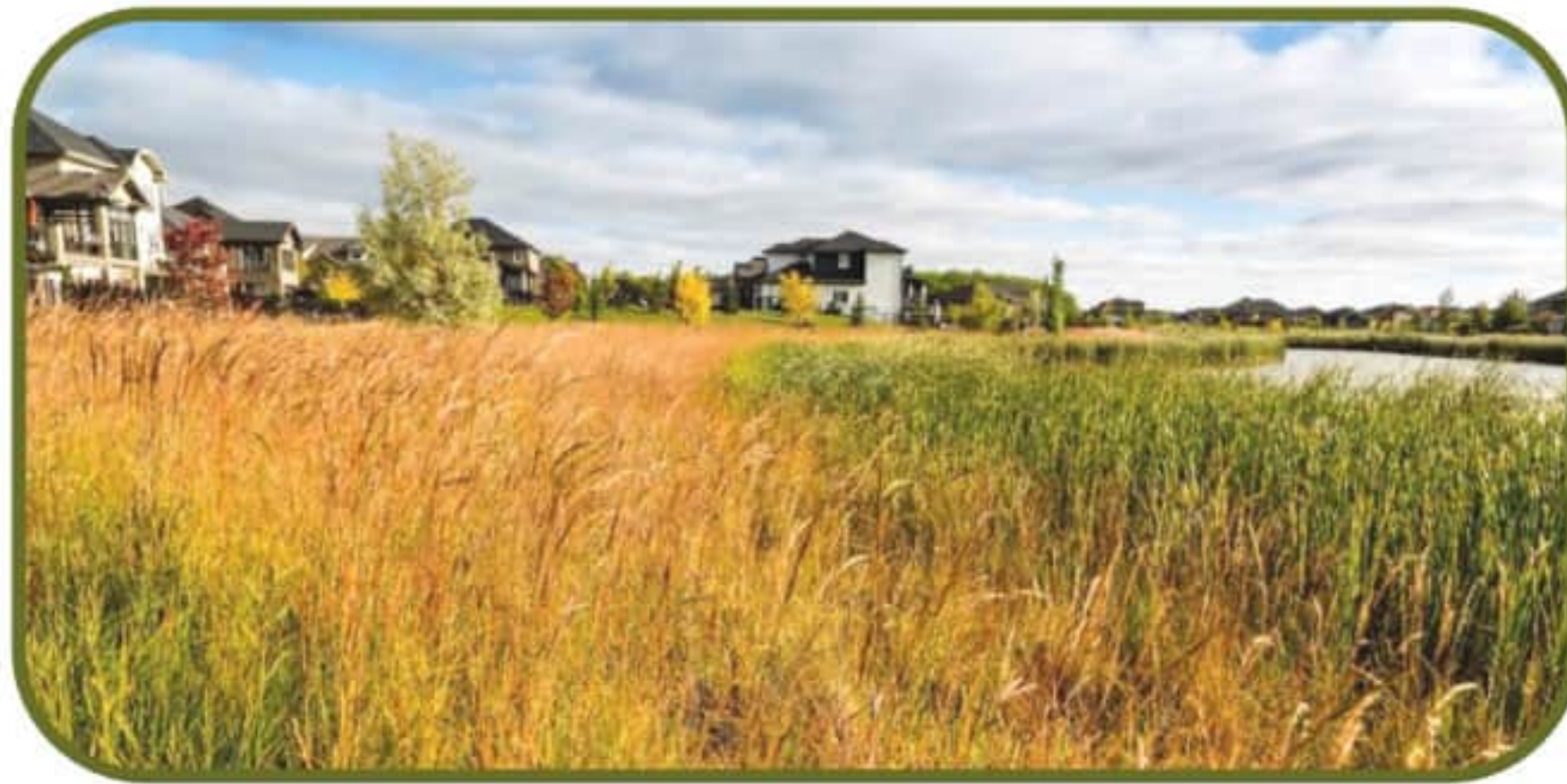
Sewer Construction

- Much of the construction will be away from roadways, minimizing impact to area residents and businesses.
- Roadway and boulevard damage will be repaired following construction.
- Buried pipes maximize land use vs. ditches.
- Reroute drainage paths in developed areas to systems with more capacity.



