



West Thornhill Stormwater Flood Remediation Construction - Phases 3B & 4A

Community Information Meeting

through Zoom
May 5, 2021



Purpose

- To advise residents and businesses of 2021 – 2022 construction activities as part of West Thornhill flood control remediation
- To promote the City's ongoing 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.
 - Initiated the West Thornhill Stormwater Flood Remediation Class EA 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.

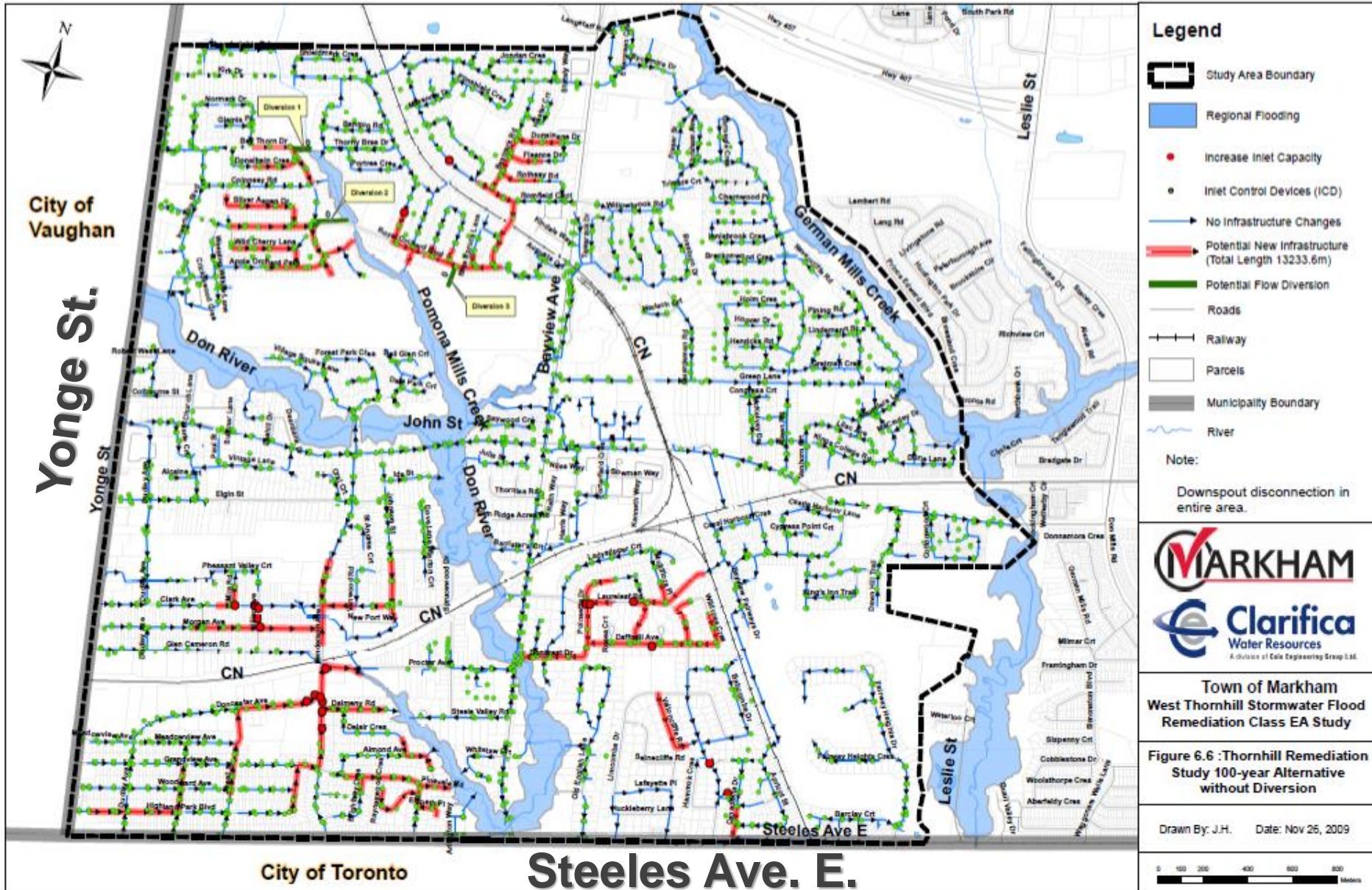


Background

- Storm drainage improvements to manage flood risks were approved through Class EA Study recommendations (2009) & City received Ministry of Environment approval in 2011.
- Staff presented an implementation strategy to Council in 2011 identifying phasing of improvements in West Thornhill.

