



# Markham Village Flood Control Implementation Project Phase 1B

## **Community Information Meeting**

Markham Village Community Centre

Date: March 20, 2025

## Purpose

- To advise Phase 1B area residents and businesses of 2025-2027 construction activities as part of Markham Village flood control implementation;
- To promote the City's ongoing Private Plumbing Protection Rebate Program.

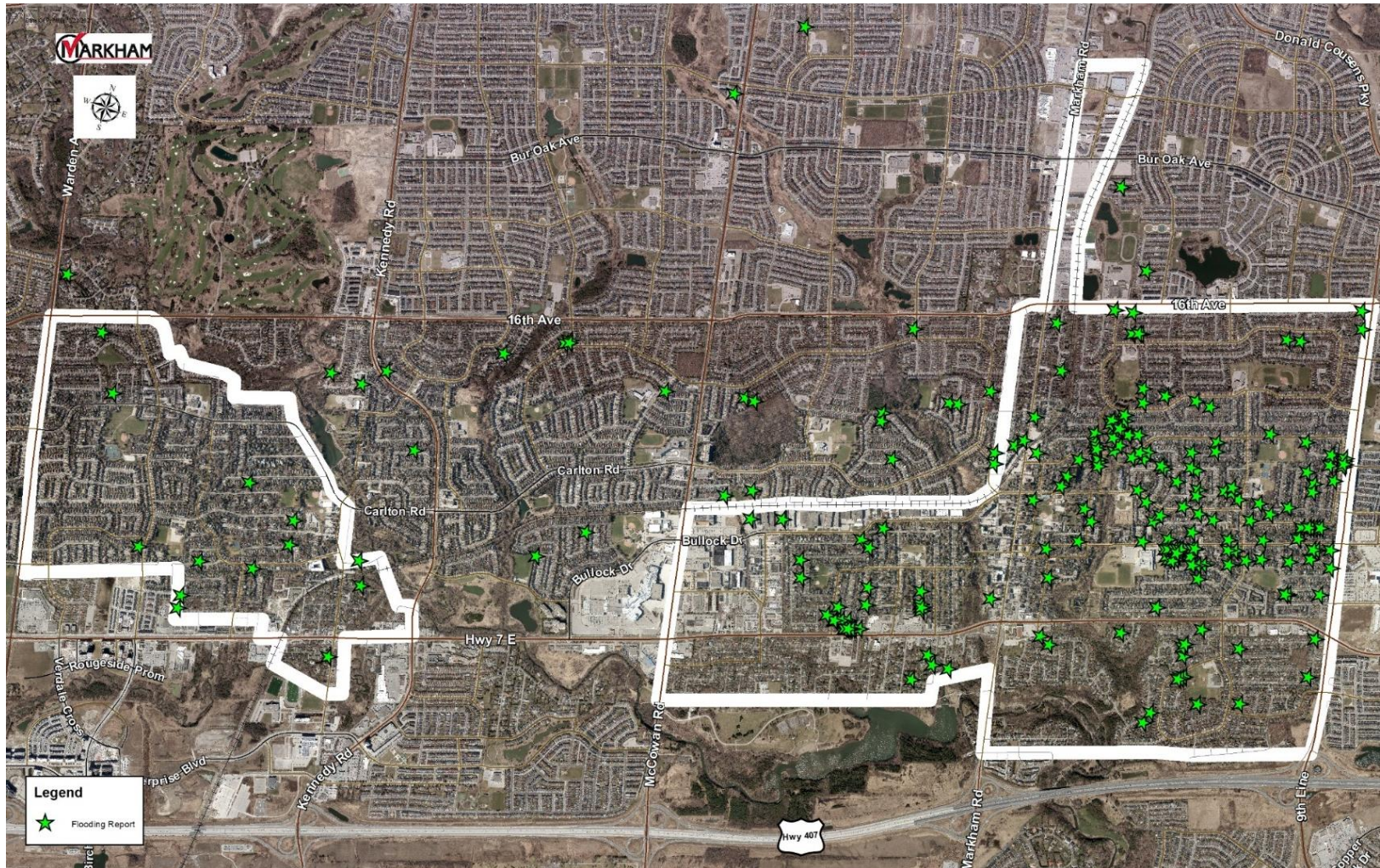
# Markham's Flood Control Program

- Following the August 19, 2005 storm Markham initiated several flood risk reduction initiatives and actions:
  - Wastewater pipe upgrades and diversions to address bottlenecks in capacity;
  - Mandatory downspout disconnection program to reduce stormwater into City-wide wastewater systems;
  - Completed the Markham Village and Unionville Stormwater Flood Remediation Feasibility Study in 2021 to identify sewer system upgrades to meet “100-year storm” design standard requirements in high flood risk areas;
  - Developed a long-term City-wide Flood Control Program and sustainable funding source (Stormwater Fee) for city-wide stormwater system upgrades.





# Markham Village/Unionville Study Area & Flood Records





## Causes of Flooding

- The area was developed prior to 1978, when the City's storm drainage design standards were limited to only 5-year level of service and later, the City updated the design standard to provide 100-year level of service.
  - When very large storm events occur, there is not enough capacity in the system, and it surcharges into basements.
- Private plumbing systems require maintenance, which can cause basement flooding when not performed.



## Proposed Solutions

- **Options for solutions include:**
  - Storm sewer and watermain upgrades;
  - Mount Joy Creek new outfall on Church Street;
  - Private Plumbing Protection
- **Four project clusters have been identified:**
  - The timing and phasing of upgrades are to be prioritized based on risk and logistics associated with construction;
  - Work is clustered based on combining work on individual drainage systems in the same location, and at similar risk levels;
  - The clusters are numbered 1 to 4 based on high to low risk.
- The Private Plumbing Protection Program will continue to be available for all homes within the study area.





# Project Clusters – Markham Village

Flood mitigation north of 16<sup>th</sup> Ave to be addressed as part of Mount Joy Secondary Plan.

McCowan Rd.

Main St.

16<sup>th</sup> Ave.

9<sup>th</sup> Line

Church St.