Naturalized Stormwater Ponds

Shore Line Protection



Wetland Planting, Cattails, Bulrushes

Upland Habitat



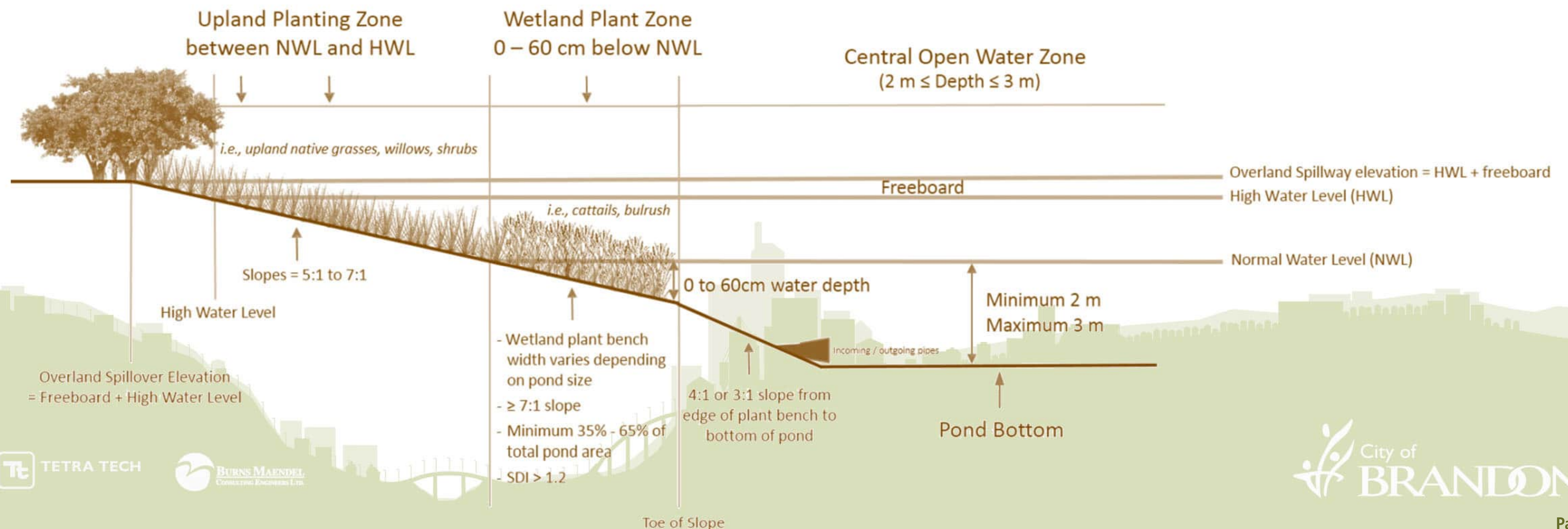
Native Grasses, Native Trees

Surrounding Area



Active Transportation Pathways, Parks, Sports Fields

Typical Naturalized Stormwater Pond Section View



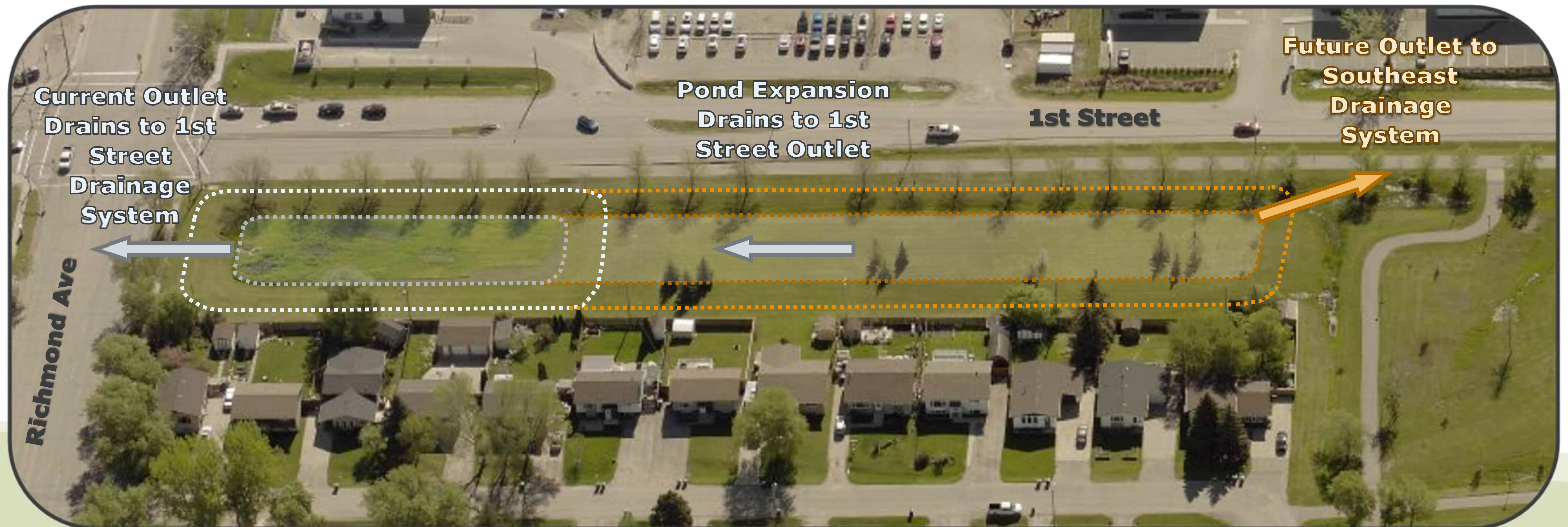
1st Street Dry Pond Expansion

Expand Existing Pond and Lower Bottom

- › Increase storage capacity and reduce area flooding.
- › Current bottom area = 0.10 ha, expansion to 0.24 ha.

Construct Second Pond Outlet to Southeast Drainage System as part of Phase 3 works

- › Divert flow from the 1st Street Drainage System to the Southeast Drainage System to provide relief during major rainfall events.



