

Lakelands Wastewater Pumping Station New Offline Storage Facility

Municipal Class Environmental Assessment - Schedule B

Online Public Information Centre

October 14, 2024 to October 28, 2024



Land Acknowledgement

We would like to acknowledge that the land on which we gather, and on which Peel operates, is part of the Treaty Lands and Territory of the Mississaugas of the Credit. For thousands of years, Indigenous peoples inhabited and cared for this land, and continue to do so today.

In particular, we acknowledge the territory of the Anishinabek, Huron-Wendat, Haudenosaunee and Ojibway/Chippewa peoples; the land that is home of the Metis; and most recently, the territory of the Mississaugas of the Credit First Nation who are direct descendants of the Mississaugas of the Credit.

We are grateful to have the opportunity to work on this land, and by doing so, give our respect to its first inhabitants.



Project Purpose

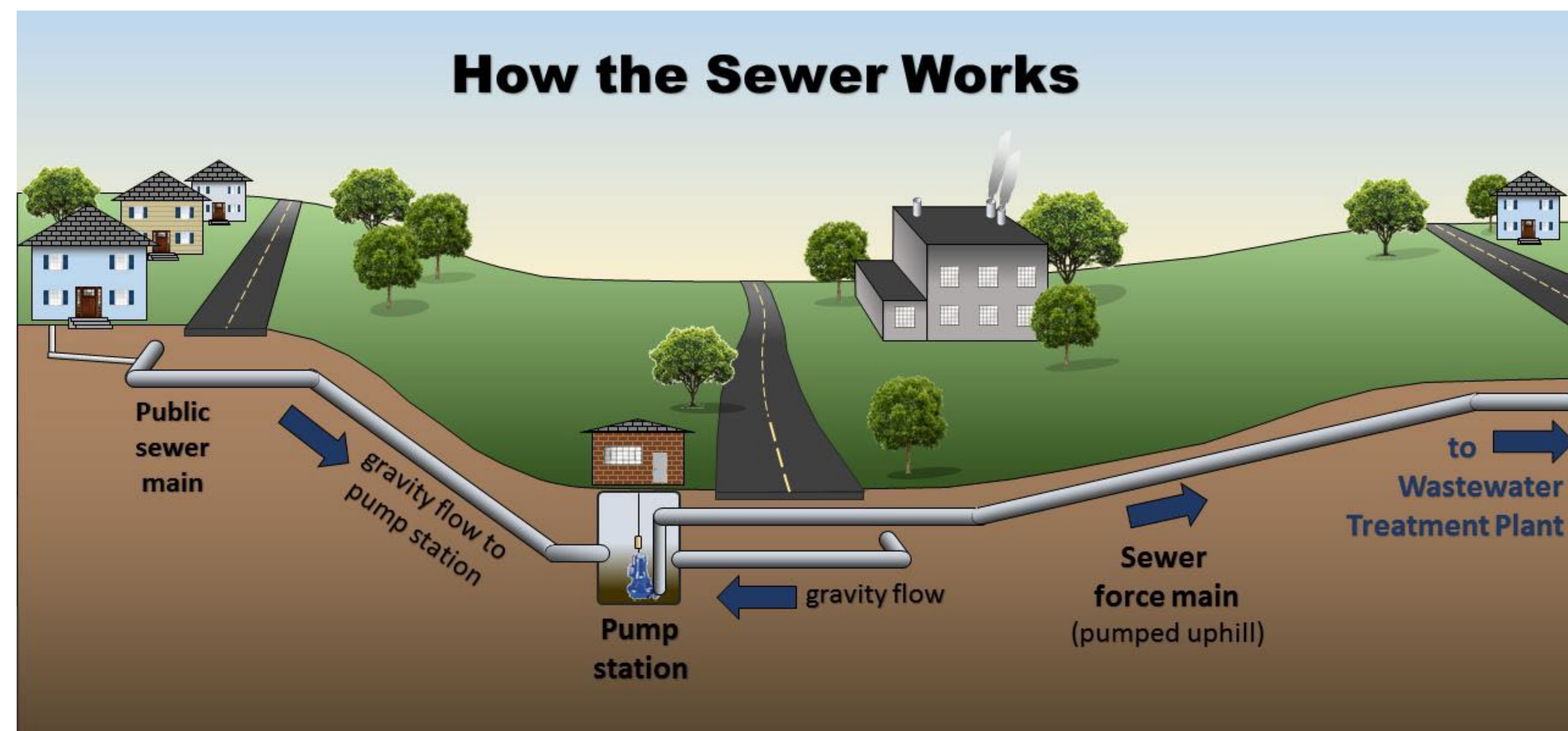
- The Lakelands Wastewater Pumping Station (WWPS) is located at 26 Stoneylake Avenue, in the City of Brampton, within the Lakelands Village residential development.
- The Lakelands WWPS will undergo upgrades to meet current Peel design standards, increase its firm peak flow capacity and include the addition of 2-hour emergency storage.
- Previous assessments completed considered various inline and offline emergency storage options, with the ultimate recommendation of proceeding with a 2-hour offsite emergency storage tank.
- The new offsite emergency storage tank will require property acquisition by Peel and hence has triggered the need to complete the Schedule B Municipal Class Environmental Assessment (MCEA) Study to review potential offsite locations within the vicinity of the WWPS.
- The Study Area encompasses the drainage area of the Lakelands WWPS which is comprised of the Lakelands Village residential development (see map inset).



Overview

What is a Wastewater Pumping Station (WWPS)?

Sewers use gravity to move wastewater from high to low points in the sanitary system. WWPS are installed at low points to convey wastewater from lower to higher points so that wastewater will flow to the wastewater treatment plant.



Why Is Emergency Storage Important?

Providing a WWPS with emergency storage reduces risk of wastewater surcharging within the sanitary system in the event of a shutdown or emergency at the WWPS. In a residential setting, emergency storage can help reduce the risk of basement flooding in the event of an emergency.