Phase	Duration of Project
1A	2014 – 2015
1B	2015 – 2016
1C	2016 – 2017
2A	2016 – 2017
2B	2017 – 2018
2C	2018 – 2019
2D	2019 – 2020
3A	2020 – 2021
3B and 4A	2021 – 2022

Class EA Recommendations

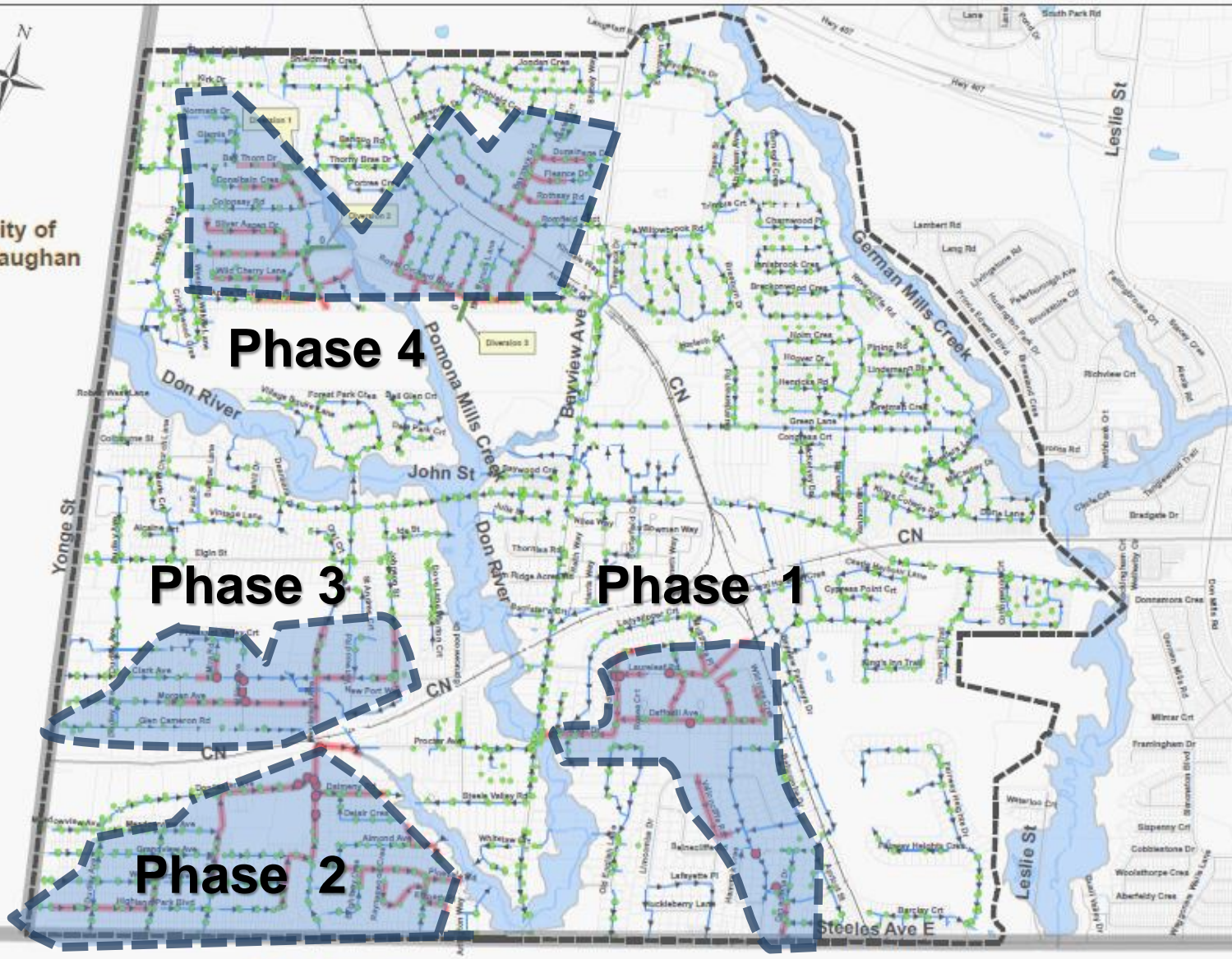


Implementation Phases



City of Vaughan

City of Toronto



Legend

- Study Area Boundary
- Regional Flooding
- Increase Inlet Capacity
- Inlet Control Devices (ICD)
- No Infrastructure Changes
- Potential New Infrastructure (Total Length 13233.6m)
- Potential Flow Diversion
- Roads
- Railway
- Parcels
- Municipality Boundary
- River

Note:
Downspout disconnection in entire area.

MARKHAM

Clarifica
Water Resources
A Division of Cole Engineering Group Ltd.

