# NORTHEAST VAUGHAN WATER AND WASTEWATER SERVICING PROJECT


**LEGEND**

- Water Service Boundary
- Wastewater Service Boundary
- Open House (Maple Community Centre)
- New Water Pumping Station
- New Elevated Water Storage Tank
- New Elevated Water Storage Tank and Pumping Station
- New Watermains
- New Sewer Network

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# Purpose

**Meeting Purpose:**

- To present the preliminary water and wastewater infrastructure recommendations for servicing northeast Vaughan:
  - Pressure District 8 Pumping Station Site
  - Pressure District 8 Water Storage #1 & Pressure District 9 Pumping Station Site
  - Pressure District 8 Water Storage #2 Site
  - Watermains
  - Trunk Sewer Route
- To receive feedback on information to be presented at the Upcoming Open House #2 (June 29, 2017)

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# Agenda

1. **Introductions and Project Update**
2. **Water and Wastewater Servicing Approach**
3. **Recommended Water and Wastewater Servicing Solutions**
   a. New proposed water infrastructure and its location
   b. New proposed sewer and its route
4. **Water Facilities, Watermain and Sewer Construction**
5. **Site and Route Selection Process**
6. **How the Environment Was Considered**
7. **Project Schedule and Next Steps**

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# 1. Introductions and Project Update

# 2. Project Objectives and Status

## EA Phase 1: Develop Problem Opportunity Statement

- *To develop a water and wastewater solution for anticipated growth in northeast Vaughan to the year 2051 reflecting York Region's Sustainability Strategy and in accordance with applicable environmental statutes.*

**City of Vaughan**

| 2015 | 2031 | 2041 |
|---|---|---|
| Residential: 320,800 | Residential: 420,000 | Residential: 497,400 |
| Employment : 214,000 | Employment : 270,000 | Employment : 321,500 |

*Source: York Region Water and Wastewater Master Plan, 2016; Growth Plan for the Greater Golden Horseshoe, 2013*

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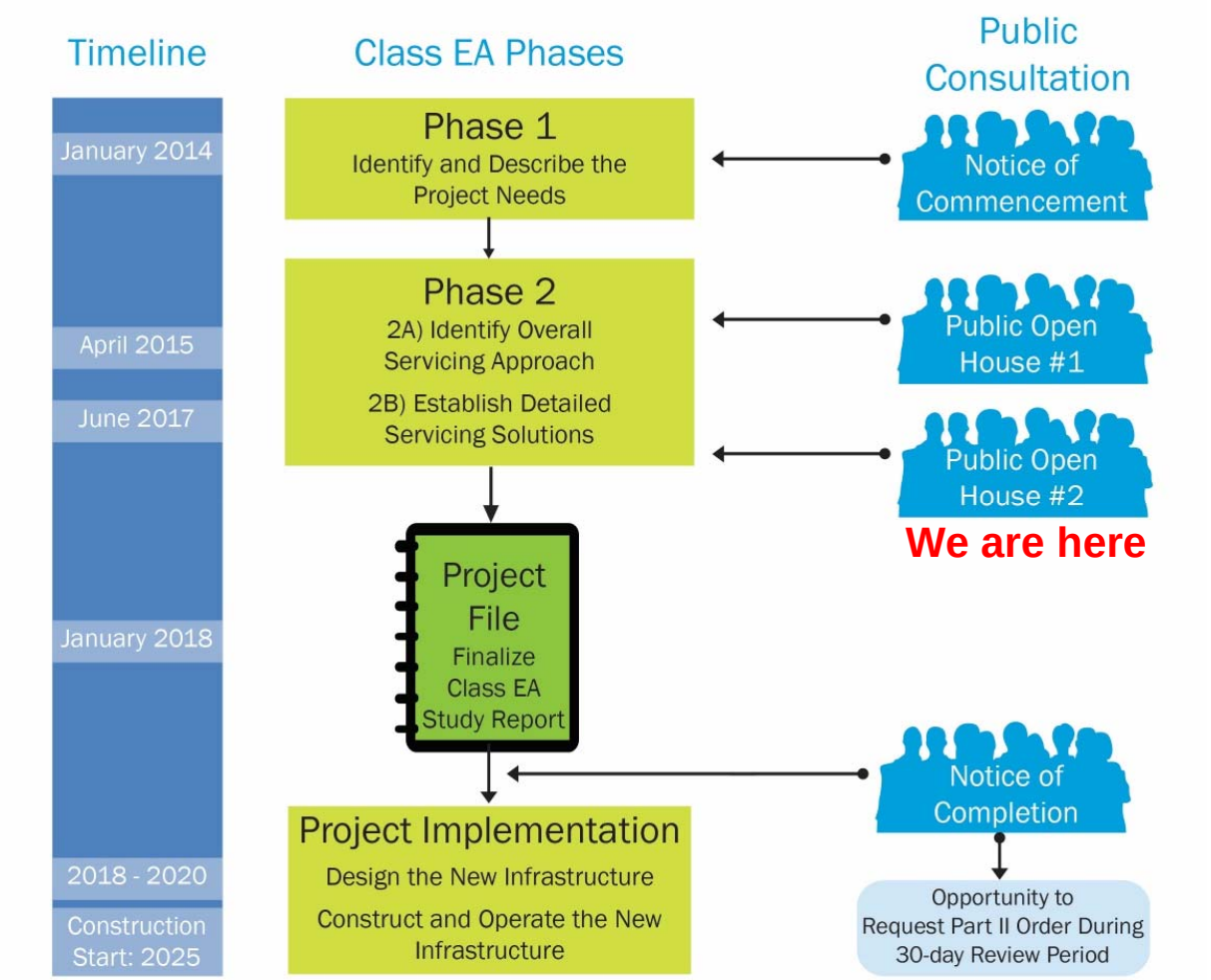
# 2. Project Objectives and Status (cont'd)

**Municipal Class Environmental Assessment Process (Schedule B)**



# 2. Overview of Servicing Approach

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**Optimize**

**Upgrade**

- Adjust Water Levels in Existing Storage Tanks
- Share Water from Other Pressure Zones