Purpose of Public Consultation

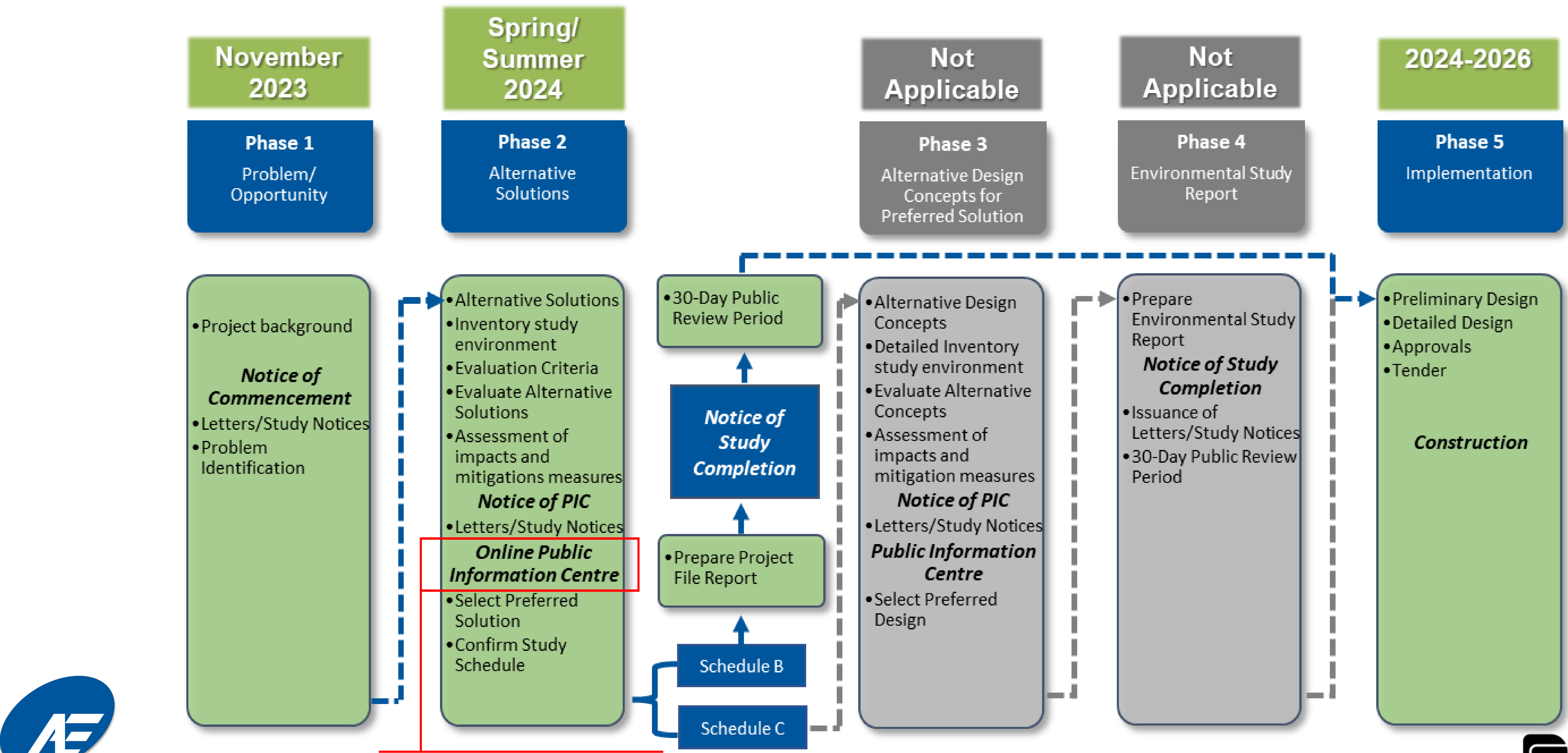
The purpose of this public consultation is to provide information on:

- Project purpose and background;
- MCEA Study process;
- Description of alternative solutions;
- Evaluation criteria and process;
- Recommended preferred solution; and
- Next steps in the Study process.

Timeline and Process

The Municipal Class Environmental Assessment (MCEA) Planning and Design Process is used by municipalities to ensure that the requirements of the *Environmental Assessment Act* are met when undertaking capital works projects.

The **Lakelands Wastewater Pumping Station New Offline Storage Facility MCEA** is being carried out as a Schedule B undertaking (Phases 1, 2 and 5) as presented in the flow chart below.



We are here in the MCEA process



Project Background

Previously, several reviews and investigations were completed to determine the optimal emergency storage solution for the Lakelands WWPS. Storage options assessed included: on-site storage tank, in-line storage tunnel and offline storage tank.

On-Site Storage Tank:

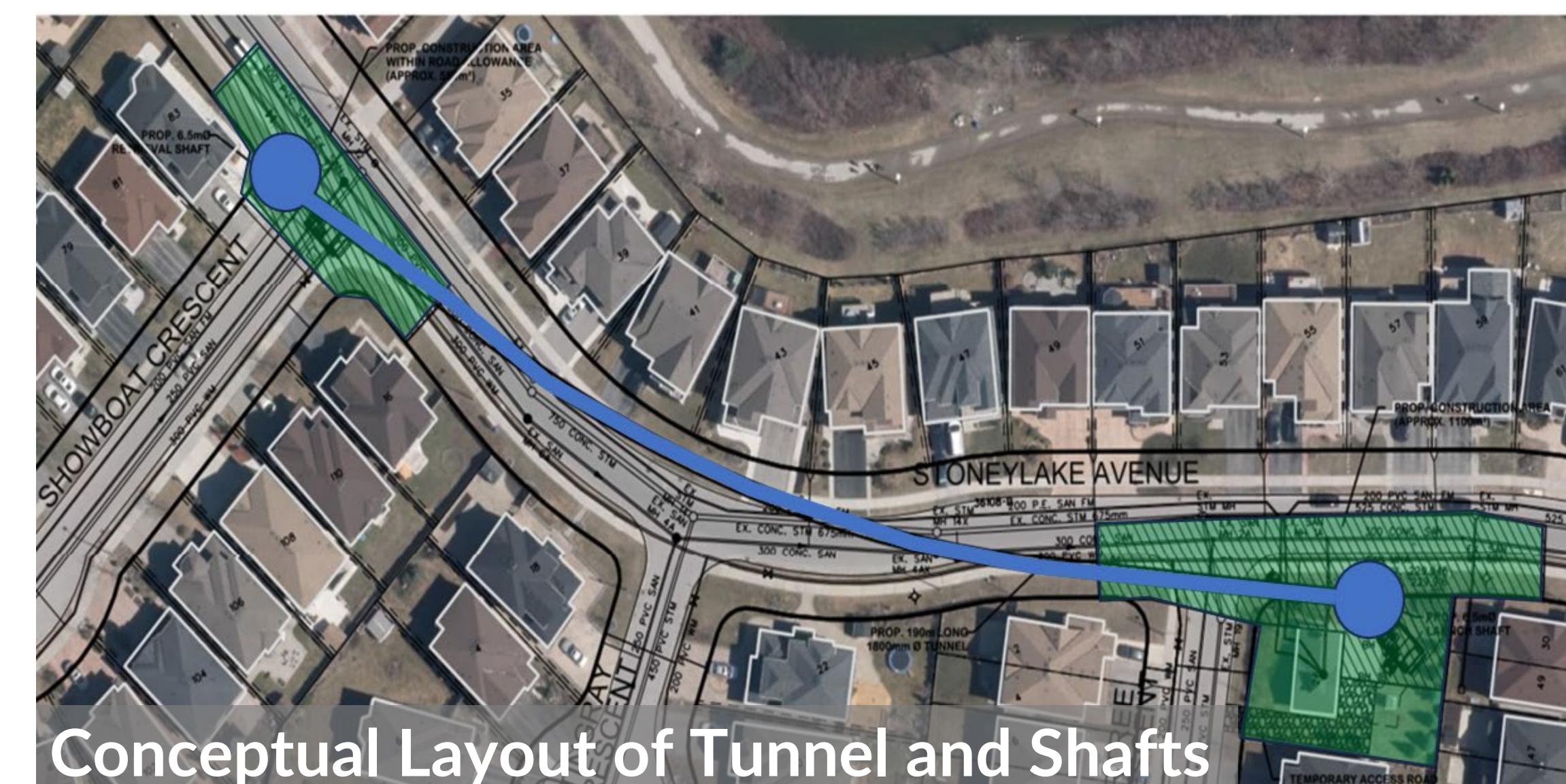
- On-site emergency storage at the Lakelands WWPS would consist of below grade concrete tank (20m long, 5m wide, 15.5m deep) constructed on the southeast side of the building.
- Constructability would be difficult due to limited area available on site, inadequate set back areas between heavy civil construction machinery and residential homes and need to relocate existing hydro transformer and main power supply for WWPS.



