# Long Point Road Sanitary Sewer
# and
# Craigleith Wastewater Treatment Plant Upgrades
# Municipal Class EA

Public Information Centre No. 2

January 26, 2023

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# PRESENTATION OUTLINE

- Background
- Problem Identification
- Alternative Identification
- Complementary Investigations
- Alternative Evaluation
- Preferred Alternative
- Next Steps
- Questions

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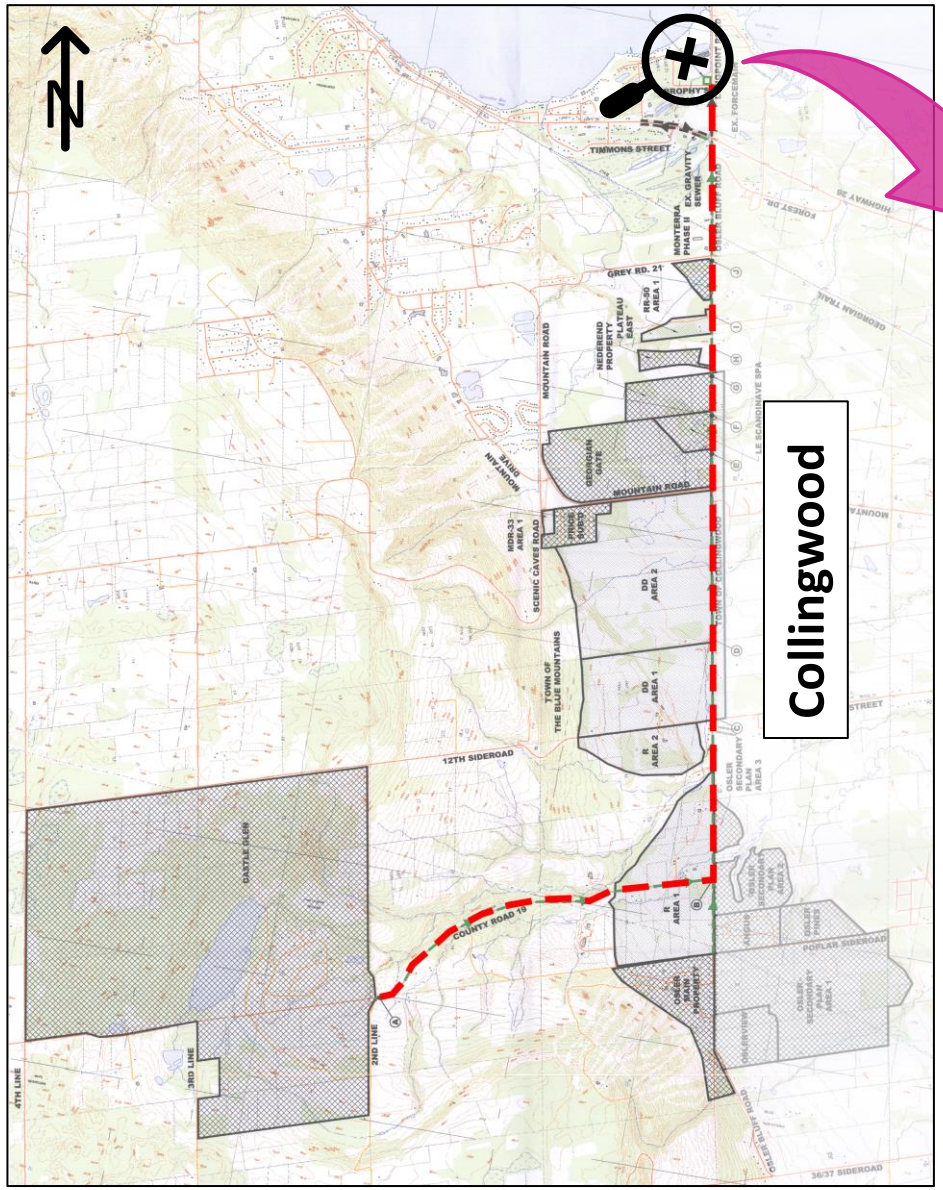
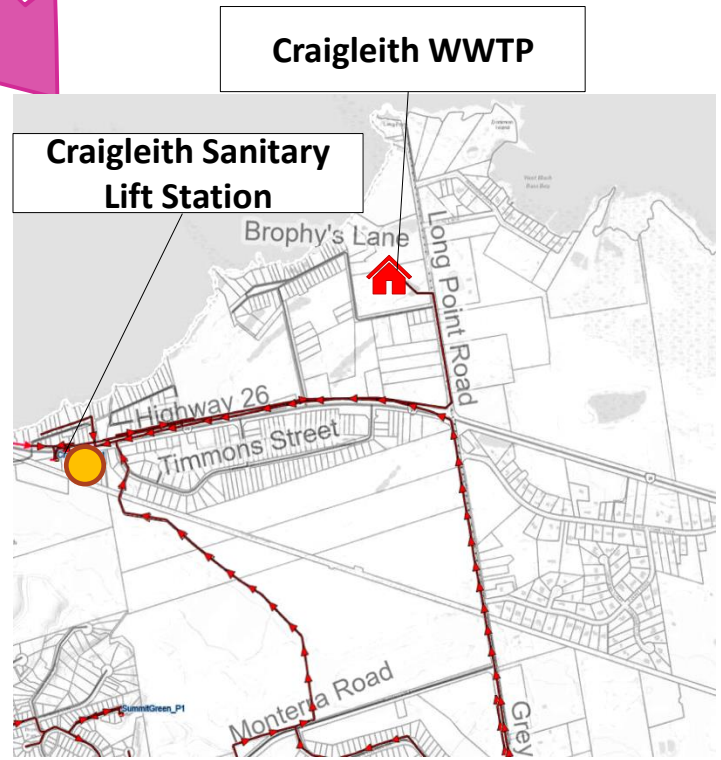
# BACKGROUND: CURRENT OPERATION

- Sanitary Sewer on County Road 21 discharges to Craigleith Sanitary Lift Station via gravity sewer.
- Land bordering  Grey 21 is currently connected to just north of Grey 19.
- Additional planned/implemented projects including Price's Development Sanitary Servicing Extension
- Future expansion potential up to Castle Glen development and Osler area.