- Upgrade Maple Pumping Station
- Repair Existing Sewer Leaks

**Construct New Water and Wastewater Infrastructure**

New elevated water tanks, pumping stations, watermains and wastewater pipes

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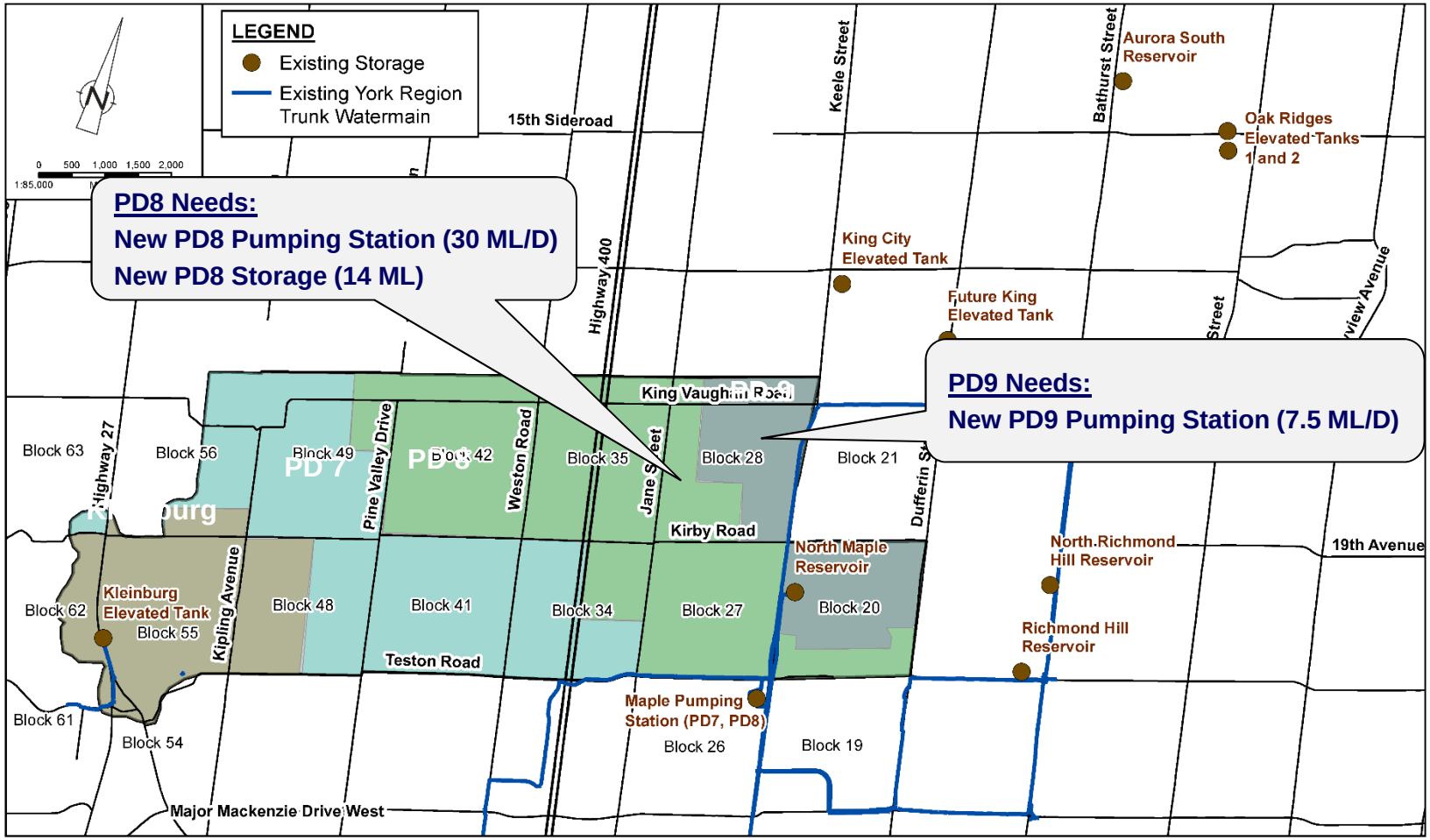
# 3. Recommended Water and Wastewater Servicing Solutions

## 3a. New Proposed Water Infrastructure and its Location

# Water Service Area and Infrastructure Needs




PD = Pressure District

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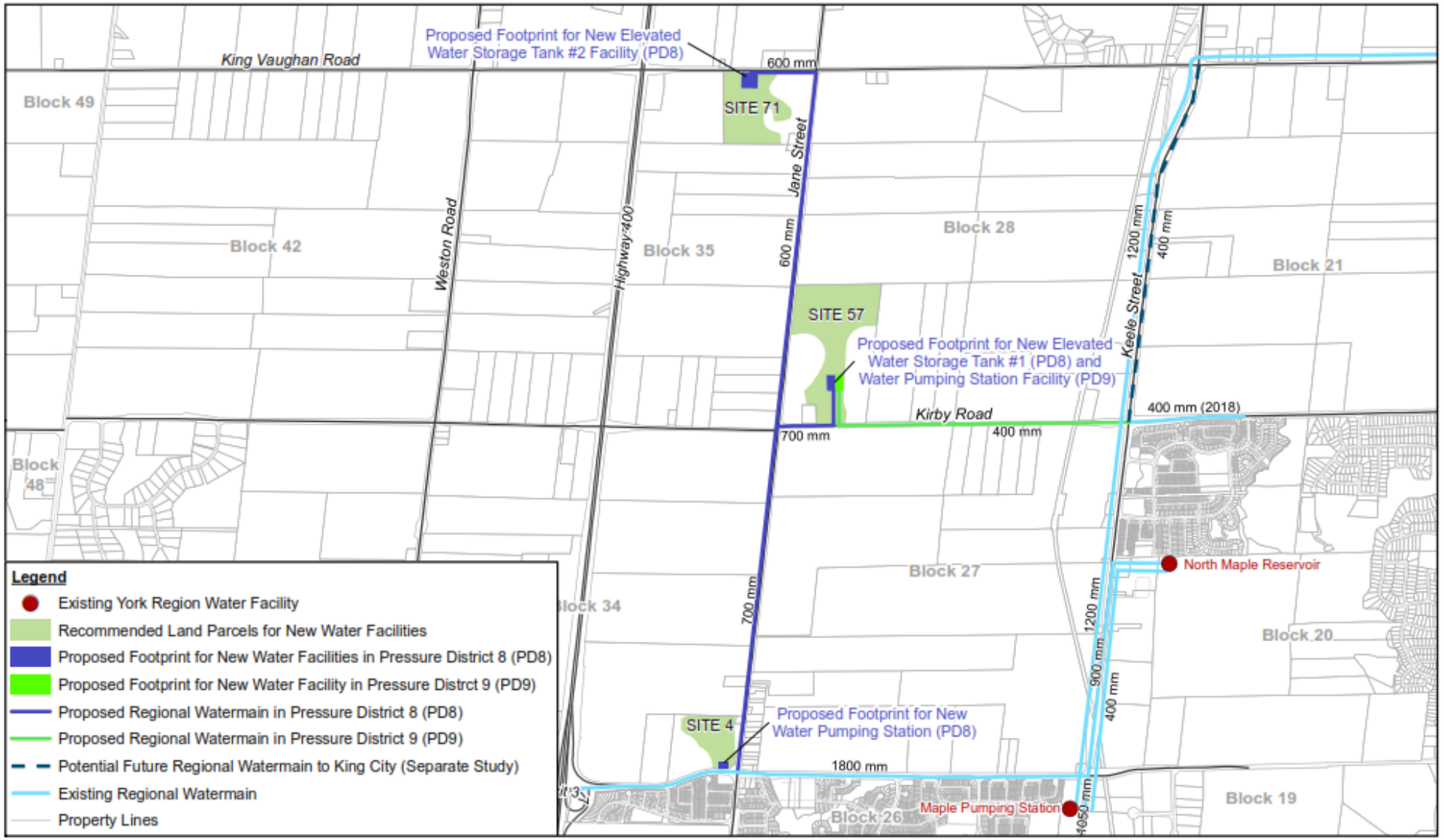
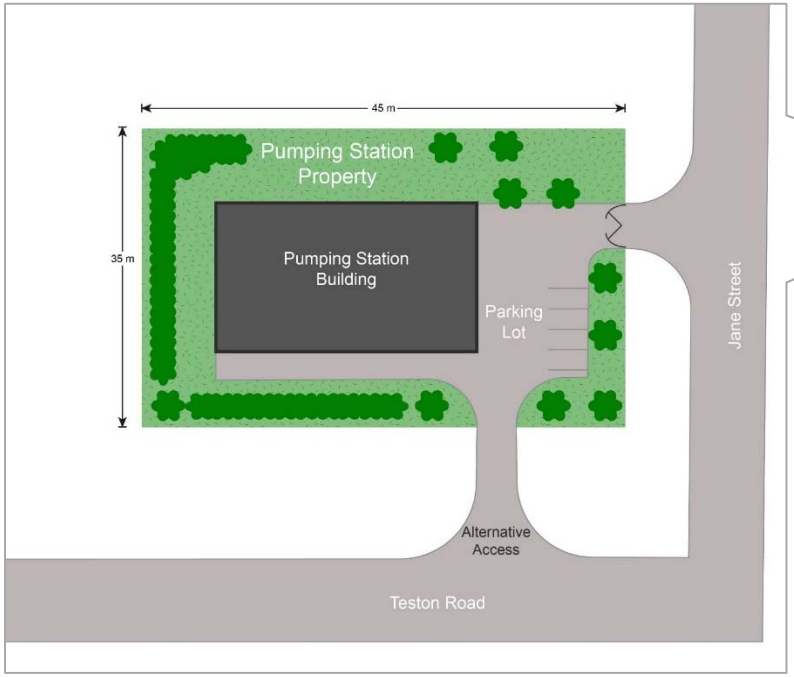
# New Proposed Water Infrastructure



# New Proposed Water Infrastructure
## (New Water Pumping Station #1)




Site Layout


Location


Digital Rendering (looking northwest)

