

# Drainage Services Flood Prevention Program

---

## Mill Woods Community Consultation

November 2005 Update



# How Did We Get Here?

- Major flooding in July, 2004
- Flood prevention becomes top priority
- Commitment to public consultation and education
- At risk neighbourhoods identified
- Public meetings in Sept./04

The image features a vertical banner on the left side. The top part of the banner shows a photograph of a modern building with a large, triangular, glass-enclosed structure, likely a library or community center, situated on a waterfront. Below the photograph, the text "City of Edmonton" is written vertically in a stylized, serif font. The background of the entire slide is a solid dark blue color.

# How Did We Get Here?

- Engineering studies of priority neighbourhoods completed Feb./05
- Community consultations in March and April/05
- flood*proof* launched
- Meetings with other stakeholders through the summer and fall/05.
- Detail study of input and options
- Additional data collected and analyzed

# *Flood Prevention Program*

- Backwater valve homeowner subsidy program
- Home Flood Prevention Checkup
- Information bulletins, notices and education material to residents
- Ads, stories and educational information in print, on TV, in newspapers and on the web.
- Backwater valve education workshops
- *Homeowners Guide to Flood Prevention*



# Today's Meeting

1. Present recommendations and implementation plan
2. Get your input and feedback
3. Make necessary adjustments
4. Forward package to City Council for budget approval



# After Today's Meeting

1. Summarize and share input
2. Incorporate input into final plan
3. Report progress
4. Continue community consultation as required until work is completed