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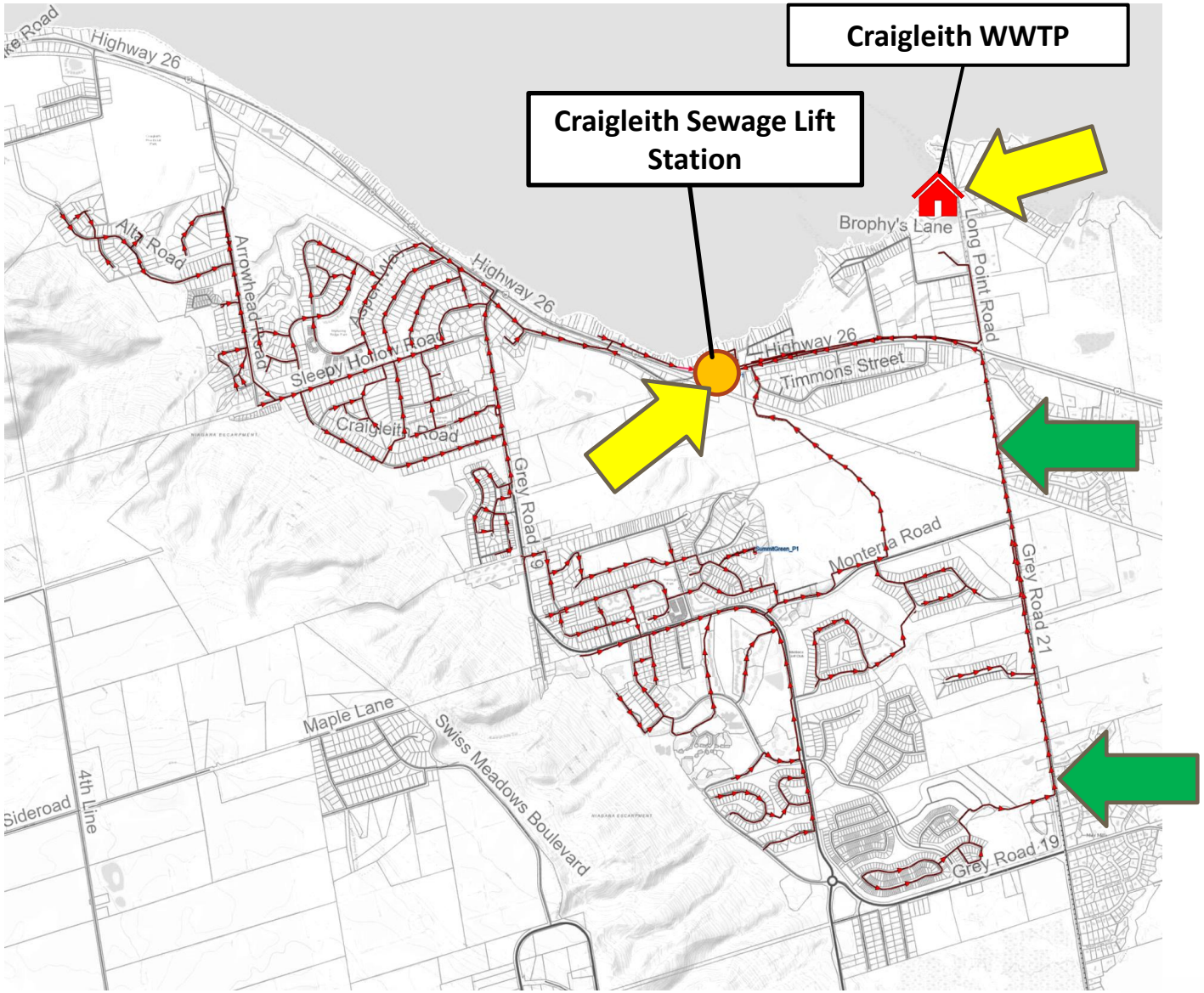
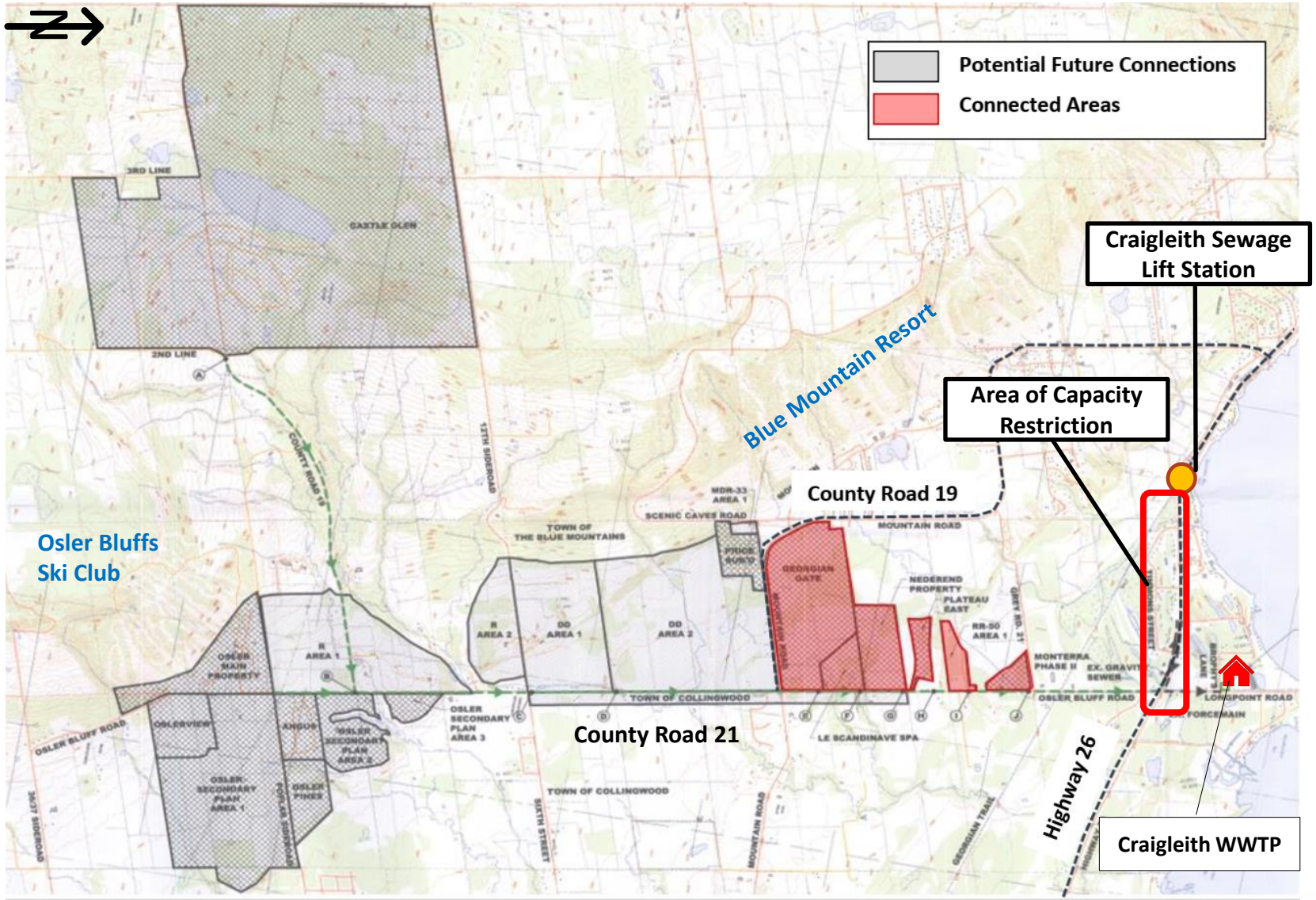
# BACKGROUND: SANITARY SEWER OPERATION

- 450mm existing sewer begins near County Road 19 and increases to a 525mm sewer on Grey Road 21 to Hwy 26.
- 300 mm sanitary sewer extends west to the existing Craigleith Sewage Lift Station.
- Craigleith Sewage Lift Station pumps wastewater to the Craigleith WWTP via dual force mains.
- Craigleith Main Lift Station includes an exterior septage and leachate receiving station.