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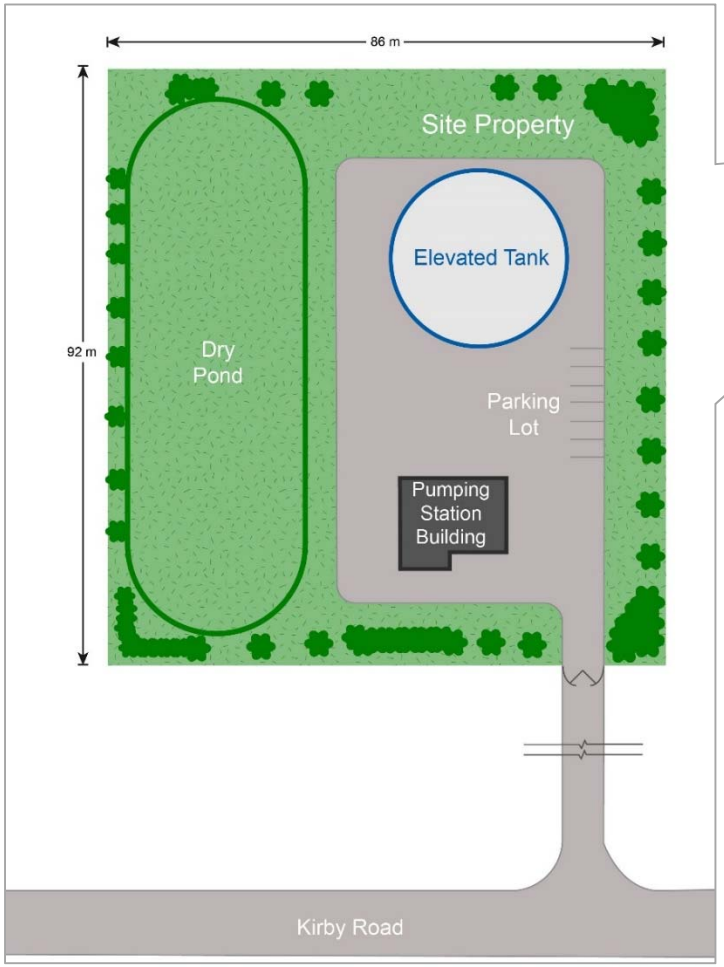
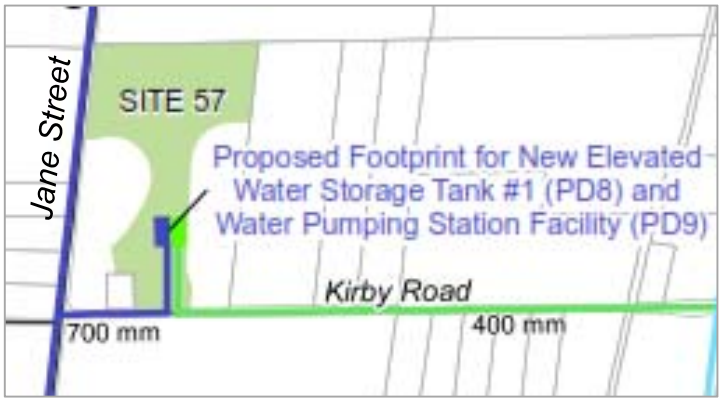
Construction to Begin as Early as 2025

# New Proposed Water Infrastructure

## (New Water Pumping Station #2 and Elevated Water Tank #1)




Site Layout




Location


Digital Rendering (looking north)

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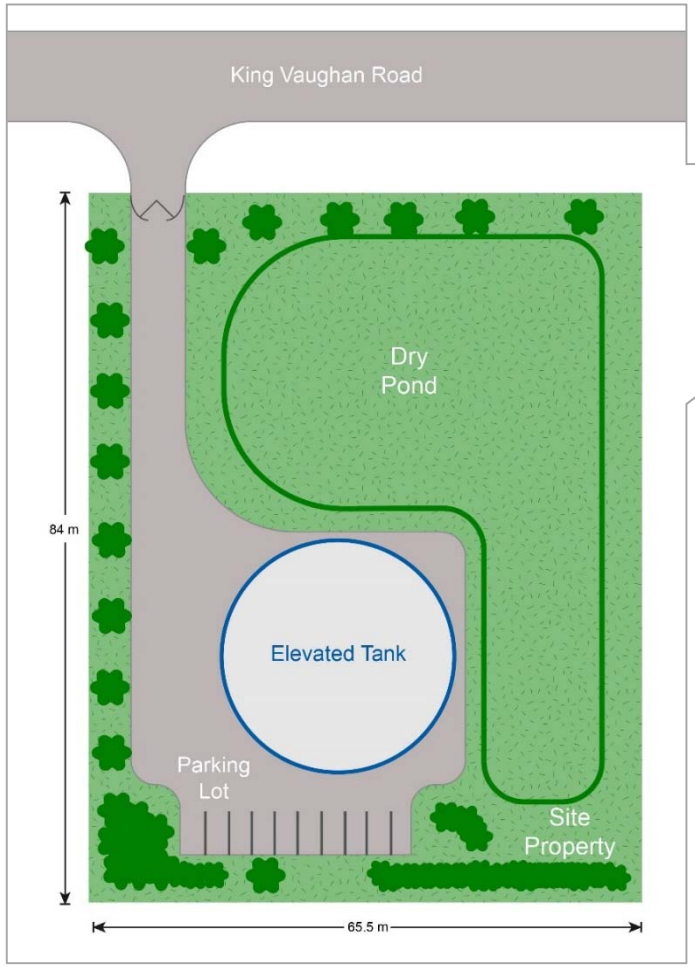
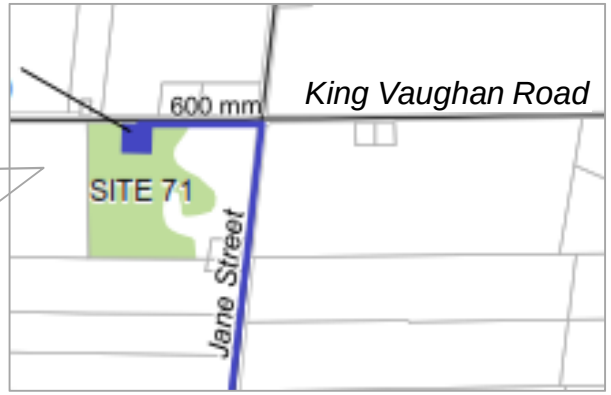
# New Proposed Water Infrastructure

## (New Elevated Water Tank #2)




Site Layout




Location


Digital Rendering (looking south)

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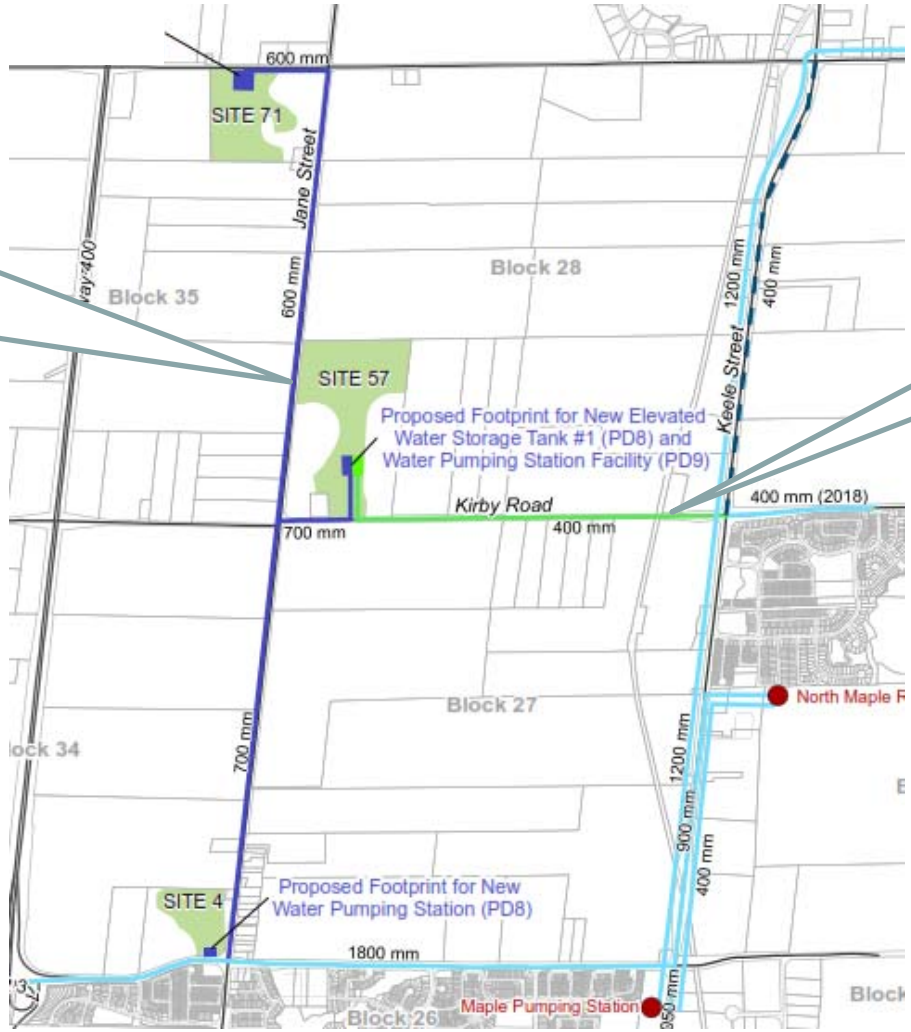
# New Proposed Water Infrastructure