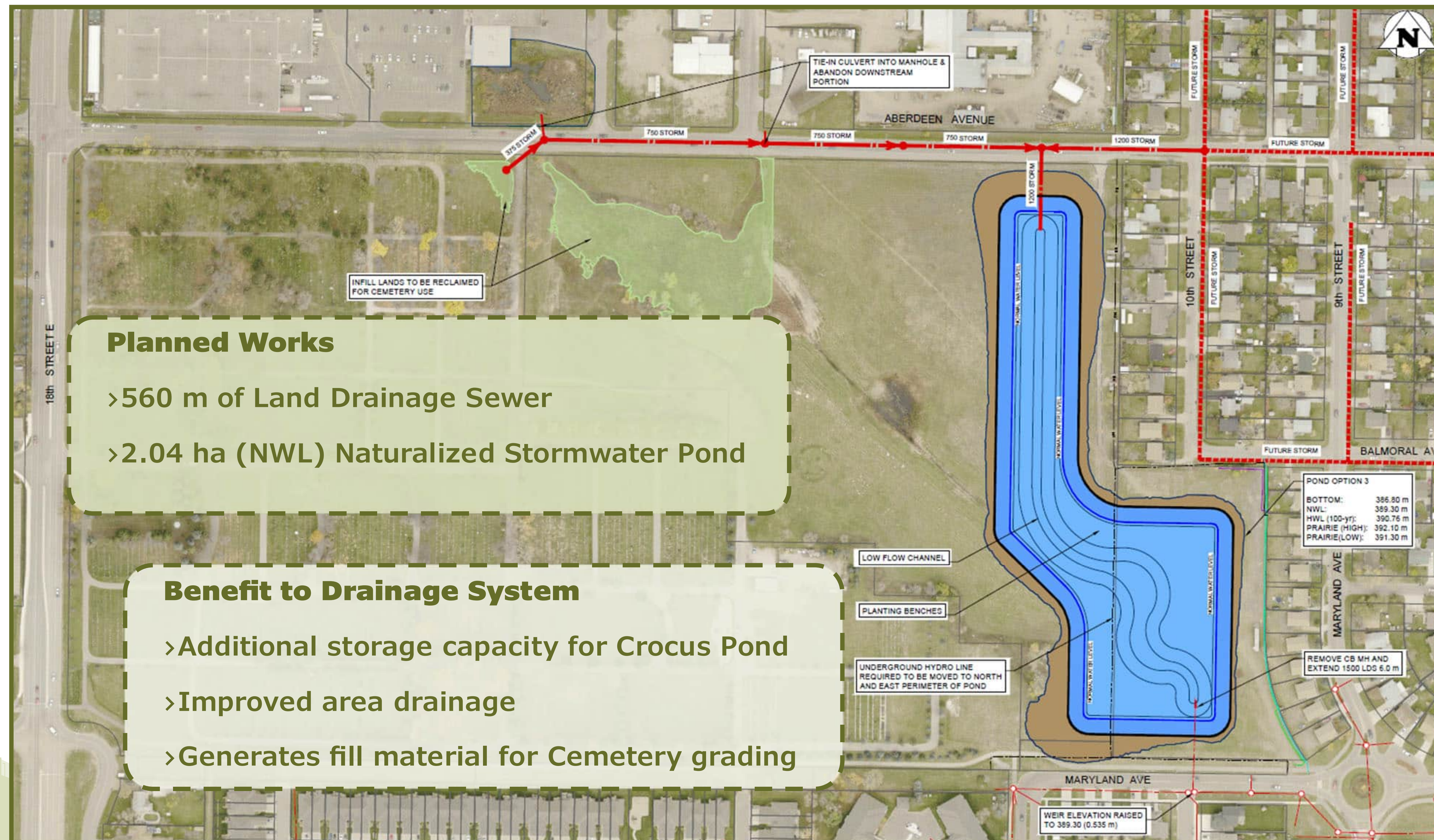
Cemetery Expansion Master Plan

***Original Concept**

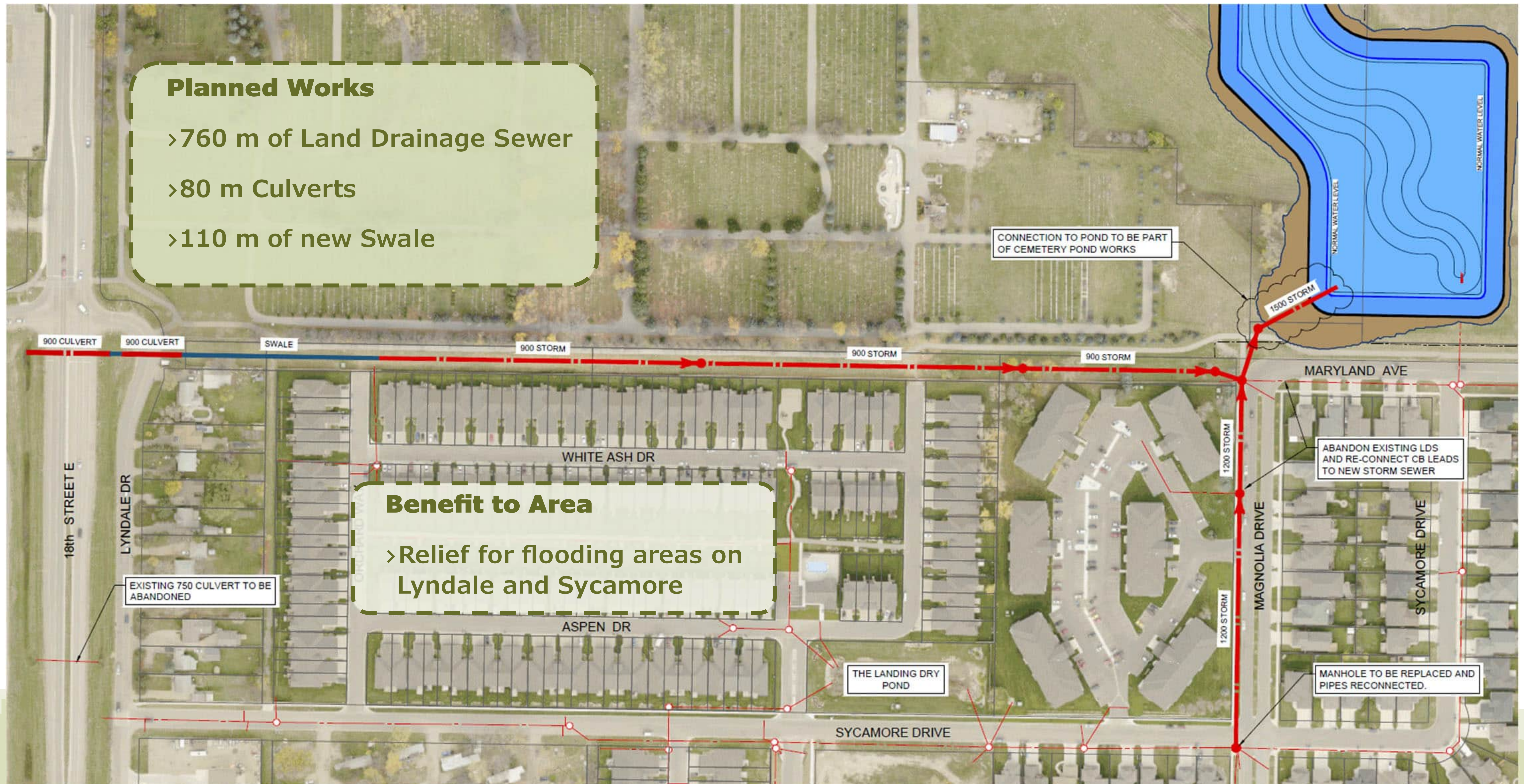


Cemetery Expansion Updated Plan

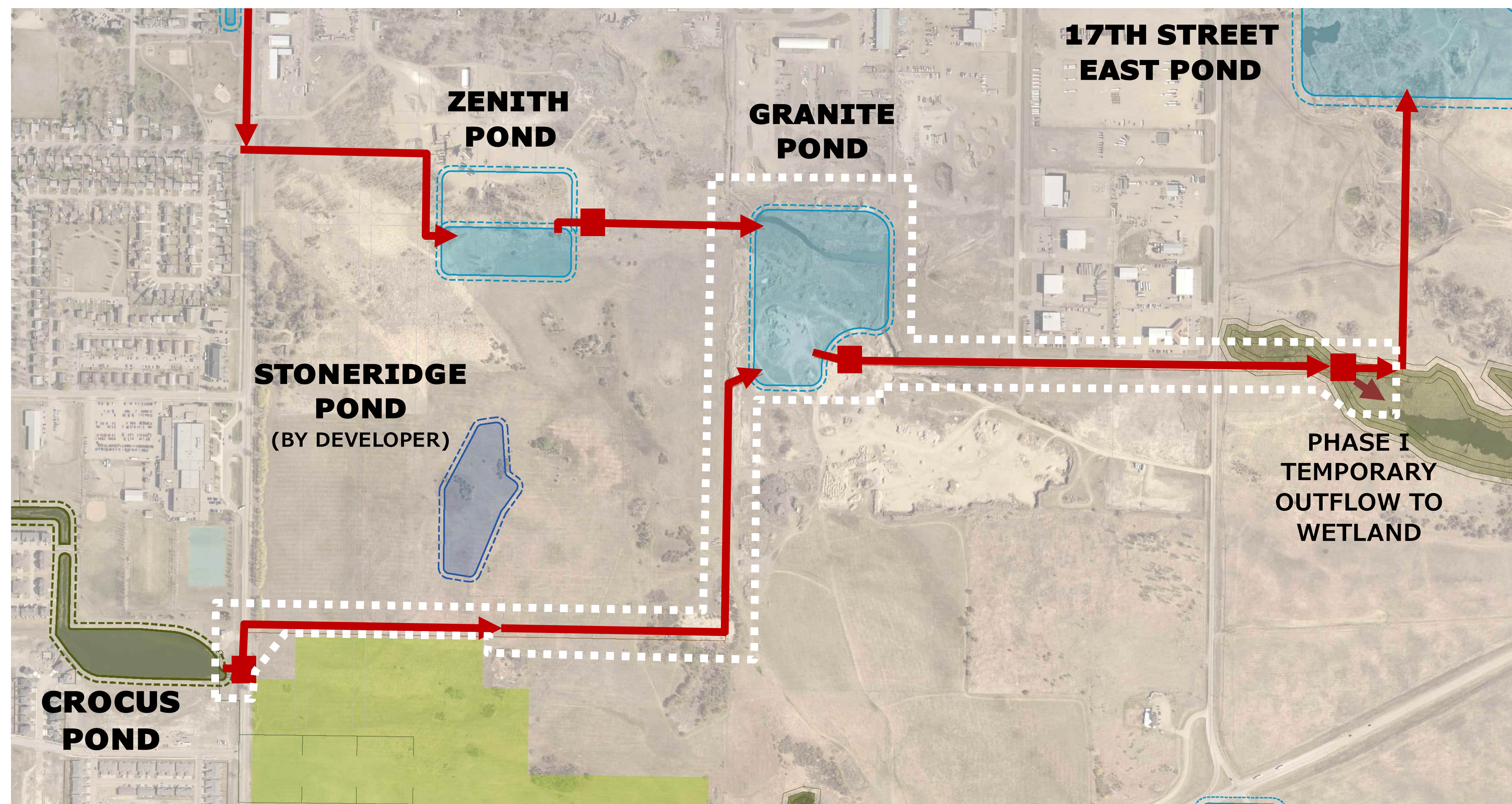
***for Drainage**



Sycamore & Lyndale Relief Sewers



SE Drainage — Phase 1



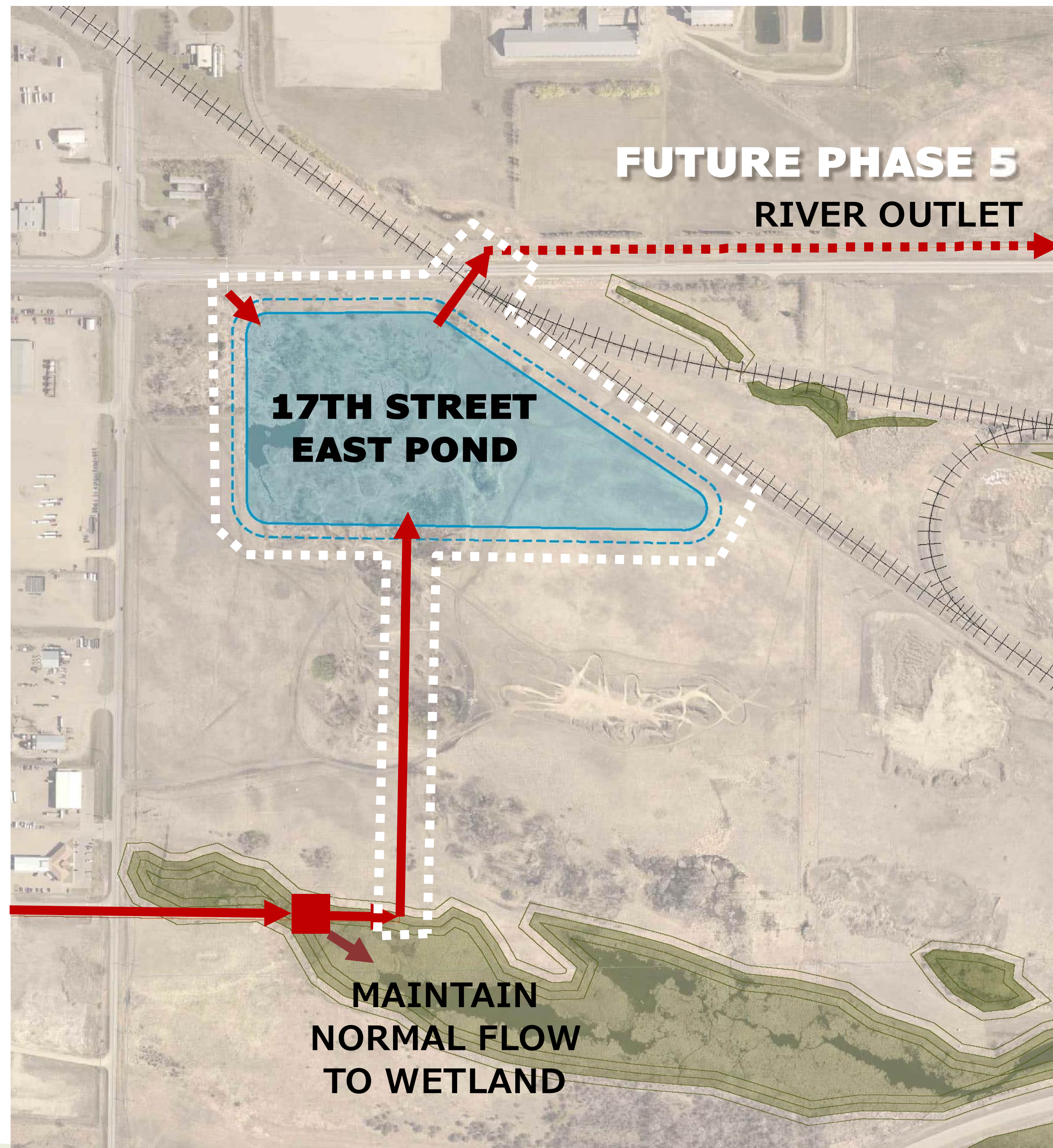
Planned Works 2023

- › 2,200 m of Land Drainage Sewer
- › 5.34 ha (NWL) Naturalized Stormwater Pond
- › Temporary outlet to Wetland

Drainage System Benefits

- › Provides gravity flow outlet for Crocus Pond (pumping operations no longer required).
- › Reduce high water level and quicker draw down time in Crocus Pond.
- › Accommodate drainage from future developments along the route.

SE Drainage — Phase 2



Planned Works 2023-2024

- › 660 m of Land Drainage Sewer
- › 9.50 ha (NWL) Naturalized Stormwater Pond

Drainage System Benefit

- › Establishes part of the ultimate route to the river.
- › Reduces high water level in Granite Pond.
- › Maintains normal pre-urban flow to Existing Wetland .
- › Future drainage outlet for Park Avenue Industrial area.