Town of Markham
West Thornhill Stormwater Flood Remediation Class EA Study

Figure 6.6 : Thornhill Remediation Study 100-year Alternative without Diversion

Drawn By: J.H. Date: Nov 26, 2009

0 100 200 400 600 800 Meters



Storm Sewer Installation





Background (continued)

- City identified need to replace several cast iron watermains (Ph 3B only) in conjunction with storm sewer replacements.
- Additional watermain replacement will be completed on adjacent streets.





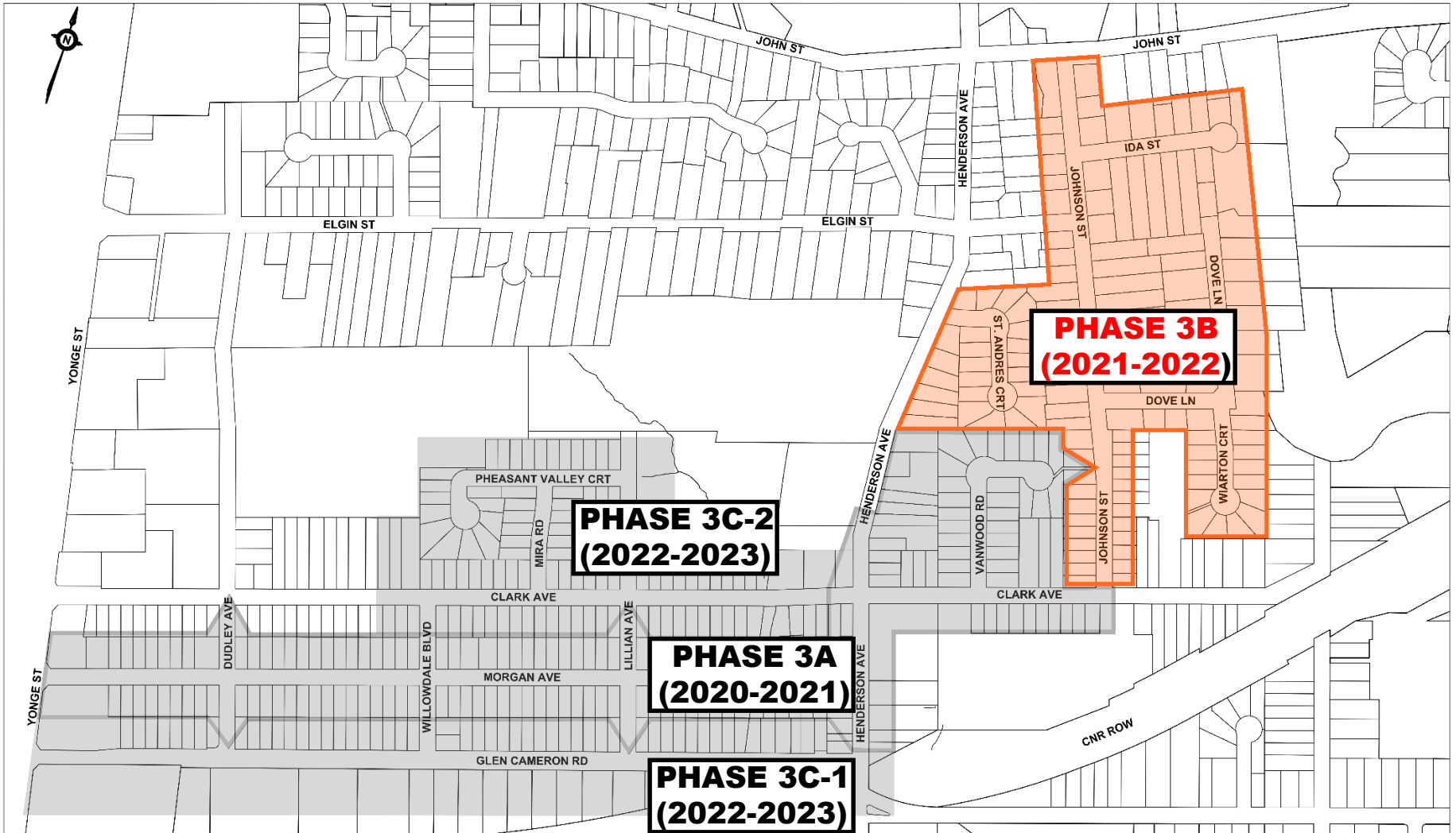
Proposed Works – Watermain Replacement (Ph 3B only)

- Replace existing cast iron watermain with a new PVC watermain
- All services to property line shall be replaced
- Replacement will generally be in a new alignment
- Final service switchover will generally take 3-4 hours, minimizing disruption to residents