WWPS Site Constraints

In-Line Storage Tunnel:

- In-line emergency storage tunnel would consist of an overflow from the existing sanitary sewer to a constructed deep tunnel (190m long, 1.8m diameter).
- Tunnel would be constructed via trenchless technologies with launch and retrieval shafts (6.5m diameter) required.
- Constructability concerns include challenging ground conditions and high-water table, traffic impacts at the launch and retrieval shaft locations and large volume of excavated material.

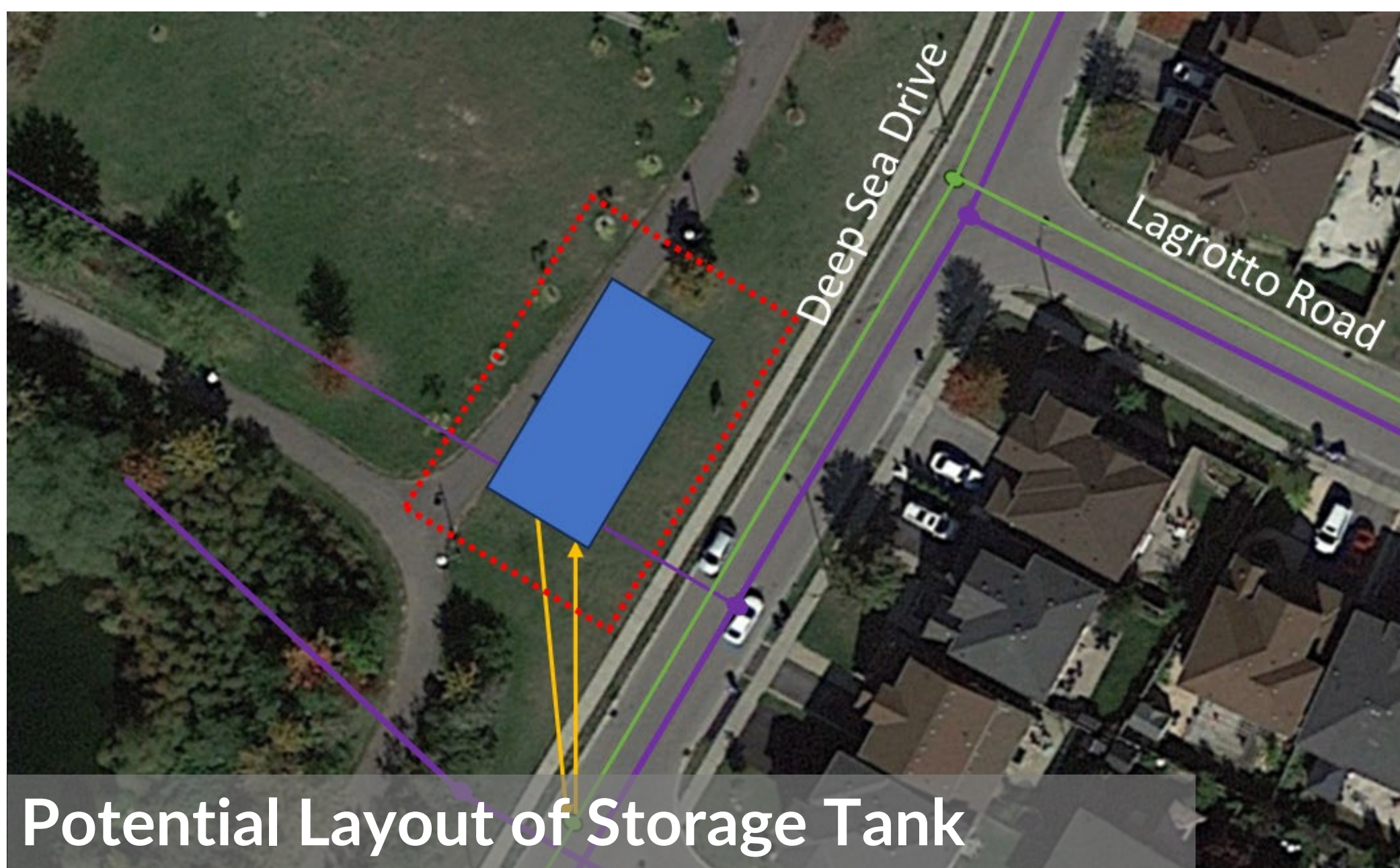


Conceptual Layout of Tunnel and Shafts

Project Background

Offline Storage Tank:

- Offline emergency storage tank would consist of below grade concrete tank structure (500m³) constructed offsite from the WWPS.
- This option would require land acquisition for both temporary and permanent easements and permanent acquisitions to facilitate construction activities and regular facility maintenance.
- Lakelands Village Park was identified as the preferred location for the offline storage tank as it offers adequate space for construction of the facility and provides separation from existing homes.



Recommendation:

- Considering constructability concerns with on-site storage tank option, lower construction cost and minimal impacts to the public due to temporary road closures and proximity to homes, the offline storage tank option was recommended.

Problem Statement

Based on background information and the purpose of the Study, a Problem Statement was prepared to govern the Study and guide the development and evaluation of the alternatives proposed.

The Lakelands Wastewater Pumping Station (WWPS), located in the City of Brampton, services the Lakelands Village residential development. The WWPS was constructed in 2004 and has a current firm capacity of 64.0 L/s, with an expected buildout capacity of 72.0 L/s. The existing WWPS requires upgrades to meet the current Peel design standards and increase its firm peak flow capacity to 72.0 L/s. The WWPS also requires the addition of 2-hour emergency storage.

