



Markham Village Flood Control Implementation Project Phase 1A

Community Information Meeting

Markham Village Community Centre

Date: February 26, 2024



Purpose

- To advise Phase 1A area residents and businesses of 2024- 2026 construction activities as part of Markham Village flood control implementation;
- To promote the City's ongoing Private Plumbing Protection Rebate Program.

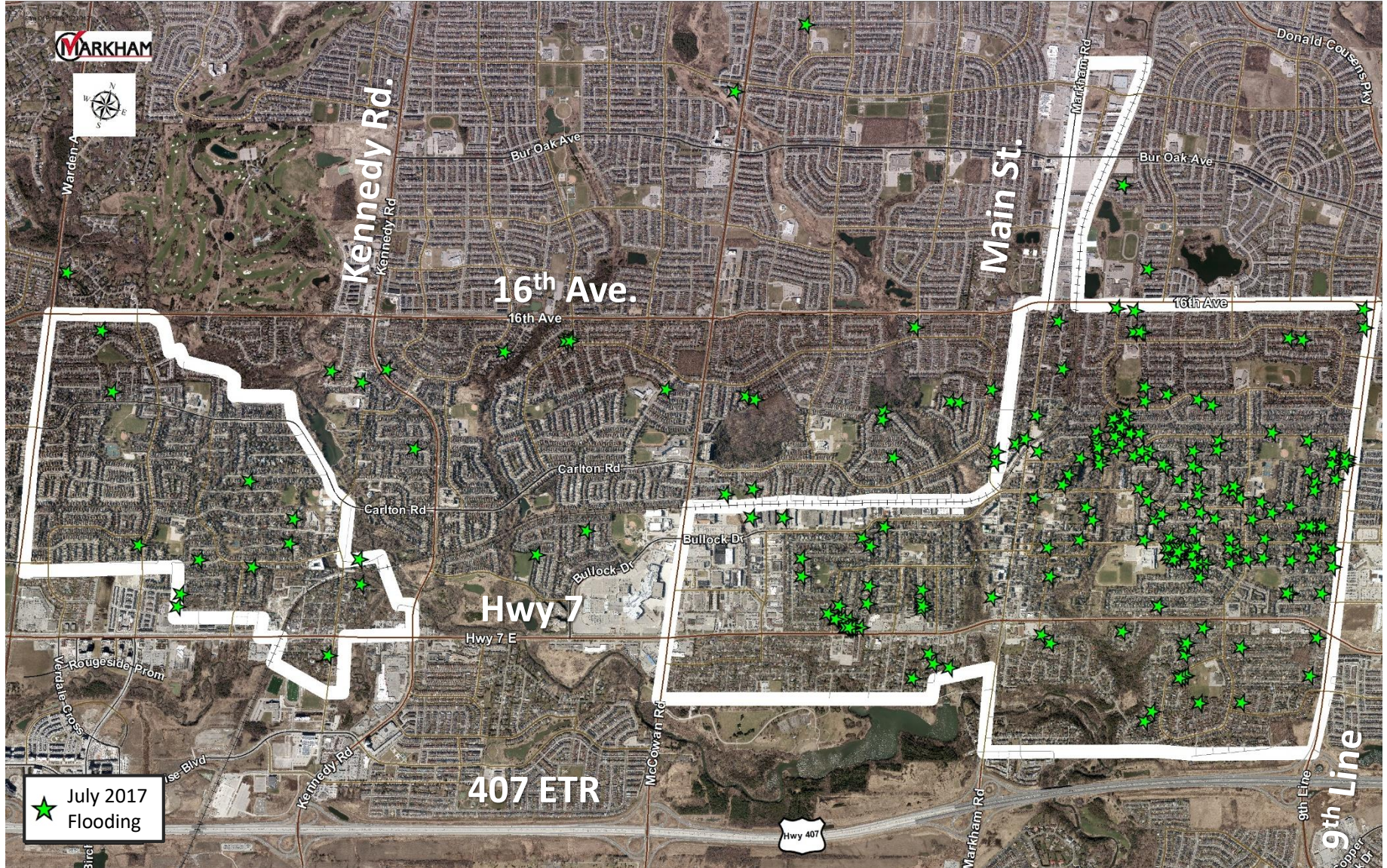


Markham's Flood Control Program

- 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;
 - Developed a long-term City-wide Flood Control Program and sustainable funding source (Stormwater Fee) for city-wide stormwater system upgrades;
 - 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.



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.
 - When very large storm events occur, there is not enough capacity in the system, and it surcharges into basements.
 - The City later updated the design standard to provide 100-year level of service.
- Private plumbing systems require maintenance, which can cause basement flooding when not performed.





Proposed Solutions

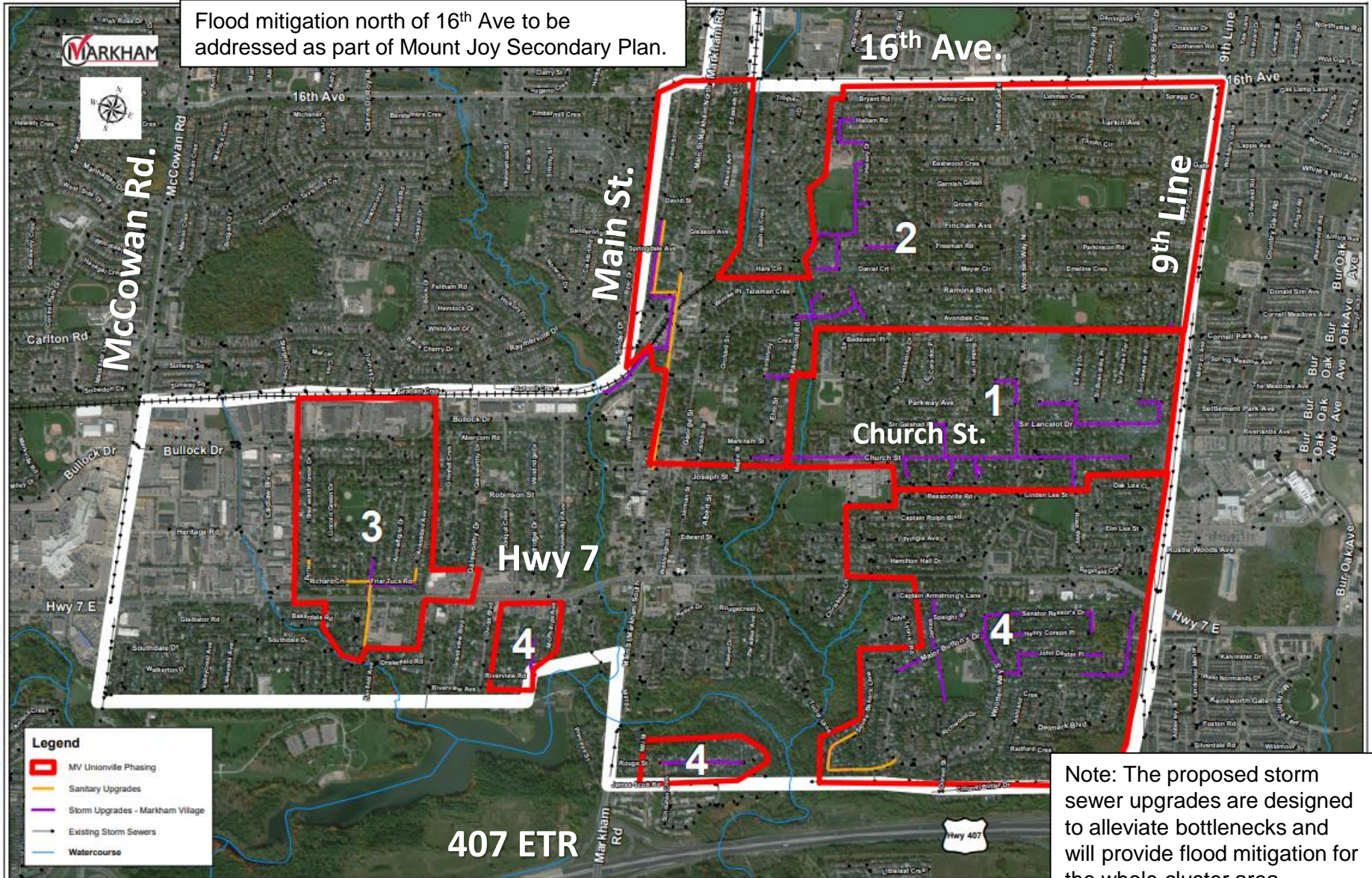
- Options for solutions include:
 - Storm and sanitary sewers and watermain upgrades;
 - Mount Joy Creek new outfall on Church Street;
 - Private Plumbing Protection
- Four project clusters have been identified:
 - The timing and phasing of upgrades are to be prioritized based on **risk** and logistics 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.