# BACKGROUND: SERVICE AREA – GREY 21 SANITARY TRUNK SEWER

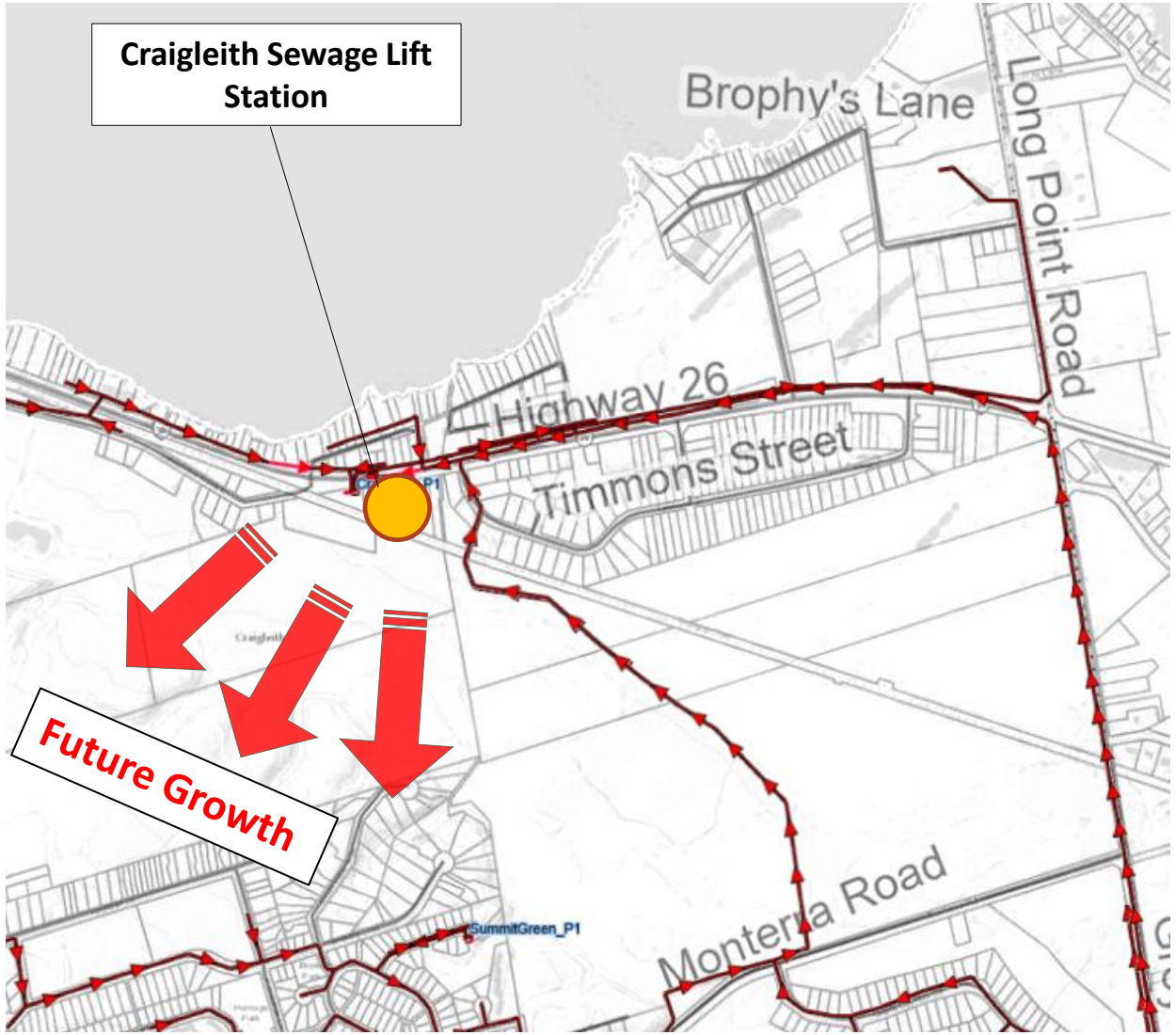
- Currently services 417 units with design flow of 19 L/s
- Near-term identified development increase this to 871 units with a design flow of 45 L/s.
- Opportunities for servicing unserviced areas within Collingwood along Grey 21.
- Existing Trunk Sewer on Grey 21 has capacity for 260 L/s.
- Connection between Grey 21 and Craigleith Sanitary Pumping Station (Lakeshore Rd) has capacity of 45.4 L/s, but other development demands limit future capacity at Craigleith SPS



# PRUDENT PREPARATION FOR PROJECTED GROWTH

- 2022 Official Plan Review identifies 6,750 new residents in 3,590 new households in the Town by 2046.
- Currently over 4,500 units in the Town's development pipeline.
- Craigleith, Blue Mountain Village, Swiss Meadows plus Castle Glen continue to be the focus of future development.
- All of these developments with the exception of Swiss Meadows will drain to the Craigleith System.
- Some developments are in progress and will be complete before this project can be implemented.
- Major Development Timeline (Subject to Approvals and Economic Conditions)
  - Castle Glen 5-10 years
  - Ostler Bluffs 10 – 15 years