Through previous assessments it was determined that the existing WWPS site does not have adequate space or capacity to provide the 2-hour emergency storage and a piped storage system was not feasible due to hydrogeological constraints. Hence, the 2-hour emergency storage will need to be in the form of an offsite emergency storage tank, which will require property acquisition by Peel. Therefore, Peel has initiated a Municipal Class Environmental Assessment (MCEA) to develop and evaluate potential off-site locations within the vicinity of the WWPS for the placement of the new offline storage facility. Alternative locations will be considered based on proximity to the WWPS site, impacts to the natural environment, impacts to residents during construction and operation (i.e.: noise and odour), characteristics of the subsurface soil and groundwater conditions, and accessibility for maintenance and operation by Peel Operations staff.



Existing Conditions

Several background studies have been completed to help characterize the Study Area and evaluate the proposed Study alternatives, including an Archaeological Assessment, Cultural Heritage Assessment and desktop Natural Environment Assessment.

Archaeological & Cultural Heritage:

- The Study Area does not retain archaeological potential on account of deep and extensive land disturbance.
- No further archaeological assessment is required.
- A review of federal, provincial and municipal registers, inventories and databases, as well as a field review, revealed there are no known built heritage resources or cultural heritage landscapes within the Study Area.

Natural Environment:

- No designated natural features (Provincially Significant Wetland or woodlands) within Study Area
- The Study Area is outside Toronto and Region Conservation Authority (TRCA) regulated area.
- Study Area is located within an urban setting and is largely comprised of anthropogenic lands.
- Large trees within the Study Area may present habitat opportunities for Species at Risk (SAR) bat species.



Alternative Solutions

Three (3) locations for the siting of the emergency storage facility have been identified and evaluated for this Study. The alternatives include:

1. **Do Nothing**
2. **Storage Tank Location 1:** Northern portion of Lakelands Village Park, southeast of the Southlake Boulevard and Stoneylake Avenue intersection
3. **Storage Tank Location 2:** Southeastern portion of Lakelands Village Park, north of the Stoneylake Avenue and Deep Sea Drive intersection
4. **Storage Tank Location 3:** Eastern portion of Lakelands Village Park, west of the Southlake Boulevard and Deep Sea Drive intersection



Alternative 1: Do Nothing

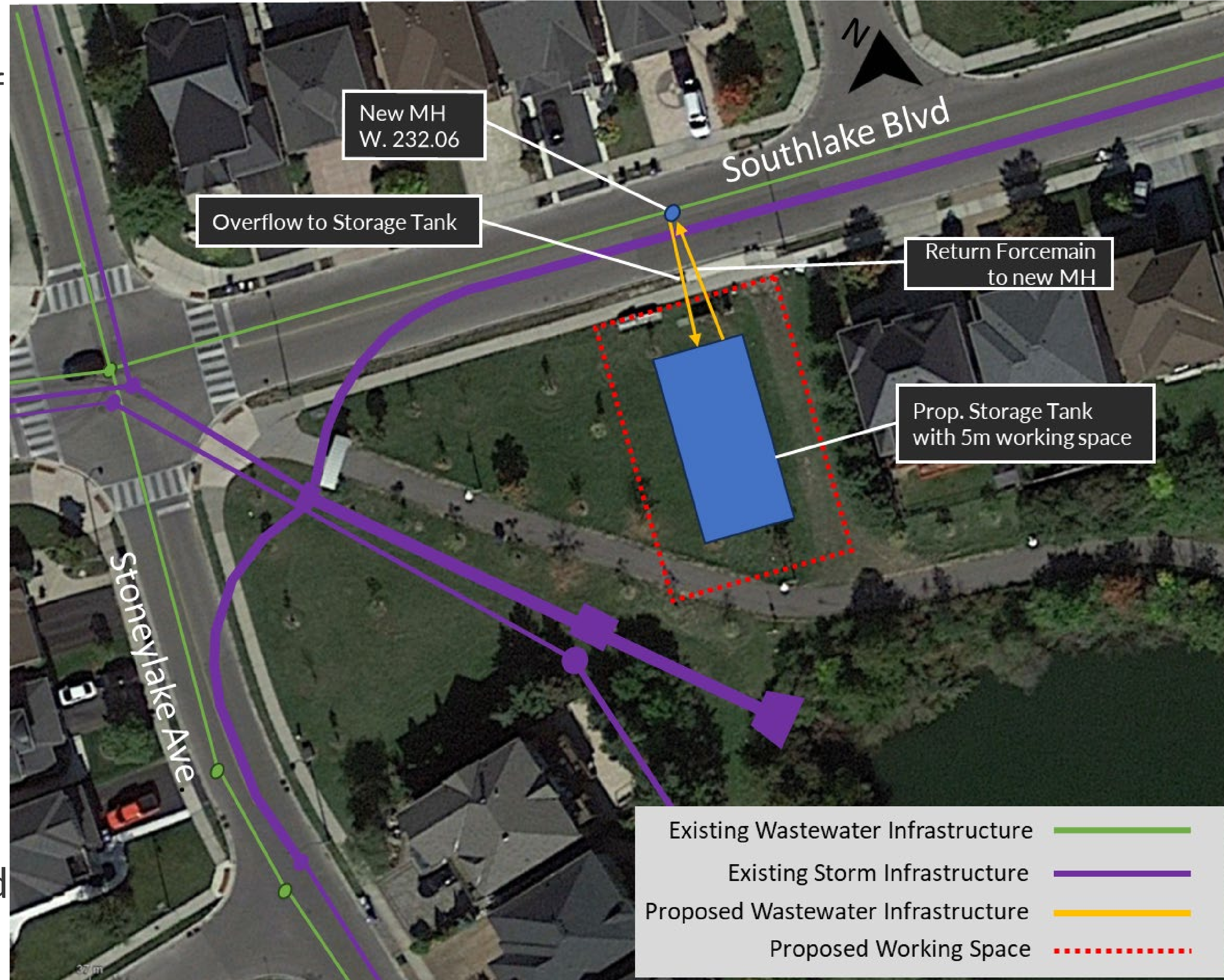
- The *Environmental Assessment Act* (EAA) requires the consideration of the “Do Nothing” alternative to provide a baseline scenario in which to compare all other alternatives and consider what will happen if there is no addition of a 2-hour emergency storage facility for the Lakelands WWPS.
- The existing WWPS does not have an overflow. In the event that the WWPS experiences a 2-hour shutdown, all residential homes that could be affected by surcharged sewers above the basement flooding elevation of 232.5m are shown in orange in figure below.
- The risk of basement flooding, however, depends upon the grade elevation of the home relative to the sewer surcharge elevation (i.e. all houses connected to the sewer system highlighted in orange are not at equal risk of basement flooding). Homes with lower basement elevations and those closer to the WWPS are expected to have higher risk of basement flooding in the event of a shut down at the WWPS.