WEST THORNHILL FLOOD CONTROL IMPLEMENTATION PHASES

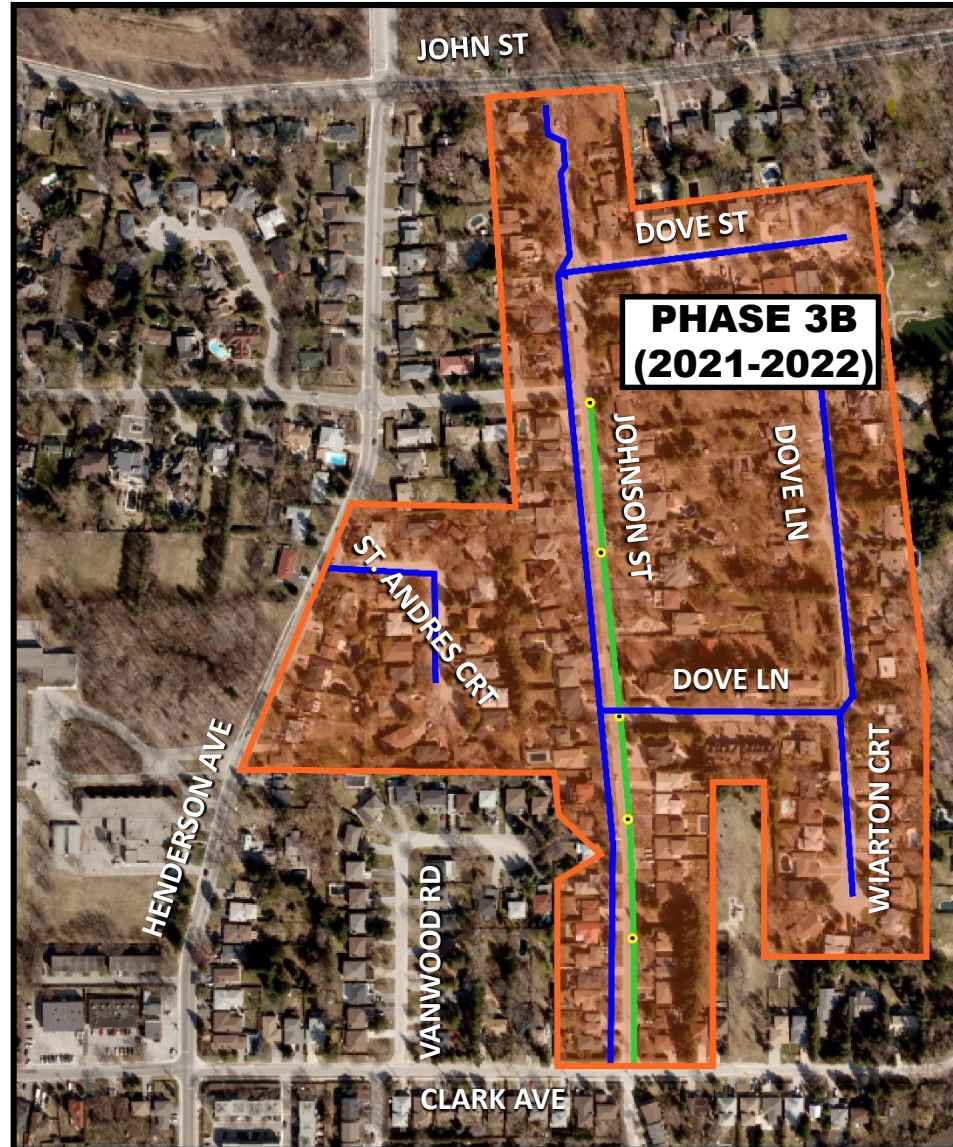