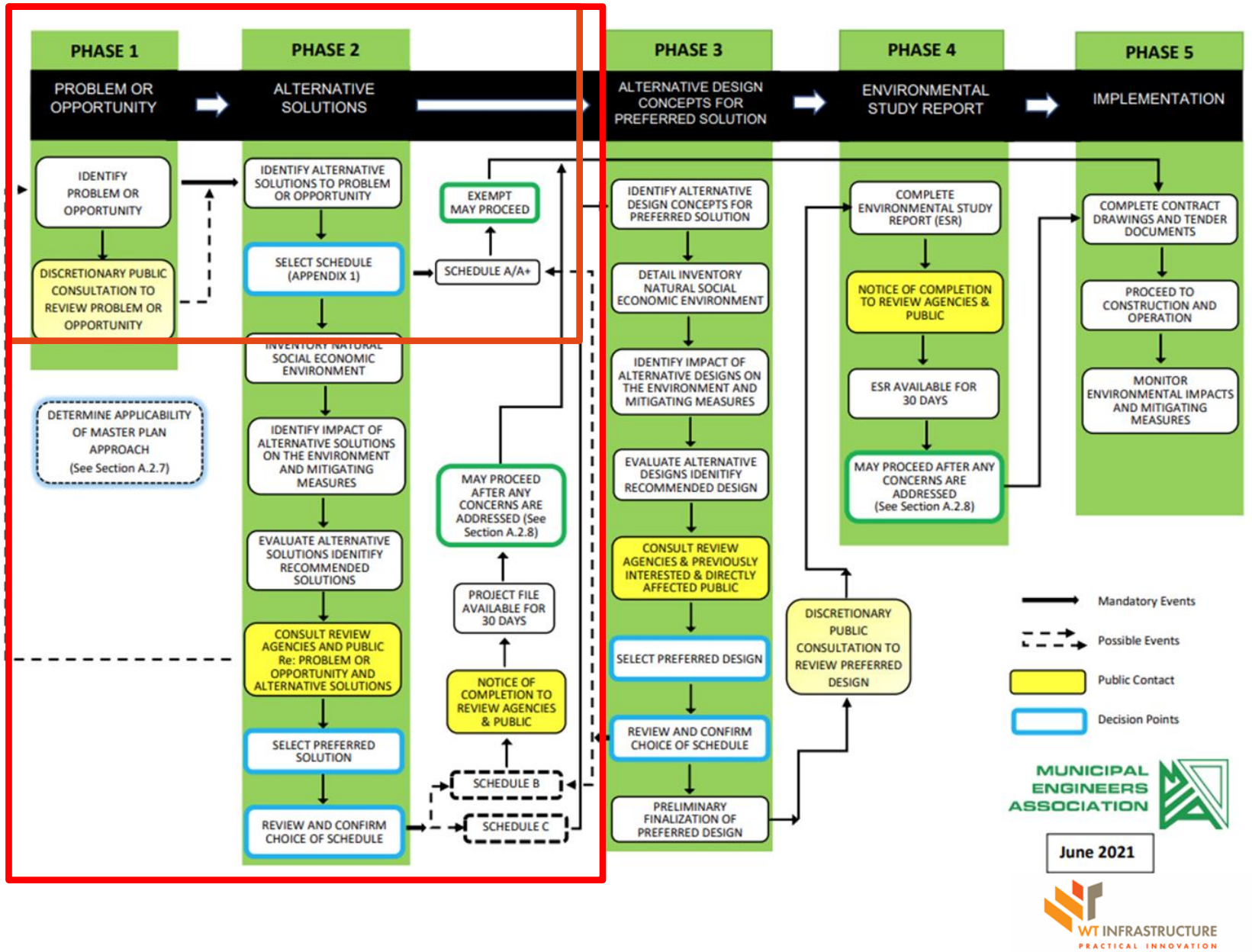
# PROBLEM IDENTIFICATION – CRAIGLEITH PUMPING STATION



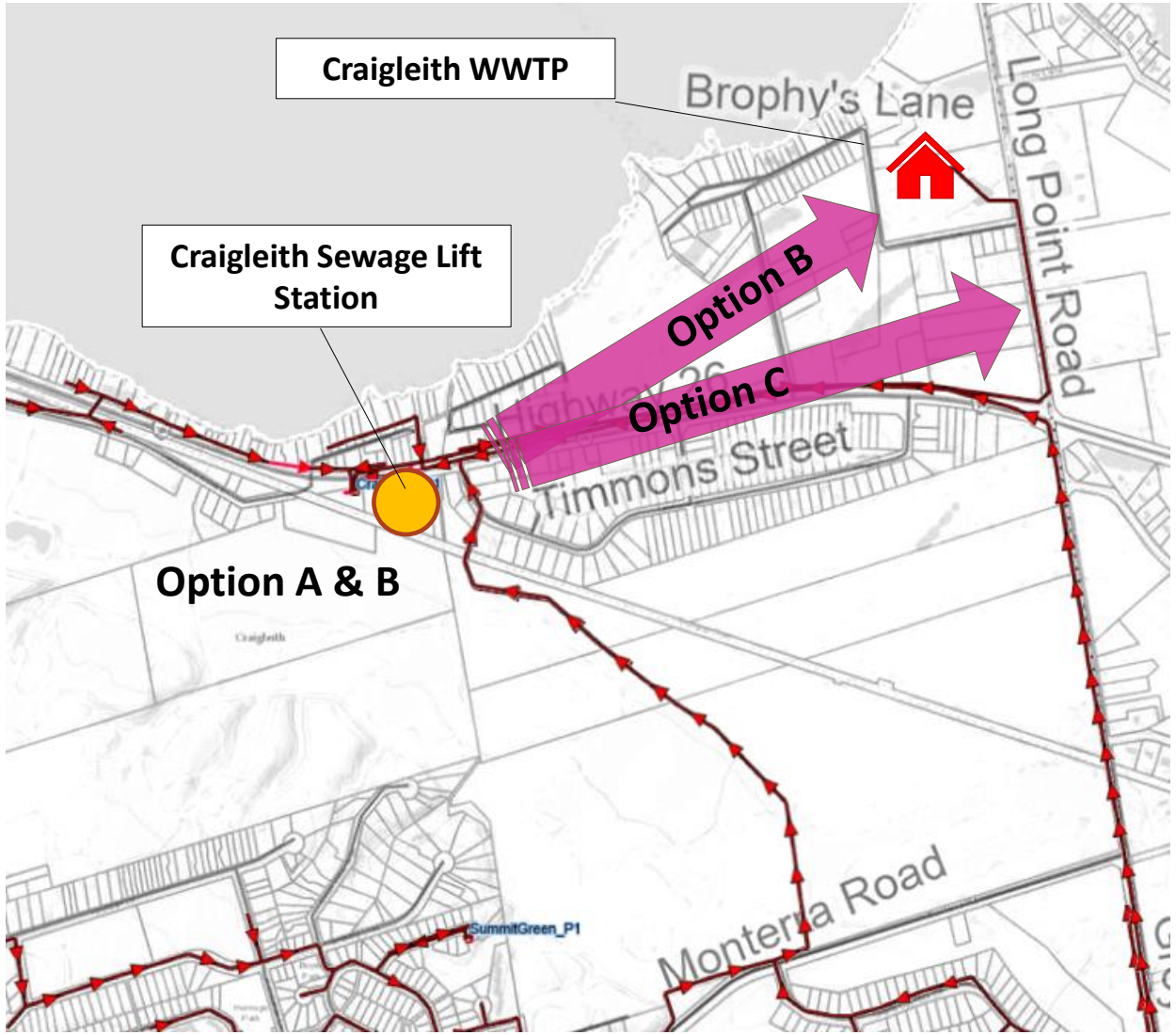

- Existing lift station was not intended to convey Grey 21 sanitary flow permanently.
- Growth pressures require additional capacity both from Grey 21 and other contributors to Craigleith SPS.
- Operational Challenges and Proximity of neighbours and development do not lend themselves to expansion at the existing pumping station.