Surcharged Sewers after 2-Hour Shutdown at Lakelands WWPS

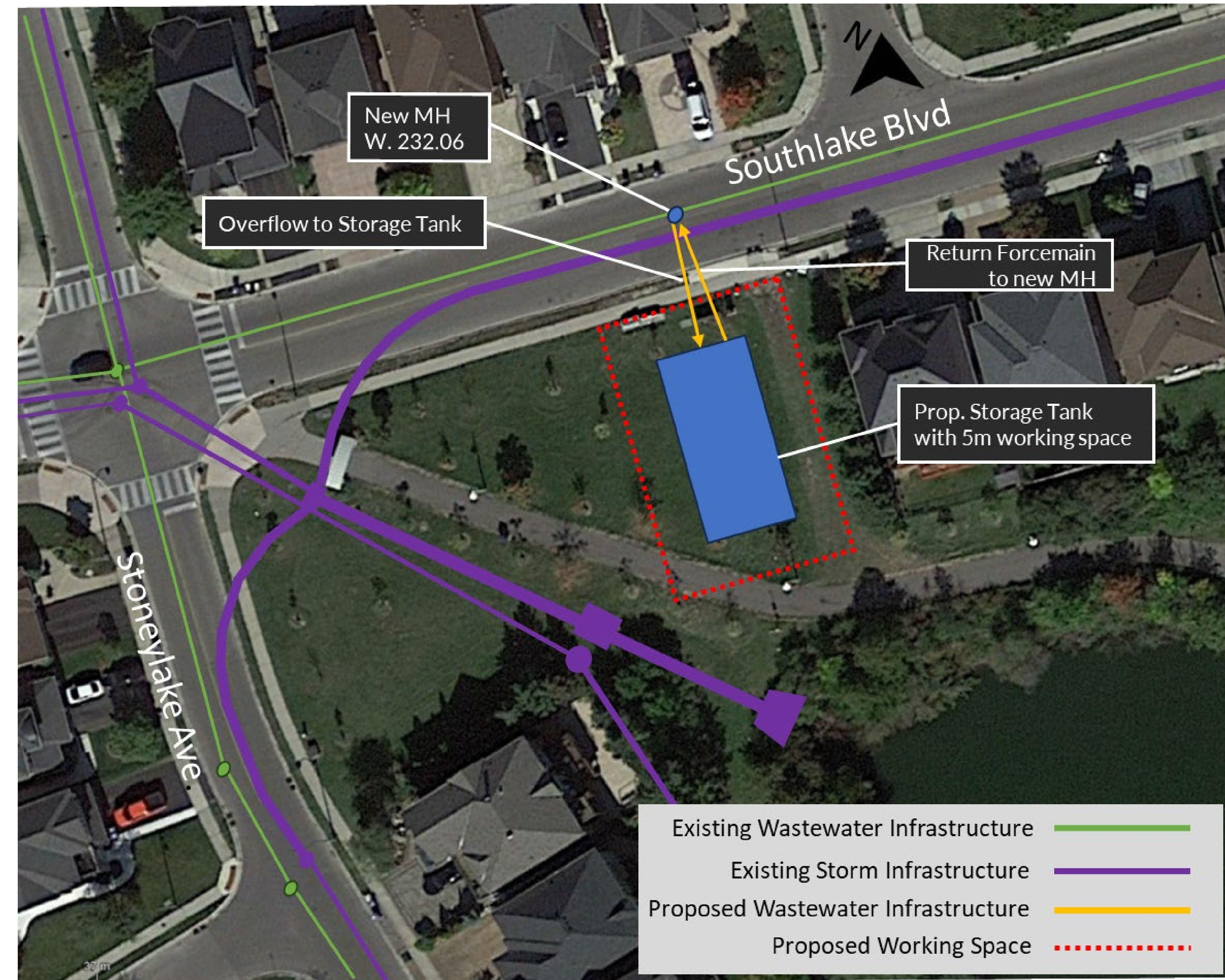
Alternative 2: Storage Tank Location 1

- Location 1 is approximately 390m from the Lakelands WWPS at the northern portion of Lakelands Village Park, southeast of the Southlake Boulevard and Stoneylake Avenue intersection.
- The greenspace, which functions as an entry feature to the Lakelands Village Park and trail network, provides an area to construct the offline emergency storage tank.
- The proposed offline storage tank is 20m long by 10m wide, with a 5m working space around the perimeter. Excavation approximately 5.0m below the flooding level (232.5m) would result in the tank having a total depth of excavation of approximately 9m below grade.
- An overflow sewer connection would be provided from a new maintenance hole (MH) on Southlake Blvd. To avoid conflict with the existing storm sewer, the overflow sewer would need to be placed at an elevation lower than the existing sanitary sewer, which would require a maintenance hole structure to house an automated gate, level instruments and/or drop structure, with passive overflow not viable. The return forcemain would convey flow to the new maintenance hole.