LOCATION MAP - WEST THORNHILL - PHASE 3B

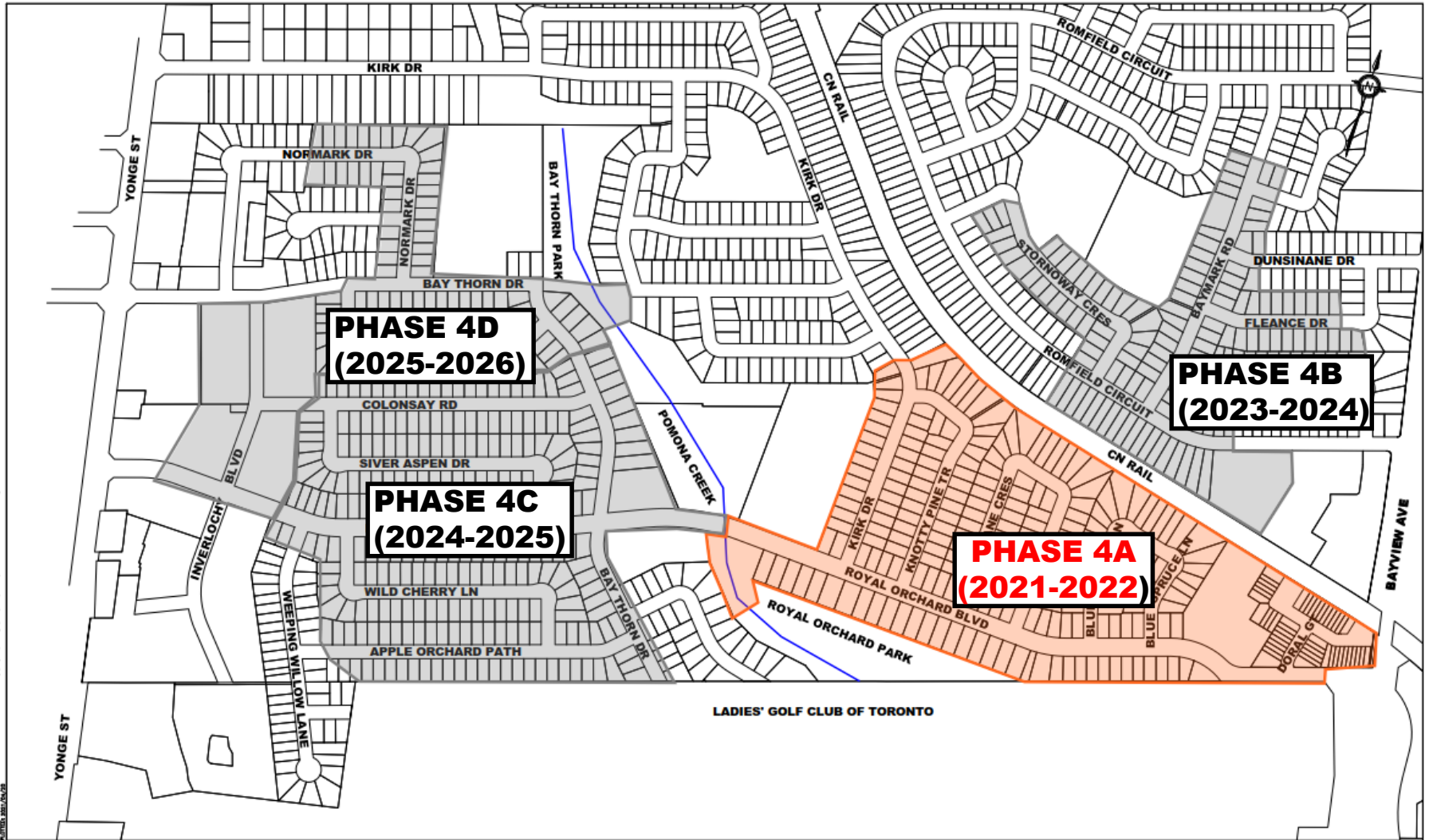
LEGEND:

- STORM SEWER UPGRADE
- WATERMAIN REPLACEMENT
- PHASE 3B AREA



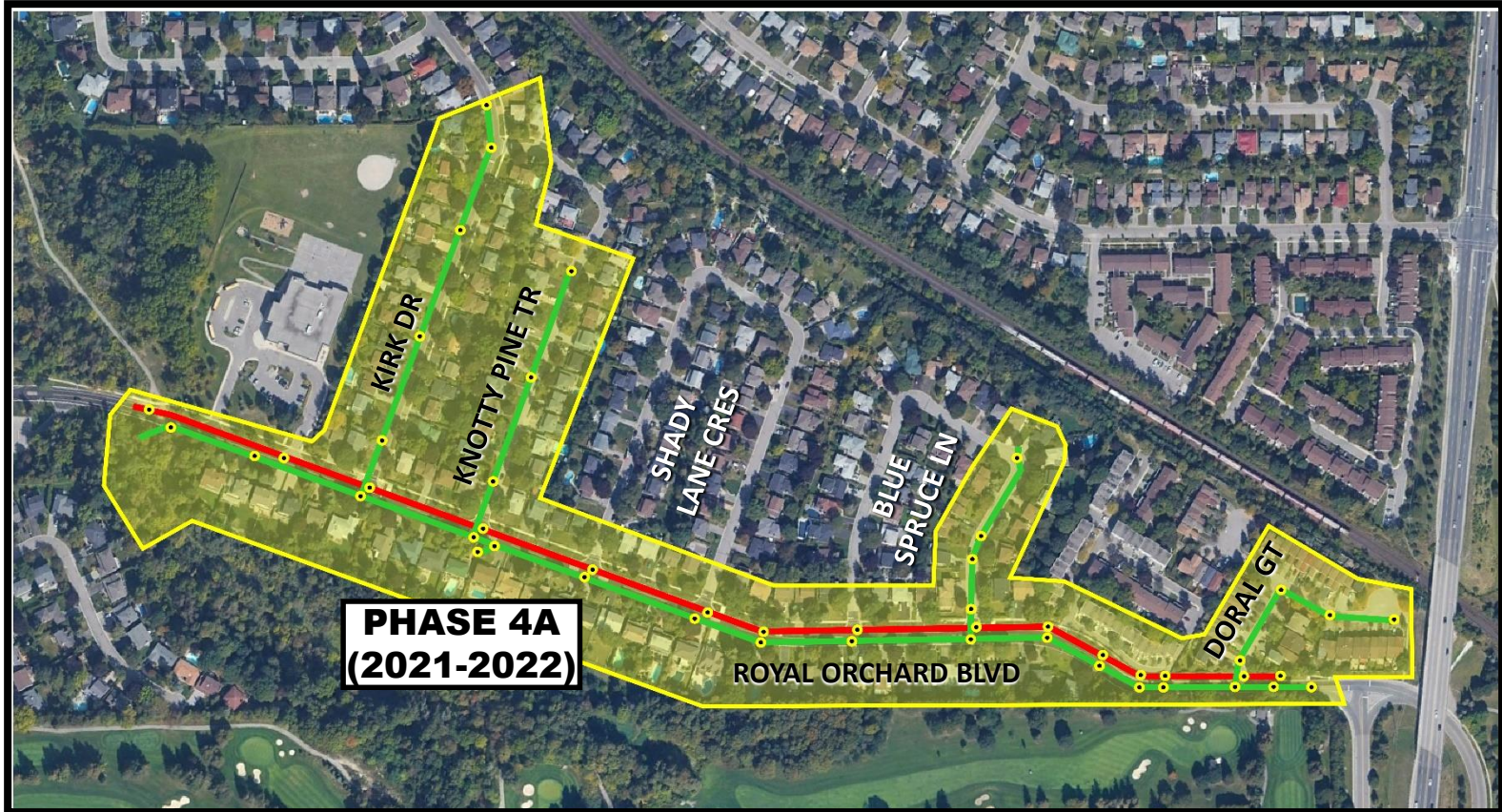


WEST THORNHILL FLOOD CONTROL IMPLEMENTATION PHASES





LOCATION MAP - WEST THORNHILL - PHASE 4A



LEGEND:

- STORM SEWER UPGRADE
- SANITARY SEWER REPLACEMENT
- PHASE 4A AREA



Phase 3B Improvements

- **Proposed works include:**
 - New storm sewer & watermain along Johnson St.
 - New watermains along Dove Ln., Warton Ct., Ida St. and St. Andres Ct..
 - Resurfacing of roads where sewers & watermains are replaced.
 - Temporary site trailers (location to be confirmed).



Phase 4A Improvements

- **Proposed works include:**
 - New storm and sanitary sewers along Royal Orchard Blvd., from Pomona Creek to Bayview Ave.,
 - New storm sewers along Kirk Dr., Knotty Pine Tr., and Blue Spruce Ln. north of Royal Orchard Blvd., and along Doral Gate and Augusta Court east of Doral Gate.
 - Storm sewer outlet upgrades at Pomona Creek south of Royal Orchard Blvd.
 - Erosion rehabilitation and prevention works in Pomona Creek south of Royal Orchard Blvd.
 - Resurfacing of roads where sewers are replaced.
 - Temporary site trailers (location to be confirmed).