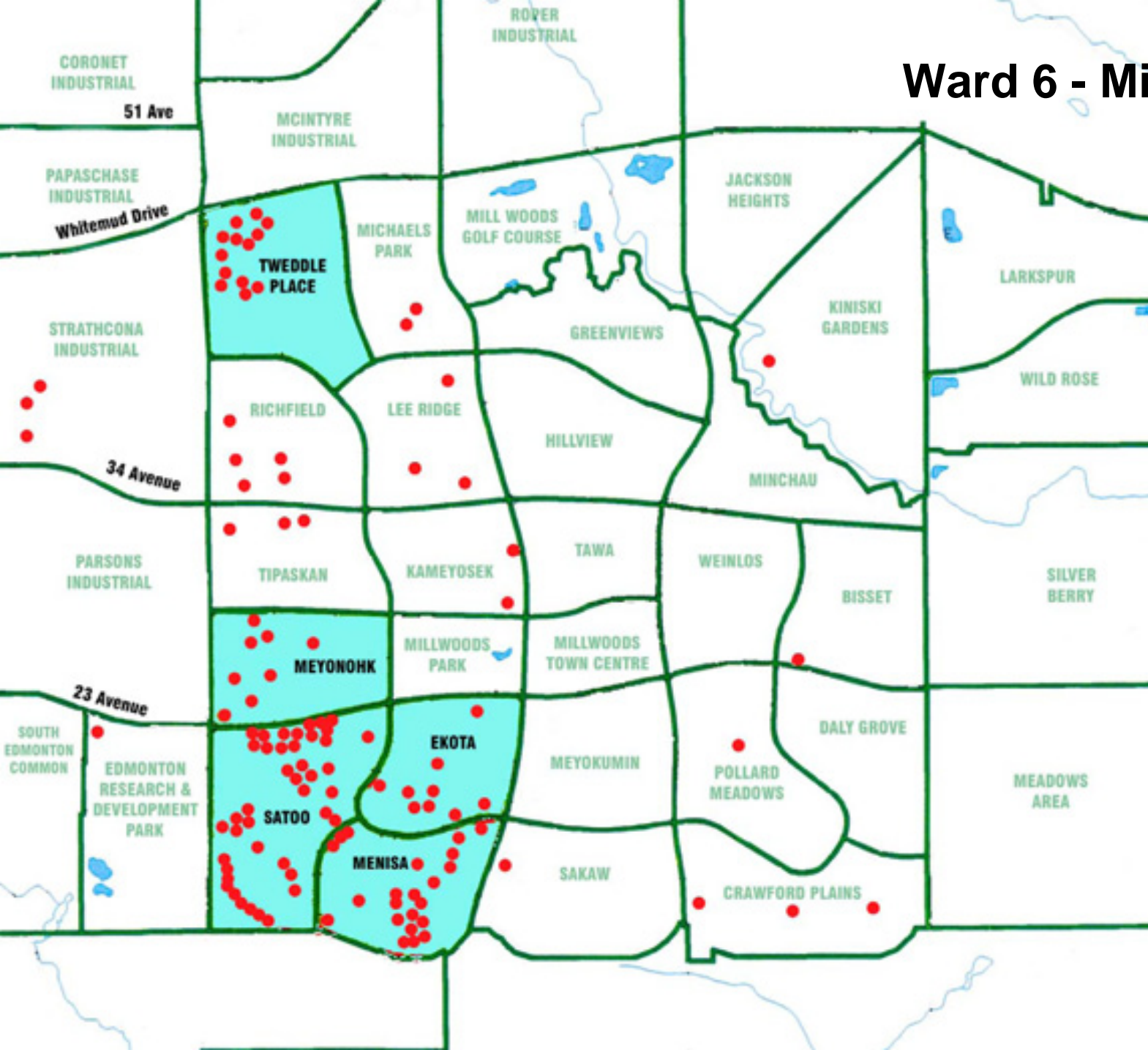


# July, 2004 Flooding

City of Edmonton



# Ward 6 - Millwoods



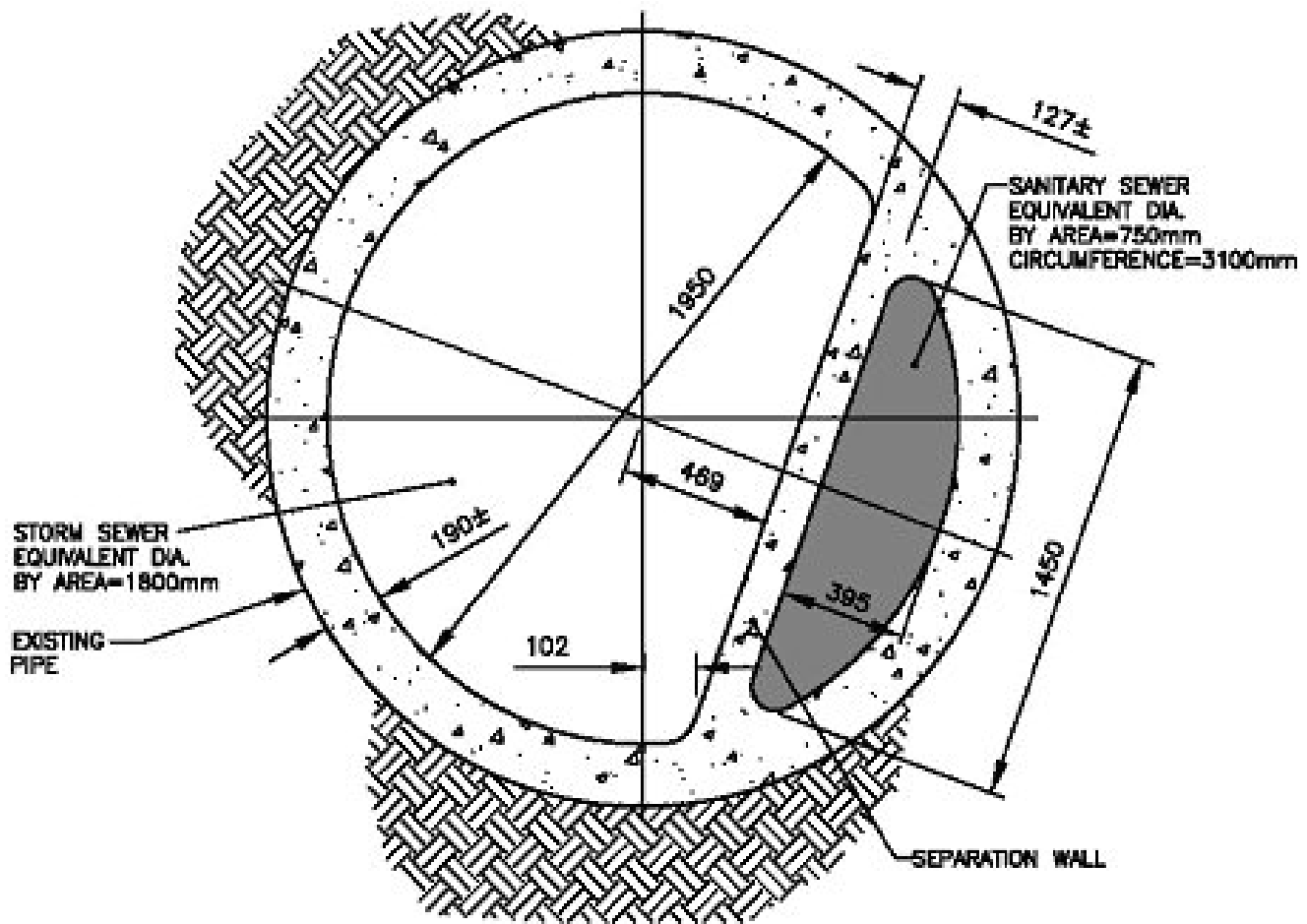


The logo for the City of Edmonton is positioned vertically on the left side of the slide. It features a stylized image of a modern building with a glass facade and a triangular roof, set against a blue background. The text "City of Edmonton" is written in a serif font, oriented vertically.