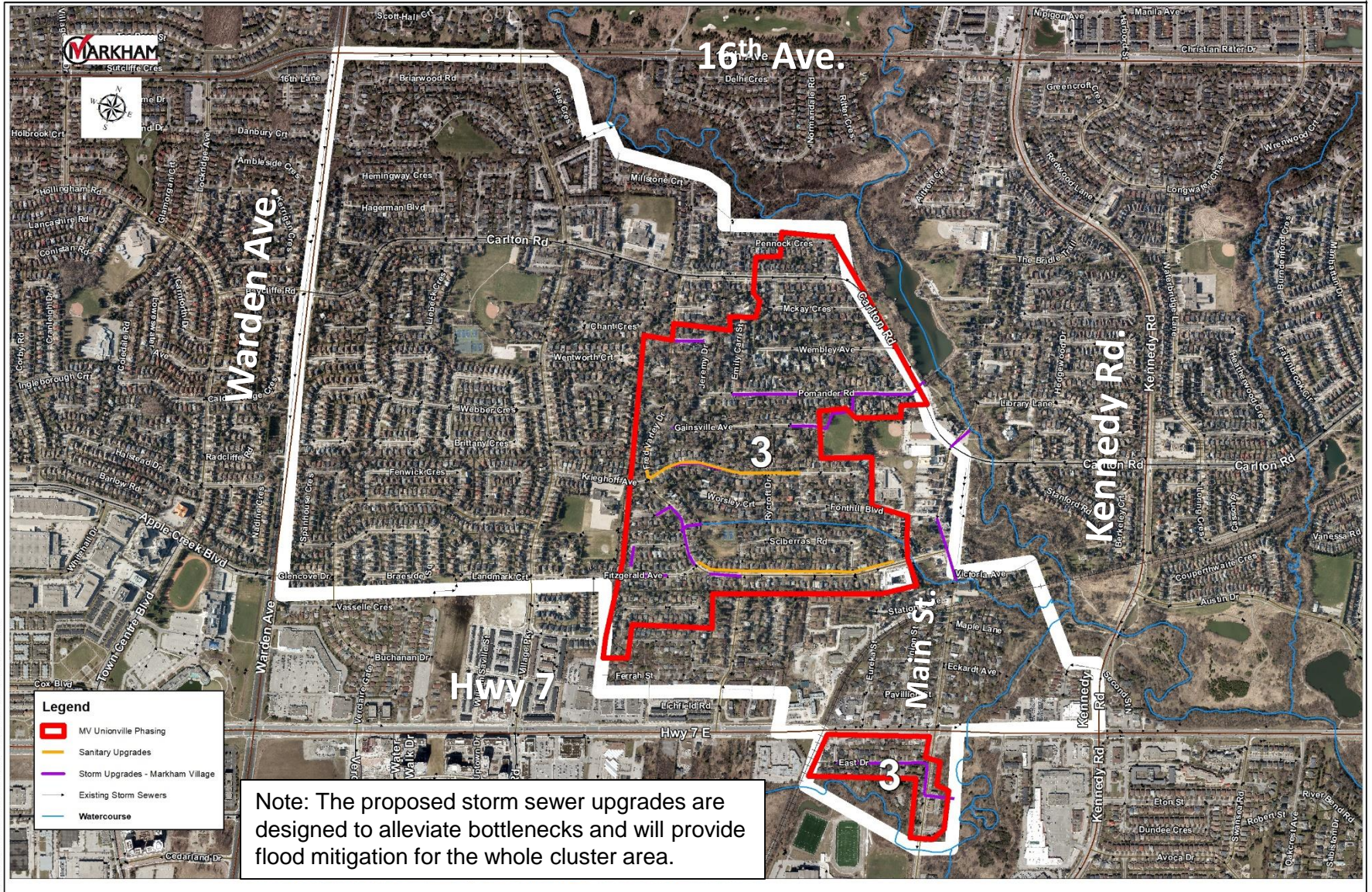
Project Clusters – Markham Village

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



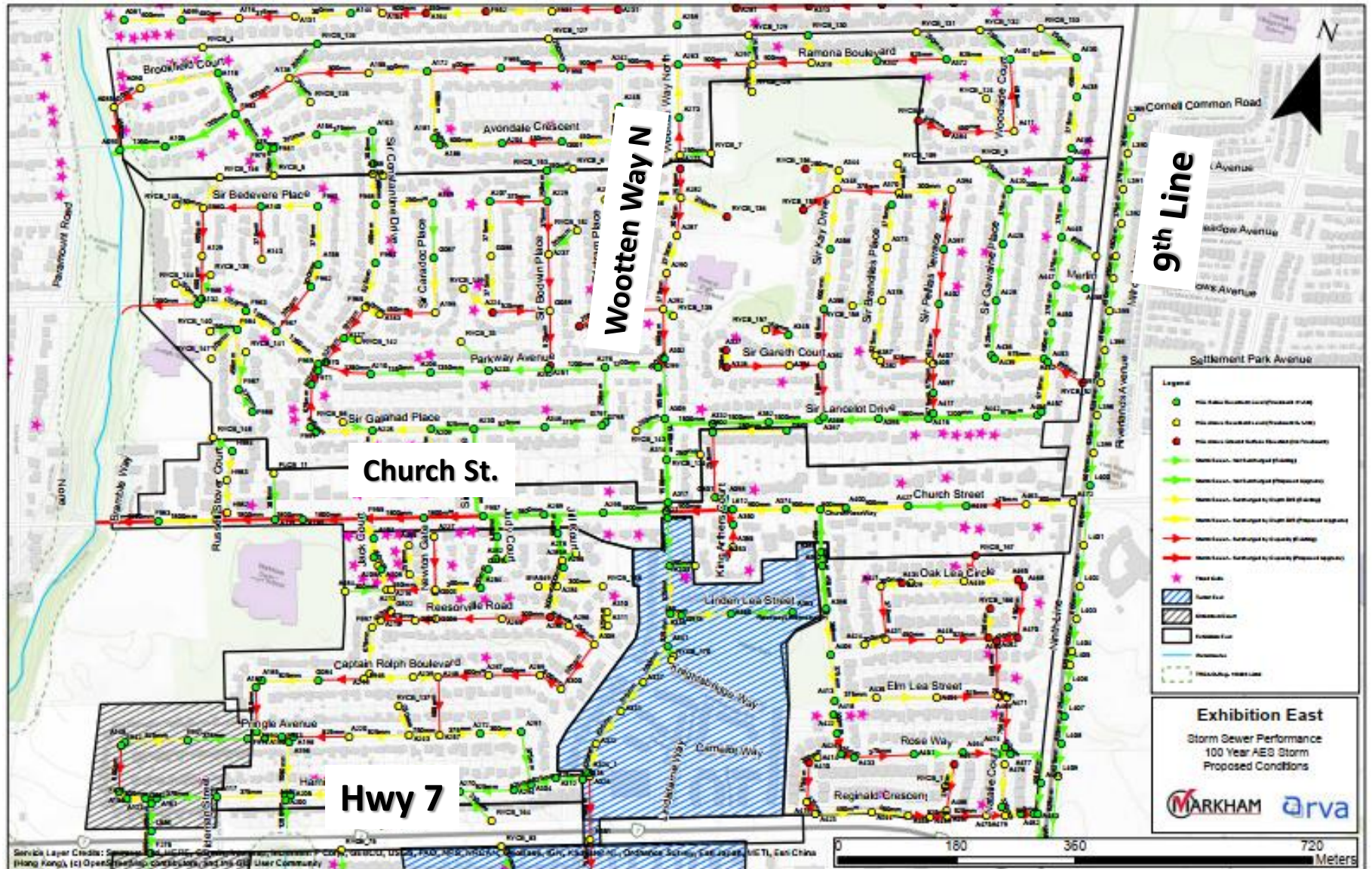


Project Clusters - Unionville