# MUNICIPAL CLASS EA FLOWCHART

- The **Class EA** process
  - Decision-making process that all Ontario municipalities follow for building new infrastructure.
  - Includes mandated public consultation throughout the project

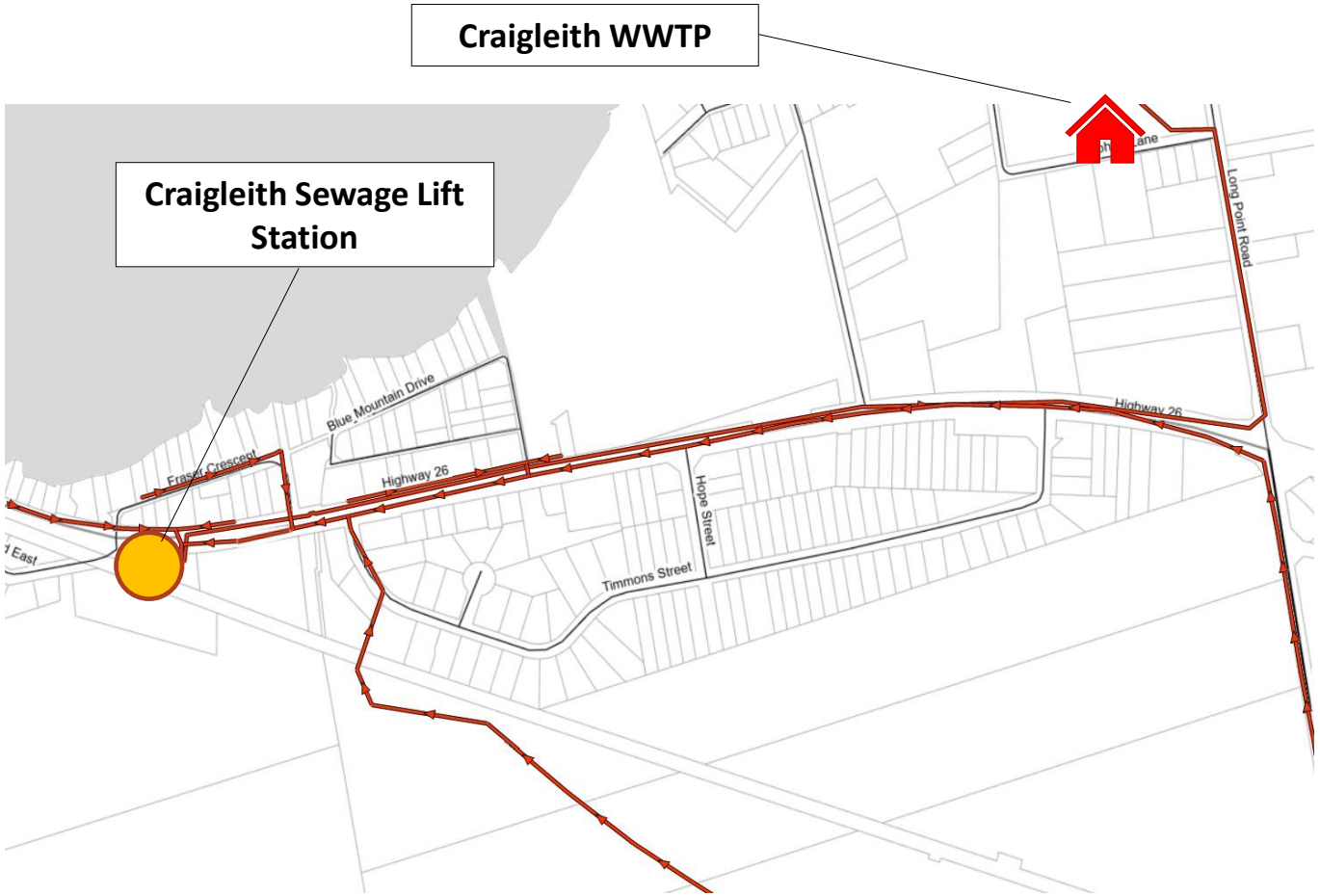


# ALTERNATIVE IDENTIFICATION



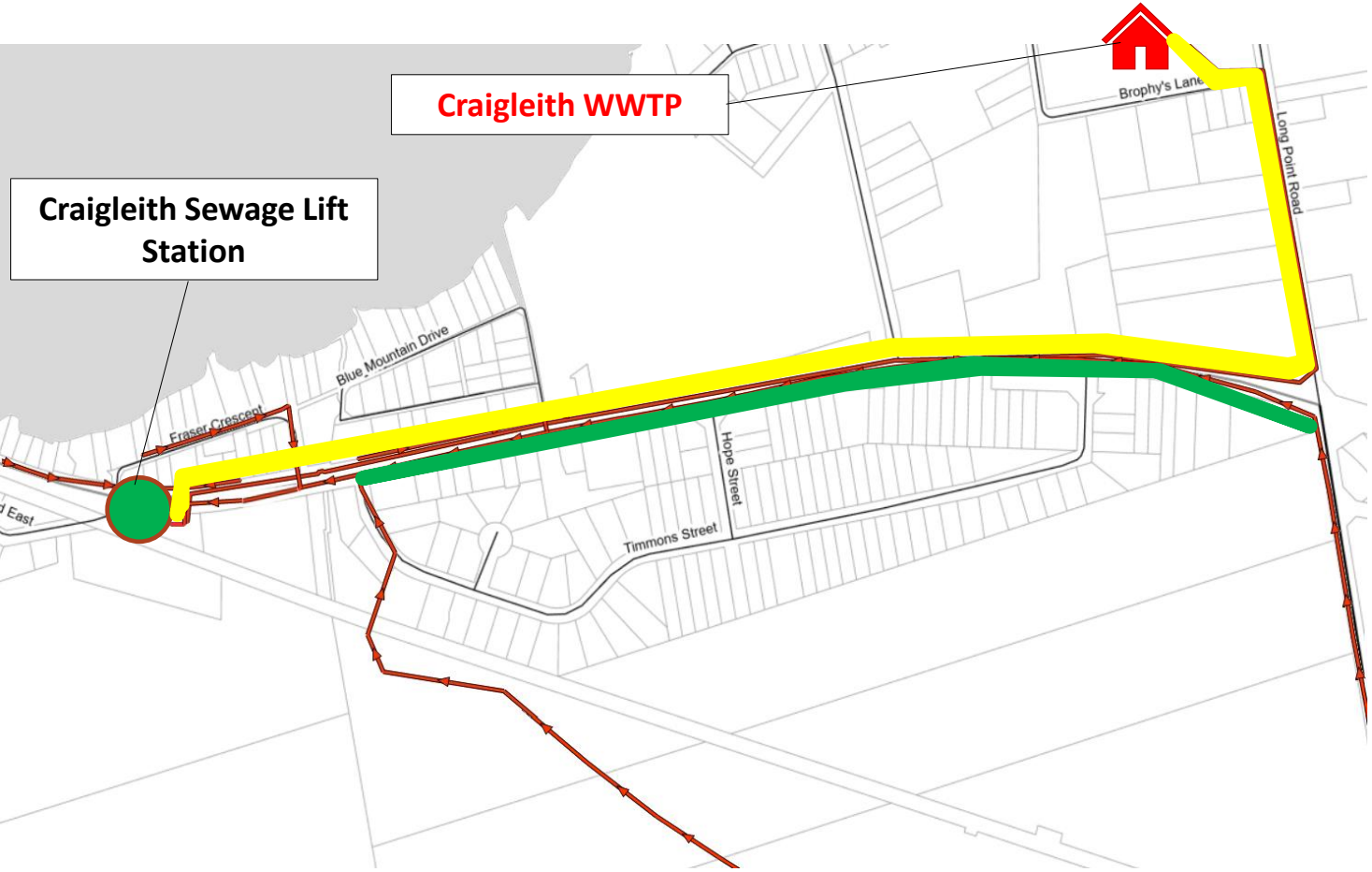

- Reviewed Alternatives
  1. Do Nothing
  2. Expand Craigleith Pumping Station including inlet sewer and forcemains.
  3. New SPS at the Plant Site
  4. New SPS between Highway 26 and Plant Site
- **Schedule B Class EA** based on following triggers:
  - Construct a new pumping station
  - Increase pumping station capacity in a new structure.
  - Land acquisition