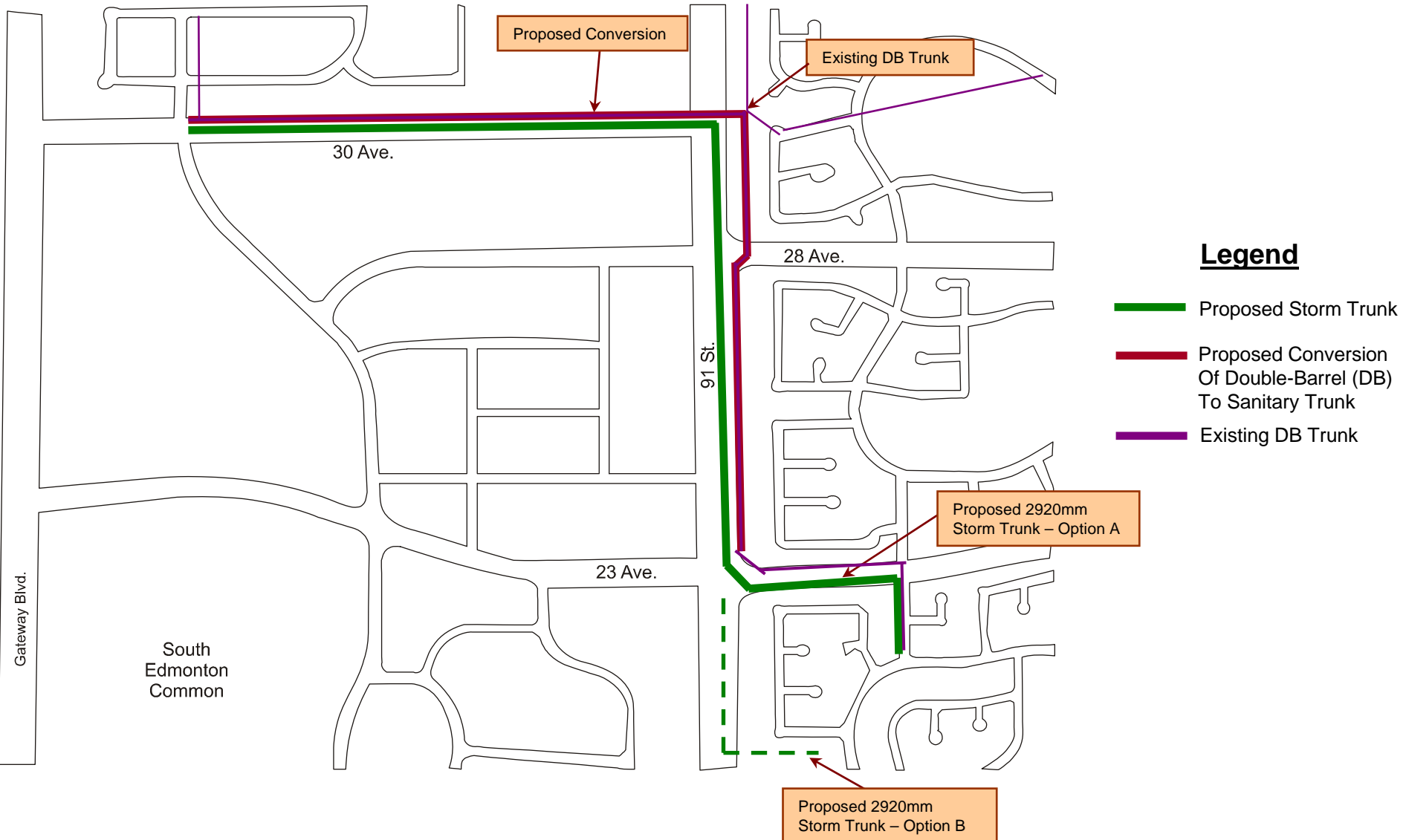
# Mill Woods Findings

- Water volume exceeded storm sewer capacity
- Stormwater got into sanitary system
- Neighbourhood has natural low areas where surface water flows
- Poor drainage on private property contributed to flooding