Managing Traffic During Construction

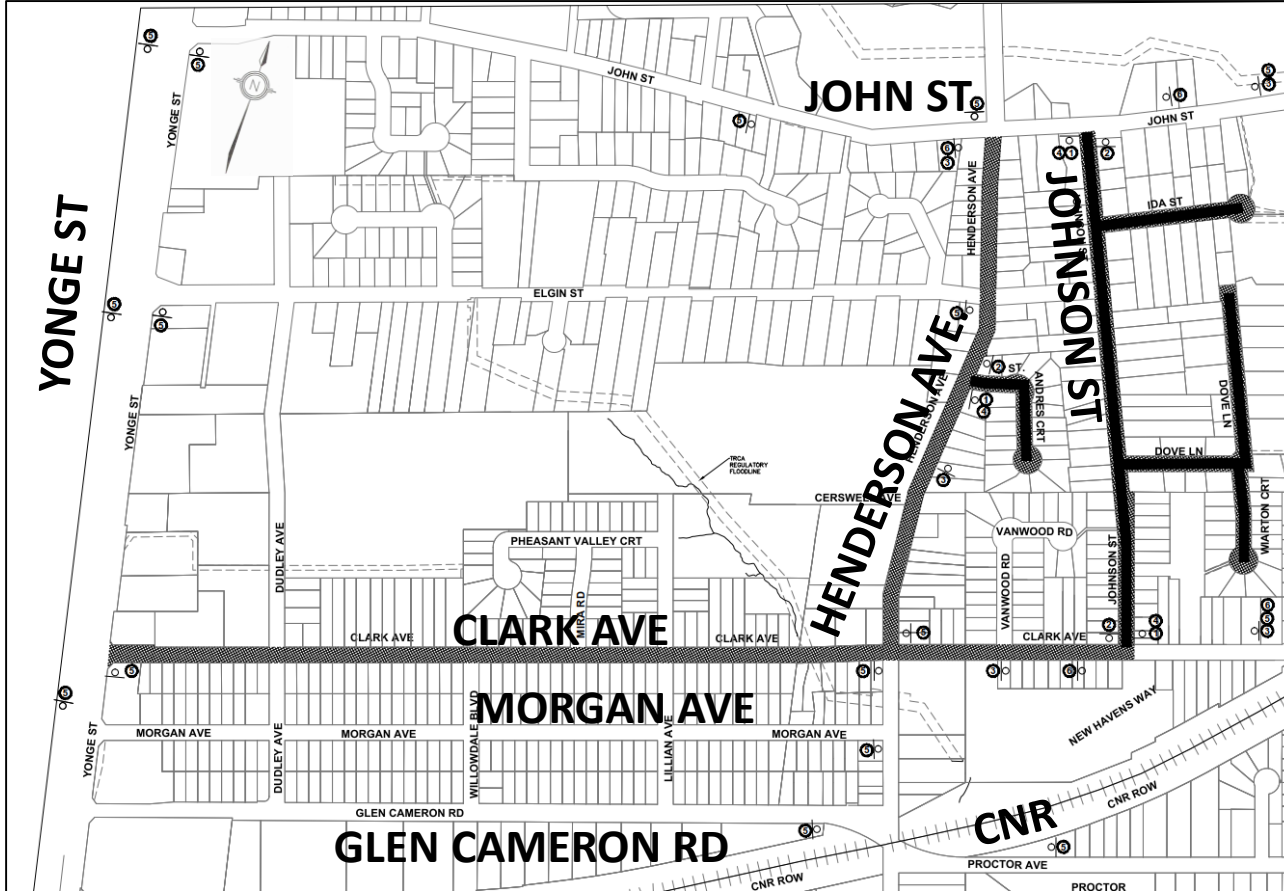
- Roads will remain open to local traffic.
 - Residents will be able to access their driveways at all times although there may be delays during working hours.
 - Access for emergency vehicles will be maintained.
 - Provisions will be made for collection of solid waste and recycling materials





West Thornhill Phase 3B

CONSTRUCTION ZONE ADVISORY SIGNING



- SIGN - Rb-90A CONSTRUCTION ZONE BEGINS
- SIGN - Rb-90B CONSTRUCTION ZONE ENDS
- SIGN - TC-1 CONSTRUCTION AHEAD
- SIGN - TC-7tB ROAD CLOSED NO EXIT
LOCAL TRAFFIC ONLY
- SIGN - TC-65 INFRASTRUCTURE IMPROVEMENTS
JOHNSON STREET, DOVE LANE,
WIARTON COURT, IDA STREET,
AND ST. ANDRES COURT
LOCAL TRAFFIC ONLY
- SIGN - TC-2B CONSTRUCTION WORKER CROSSING