Feasibility Study Recommended Upgrades





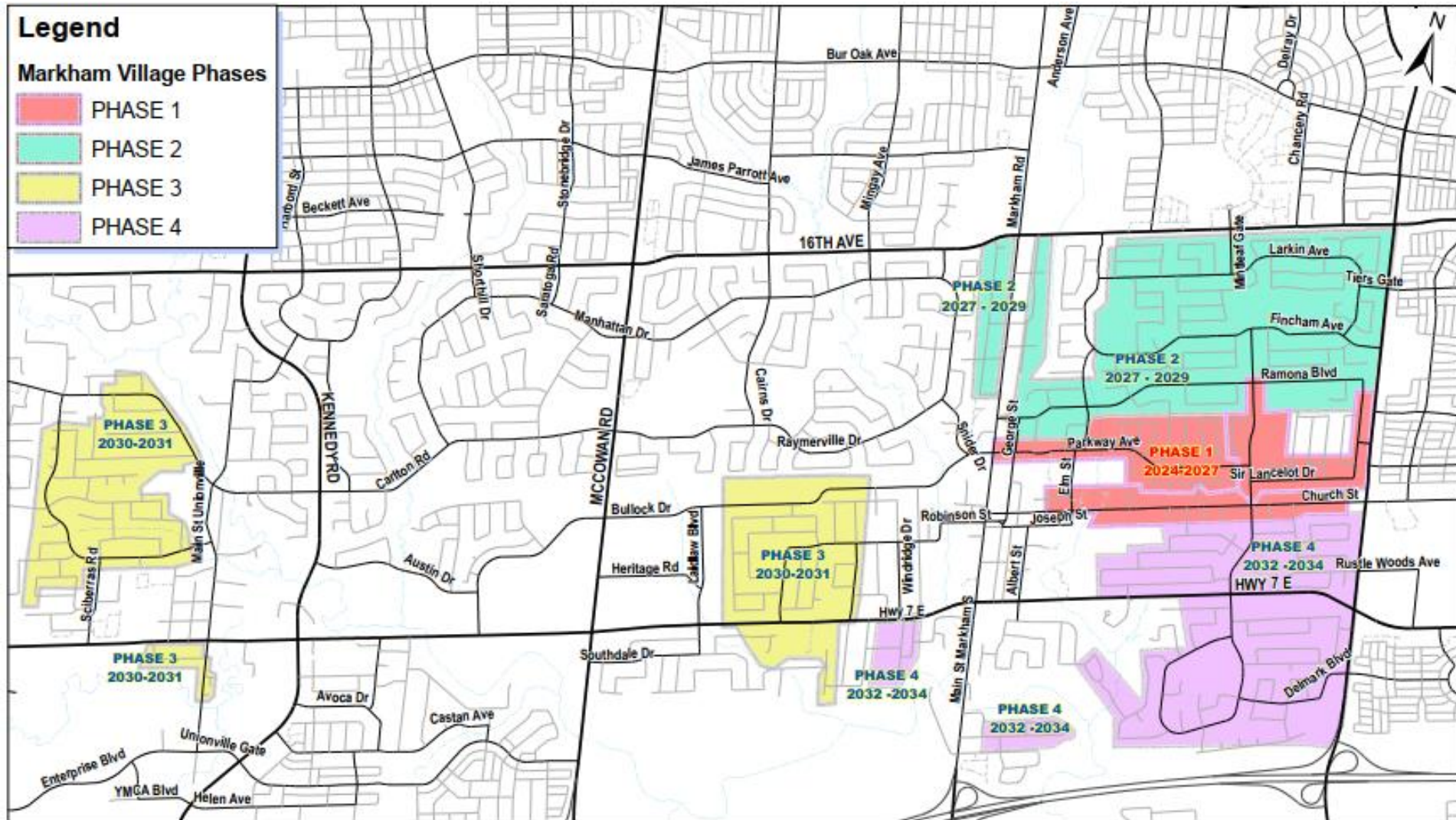
Implementation Strategy

- Storm drainage improvements to manage flood risks were identified in 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