17th STREET EAST POND SITE



GRAVEL EXTRACTION OPERATIONS UNDERWAY

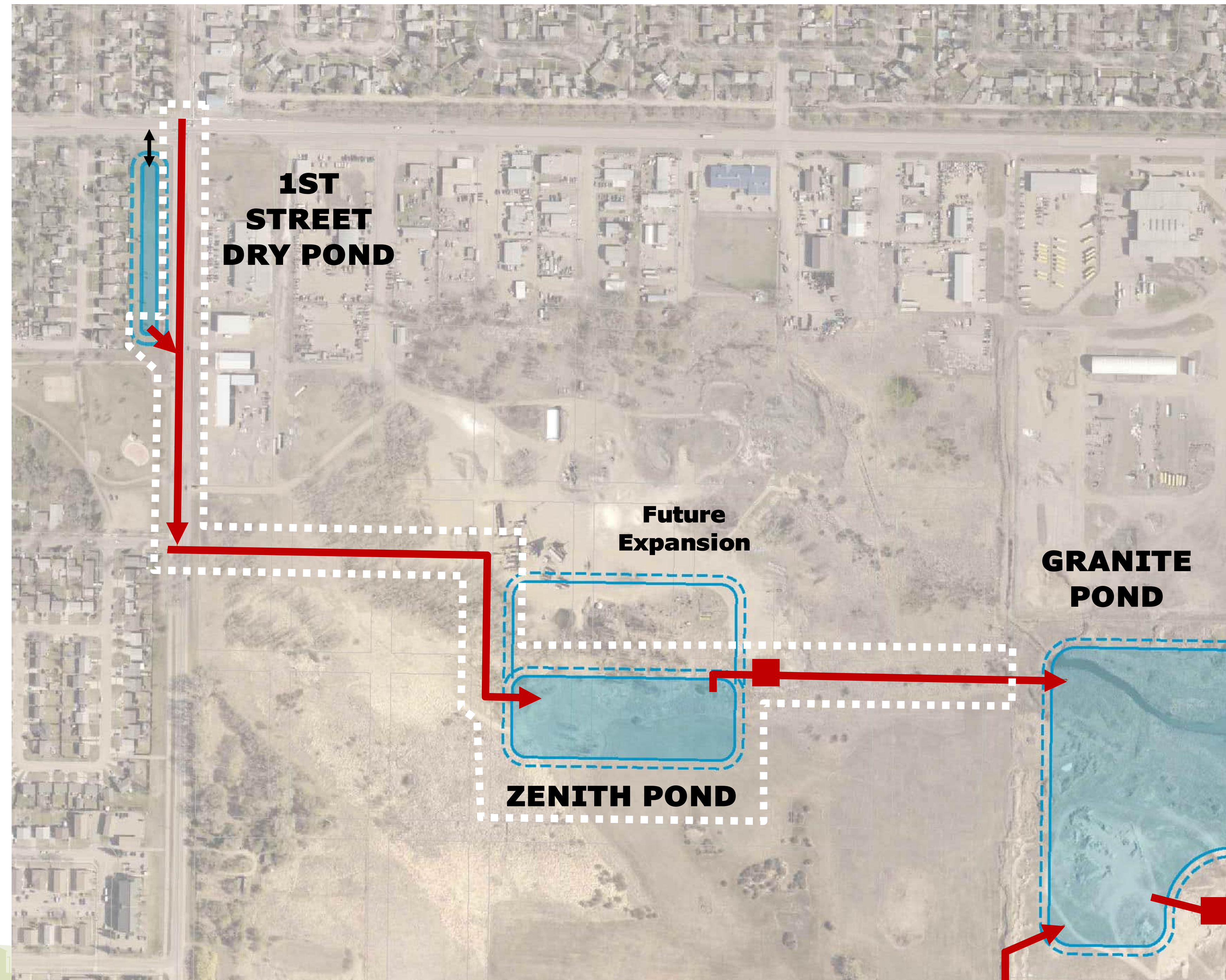
SE Drainage Existing Class 4 Wetland

Impacts to Wetland

- Phase 1 will temporarily outlet all SE Drainage to the wetland.
- Phase 2 will restore normal flow levels to the wetland, and bypass the majority of high flow north to 17th Street Pond.

Goal is no long term impact to wetland

SE Drainage — Phase 3



Planned Works 2024-2025

- › 1,130 m of Land Drainage Sewer
- › 1.75 ha (NWL) of Naturalized Stormwater Pond
- › Future pond expansion to 3.90 ha (NWL)

Drainage System Benefits

- › Reroutes flow from Richmond area to the SE drainage system.
- › System will be ready for future drainage relief of surrounding area.
- › Zenith Pond expandable to support future drainage improvements.



Aerial view near proposed Zenith Pond

SE Drainage — Phase 4



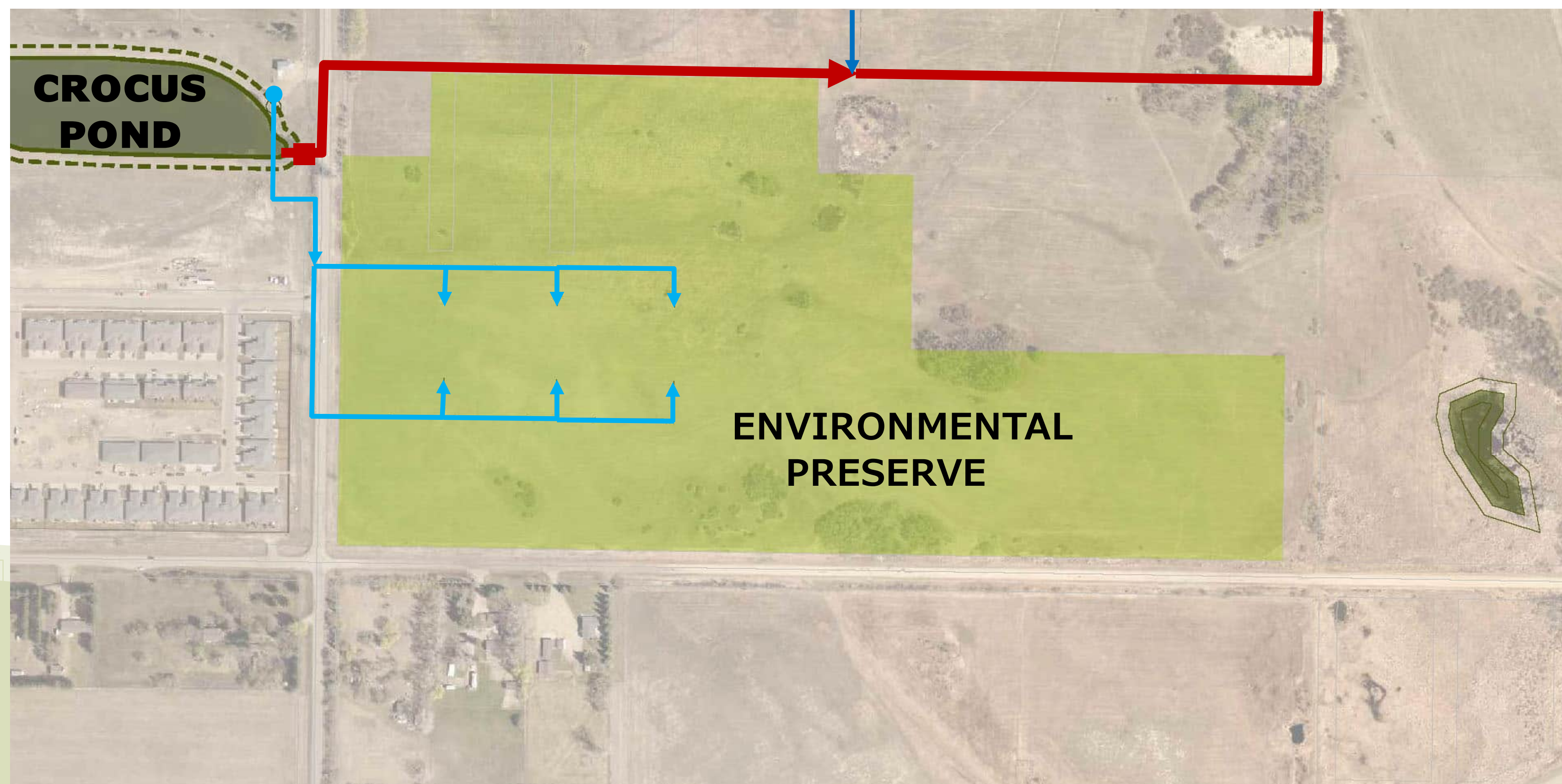
Small Yellow Lady's Slipper



Hybrid Small White Lady's Slipper



Endangered Small White Lady's Slipper



Planned Works 2025

- › Seasonal irrigation system pumped from Crocus Pond.
- › Irrigation system to be developed in consultation with the Province of Manitoba and a Conservation Steward (e.g. Nature Conservancy of Canada) to ensure solution is best fit for the Small White Lady's Slipper.