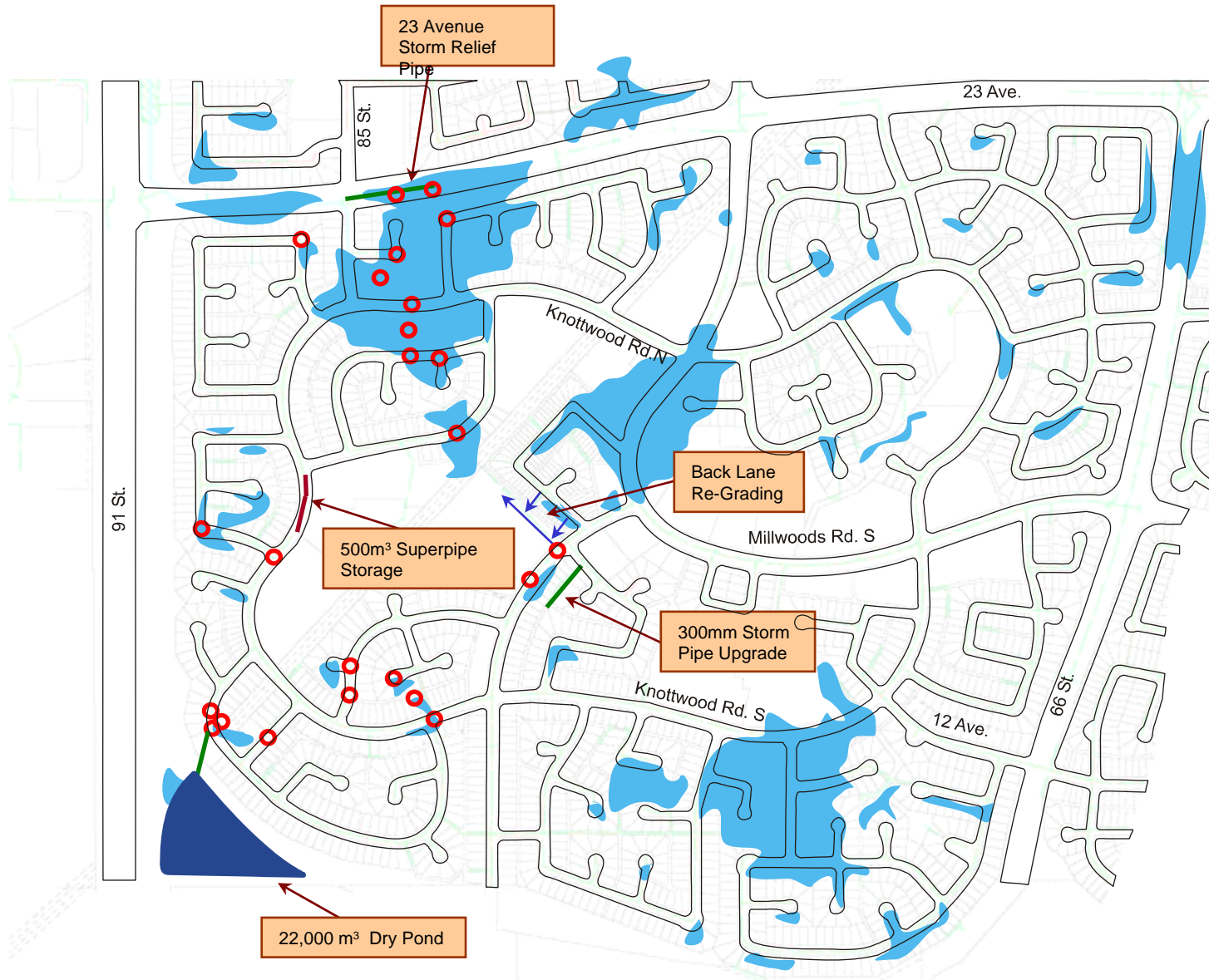
# The Double Barrel Pipe









# Mill Woods Flood Relief Concept Plan



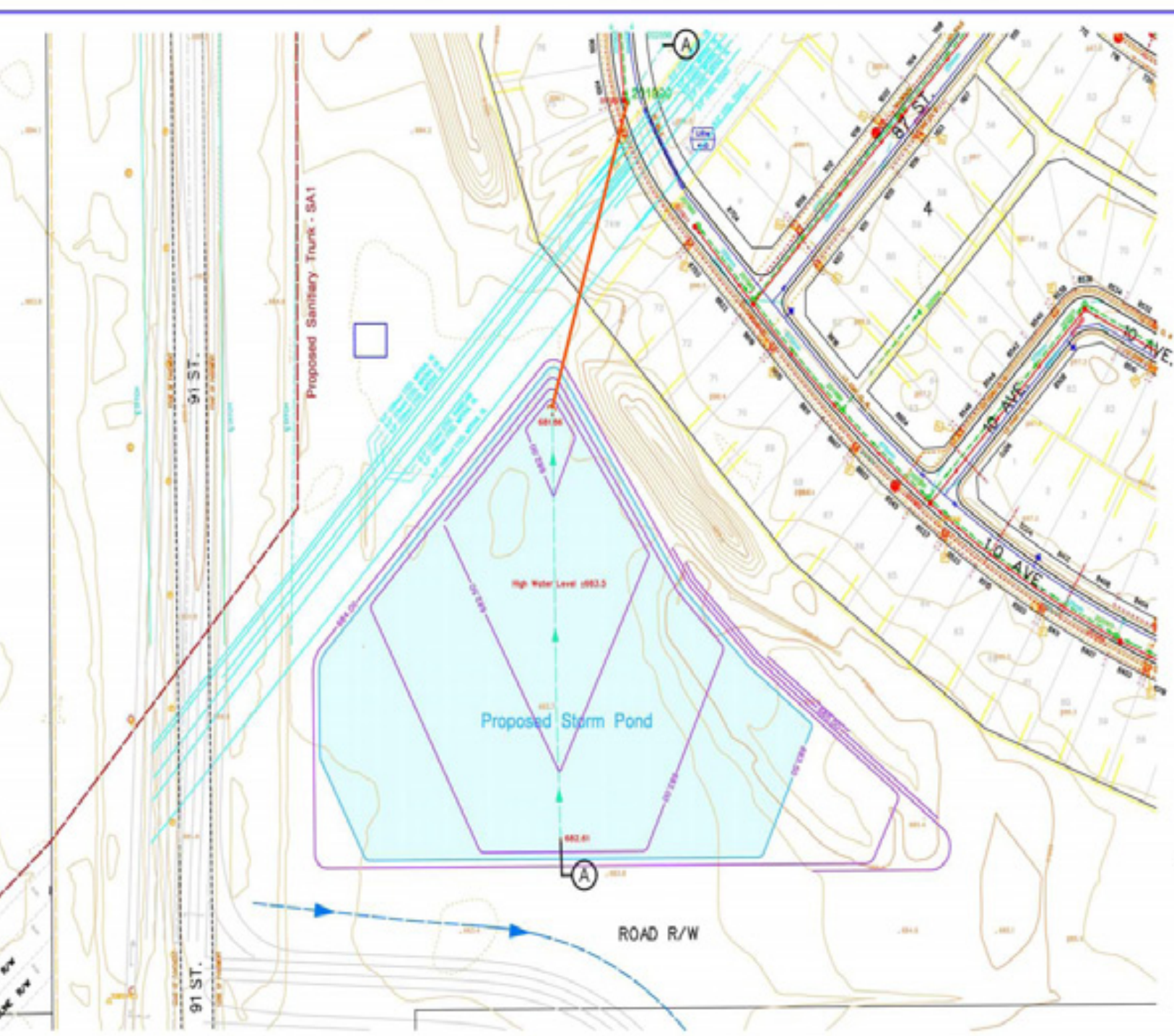
# Satoo



## Legend

-  Trapped Low Areas
-  Surface Storage
-  Surface Drainage for Major Flows
-  New Storm System
-  Inlet Capacity Upgrade
-  New Sanitary System