Hwy 7

407 ETR



## Legend

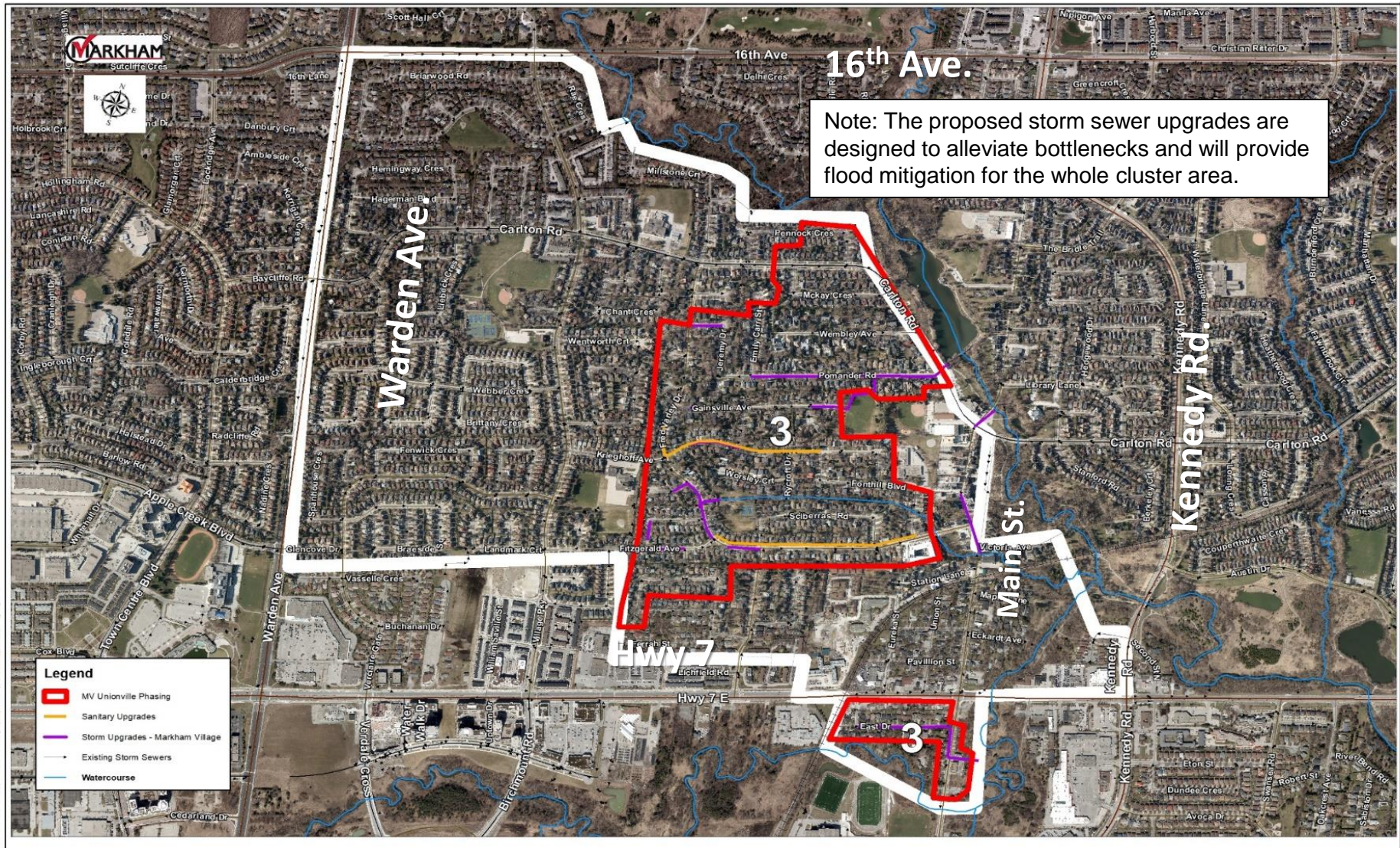
- MV Unionville Phasing
- Sanitary Upgrades
- Storm Upgrades - Markham Village
- Existing Storm Sewers
- Watercourse

Note: The proposed storm sewer upgrades are designed to alleviate bottlenecks and will provide flood mitigation for the whole cluster area.