New watermains on Jane Street and on Kirby Road from Pumping Station #1 to Elevated Water Storage Tanks #1 and #2

New watermain on Kirby Road from Pumping Station #2 to the existing watermain on Keele Street




**Example of Roadside Watermain Chamber Vent**

**Construction to Begin as Early as 2025**

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# New Proposed Water Infrastructure

## Virtual Tour (online)

***(must be viewed in Google Chrome or other browser that supports 360 playback)***

## Flyover Tour (online)


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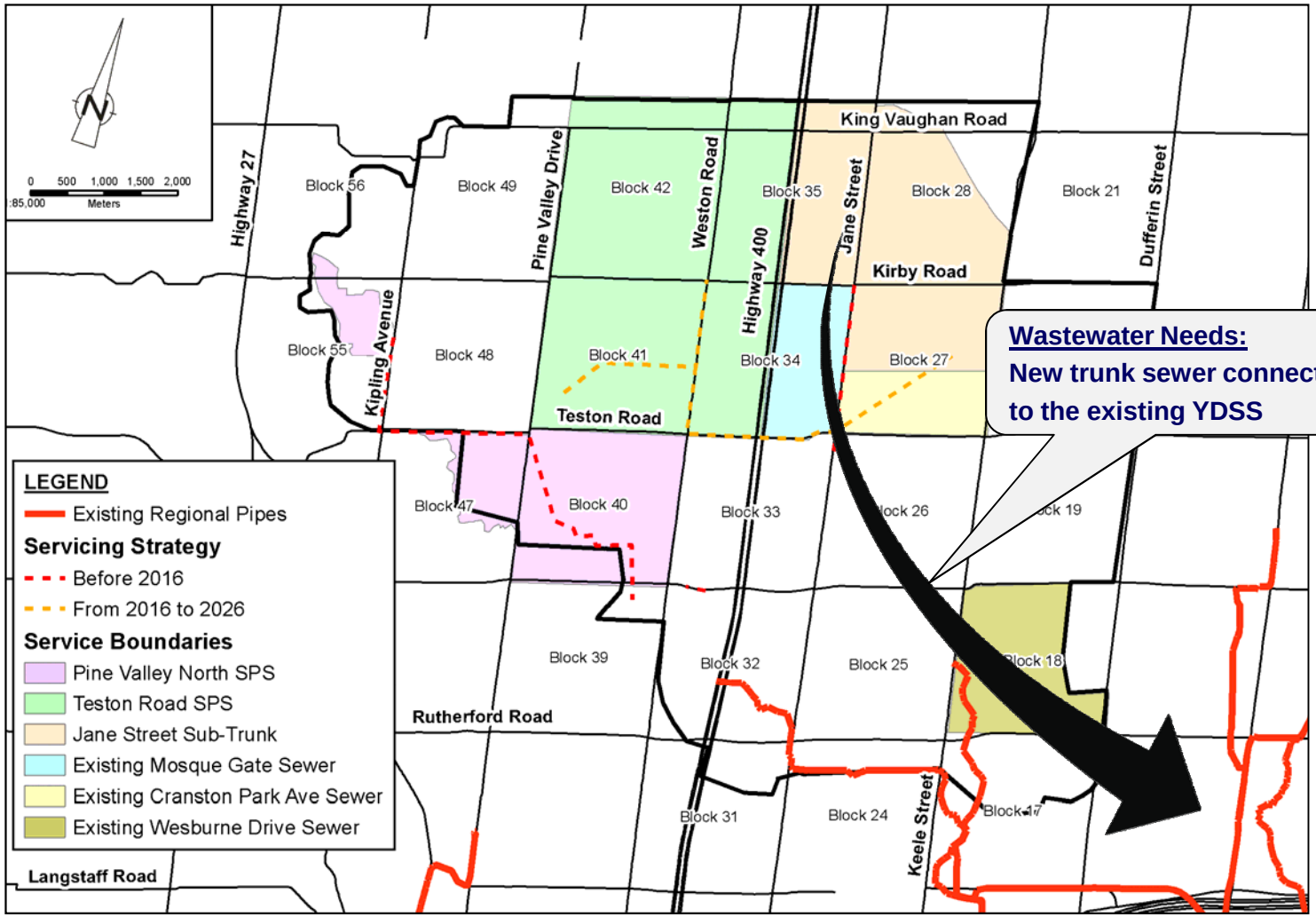
# 3. Recommended Water and Wastewater Servicing Solutions

## 3a. New Proposed Sewer and its Route

# Wastewater Service Area and Infrastructure Needs

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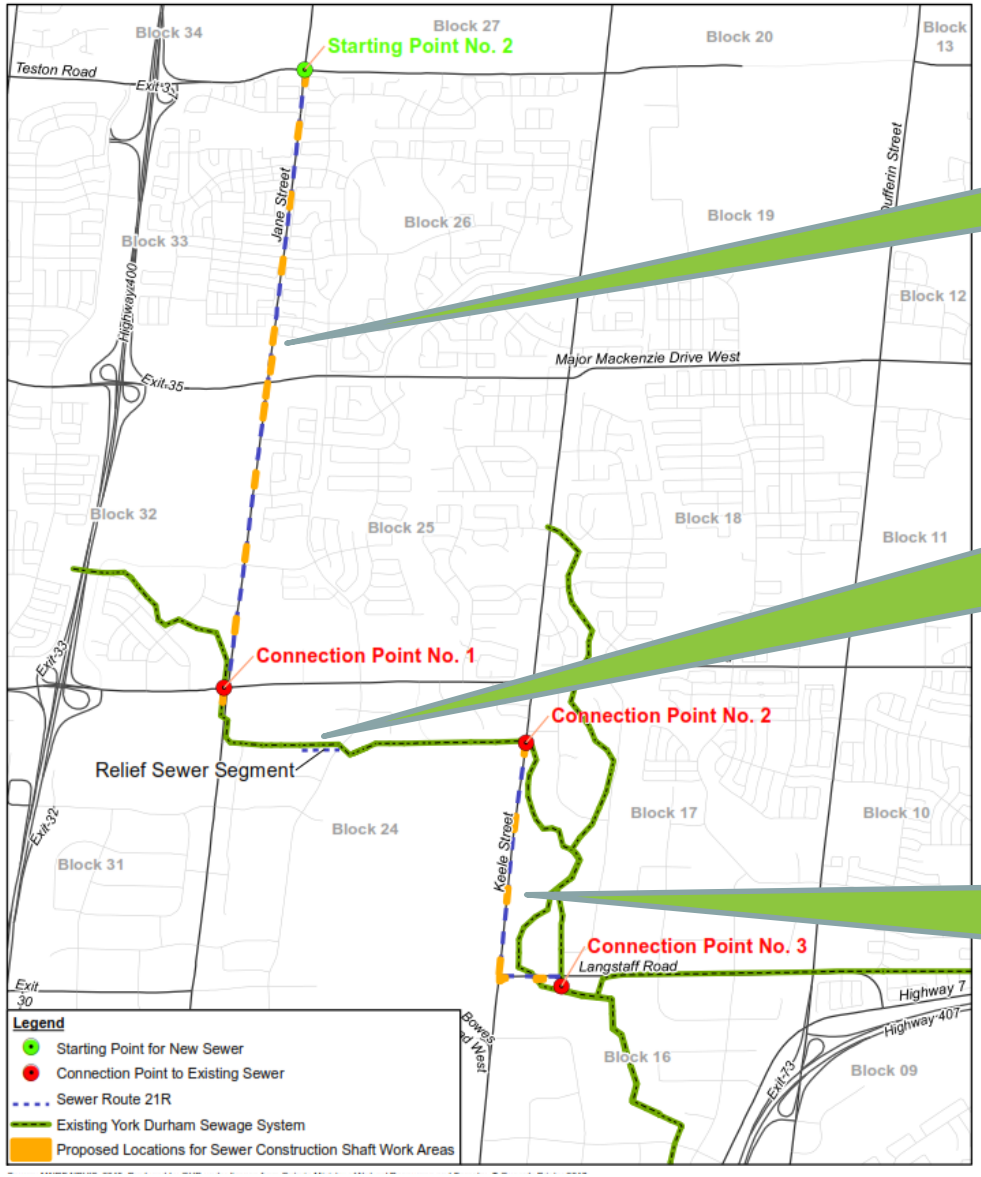
# Recommended Sewer Route (21R)