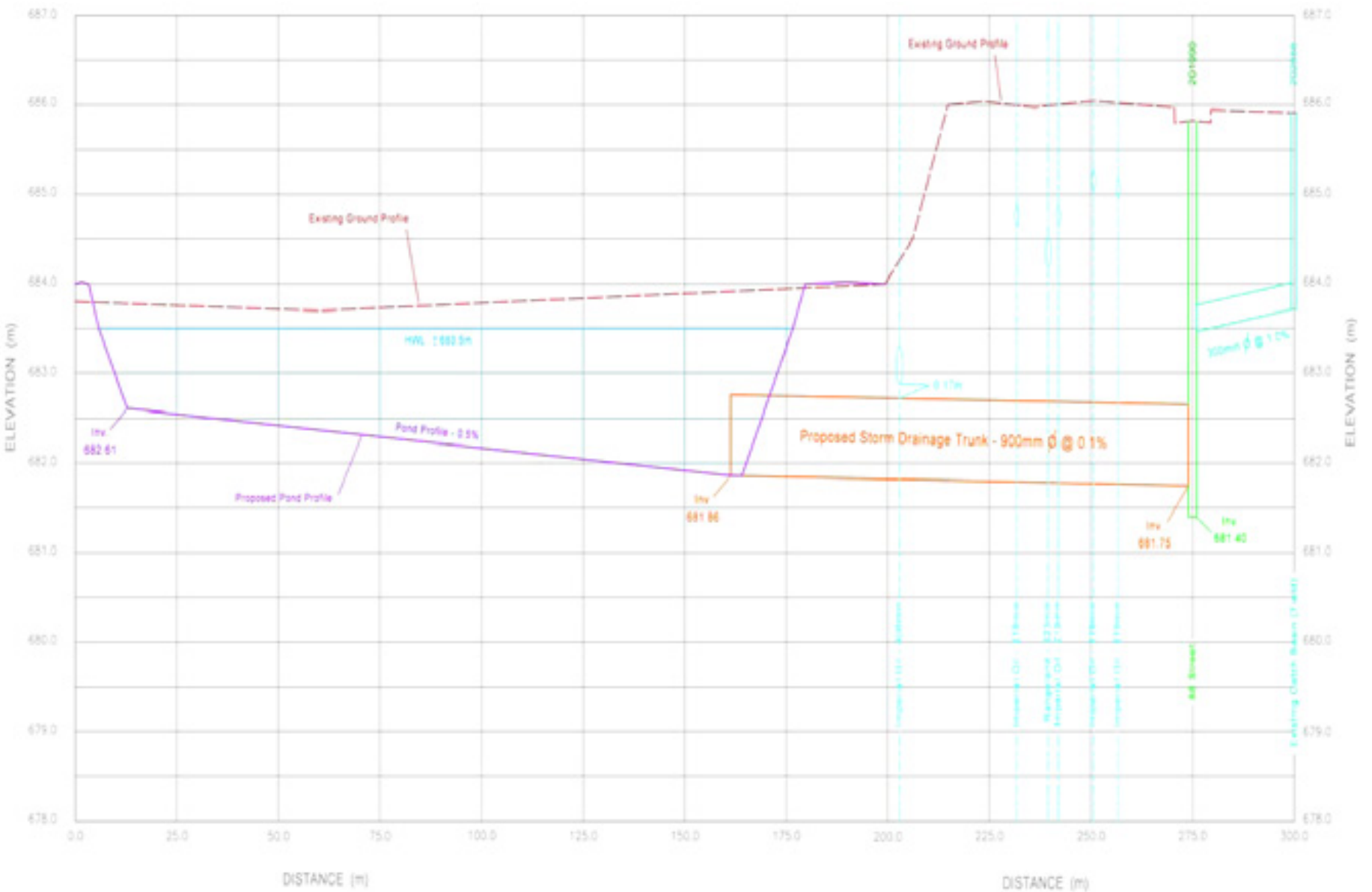


**PROPOSED SATOO  
STORM WATER POND**

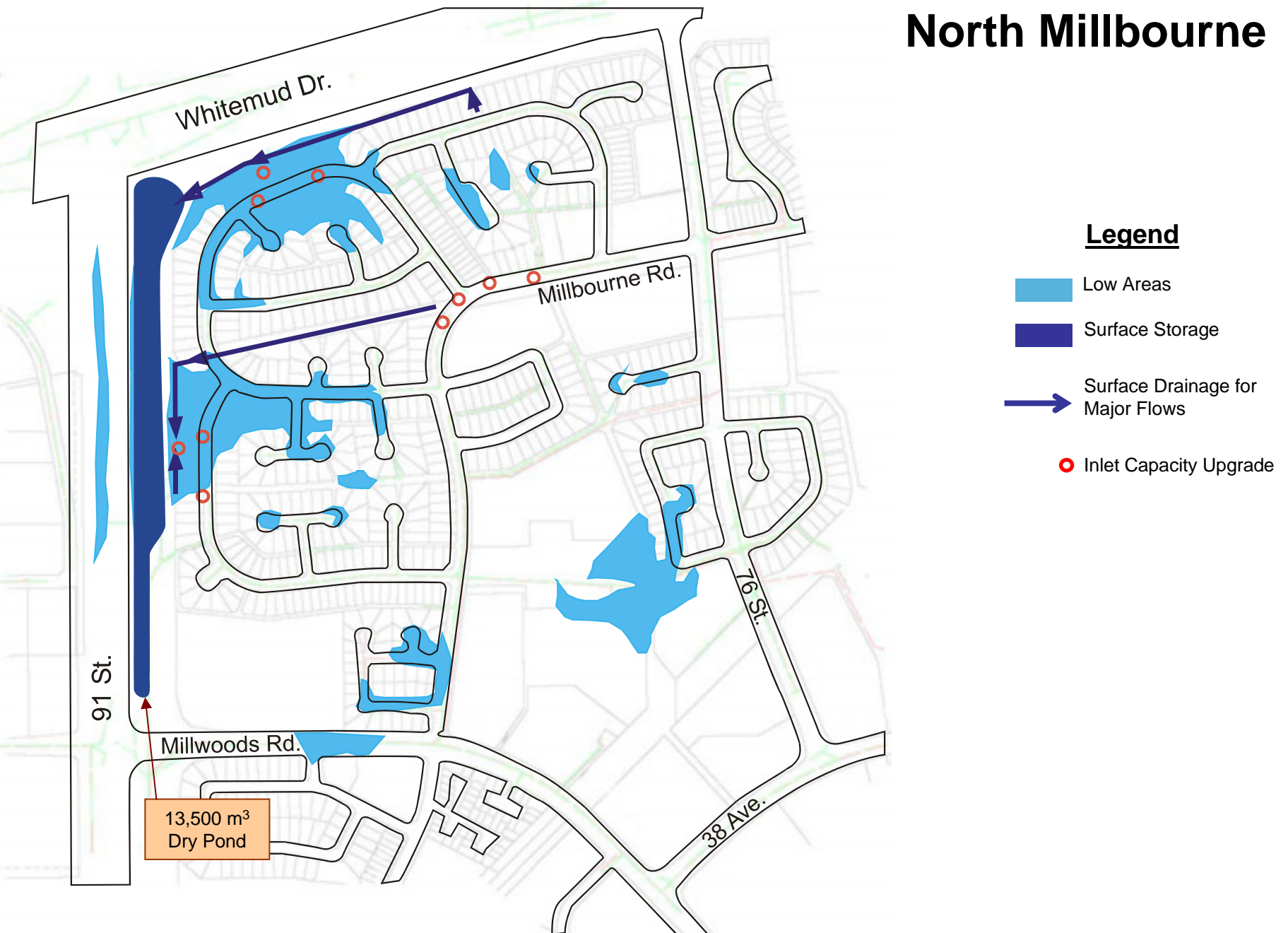
Area = 21,738 m<sup>2</sup>  
Perimeter = 594.1 m  
Total Available Storage = 22,000 m<sup>3</sup>  
Total Excavation = 40,000 m<sup>3</sup>