# Project Clusters - Unionville







# Feasibility Study Recommended Upgrades



# Implementation Strategy

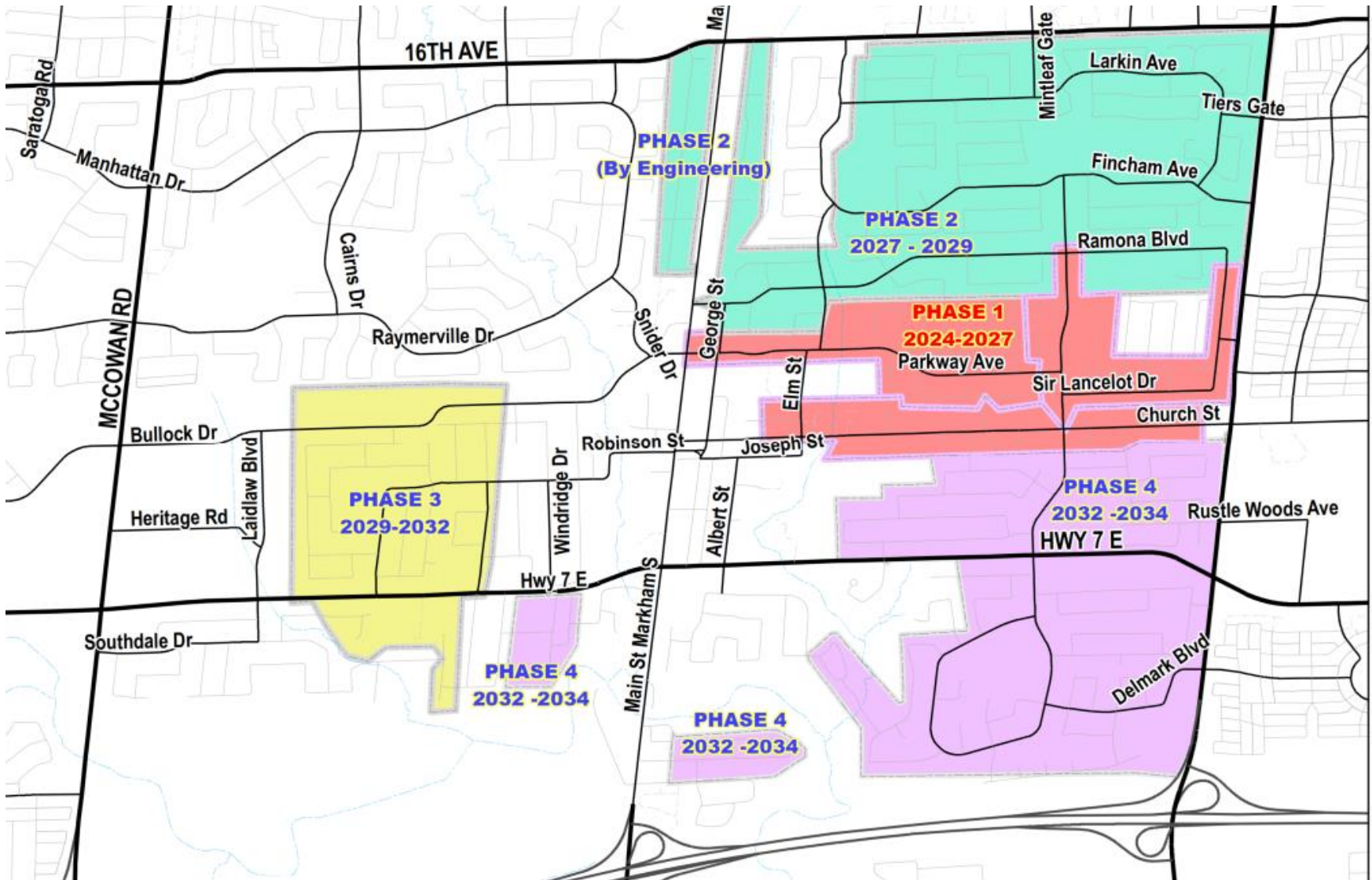
- Storm drainage improvements to manage flood risks were completed through Feasibility Study recommendations in 2021;
- Staff presented an implementation strategy to Council in 2021 identifying phasing of improvements in Markham Village.

Project Phases	Design	Construction
1A, 1B & 1C	2022 - 2024	2024 - 2027
2	2025 - 2027	2027 - 2028
3	2026 - 2029	2028 - 2030
4	2028 - 2030	2030 - 2032