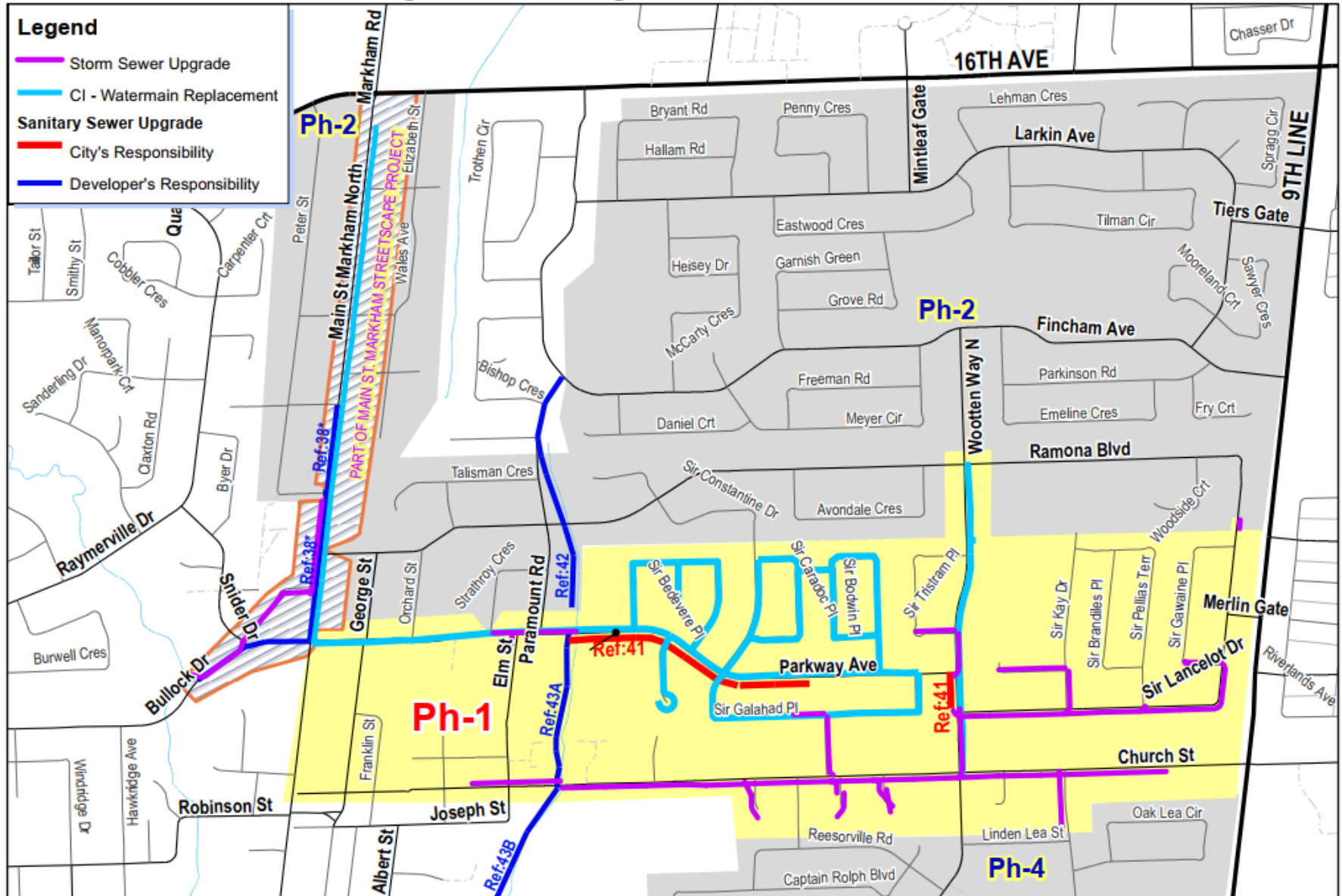


Markham Village Phases



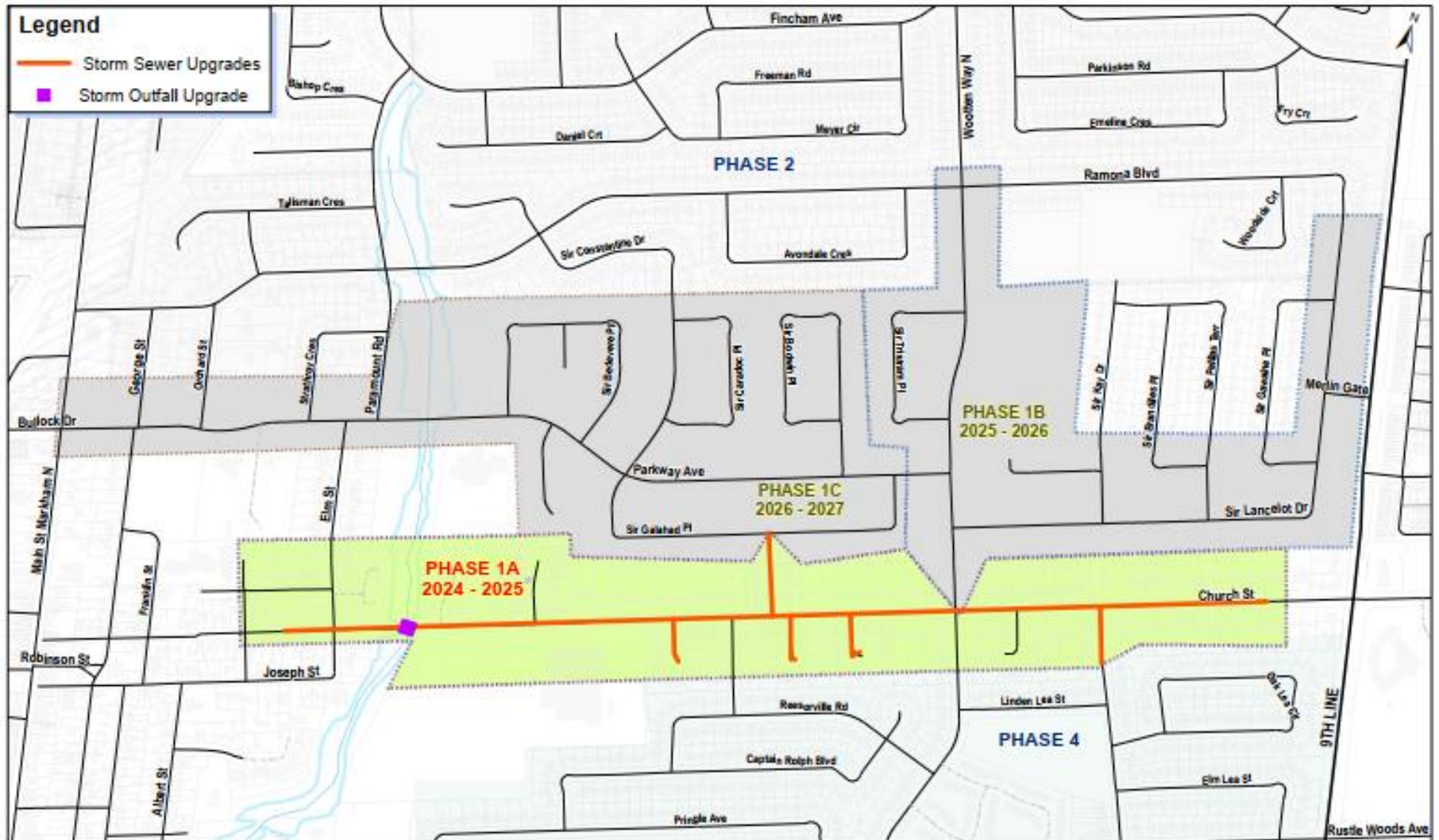


Project Area - Phase 1





Implementation Phases - 1A, 1B & 1C



*Phase 1A – Nov. 2025 Completion of Base Asphalt, Oct. 2026 Top Asphalt/Boulevard Restoration



Phase 1A Improvements

Proposed works include:

New storm sewer upgrades and road reconstruction including:

- ***Church Street*** (from east of Rose Way to west of Elm Street);
- ***Sir Isaac Gate***: (south half from Church Street);
- ***Jack Court***: (Full length);
- ***Judy Court***: (Full length);
- ***Jill Court***: (Full length);
- ***King Arthurs Court***: (25 m south of Church Street);
- ***Rose Way***: (from Church Street to Linden Lea Street).