# ALTERNATIVE A – DO NOTHING



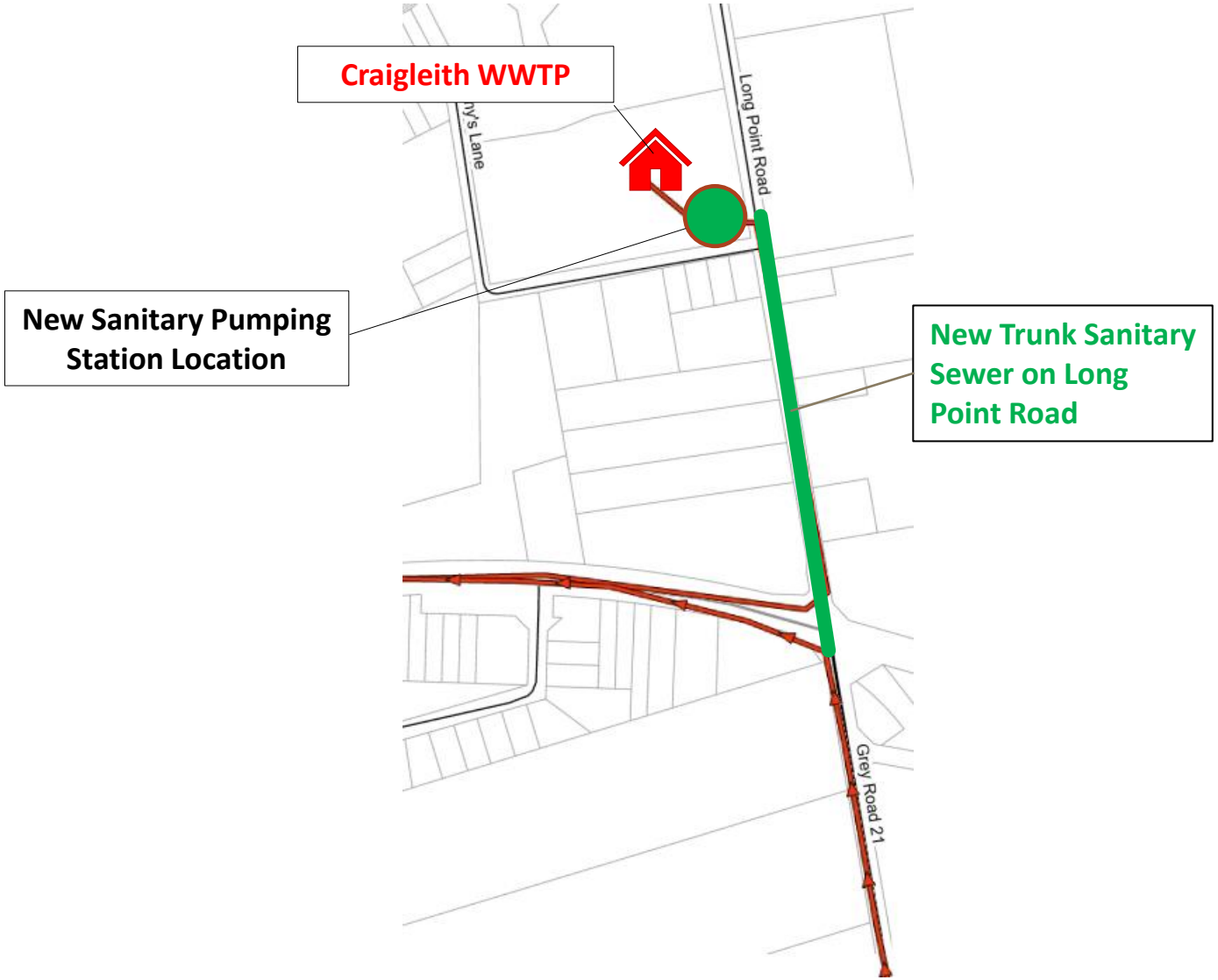

- Maintain existing sanitary sewer from Grey 21 to Craigleith SPS – Full capacity of 45.4 L/s.
- Upgrade the Craigleith Sanitary Pumping Station as currently planned based on optimization study (pumps, generator, safety/operational issues).
- Low-cost alternative – Existing budgeted work only to be completed.
- Does not address identified problem.
- Limits growth
- No additional cost over current planned expenditures to maintain operation.