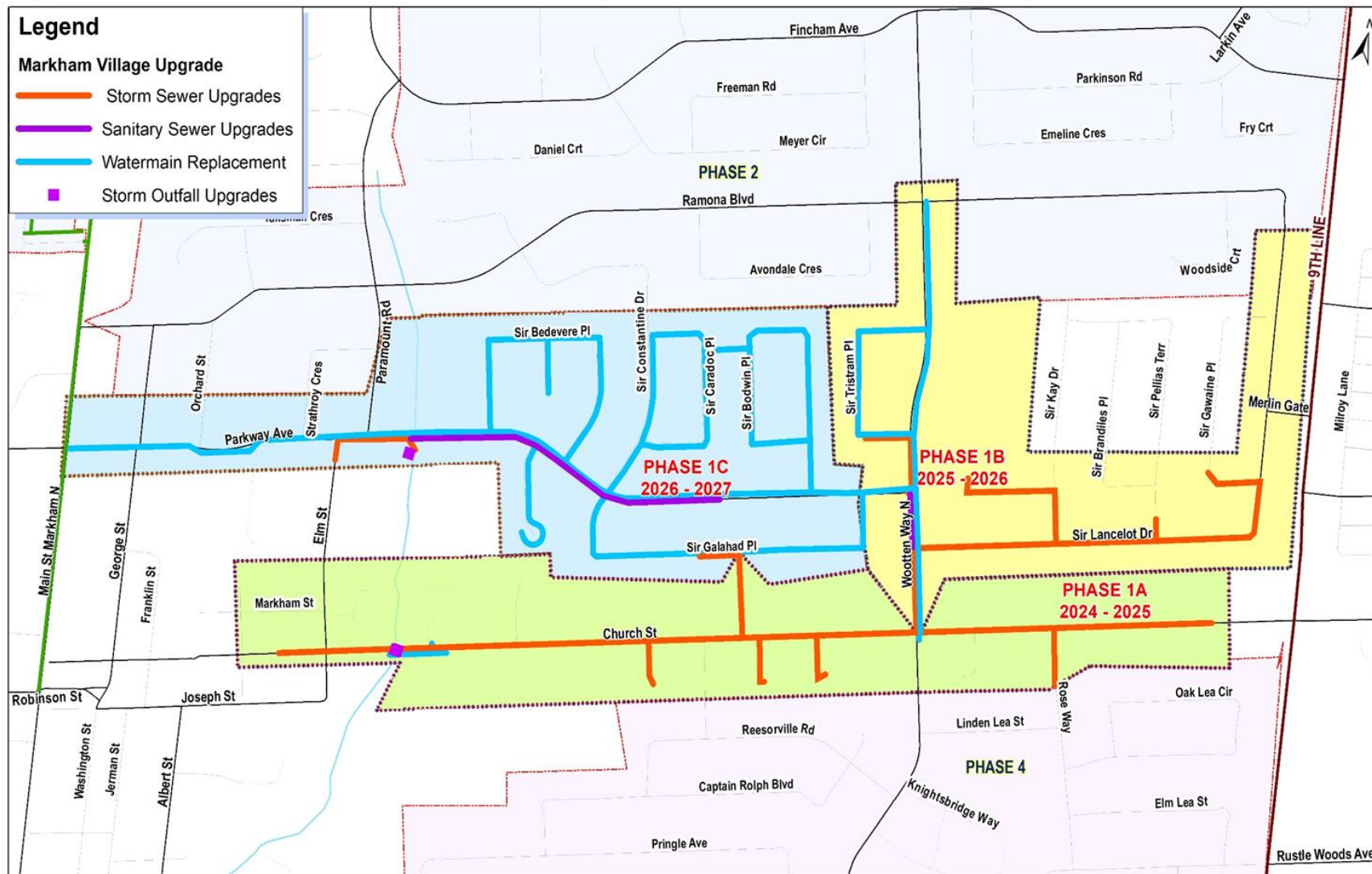


# Markham Village Phases





# Markham Village Phase 1

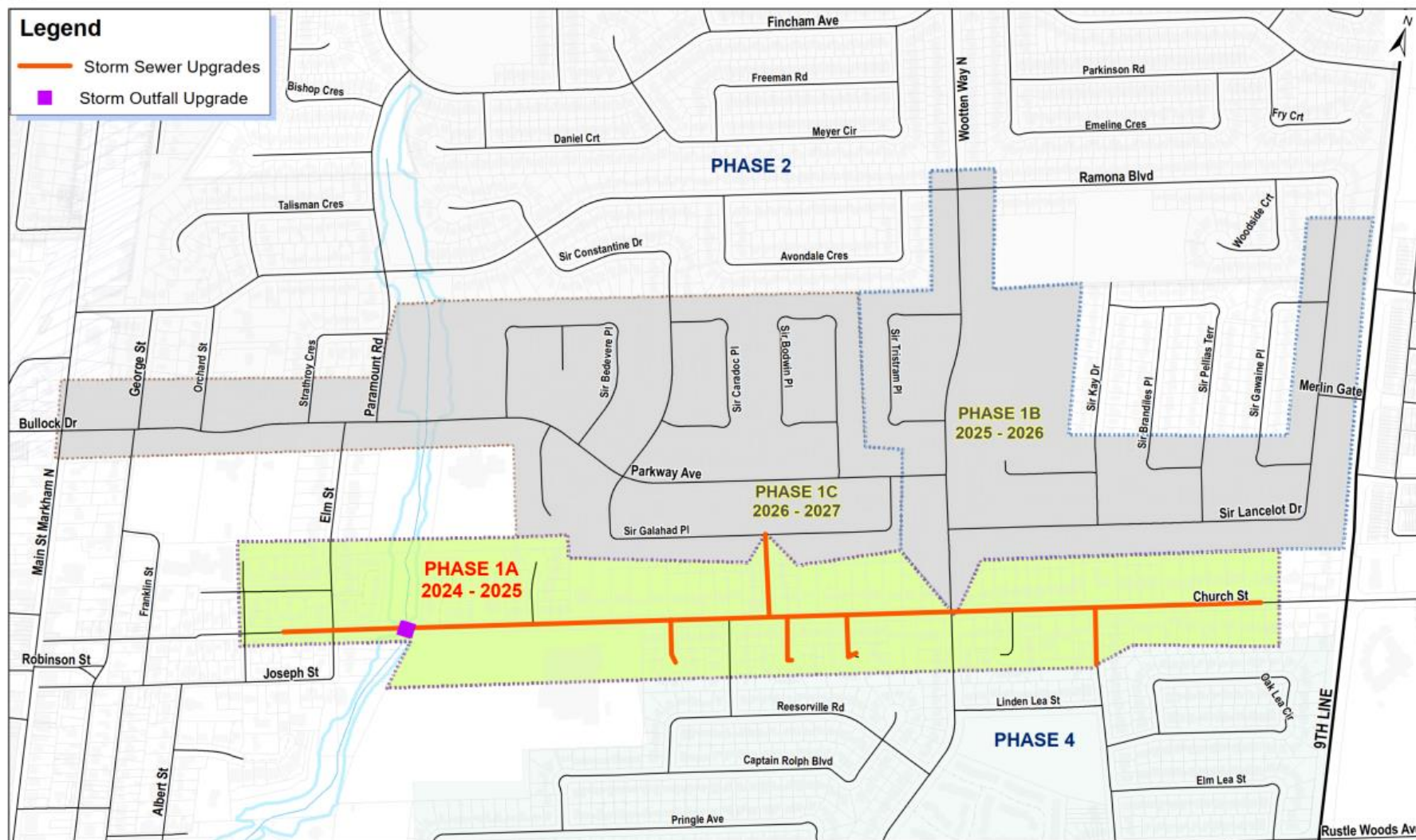






# Markham Village Phase 1A

## MARKHAM Markham Village Flood Control Implementation - Phase 1A Construction

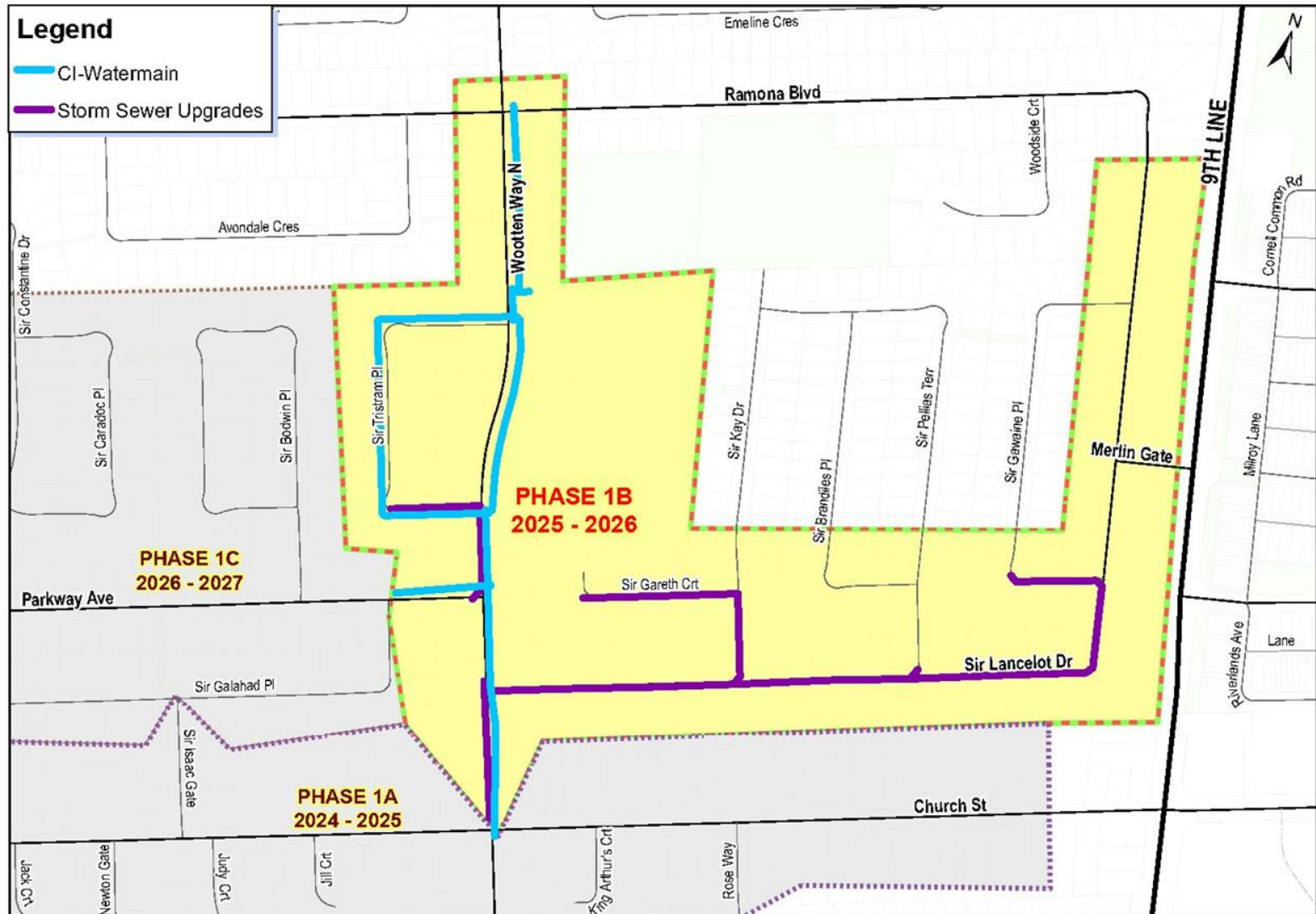




# Markham Village Phase 1B



Unionville and Markham Village Flood Control Implementation: Phase -1B







# Markham Village Phase 1C

**MARKHAM** Unionville and Markham Village Flood Control Implementation: Phase -1C



# Phase 1B Improvements

## Proposed works include:

New storm sewer upgrades, Watermain and road reconstruction including:

- **WOOTTEN WAY NORTH:** ( from Church Street to Ramona Blvd);
- **SIR LANCELOT DRIVE:** (from Wootten Way N. to Sir Gawaine Pl);
- **SIR TRISTRAM PLACE:** (Full length);
- **SIR GARETH COURT:** (Full length);
- **SIR KAY DRIVE:** (70 m North of Sir Lancelot Drive);
- **SIR GAWAINE PLACE:** (60 m West of Sir Lancelot Drive);



# Typical Storm Sewer Installation



# Managing Traffic During Construction

## Roads Closure:



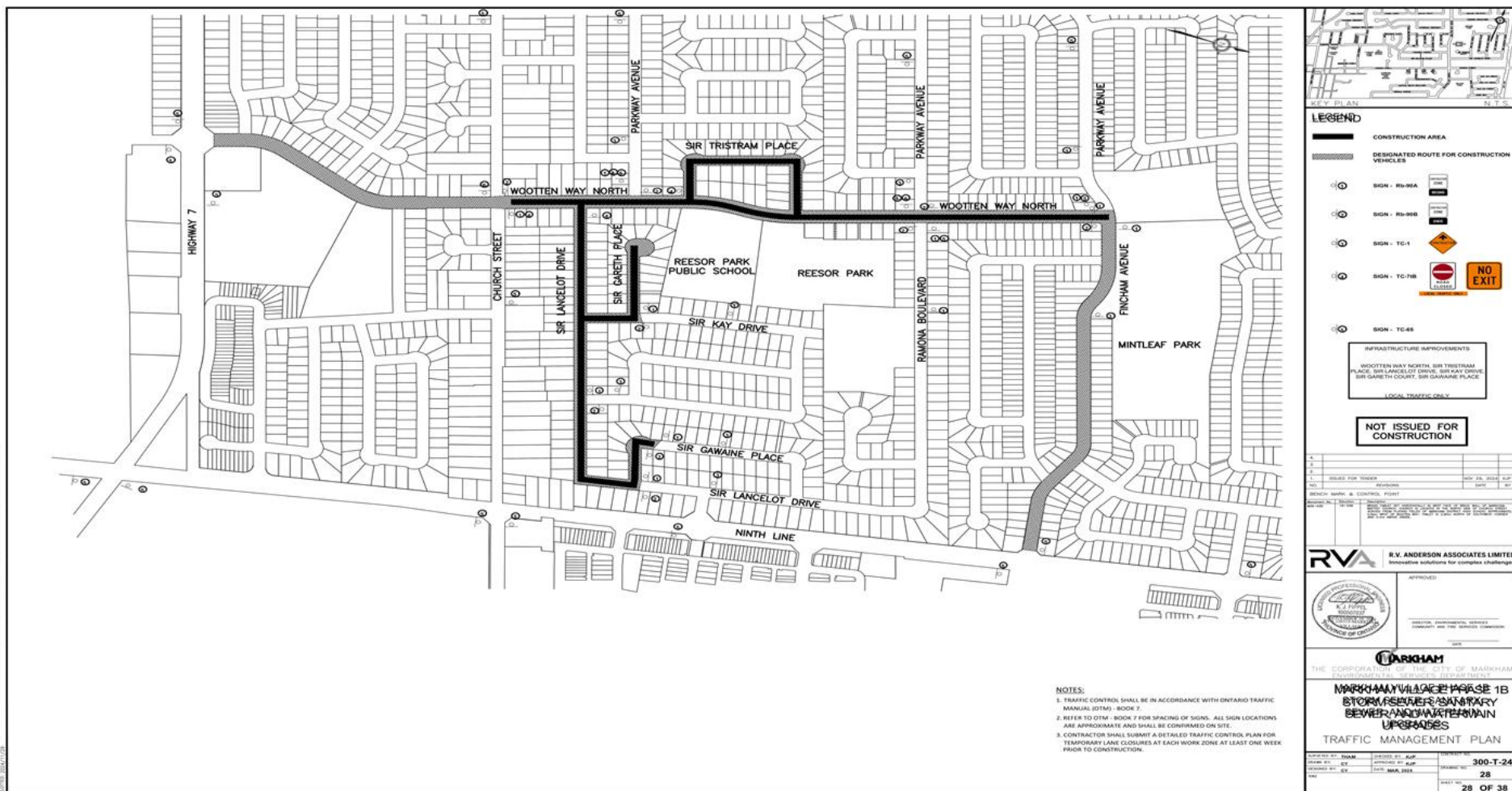
- Access for emergency vehicles will be maintained,
- Provisions will be made for collection of solid waste and recycling materials.