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.

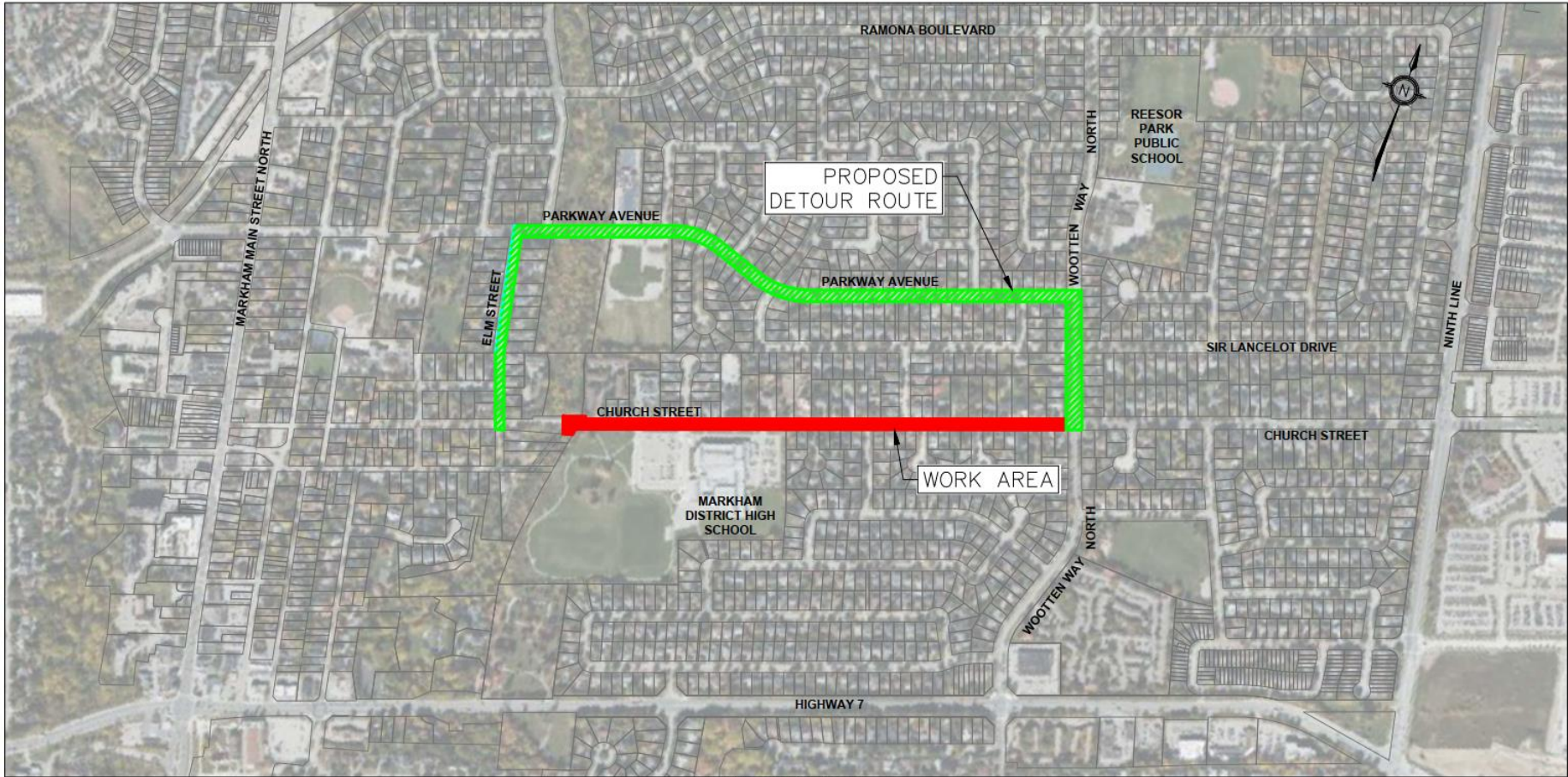


Roads	Full Closure*	Partial Closure
Church St.	Yes	-
Jack Court	-	Yes
Judy Court	-	Yes
Jill Court	-	Yes
Sir Isaac Gate	-	Yes
King Arthurs Court	-	Yes
Rose Way	-	Yes