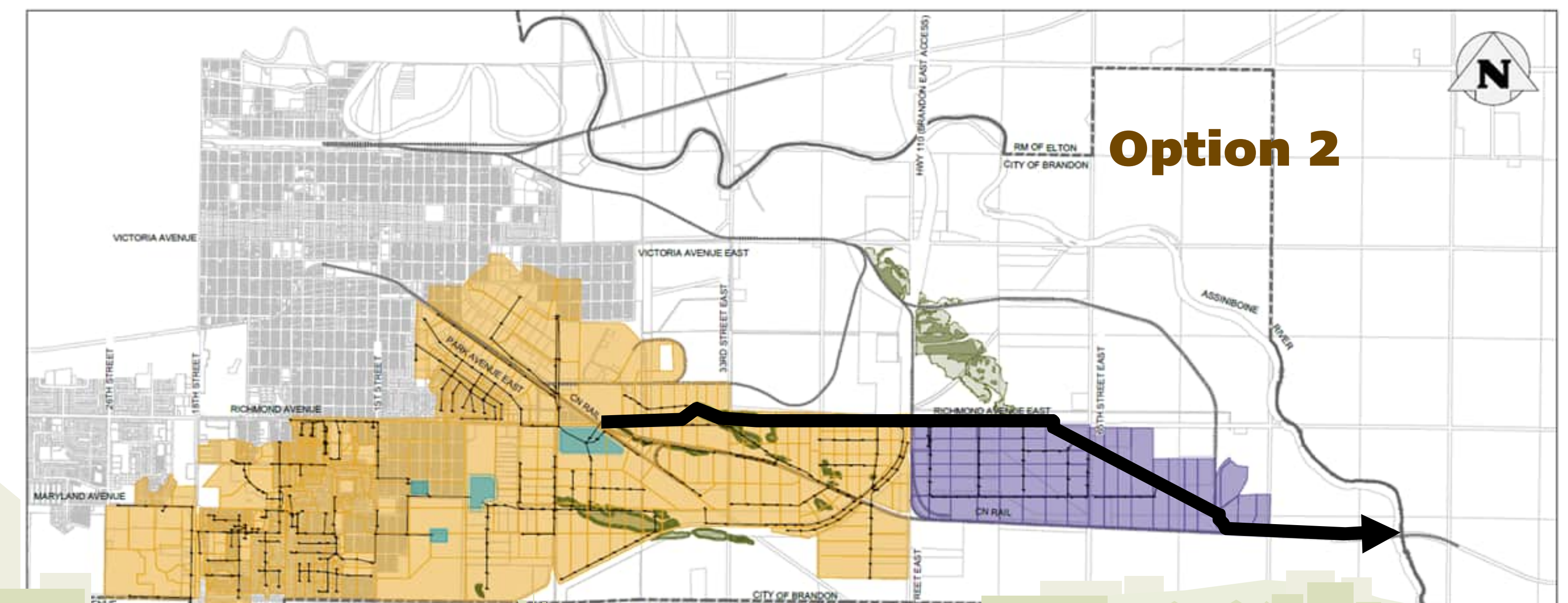
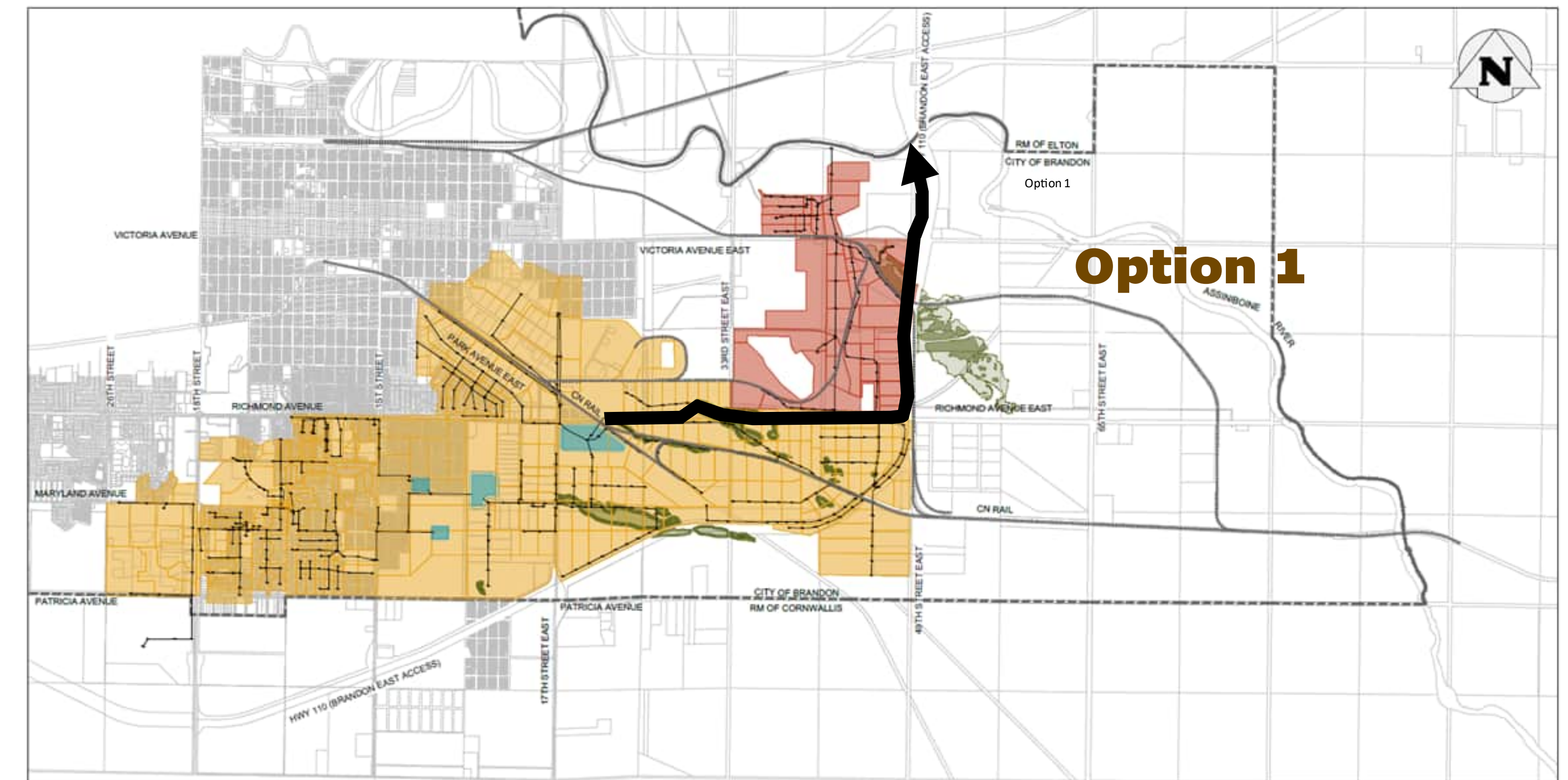
SE Drainage — Phase 5