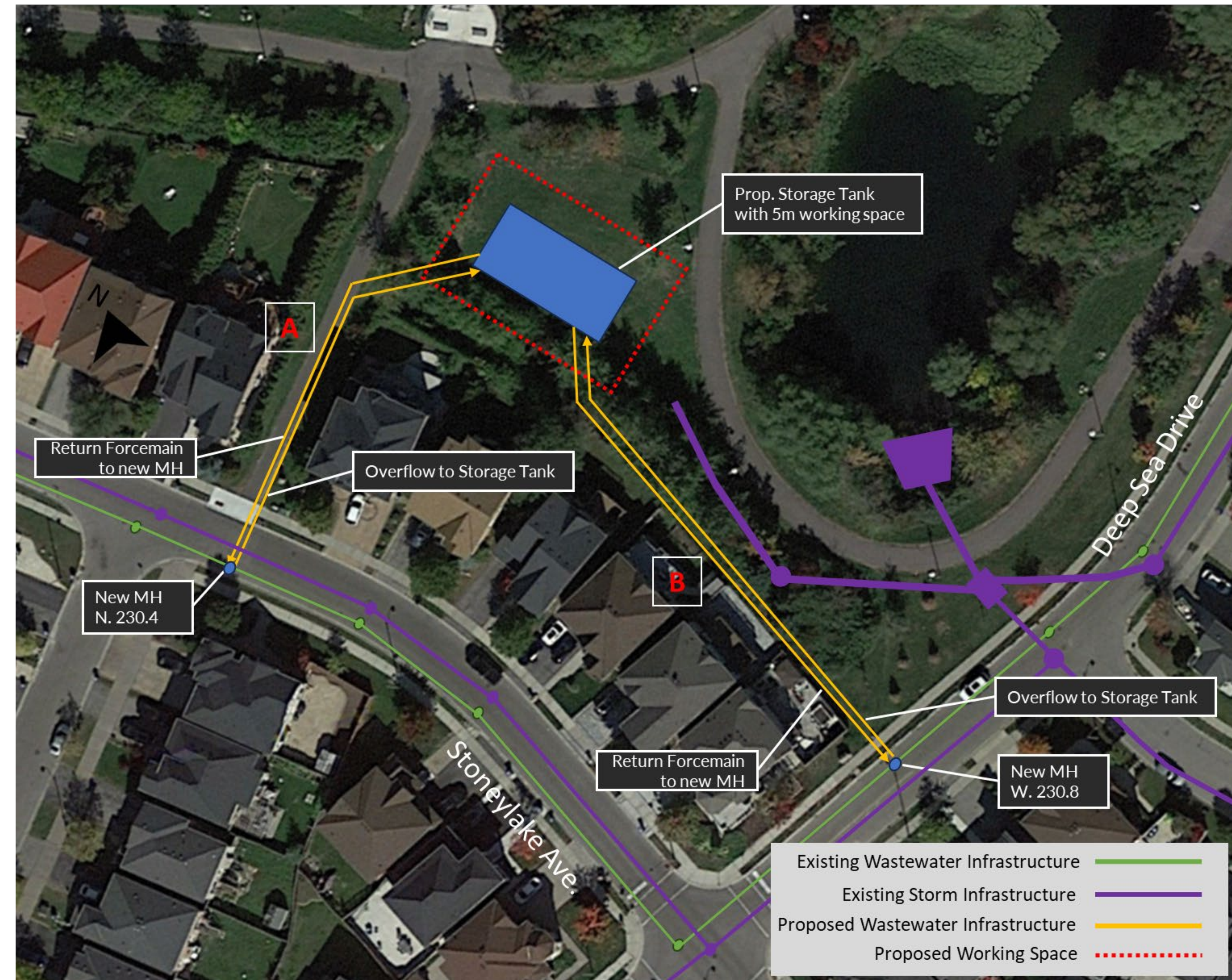
Alternative 2: Storage Tank Location 1

- Considerations for Location 1:
 - Property acquisition from the City of Brampton within the Lakelands Village Park area will be necessary;
 - Temporary disturbance of existing sidewalks and pathways will occur during construction;
 - Constructability concerns with proximity and location of large storm infrastructure and existing utilities;
 - Technical concerns due to requirement for automated gate and level sensors in maintenance hole;
 - Negative impacts to neighbouring properties during construction due to noise and dust;
 - Potential negative impacts to neighbouring properties during operation of tank, such as odour and intermittent pedestrian restrictions when Peel completes maintenance activities;
 - Minor temporary negative impacts on the natural environment from disturbance of parkland/green space; however, mitigation measures and restoration will minimize any permanent impacts.