* Only Local Traffic will be allowed



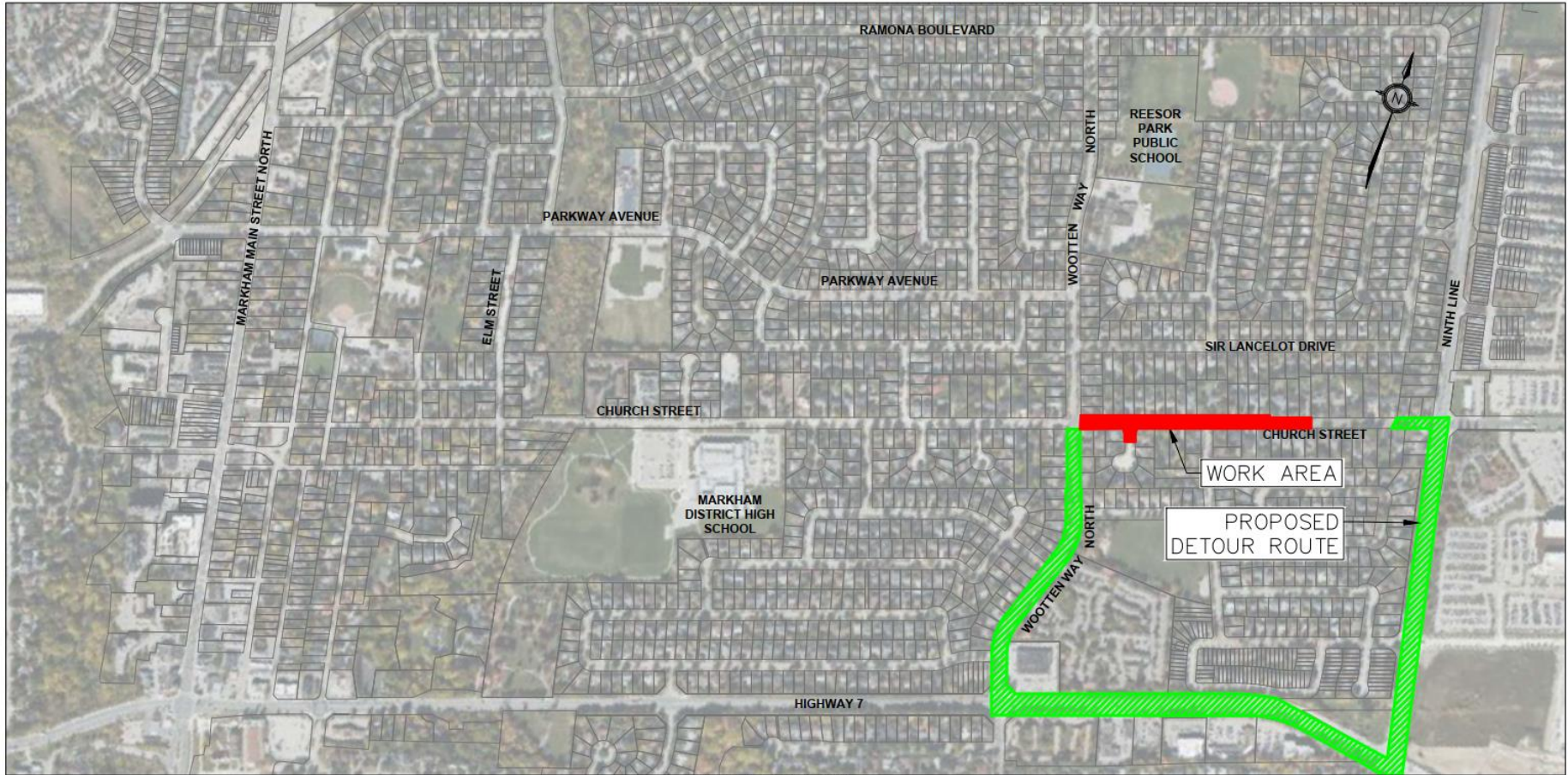
Managing Traffic During Construction



TRAFFIC DETOUR PLAN 1
CHURCH STREET CLOSURES BETWEEN MOUNT JOY CREEK AND WOOTTEN WAY NORTH
SCALE 1:5000



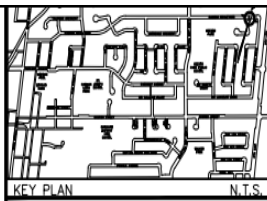
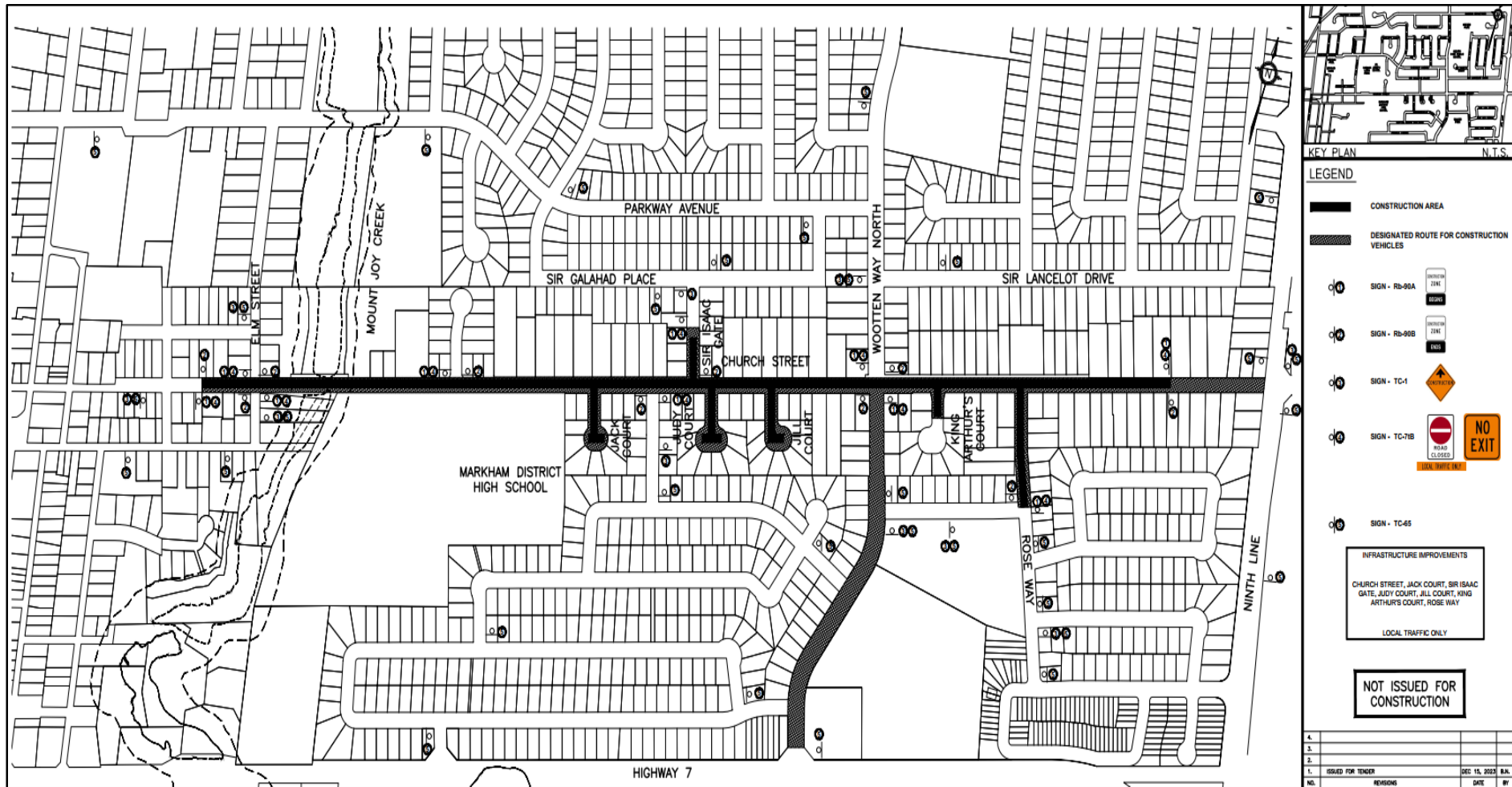
Managing Traffic During Construction



TRAFFIC DETOUR PLAN 2
CHURCH STREET CLOSURES BETWEEN WOOTTEN WAY NORTH AND NINTH LINE
SCALE 1:5000



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



KEY PLAN N.T.S.

LEGEND

- CONSTRUCTION AREA
- DESIGNATED ROUTE FOR CONSTRUCTION VEHICLES

- SIGN - RB-80A
- SIGN - RB-80B
- SIGN - TC-1
- SIGN - TC-7B
- SIGN - TC-65

INFRASTRUCTURE IMPROVEMENTS
 CHURCH STREET, JACK COURT, SIR ISAAC GATE, JUDY COURT, JILL COURT, KINGS ARTHUR'S COURT, ROSE WAY
 LOCAL TRAFFIC ONLY

NOT ISSUED FOR CONSTRUCTION

4.			
3.			
2.			
1.	ISSUED FOR TENDER		DEC 15, 2023 B.K.
NO.	REVISIONS	DATE	BY



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 3-4 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.