# ALTERNATIVE B – EXPAND CRAIGLEITH PUMPING STATION



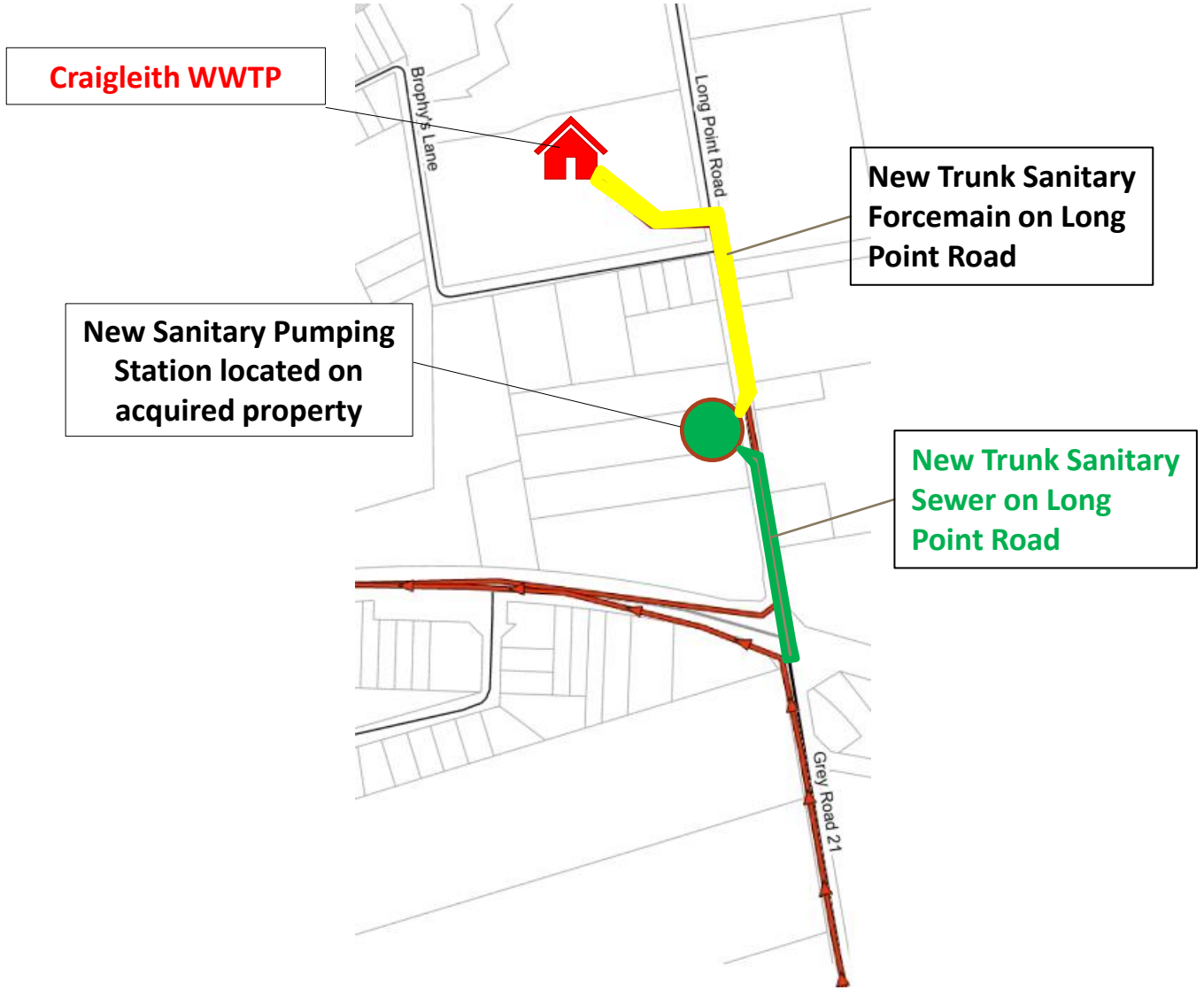

- Replace 1.3 km of sanitary sewer from Grey 21 to west intersection of Timmons and Highway 26 with larger size (525-600mm) (Green Line).
- Upgrade Craigleith SPS for ultimate capacity of upstream areas.
- Add third 2.2km long forcemain between pumping station and Craigleith WWTP (Yellow Line).
- Estimated Cost: $16M - $19M (incl. engineering and contingency) +/- 25%

# ALTERNATIVE C – NEW TRUNK SEWER AND PUMPING STATION AT CRAIGLEITH WWTP




- Extend gravity sanitary sewer approximately 450 metres from Grey 21/Highway 26 to the Craigleith WWTP along Long Point Road.
- Construct new sanitary pumping station on the existing wastewater treatment plant site immediately south of the existing main plant building.
- Install new forcemain connection from new pumping station to the existing WWTP headworks.
- Estimated Cost: $8.1M (incl. engineering and contingency) +/-25%

# ALTERNATIVE D – NEW TRUNK SEWER AND PUMPING STATION BETWEEN HIGHWAY 26 AND CRAIGLEITH WWTP




- Extend gravity sanitary sewer approximately 100-400 metres from Grey 21/Highway 26 to the Craigleith WWTP.
- Construct new sanitary pumping station on land to be acquired along Long Point Road.
- Construct new 50 – 350 m long forcemain from proposed pumping station site to headworks of WWTP.
- Estimated Cost: $9.5M (incl. engineering and contingency)

# EVALUATION CRITERIA

## ENVIRONMENTAL

Potential impacts to the environment (i.e., resource depletion, natural heritage, tree removal, agricultural resources).

## SOCIAL

Potential impacts of the solution to the cultural sphere, residences, businesses, community, institutional, or recreational facilities.

## Evaluating the Options

With input from the public, key stakeholders, and review agencies, the team developed criteria to evaluate the project alternatives

## ECONOMIC

Capital costs associated with the solution Lifecycle Cost Assessment (Capital, Operational and Maintenance)

## TECHNICAL

Constructability, operability, construction risk and effectiveness of the solution.

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Note: Cost Estimates are high level Class D (+/-25%) are for comparison and are not intended for budgeting. Actual costs may be up to -20% lower and 50% higher.

# ENVIRONMENTAL INVESTIGATION INFORMATION

## Ecological

- No endangered species at risk identified.
- Some habitat around WWTP may be suitable for species of concern (Canada Warbler, Eastern Wood-Pewee and Wood Thrush)
- Roost quality of trees/vegetation around WWTP is generally poor, but any construction impacted trees will need to be removed in the winter to avoid potential impacts with bat or bird breeding.

## Geotechnical

- Bedrock is typically 4.6 to 7.6 m below surface
- Groundwater is typically 0.2 to 0.9 m below surface but is shallower closer to the Bay.
- Dewatering will be an issue during construction and may require specialized design considerations.

## Archaeological

- Majority of project areas are identified as disturbed.
- Undisturbed area around WWTP and land to be potentially acquired will require a Stage 2 Assessment prior to construction.

# TECHNICAL IMPACTS

- **Alternative A: Do Nothing**
  - No impacts but does not solve identified problem.
- **Alternative B: Upgrade Craigleith SPS**
  - Technically feasible.
  - Challenging with respect to phasing to maintain operation during construction.
- **Alternative C: Trunk Sewer on Long Point Road and New Sanitary Pumping Station at Craigleith WWTP**
  - Technically feasible.
  - Allows for many benefits of being on existing WWTP site (i.e. power, common generator, proximity of operators)
- **Alternative D: Trunk Sewer on Long Point Road and New Sanitary Pumping Station on acquired land between WWTP and Highway 26.**
  - Technically feasible.
  - Loss of complementary benefits as stand alone facility.

# ENVIRONMENTAL IMPACTS

- **Alternative A: Do Nothing**
  - No impacts but does not solve identified problem.
- **Alternative B: Upgrade Craigleith SPS**
  - Localized impacts on an existing developed site.
  - 3.5 km of new piping (gravity and forcemain) will increase potential environmental impacts during construction.
- **Alternative C: Trunk Sewer on Long Point Road and New Sanitary Pumping Station at Craigleith WWTP**
  - Localized impacts on an existing developed site (some tree removal may be required)
  - 450m of new piping on existing road will increase potential environmental impacts during construction but will lower impacts if new and existing residents can be serviced.
- **Alternative D: Trunk Sewer on Long Point Road and New Sanitary Pumping Station on acquired land between WWTP and Highway 26.**
  - New pumping station site will require clearing of existing undeveloped land.
  - 450m of new piping on existing road will increase potential environmental impacts during construction but will lower impacts if new and existing residents can be serviced.

# SOCIAL ENVIRONMENTAL IMPACTS

- **Alternative A: Do Nothing**
  - No impacts from construction.
  - Craigleith SPS will remain a single point of failure risk for a larger area as growth occurs.
- **Alternative B: Upgrade Craigleith SPS**
  - Localized construction impacts along Highway 26, Forcemain alignment and Lakeshore Road near pumping station.
  - Craigleith SPS will remain a single point of failure risk for a larger area as growth occurs.
- **Alternative C: Trunk Sewer on Long Point Road and New Sanitary Pumping Station at Craigleith WWTP**
  - Localized construction impacts along Long Point Road and at the Craigleith WWTP.
  - Pumping Station site will be screened from adjacent residences with existing and enhanced vegetative buffer.
- **Alternative D: Trunk Sewer on Long Point Road and New Sanitary Pumping Station on acquired land between WWTP and Highway 26.**
  - Localized construction impacts along Long Point Road, new SPS site and at the Craigleith WWTP.
  - Pumping Station site would be constructed in residentially zoned area.