**New Sewer Segment #1 (along Jane Street )**

**New Sewer Segment #3 (along sewer easement south of Rutherford Road)**

**New Sewer Segment #2 (along Keele Street and Langstaff Road)**

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# What Will the Water Facilities and Watermain Construction Look Like?

## Pumping Station Construction

## Elevated Tank Construction

## Watermain Construction

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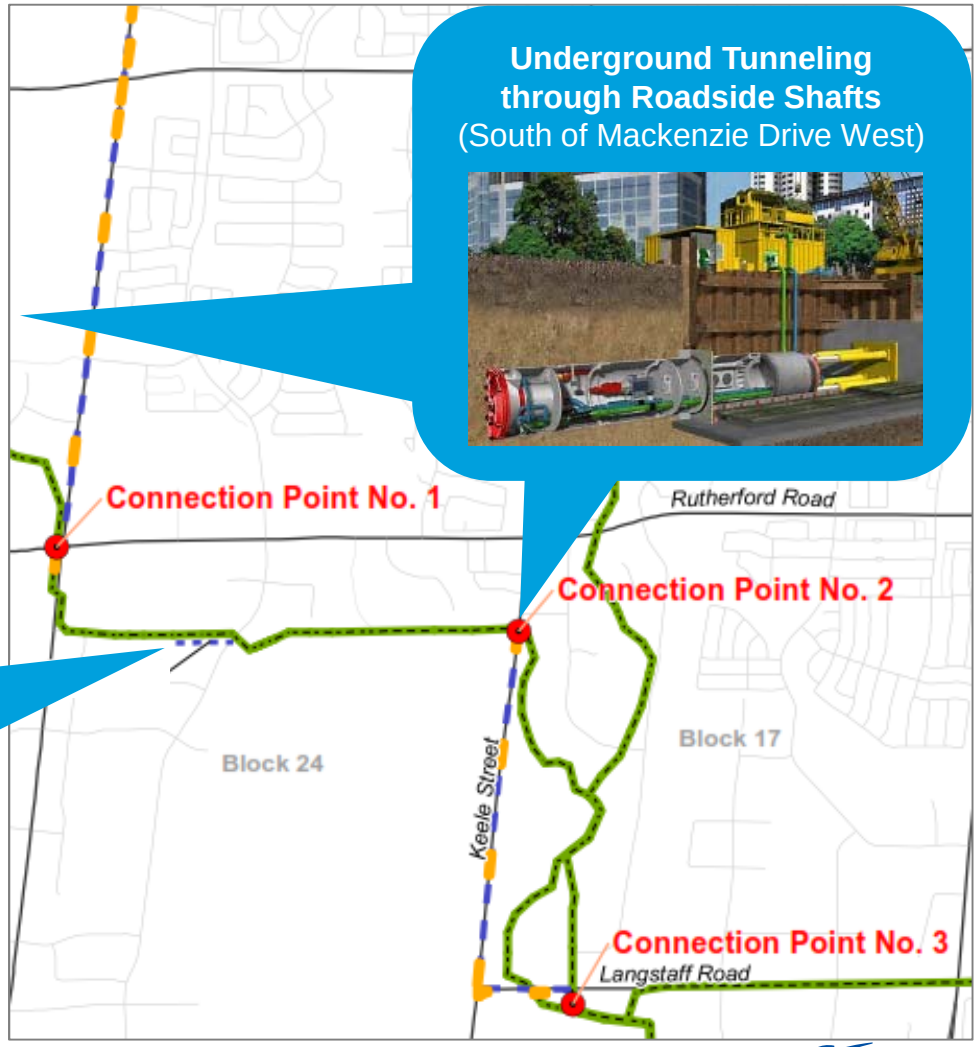
# What Will the Sewer Construction Look Like?


**Open Excavation in Road Allowance**
(Teston Road to Major Mackenzie Drive West and Relief Sewer Segment)




**Underground Tunneling through Roadside Shafts**
(South of Mackenzie Drive West)



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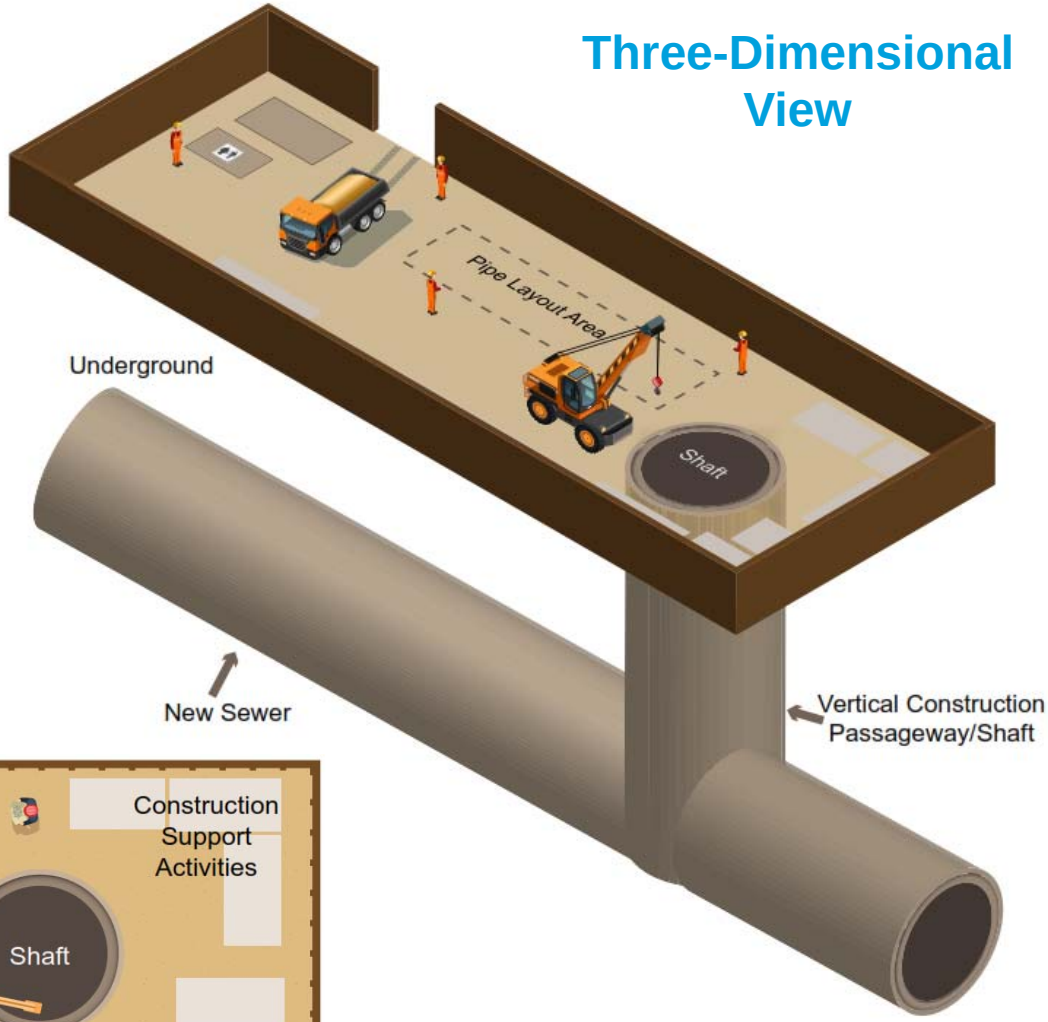
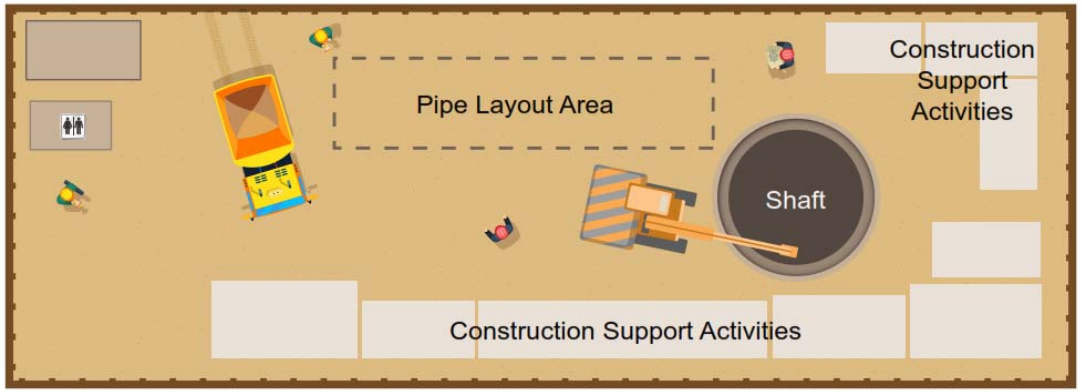
# What Will the Sewer Construction Look Like?