Future Works

- ›Option 1 Route—4,500 m to River
- ›Option 2 Route—7,500 m to River

Future Challenges

- ›Land / easement requirements.
- ›Private land ownership.
- ›Accommodation for future development.
- ›Poorly defined area drainage.
- ›Gravel pits



Estimated Project Costs

(Class 'D')

Engineering Design	\$1.13M
1st Street Dry Pond Works	\$0.16M
Cemetery Pond and Aberdeen Sewer	\$4.33M
Sycamore and Lyndale Relief Sewers	\$2.06M
Phase 1	\$7.31M
Phase 2	\$10.86M
Phase 3	\$4.43M
Phase 4	\$1.65M
TOTAL ESTIMATED COST	\$31.93M

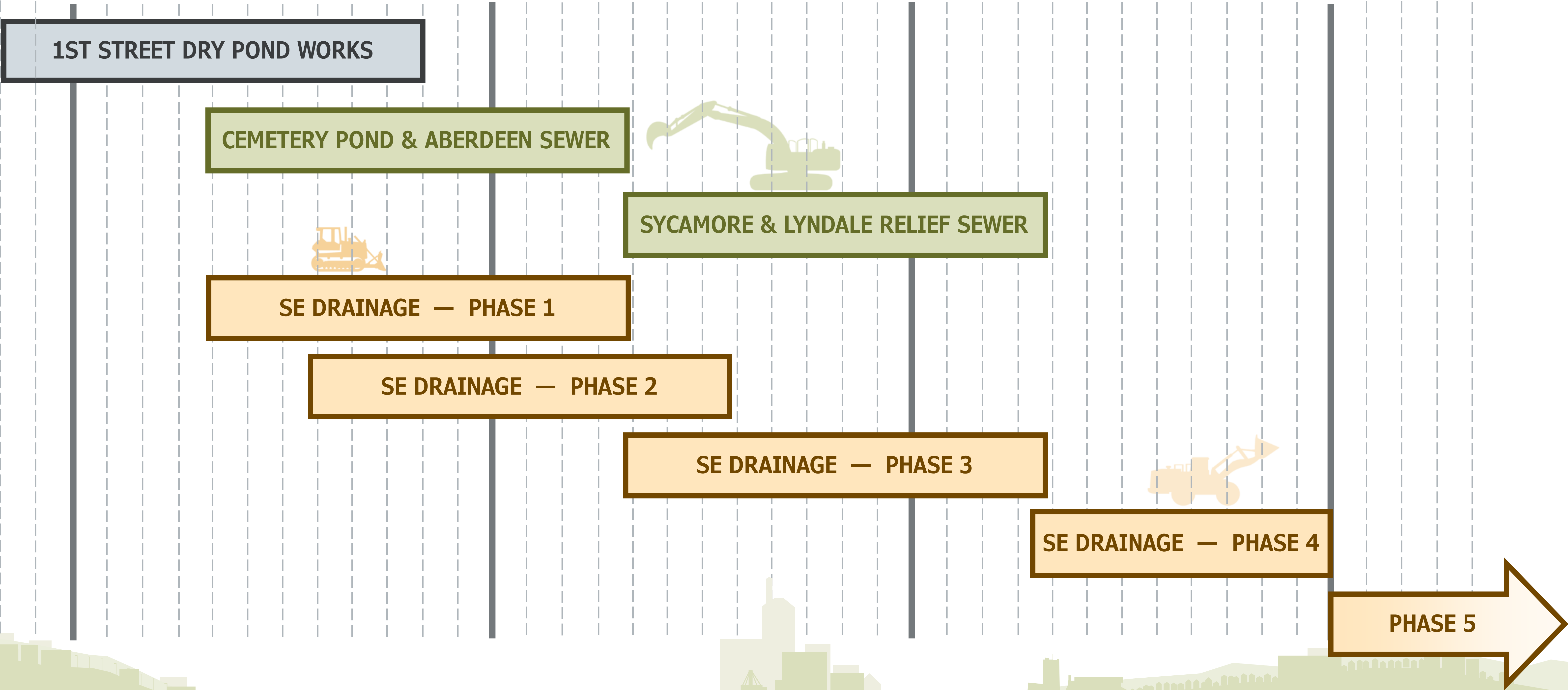
Canadian Construction Association (CCA) Class D (-20% to +30%) Cost Estimate

Construction Schedule

2023

2024

2025



Thank You

- › We appreciate you taking the time today to further understand this project.
- › Comment / Feedback sheets are available at the door on your way out.
- › Information is available on City of Brandon website.
(find it by searching for Southeast Brandon Drainage Improvements Project, or use the QR Code Below)
- › The website will be updated as the project progresses.

Information available at:



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