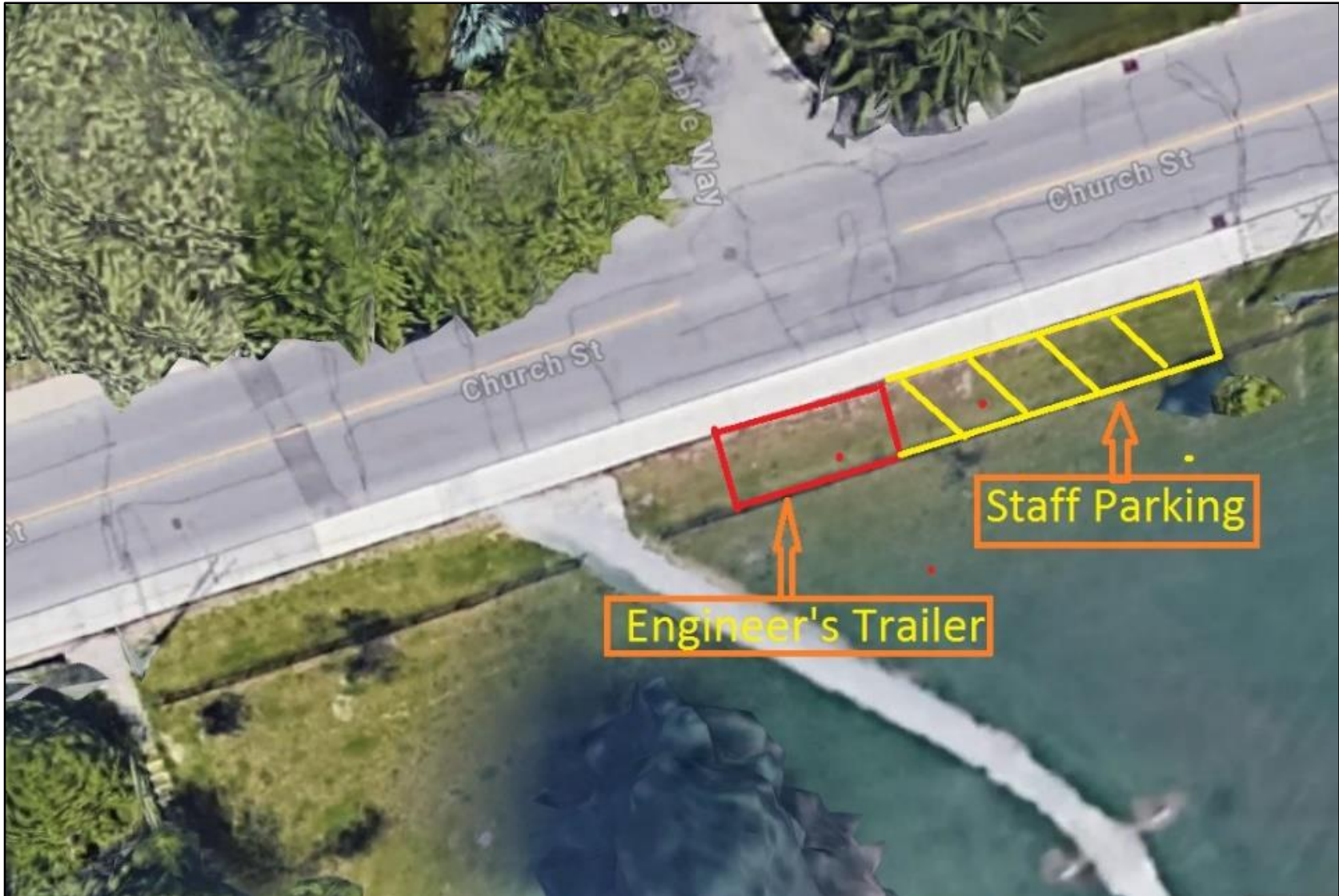


Protecting Trees / Tree Pruning

- 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, and
- For construction of outfall upgrades at Mount Joy creek, some of existing trees will be removed. Extensive replanting will be completed following construction.



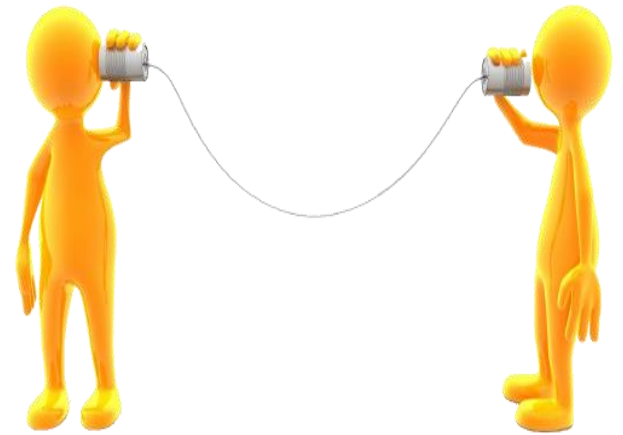
Engineer's Site Office Trailer





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 1A construction start date, **mid-April 2024**,
- Anticipated Phase 1A completion date, **October 2026**
(Top Asphalt & Boulevard Restoration).





Questions

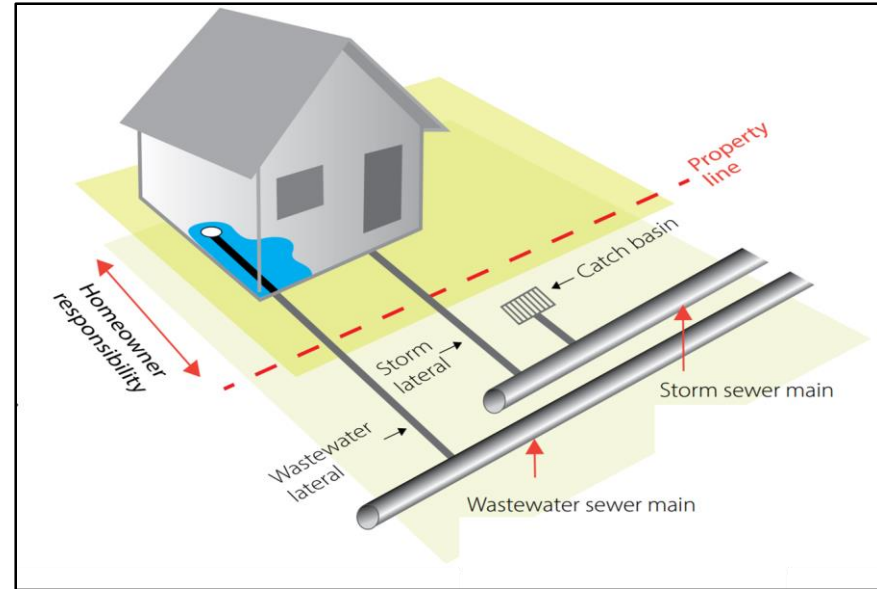


Private Plumbing Protection Rebate Program



Private Plumbing Protection Rebate Program

- Severe rain events can overwhelm the City's older sanitary and storm sewer systems contributing to basement flooding and property damage;
- During intense rainfall, 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.