## Example of a Typical Sewer Construction Shaft Work Area

### Three-Dimensional View




### Overhead View

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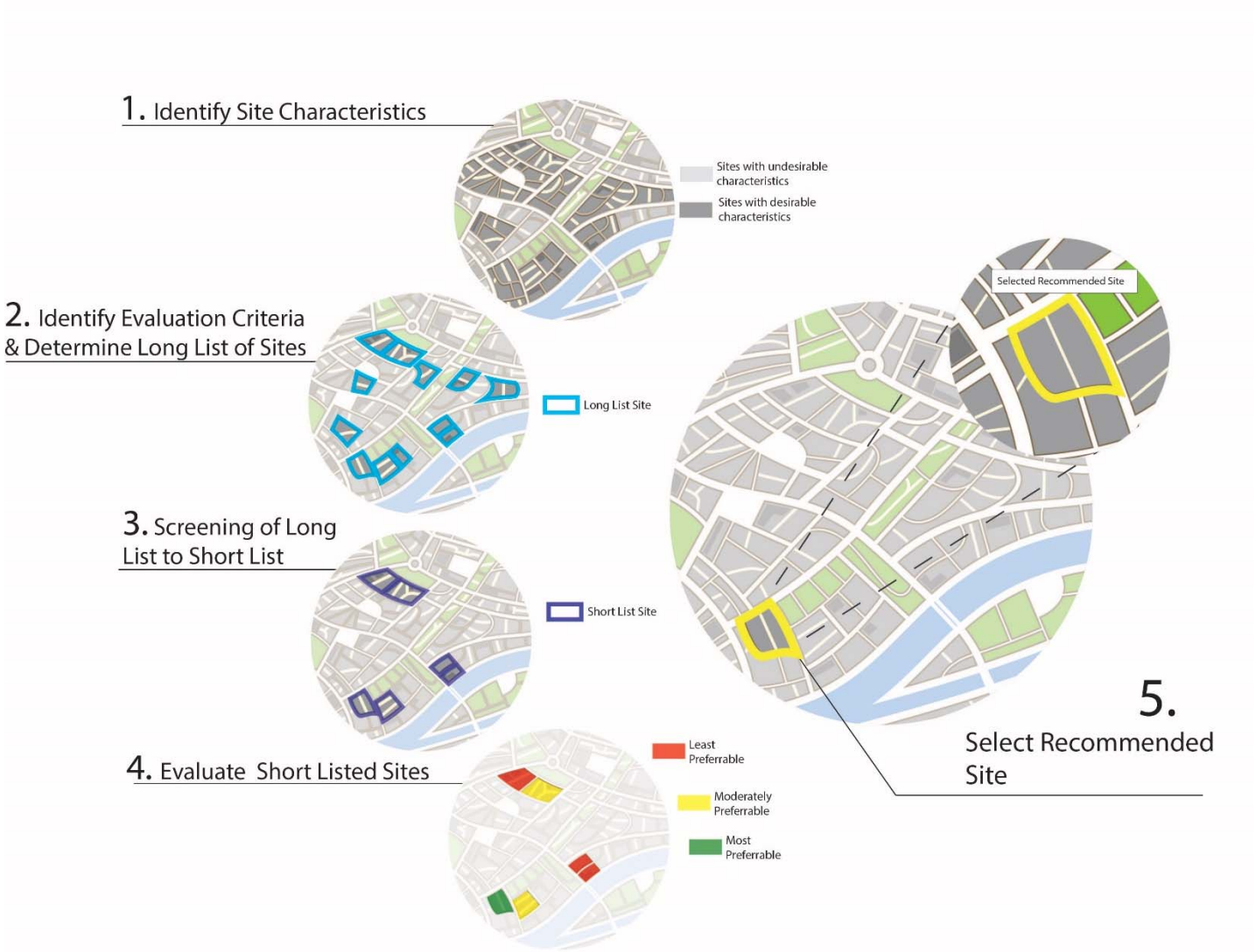
# 5. Site and Route Selection Process

# Site and Route Selection Process



# Site and Route Selection Criteria

Several criteria, covering a broad definition of the “environment” were considered as part of the site selection process:

**Technical and Financial**

- Constructability
- Cost of site and watermains /cost of sewers

**Natural Environment**

- Environmental Sensitive Areas (i.e. wetlands and forests)
- Watercourse crossings along watermain routes/sewer routes

**Cultural Environment**

- Archaeological Potential
- Built Heritage Resources

**Built, Social & Economic Environments**

- Proximity to existing residences and businesses
- Number of residences/businesses along watermain routes/sewer routes
- Temporary disruption to driveways and roads
- Visual impression of new infrastructure
- Planned future development
- Existing farm operations