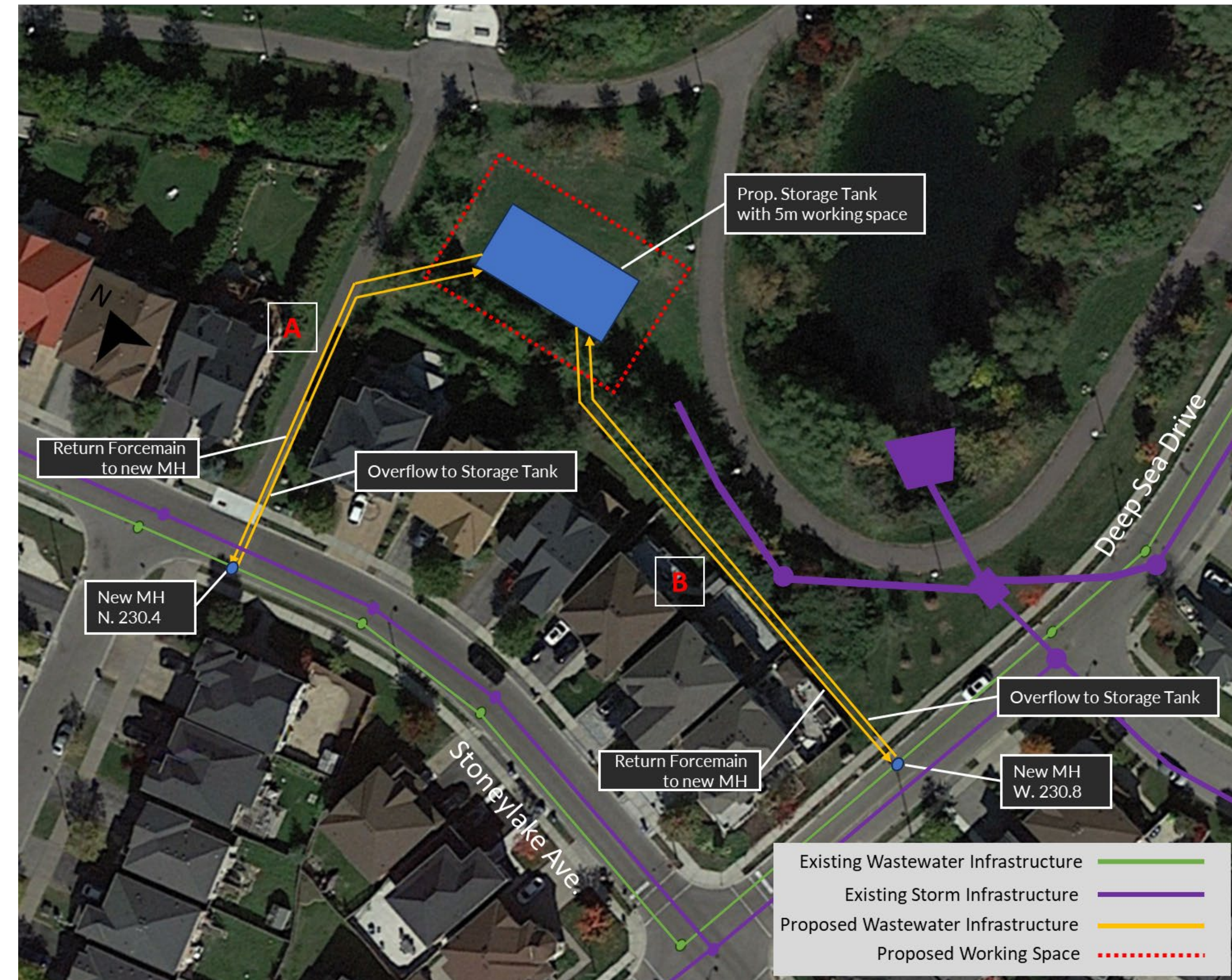
Alternative 3: Storage Tank Location 2

- Location 2 is approximately 140m from the Lakelands WWPS at the southeast portion of Lakelands Village Park, north of the Stonelylake Avenue and Deep Sea Drive intersection.
- The greenspace, which functions as a buffer area between residential properties and the Lakelands Park trail network, provides an area to construct the offline emergency storage tank.
- The proposed offline storage tank is 20m long by 10m wide, with a 5m working space around the perimeter.
- Reviewing the available space and considering the existing sanitary collection system, two overflow and forcemain configurations were considered: A and B as shown on inset map.
- For piping Configuration A, an overflow sewer connection would be provided from a new maintenance hole (MH) on Stonelylake Avenue. Excavation approximately 4.1m below the flooding level (232.5m) would result in the tank having a total depth of excavation of approximately 5.6m below grade.
- For piping Configuration B, an overflow sewer connection would be provided from a new maintenance hole on Deep Sea Drive. Excavation approximately 4.3m below the flooding level (232.5m) would result in the tank having a total depth of excavation of approximately 5.8m below grade.



Alternative 3: Storage Tank Location 2

- Considerations for Location 2:
 - Property acquisition from the City of Brampton within the Lakelands Village Park area will be necessary;
 - Temporary disturbance of existing sidewalks and pathways will occur during construction;
 - Constructability concerns with the accessibility of location by large equipment and vehicles during construction and operation and maintenance;
 - Operational concerns related to site security, property damage, and safety of workers in this area with lower public visibility;
 - Negative impacts to neighbouring properties during construction due to noise and dust;
 - Potential negative impacts to neighbouring properties during operation of tank, such as odour;
 - New sewers are within 3m of property lines; and
 - Minor temporary negative impacts on the natural environment from disturbance of parkland/green space; however, mitigation measures and restoration will minimize any permanent impacts.



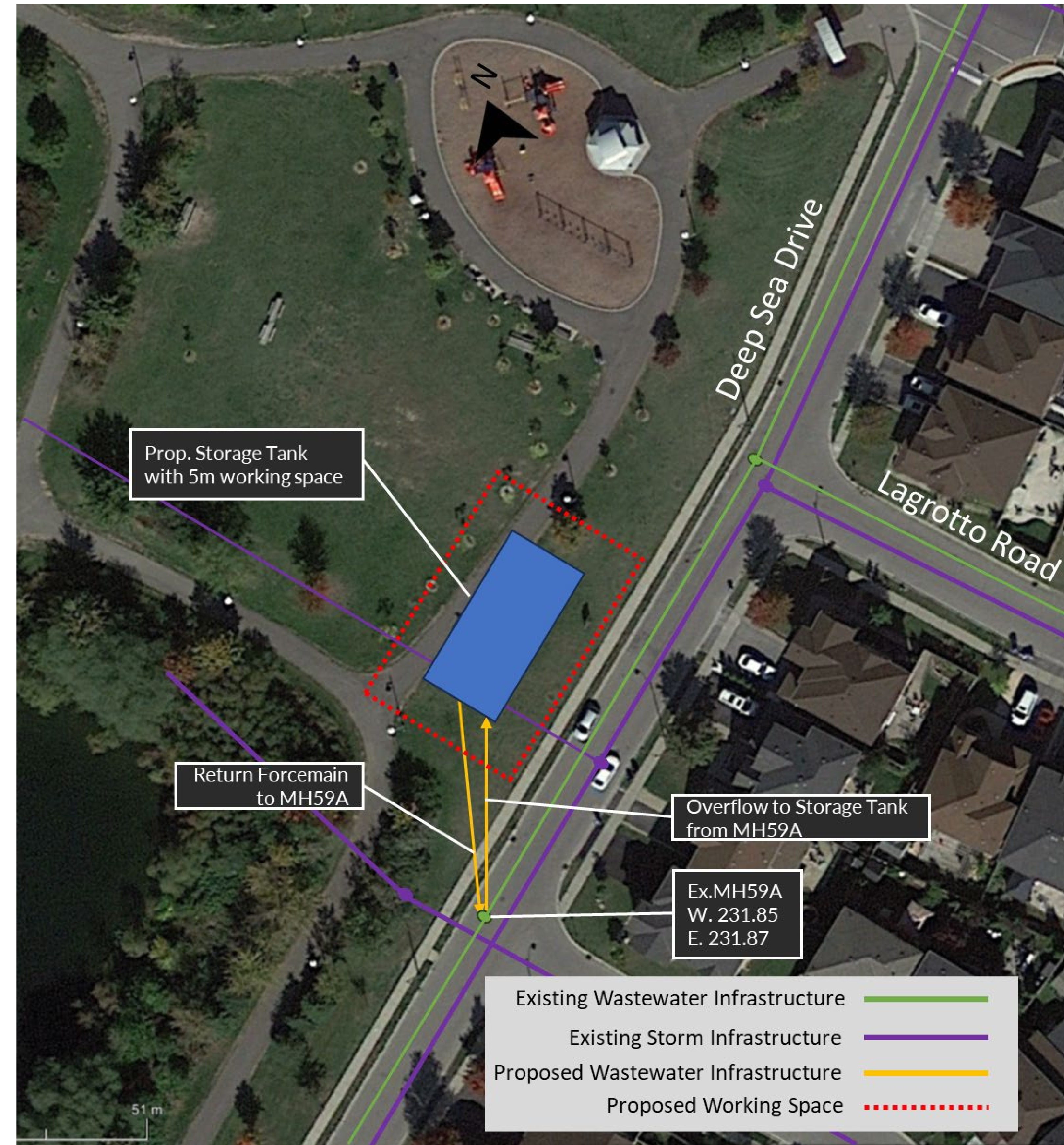
Alternative 4: Storage Tank Location 3

- Location 3, at the intersection of Deep Sea Drive and Southlake Boulevard, is approximately 480m from the Lakelands WWPS.
- The park area, adjacent to the play structure and storm pond, provides adequate space to construct the offline emergency storage tank.
- The proposed offline storage tank is 20m long by 10m wide, with a 5m working space around the perimeter. Excavation approximately 3.8m below the flooding level (232.5m) would result in the tank having a total depth of excavation of approximately 7.8m below grade.
- An overflow sewer connection would be provided from an existing maintenance hole (MH59A). The return forcemain would convey flow back to the existing maintenance hole (MH) as well after the emergency event.