Roads	Full Closure*	Partial Closure
Wooten Way North	Yes	Yes
SIR LANCELOT DRIVE	-	Yes
SIR KAY DRIVE	-	Yes
SIR GAWAINE PLACE	-	Yes
SIR GARETH COURT	-	Yes
SIR TRISTRAM PLACE	-	Yes
SIR PELLIAS TERRACE	-	Yes
* Only Local Traffic will be allowed		





# Markham Village Phase 1B Work Area & Designated Route for Construction Vehicles



# Driveway Access During Construction

- Some temporary disruption to driveway access should be expected during working hours, in the active construction area;
- Roadway will be restored at the end of each working day to restore driveway access, and
- Street parking restrictions will be waived to allow temporary street parking if required (e.g., during construction of new concrete curbs).





## Winter Works

- The contractor may be required to work during winter period to accommodate storm sewer installation.
  - During this period, the contractor will be responsible for snow clearing per City standards.

# Temporary Water Shut-offs

- Water shut-offs may be required during construction to transfer water supply to relocated watermains;
- Shut-offs will typically be 4-6 hours in duration, and
- Affected residents will be given 48 hours notice.





# Controlling Noise, Dust, Mud and Sediment

**To mitigate impacts of noise, dust, mud and sediment wash-off, the contractor is required to:**

- Adhere to Markham's noise by-law (work hours, sound levels);
- Limit dust by applying water and dust suppressants;
- Limit mud by street sweeping, and
- Adhere to the sediment and erosion control plan in the construction contract.



# Maintaining Public Services

- Fire and Emergency services will be notified of road closures;
- Solid waste collection will be co-ordinated with the Contractor, and
- School bus service will be maintained during construction but will be re-routed if required.





# Pre-Construction Home Inspection

- As recommended in the Feasibility Study Report, a pre-construction home inspection survey will be offered free of charge to homeowners adjacent to construction to provide a record of conditions prior to construction.



## Protecting Trees / Tree Pruning

- Trees along the construction area will be protected from damage by construction equipment with fencing, according to City standards;
- As noted in the Feasibility Study Report, tree removal along the sewer alignment will be avoided to the extent possible;
- Tree pruning along work areas is required to facilitate construction. Pruning will be supervised by a certified arborist and will be done in accordance with the City's requirements.

# Engineer's Site Office Trailer

- To be determined by Contractor – Example of Typical Setup







# **Proposed Contractor's Staging Area**

- To be determined by Contractor

# Communication Plan

- Regular communication from the City to residents/businesses in the area (city website);
- Construction notices;
- Advanced notification of access closure and disruption of services to residents;
- Designated contact person, and
- 24-hour emergency service.

## Next Steps

- Anticipated Phase 1B construction start date, mid-April 2025
- Anticipated Phase 1B completion date, December 2026







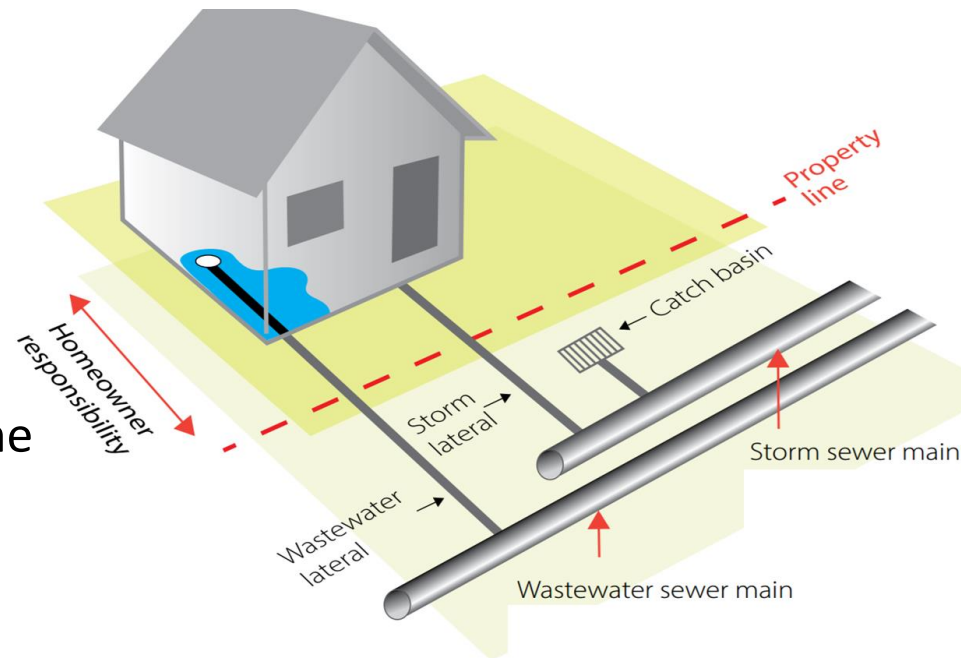
# Questions



# **Private Plumbing Protection Rebate Program**

# Private Plumbing Protection Rebate Program

- Severe rain events can overwhelm the City's older sanitary and storm sewer systems. This can contribute to basement flooding and property damage;
- Under intense rainfall conditions, home flooding can happen in many ways:
  - Direct connection of your home's private plumbing to the City's sanitary or storm sewer systems, and
  - Blocked or damaged sanitary or storm laterals (pipes) between the home plumbing system and the City's sewers.