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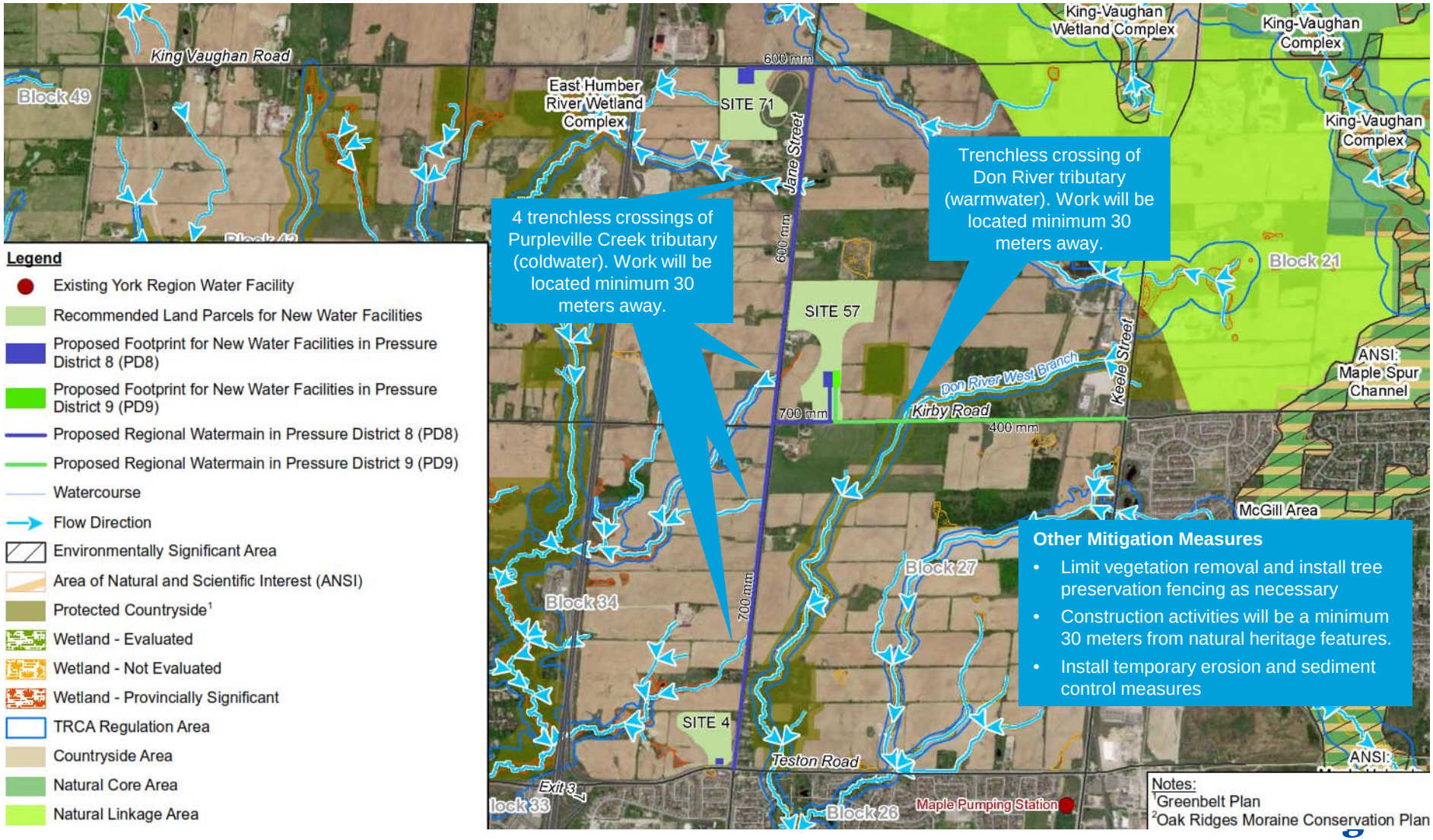
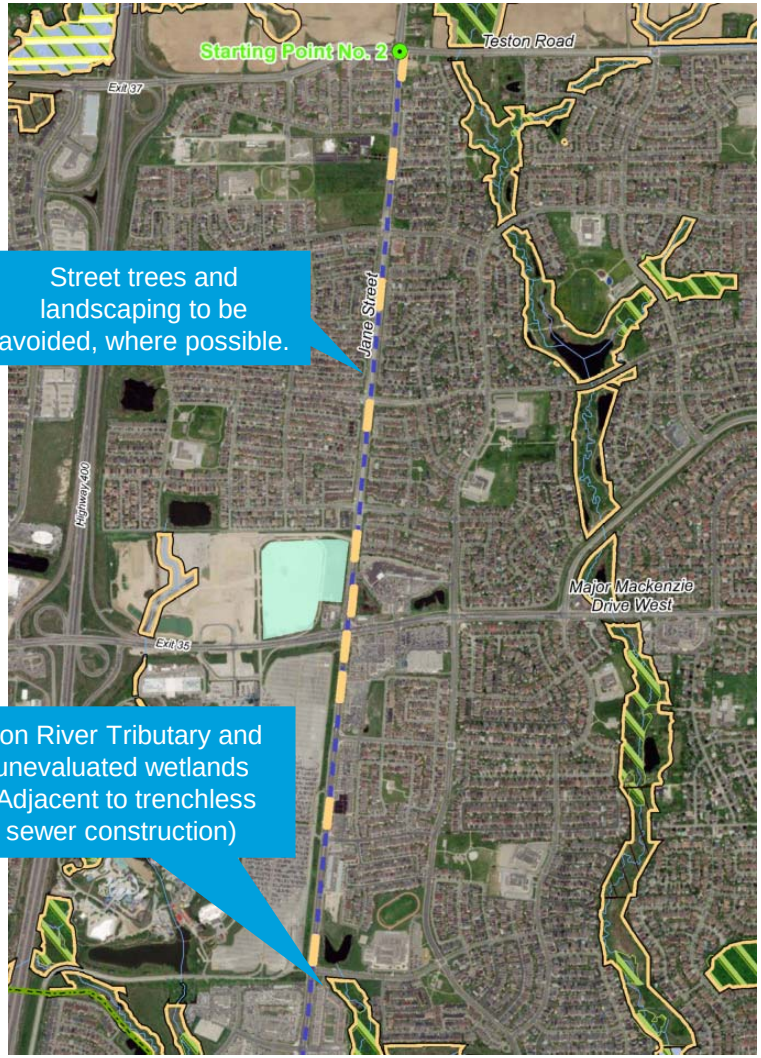
# 6. How the Environment Was Considered

# Natural Environment (Water)



# Natural Environment (Wastewater)

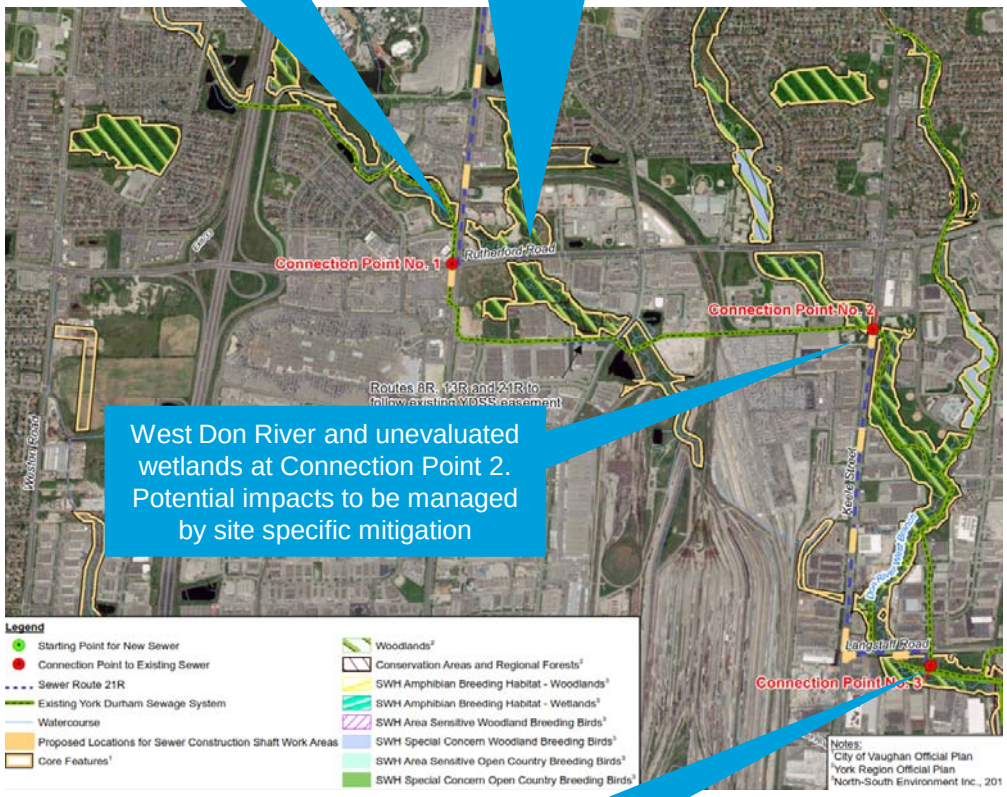



Street trees and landscaping to be avoided, where possible.