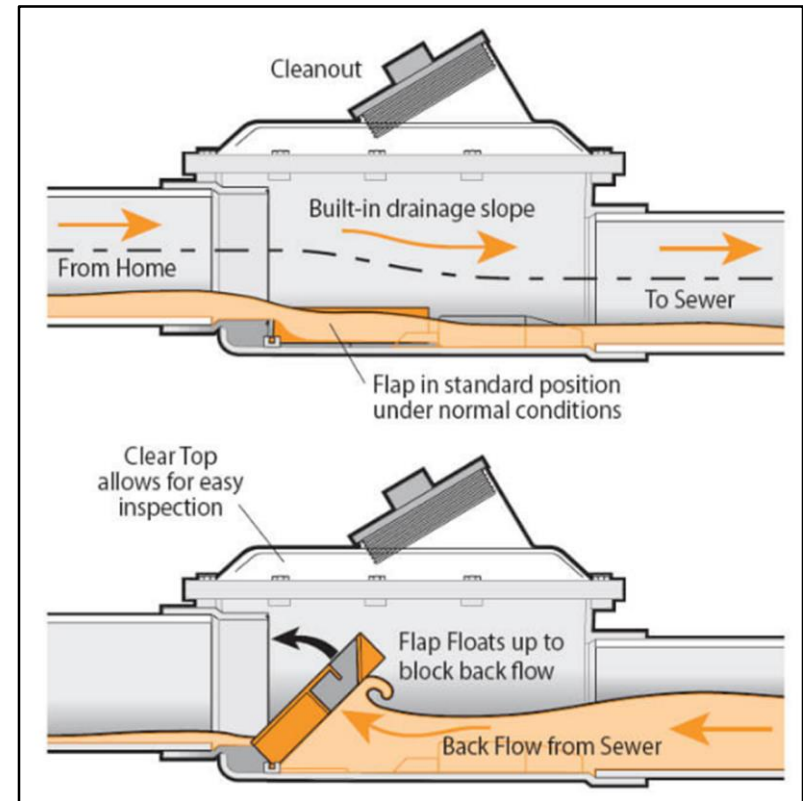
Private Plumbing Protection Rebate Program

- 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 during normal conditions and prevents back flow of sewage or stormwater during storms.

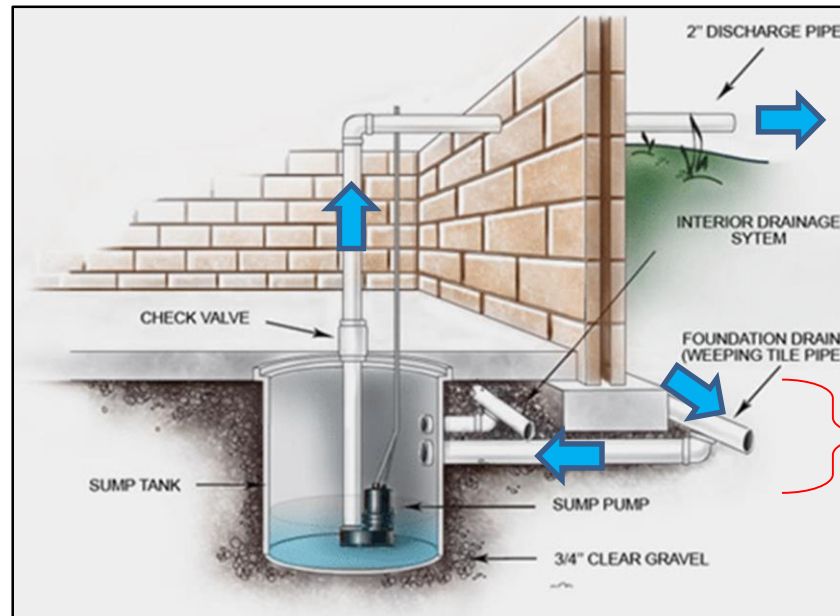




Private Plumbing Protection Rebate Program

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 City sewers, and
- Disconnecting weeping tiles from City sewers and installing a sump pump can help prevent infiltration flooding through foundation walls or the floor when City sewers surcharged during large storms.



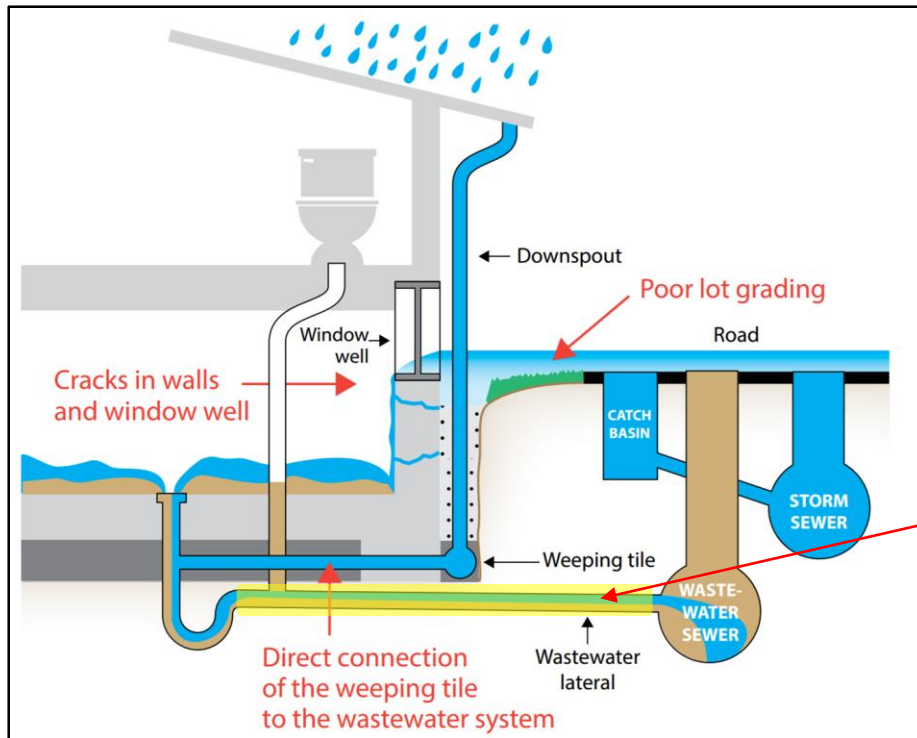
weeping tile
disconnected
From City sewer



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 lateral pipe



Private Plumbing Protection Rebate Program

Rebates amounts for eligible measures are as follows:

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

- **How to Apply?** To learn more about application steps or if you would like to apply, please visit the City website www.markham.ca/residentialflooding or send an email to plumbingrebate@markham.ca
- To determine which measures may provide protection to your home, contact a licensed plumber for an assessment.



Sump Pump



Backwater Valve



Questions