Alternative 4: Storage Tank Location 3

- Considerations for Location 3:
 - Property acquisition from the City of Brampton within the Lakelands Village Park area will be necessary;
 - Temporary disturbance of existing sidewalks and pathways will occur during construction, with the need to relocate some pathways to suit final installation;
 - Temporary disturbance of neighbourhood parkland space during construction;
 - Potential for impact on City's ability to implement additional programming within the parkland space (ie: courts, enhanced shade structure, etc.) depending on final placement of tank and above ground structure;
 - Minor storm infrastructure (250mm diameter storm sewer) and no existing utilities in proximity to proposed tank location;
 - No adjacent neighbouring properties to the tank; and
 - Minor temporary negative impacts on the natural environment from disturbance of parkland/green space; however, mitigation measures and restoration will minimize any permanent impacts.



Evaluation Criteria and Process

As part of the MCEA process, the developed alternatives were evaluated against five (5) categories and respective criteria to comparatively assess the alternatives in a qualitative manner to select the best alternative.

Evaluation Criteria

Evaluation Categories	Criteria
Technical Environment	<ul style="list-style-type: none"> • Constructability and complexity of implementation • Impacts on existing utilities and infrastructure • Accessibility for construction and operation and maintenance • Addresses study problem • Compliance with Peel’s design and operating requirements
Natural Environment	<ul style="list-style-type: none"> • Potential encroachment to designated natural areas and regulated areas • Impacts on significant wildlife and their habitat, including Species at Risk (SAR) • Impacts on vegetation communities • Surface water impacts • Groundwater impacts
Social Environment	<ul style="list-style-type: none"> • Impacts on private property/residential properties • Impacts on neighbourhood greenspaces and parklands • Impacts on road access to residential properties • Nuisance impacts (vibration, dust and noise issues during construction)
Cultural Environment	<ul style="list-style-type: none"> • Disruption of built and cultural heritage features • Impact on areas of archaeological potential
Economic Environment	<ul style="list-style-type: none"> • Construction Capital Costs • Peel’s operating and maintenance costs • Land acquisition and/or easement requirements

The selection of the preferred alternative is based on the relative advantages and disadvantages of each alternative within the natural, social, cultural, technical and economic environments’ evaluation criteria and includes consideration of mitigation measures. The ranking of each alternative relative to the specific evaluation criterion was conducted using a colour-coded system as shown below.

Rating	Colour Code
Preferred	Green
Less Preferred	Yellow
Least Preferred	Red

The alternative which demonstrated the greatest number of “most” preferred boxes and/or the fewest “least” preferred boxes relative to their potential environmental effects would likely be the preferred alternative.

Evaluating the Alternatives

Criteria	Alternative 1: Do Nothing	Alternative 2: Storage Tank Location 1	Alternative 3: Storage Tank Location 2	Alternative 4: Storage Tank Location 3
Technical Environment	<ul style="list-style-type: none"> Doesn't address Study problem or Peel's design and operation standards 	<ul style="list-style-type: none"> Addresses Study problem with constructability concerns related to conflict of proposed overflow piping and existing storm sewer 	<ul style="list-style-type: none"> Significant constructability concerns related to accessibility as well as operation and maintenance concerns with accessibility, security and safety 	<ul style="list-style-type: none"> Addresses Study problem with constructability concerns which can be mitigated
Natural Environment	<ul style="list-style-type: none"> No construction impacts 	<ul style="list-style-type: none"> Fewer construction impacts 	<ul style="list-style-type: none"> Construction impacts with removal of vegetation and trees 	<ul style="list-style-type: none"> Fewer construction impacts
Social Environment	<ul style="list-style-type: none"> Greater risk of basement flooding within the neighbourhood in emergency event with no additional storage provided in the system 	<ul style="list-style-type: none"> Impacted greenspace is not passive parkland planned for future programming by City of Brampton Closest proximity to residential homes 	<ul style="list-style-type: none"> Impacted greenspace is not passive parkland viable for future programming by City of Brampton Proximity to residential homes can be mitigated via design elements 	<ul style="list-style-type: none"> Impacted greenspace is passive parkland that is candidate for future programming by City of Brampton Proximity to residential homes can be mitigated via design elements
Cultural Environment	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No impact
Economic Environment	<ul style="list-style-type: none"> Lowest cost 	<ul style="list-style-type: none"> Higher capital cost with additional operation and maintenance required for valving and level sensors in overflow maintenance hole 	<ul style="list-style-type: none"> Higher capital cost 	<ul style="list-style-type: none"> High capital cost
OVERALL RANKING	NOT RECOMMENDED	NOT RECOMMENDED	NOT RECOMMENDED	RECOMMENDED

The full detailed evaluation matrix will be included in the final Project File Report, which will be filed publicly.



Recommended Preferred Solution & Mitigation Measures

- Based on the evaluation, **Alternative 4: Storage Tank Location 3**, at the intersection of Deep Sea Drive and Southlake Boulevard, is recommended as the preferred solution.
- While this Location has greater impact on the City of Brampton's greenspace surrounding the Lakelands Village Park, as it will impact the passive use area next to the Lakelands playground, these impacts are mostly temporary, with permanent impacts being mitigated with the final siting of the tank facility as close to the pond and Deep Sea Drive as feasible.

Mitigation Measures

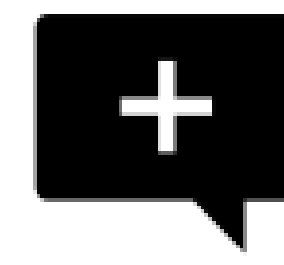
- Minimize construction area within park area to extent possible.
- Develop and implement Erosion and Sediment Control Plan to minimize risk of sediment transport into adjacent pond.
- Develop Restoration Plan including vegetation replacement, pathway realignment and lighting relocation to facilitate the restoration, remediation, and enhancements to the greenspace.
- Additional mitigation measures will continue to be developed throughout design and prior to construction.



Next Steps

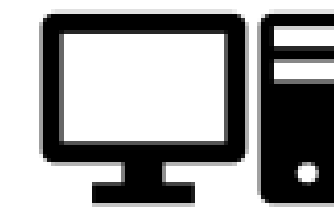
Thank you for Participating!

- Comments, questions and feedback are welcomed. Please provide feedback by **October 28, 2024** by contacting the Project Team.



Questions and comments submitted to:

greg.beams@peelregion.ca



Web page:

<https://www.peelregion.ca/public-works/environmental-assessments/brampton/lakelands.asp>

Next Steps

- The project team will respond to any questions received and will further refine the preferred solution to minimize impacts and disruption during construction.
- Upon completion of the Study, a Project File Report will be prepared and filed for a 30-day comment period. Notification will be advertised on the project website and mailed to residents in the Study Area.

Accessibility

Peel is committed to meet the requirements outlined in the *Accessibility for Ontarians with Disabilities Act, 2005* (AODA). Please contact the project manager if you require an alternative format of this document and/or if you need support and accommodations to provide feedback for this study.



Please note that information related to this study will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. All comments received will become part of the public record and may be included in the study documentation prepared for public review.