Don River Tributary and unevaluated wetlands (Adjacent to trenchless sewer construction)

Don River Tributary and (Above trenchless sewer construction)

Don River Tributary and unevaluated wetlands (Adjacent to sewer construction)




West Don River and unevaluated wetlands at Connection Point 2. Potential impacts to be managed by site specific mitigation

West Don River and unevaluated wetlands at Connection Point 3. Potential impacts to be managed by site specific mitigation

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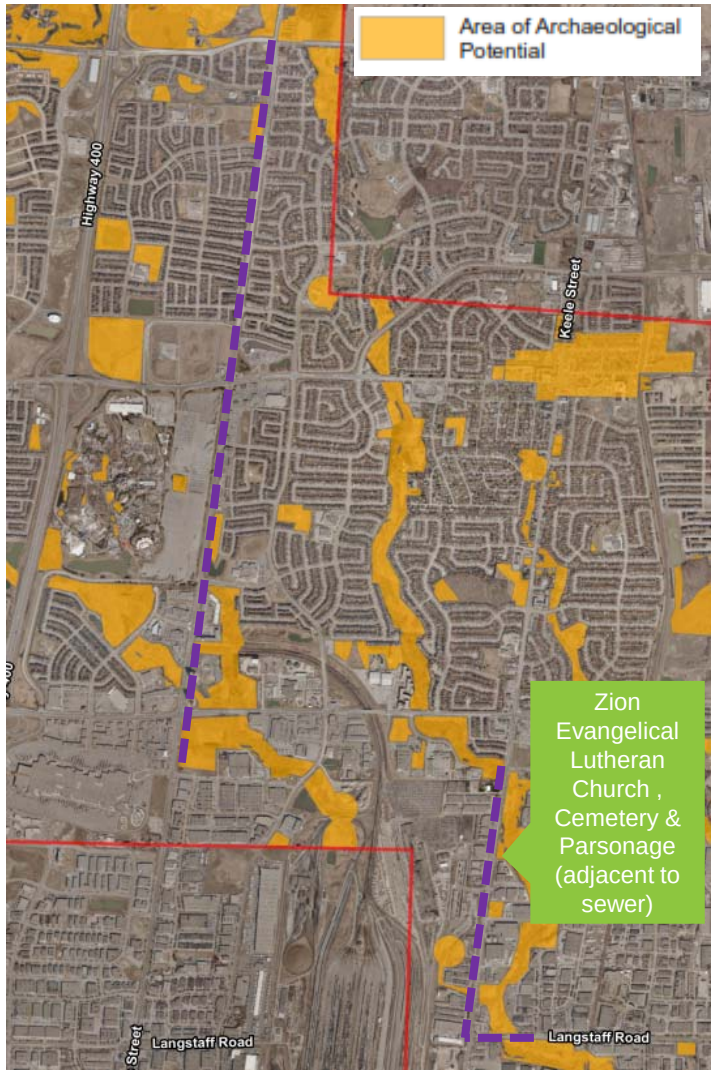
# Archaeology and Cultural Heritage (Water)

# Archaeology and Cultural Heritage (Wastewater)




## Connection Point No. 3


Photo Plate

Cemetery - Requires Stg 2 and 3 Investigation

Cemetery

Disturbed: No Stage 2 Survey Required

Test Pit Survey Required

Stage 3 Investigation required for any work within 10 m of the St. Stephens/Langstaff Cemetery

Location of Connection Point No. 3 to be confirmed during Preliminary Design

Further Stage 1 Archaeological Assessment to be conducted this summer to confirm potential construction shaft work areas do not have archaeological potential

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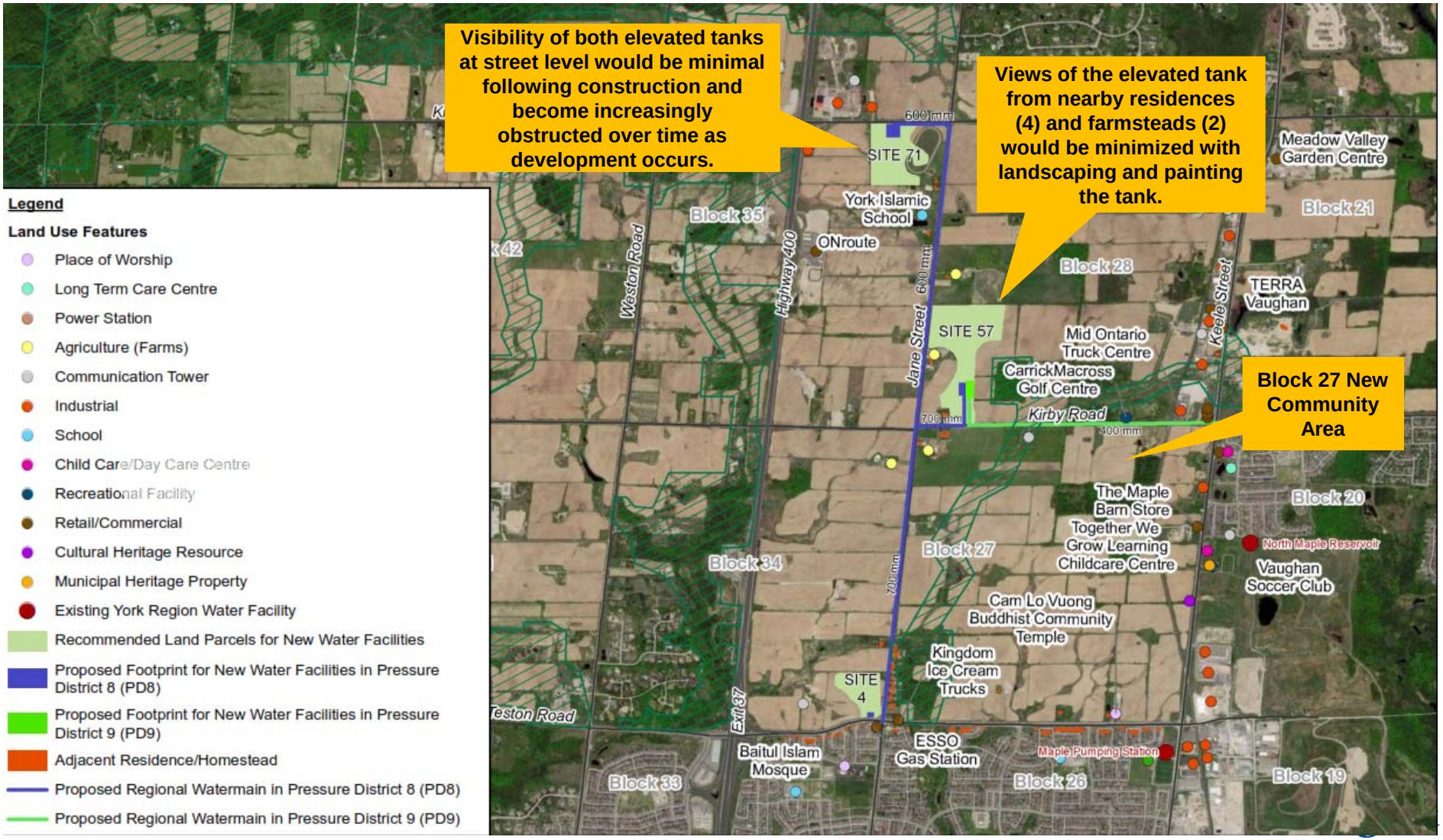
# Existing and Future Land Uses (Water)



# Existing and Future Land Uses (Wastewater)

# Construction Impacts Mitigation

Watermain and sewer construction will include:

- Workspaces that are limited to road right-of-ways as much as possible
- Some need for easements, to be negotiated
- Lane closures with traffic management plans
- Best management practices for noise, vibration and dust
- On and off-hours contact information for public inquiries

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# 7. Project Schedule and Next Steps

# Project Stages and Schedule

**Summer 2017**

- Confirmatory Field Work, Feasibility Study & Engineering Pre-Design

**Fall 2017**

- Project File Preparation (Finalize the Class EA Report)

**Winter 2018**

- Notice of Study Completion & 30-Day Review Period

**Construction to begin as early as 2025**

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# Thank You!