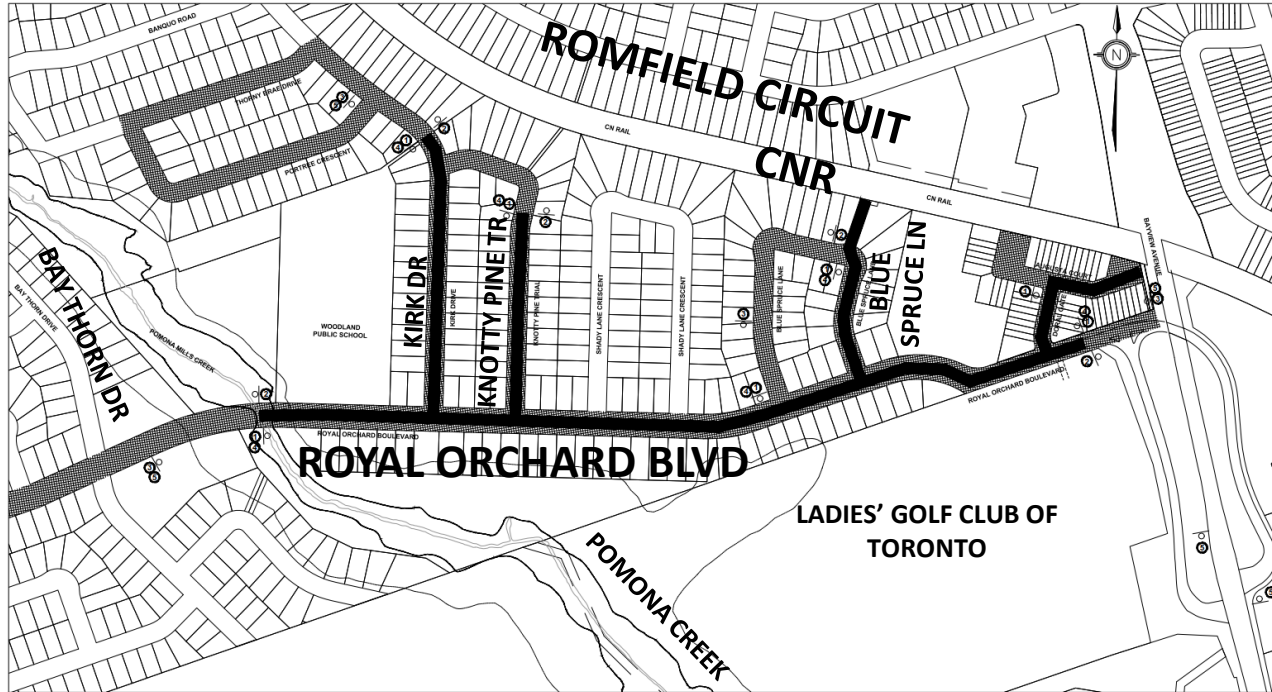
LEGEND

- CONSTRUCTION AREA
- DESIGNATED ROUTE FOR CONSTRUCTION VEHICLES



West Thornhill Phase 4A

CONSTRUCTION ZONE ADVISORY SIGNING



- ① SIGN - Rb-90A CONSTRUCTION ZONE BEGINS
- ② SIGN - Rb-90B CONSTRUCTION ZONE ENDS
- ③ SIGN - TC-1 CONSTRUCTION AHEAD
- ④ SIGN - TC-71B ROAD CLOSED NO EXIT
LOCAL TRAFFIC ONLY
- ⑤ SIGN - TC-65 INFRASTRUCTURE IMPROVEMENTS
ROYAL ORCHARD BOULEVARD,
KIRK DRIVE, KNOTTY PINE TRAIL,
BLUE SPRUCE LANE, DORAL GATE,
AND AUGUSTA COURT
LOCAL TRAFFIC ONLY
- ⑥ SIGN - TC-2B CONSTRUCTION WORKER

LEGEND

- CONSTRUCTION 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.
- Street parking restrictions will be waived to allow temporary street parking if required (e.g., during construction of new concrete curbs).





Controlling Noise, Dust, Mud and Sediment

- To mitigate impacts of noise, dust, mud and sediment washoff, 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;
 - 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.
- School bus service will be maintained during construction but will be re-routed if required.





Pre-Construction Home Inspection

- As recommended in the Class EA 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
- Covid-19 H&S protocols will be followed





Temporary Water Shut-offs (Ph 3B only)

- 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.
- Affected residents will be given 48 hours notice.





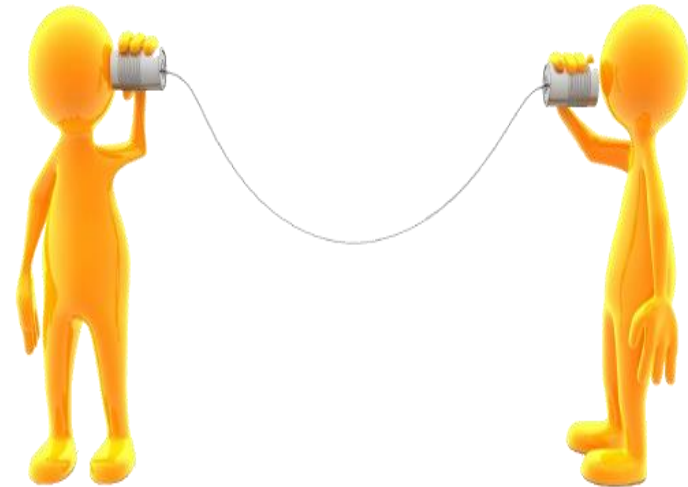
Protecting Trees / Tree Pruning

- Trees along the construction area will be protected from damage by construction equipment with fencing, according to City standards.
- As noted in the Class EA 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.



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
- 24-hour emergency service





Next Steps

- Anticipated construction start May 2021
- Anticipated completion:
 - Phase 3B – August 2022
 - Phase 4A - December 2022





Questions