# Satoo Storm Pond and Drainage



# North Millbourne

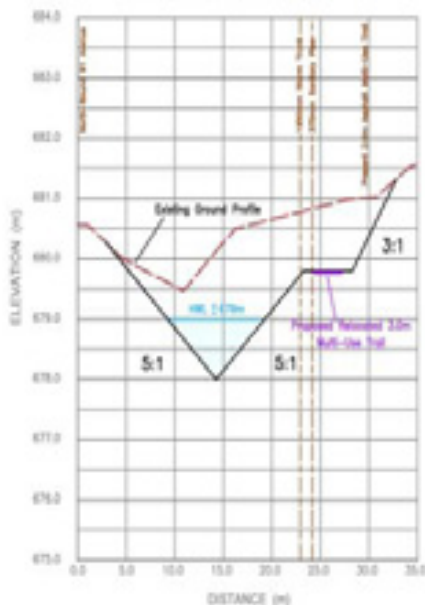




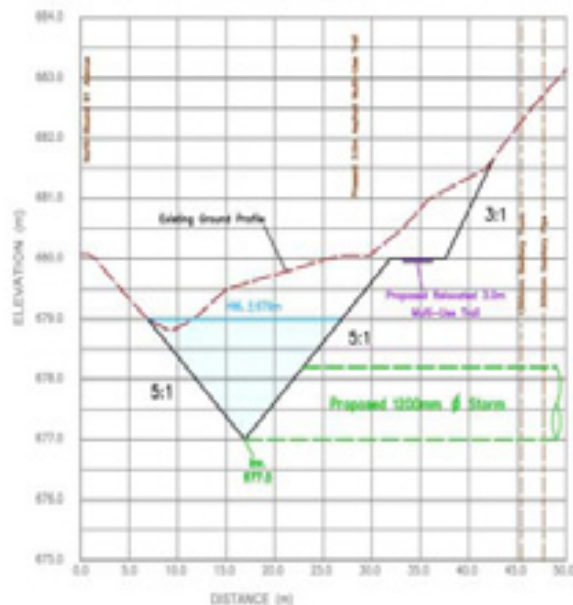
Please Refer to Figure 1.b (Cross-Sections) for Cross-Section Profiles