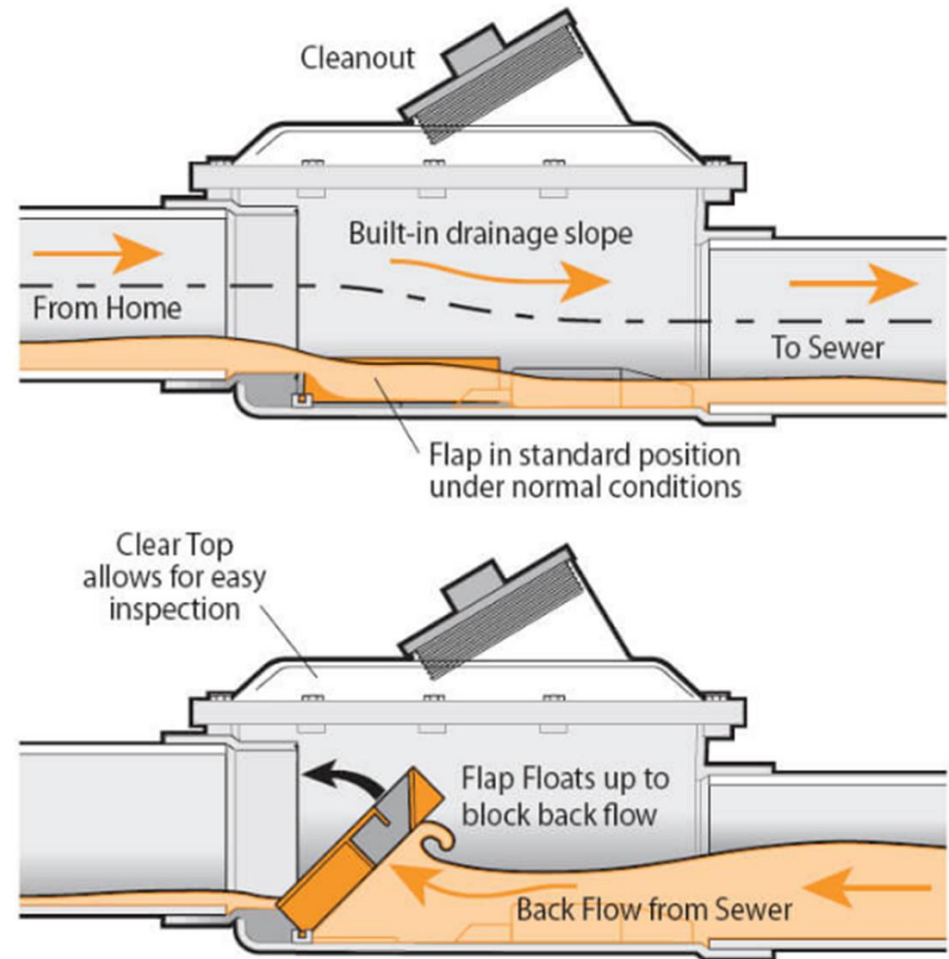
# Private Plumbing Protection Rebate Program

- To help reduce flood damages, in April 2018, Markham City Council approved a Private Plumbing Protection Rebate Program to financially support homeowners who install flood protection measures;
- Measures promoted under the program include:
  - Backwater Valve;
  - Weeping Tile Disconnection and Sump Pump Installation, and
  - Sanitary and Storm Lateral Relining and Repair.
- The program has been extended until April 30, 2027.

# Private Plumbing Protection Rebate Program

## Backwater Valve:

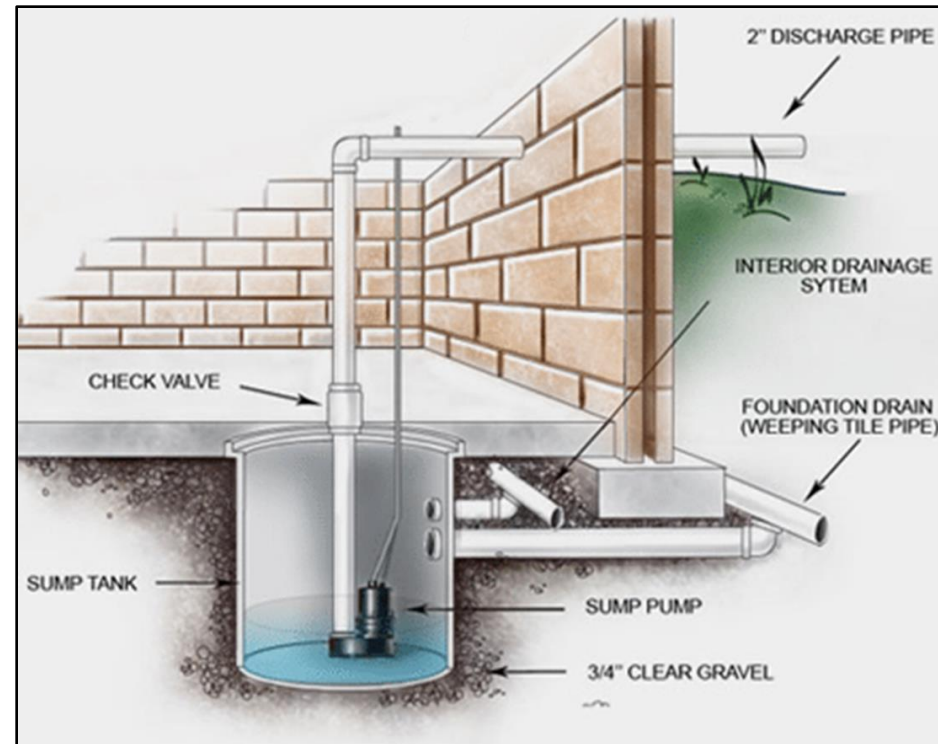
- A device installed to stop stormwater or sewage from flowing back into your home;
- This device acts as a 'check valve' that allows sewage or stormwater to flow out of the home's plumbing system during normal conditions, and that prevents back flow of sewage or stormwater during storms.



# Private Plumbing Protection Rebate Program

## Weeping Tile Disconnection and Sump Pump Installation:

- Weeping tiles (also called foundation drains) collect groundwater or infiltrated rainwater from around the outside of homes and may directly connect to municipal sewer systems, and
- Disconnecting weeping tiles from municipal sewers and installing a sump pump can help prevent infiltration flooding through foundation walls or the floor when municipal sewers are surcharged during large storm events.

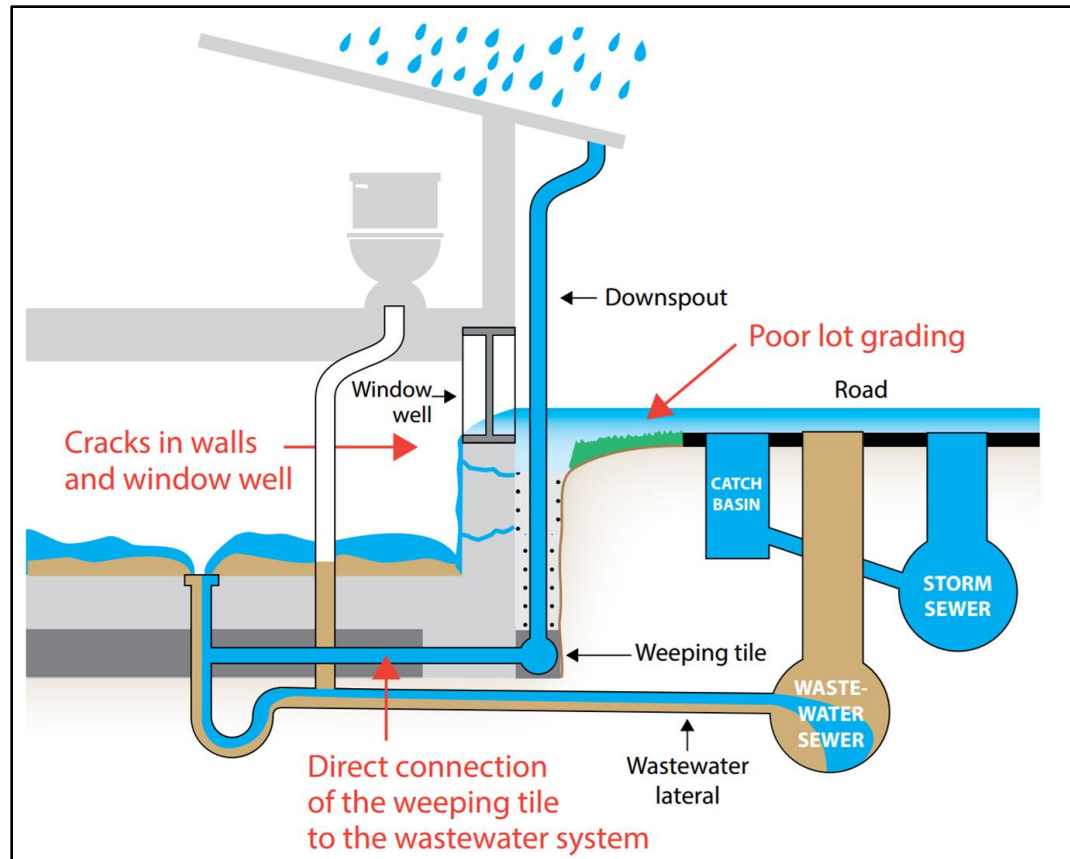




# Private Plumbing Protection Rebate Program

## Sanitary and Storm Lateral Relining and Repair:

- The replacement and restoration of private laterals (pipes) connecting your home's plumbing to the City's sewer system.





# Private Plumbing Protection Rebate Program

Rebates amounts for eligible measures as follows:

Private Plumbing Protection Measure	Maximum Rebate Amount
<b>Backwater Valve</b> – Indoor Installed on Sanitary Lateral	\$1,750
<b>Backwater Valve</b> – Indoor Installed on Storm Lateral	\$1,750
<b>Backwater Valve</b> – Outdoor Installed on Sanitary Lateral (NEW)	\$2,000
<b>Backwater Valve</b> – Outdoor Installed on Storm Lateral	\$2,000
<b>Weeping Tile</b> - Disconnected from Sanitary Lateral and Redirect to Storm Lateral by gravity connection	\$3,000
<b>Weeping Tile</b> - Disconnected from Sanitary Lateral and Sump Pump Installation	\$5,000
<b>Lateral Reline/Repair</b> – Storm	\$2,500
<b>Lateral Reline/Repair</b> – Sanitary	\$2,500



# Private Plumbing Protection Rebate Program

## Am I eligible?

- The property must be located in known flood prone areas, or demonstrate existence of flood risk in the area;
- The property is not subject to any contraventions, work orders or outstanding municipal requirements;
- No outstanding municipal fines, tax payments, or fees;
- The property owner has obtained approval of the work from the Environmental Services Department prior to installation;
- Downspouts have been disconnected from the City's sewer system;
- The property owner provides the necessary documentation required in the application forms, and complies with program requirements;
- The property owner has obtained building permits for the new installation;
- The new installation adheres to the Building Code Act, 1992, S.O. 1992, c. 23 and the Ontario Building Code O. Reg. 332/12, as amended or any successor thereof;
- The property owner signs a release form in favour of the City;
- The work is not required as part of other works in meeting Ontario Building Code requirements, and
- The deadline to obtain the building permit is April 30, 2027.





# Private Plumbing Protection Rebate Program

## Application Steps:

- Property owners determine required work in consultation with qualified contractor and confirm eligible work;
- Property owners fill out the Technical Review Application Form and submit to City for review/approval;
- After receiving an initial approval, property owners hire a licensed plumber to conduct CCTV inspection of laterals and submit inspection record to the City for review;
- City issue the Technical Review Approval form to property owners to proceed or change the work plan;
- Property owners submit building permit application along with the Technical Review Application and Approval Form;
- Building Department issues the permit;
- Property owners hire qualified contractor to complete the installation;
- Building Department inspects completed works;
- Property owners submit Rebate Application Form including invoices to Environmental Services Department, and
- City issues rebate cheque to property owners.



# Private Plumbing Protection Rebate Program

- **How to Apply?** To learn more about this rebate program or if you would like to apply, please visit the City website [www.markham.ca/water](http://www.markham.ca/water) under “Sewer Back-up & Flooding” or send an email to [privateplumbing@markham.ca](mailto:privateplumbing@markham.ca)
- To determine which measures may provide protection to your home, contact a licensed plumber for an assessment.





# Questions