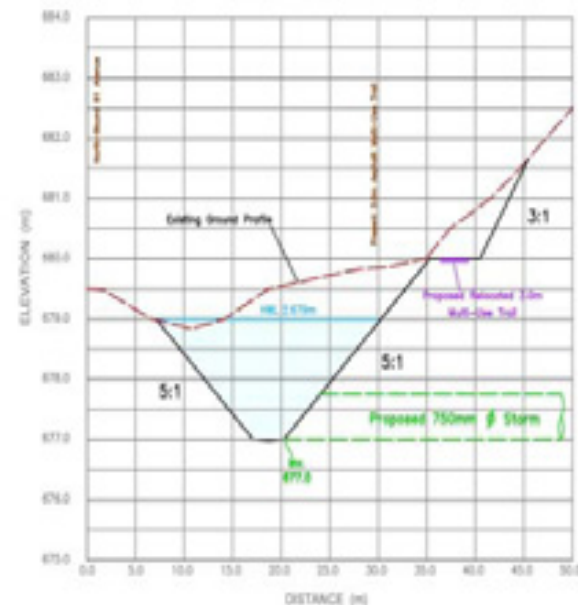
Cross-Section A-A



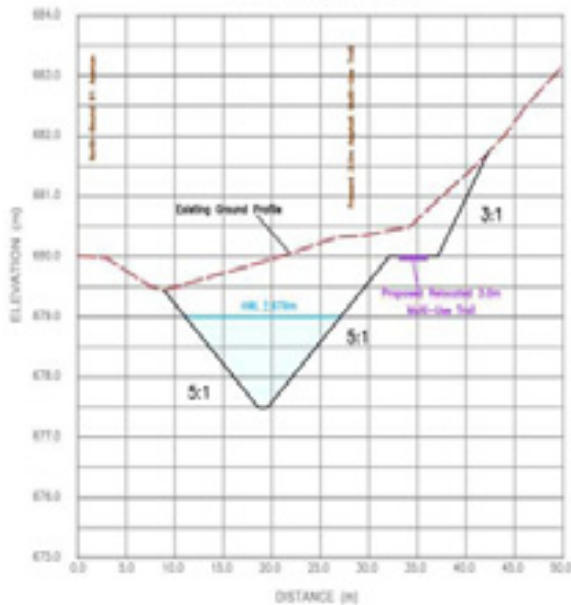
Cross-Section B-B



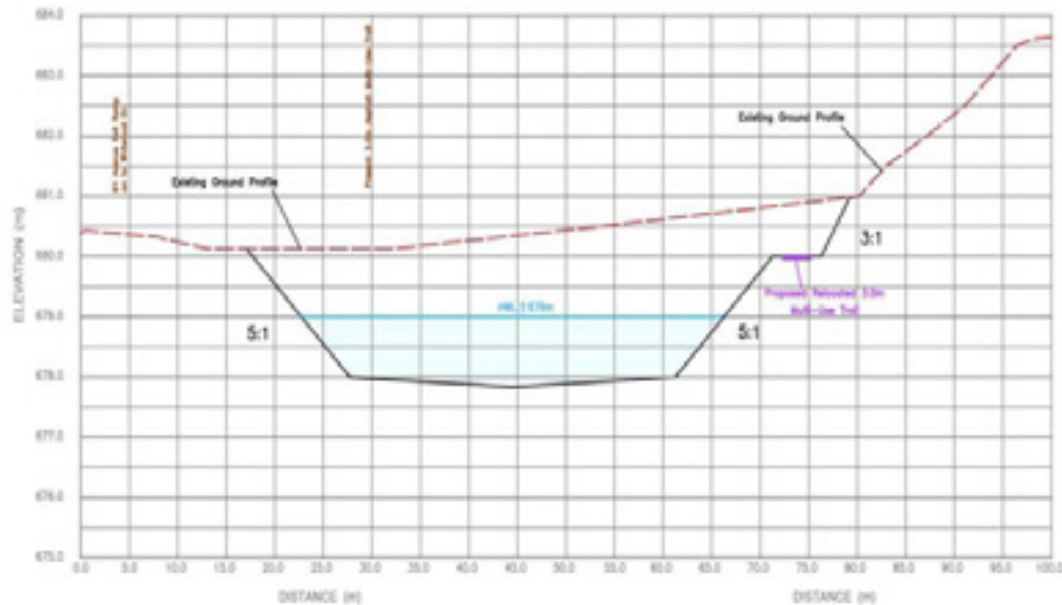
Cross-Section C-C



Cross-Section D-D



Cross-Section E-E



# Ekota and Menisa



## Legend



Low Areas



New Storm System



Inlet Capacity Upgrade

Overflow

Major Drainage  
Relief Trunk





# Cost of System Improvements: Mill Woods

30 <sup>th</sup> Avenue Double Barrel	\$13,500,000
91 <sup>st</sup> Street Double Barrel	\$9,500,000
Total	\$23,000,000



# Cost of System Improvements: Satoo

Storm Pond and piping	\$1,380,000
Surface Re-grading	\$230,000
Storm Sewer Upgrade	\$210,000
23 Avenue Storm Relief Sewer	\$240,000
CB Upgrade	\$220,000
Sanitary Super Pipe	\$790,000
Total	\$3,070,000



# Cost of System Improvements: Tweddle Place

Storm Pond and Piping	\$1,500,000
Surface Drainage Re-grading	\$80,000
Major Flow Pipe	\$1,510,000
CB Upgrades	\$92,000
Total	\$3,182,000



# Cost of System Improvements: Menisa and Ekota

Major Storm Relief Trunk	\$87,000
Major Storm Overflow Trunk	\$72,000
CB Upgrades	\$16,000
Total	\$175,000

# Recommendations for Homeowners

- Improve lot grading to get surface water away from house
- Install/maintain adequate eavestroughs
- Channel downspout water to proper place
- Install backflow prevention valve
- In some cases, install sump pump





# Back Flow Prevention Valves Mill Woods

	Reported Flooded Basements 2004/2005	Eligible 2004	Eligible ProActive 2005	Paid	Check-up Program
Satoo	161	100	7	57	21
Menisa	59	44	4	22	17
Ekota	26	16	1	8	13
Meyonohk	11	2	2	1	8
Tweddle Place	35	25	0	14	13



# What are the Benefits?

- Quicker overall drainage
- Less pooling of water on the surface
- Less likelihood of basement flooding
- Less property damage
- Savings of time, money and inconvenience



# About Dry Ponds

- Collects surface water
- Water drained via pipes
- Usually takes less than 24 hrs to drain
- Normally 1.5 to 3 metres in depth
- Landscaped to blend in.
- Can be used for sports/recreation when dry
- Built to minimize safety risk
- Common in many cities; some on school sites (including Regina, Red Deer and Calgary)
- 60 in Edmonton, mostly along roadways

# What Do Dry Ponds Look Like?

City of Edmonton





# What Do Dry Ponds Look Like?

City of Edmonton







# Implementation Plan

- Overall, ten year timeframe investing more than \$100 million in 15 communities
- Focus on most critical needs first
- Consult/inform community and others on design and construction, especially surface components like dry ponds



# Mill Woods Implementation Plan

<b>Manhole Sealing</b>	<b>Complete</b>
<b>Proactive Backflow Valve Program</b>	<b>Ongoing</b>
<b>Flood Prevention Home Checkup Program</b>	<b>Ongoing</b>
<b>Sewer Upgrades and Dry Ponds</b>	<b>Near Term *</b> (2 – 3 years)
<b>Double Barrel</b>	<b>Mid Term *</b> (3 – 6 years)

**\* Note: pending Council approval**



# Discussion and Feedback

Clarifying Questions?



Issues, comments, concerns?



Additional information needs?

# Household Servicing (1989 to present)