# ECONOMIC ENVIRONMENTAL IMPACTS

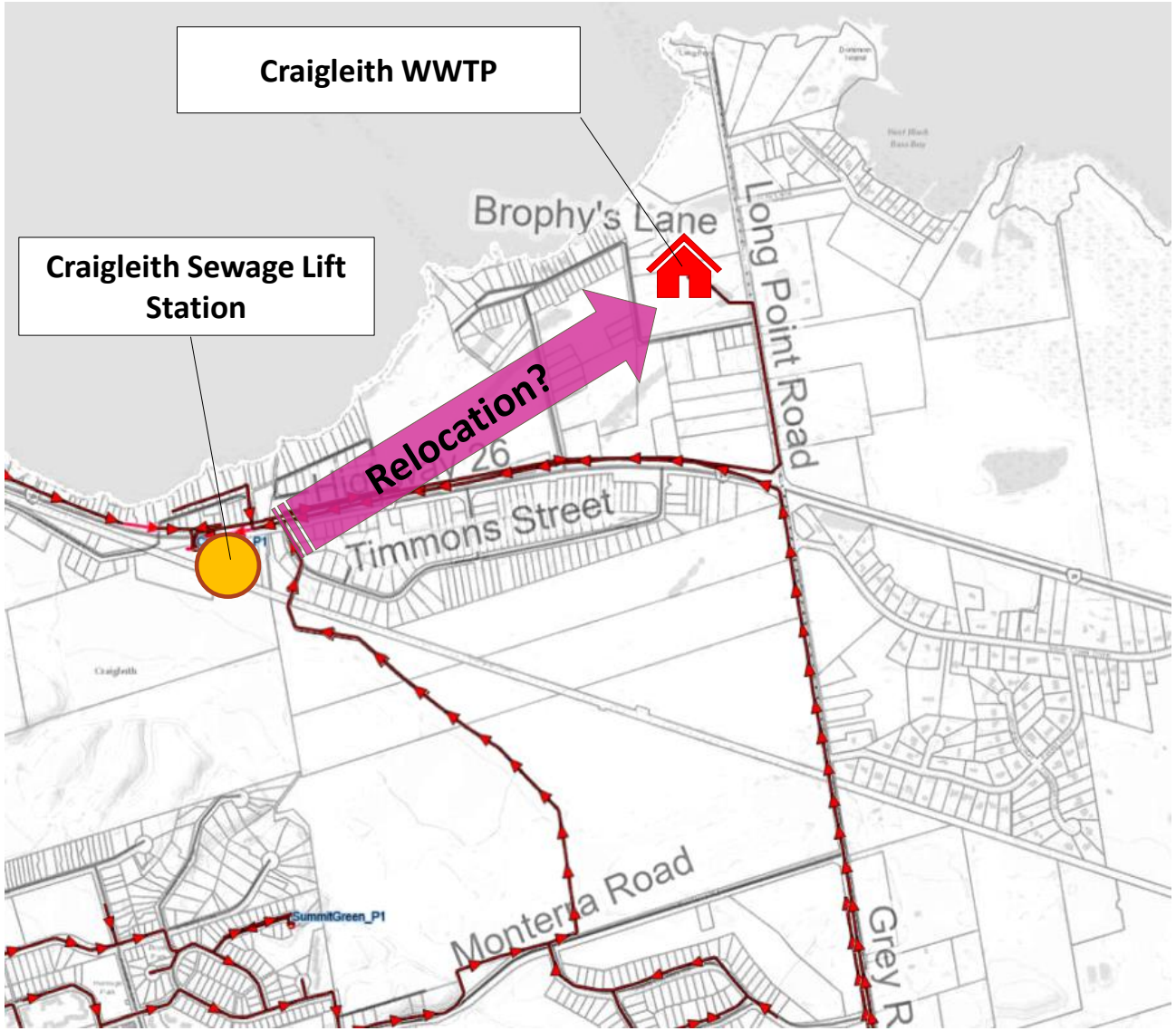
- **Alternative A: Do Nothing**
  - No additional capital cost.
  - Limits growth and associated potential tax revenue.
- **Alternative B: Upgrade Craigleith SPS**
  - Capital cost of $16-19M. Comparable, but lower operating costs than Alternative C and D.
  - Allows for growth and servicing of larger area.
- **Alternative C: Trunk Sewer on Long Point Road and New Sanitary Pumping Station at Craigleith WWTP**
  - Capital cost of $8.1M. Comparable, but lower operating costs than Alt D and higher operating costs than Alt B.
  - Allows for growth and servicing of larger area.
- **Alternative D: Trunk Sewer on Long Point Road and New Sanitary Pumping Station on acquired land between WWTP and Highway 26.**
  - Capital cost of $9.5M. Comparable, but higher operating costs than Alternative B and C.
  - Reduction in developable land due to land acquisition.
  - Allows for growth and servicing of larger area.

# EVALUATION OF ALTERNATIVES

| Criteria | Alternative A: Do Nothing | Alternative B: Expand Craigleith SPS | Alternative C: New Trunk Sewer and SPS at Craigleith WWTP | Alternative D: New Trunk Sewer and SPS on new property |
|---|---|---|---|---|
| Technical | ▼ | ▲ | ▲ | ▲ |
| Environmental | ▲ | ▼ | ▲ | ▼ |
| Social | ▼ | ▼ | ▲ | ▼ |
| Economic | ▲ | ▼ | ▲ | ▼ |
| Ranking | **4** | **3** | **1** | **2** |

▲ Most Preferred ▲ Somewhat Preferred ▼ Less Preferred ▼ Least Preferred

# SEPTAGE AND LEACHATE RECEIVING STATION - ALTERNATIVES




- Alternatives considered:
  - A. Maintaining septage receiving at the Craigleith SLS
  - B. Moving septage receiving to the Craigleith WWTP connected to new SPS.
- If the preferred alternative is to construct a new SPS at the Craigleith WWTP, moving the septage receiving station makes sense.

# SEPTAGE AND LEACHATE RECEIVING STATION IMPACTS

## WHY MOVE IT?

- Addresses challenges with existing sites due to traffic, safety, odour, efficiency.

## WHAT IMPACT WILL MOVING IT HAVE?

- Improvements to traffic, safety, odour, and security
- Increased truck traffic to the site along Long Point Road
- Additional concerns related to noise and odour

## MITIGATION

- Improving buffers, traffic management and enforcement, enclosed environment for discharge

# PREFERRED ALTERNATIVE: ALTERNATIVE C – EXTEND SANITARY SEWER ALONG LONG POINT ROAD AND CONSTRUCT NEW PUMPING STATION AT CRAIGLEITH WWTP

**Trunk Sewer – Grey Road 21 to Craigleith WWTP along Long Point Road**

- Installed under centreline of road approximately 3 m deep.
- Construction will take approximately 2-3 months.
- No significant environmental impacts anticipated after construction.

**New Pumping Station at the Craigleith WWTP**

- 5-8 metre deep wet-well with submersible pumps
- Integrated building with Septage and Leachate Receiving Station
- Vegetated buffer to south to be maintained and enhanced



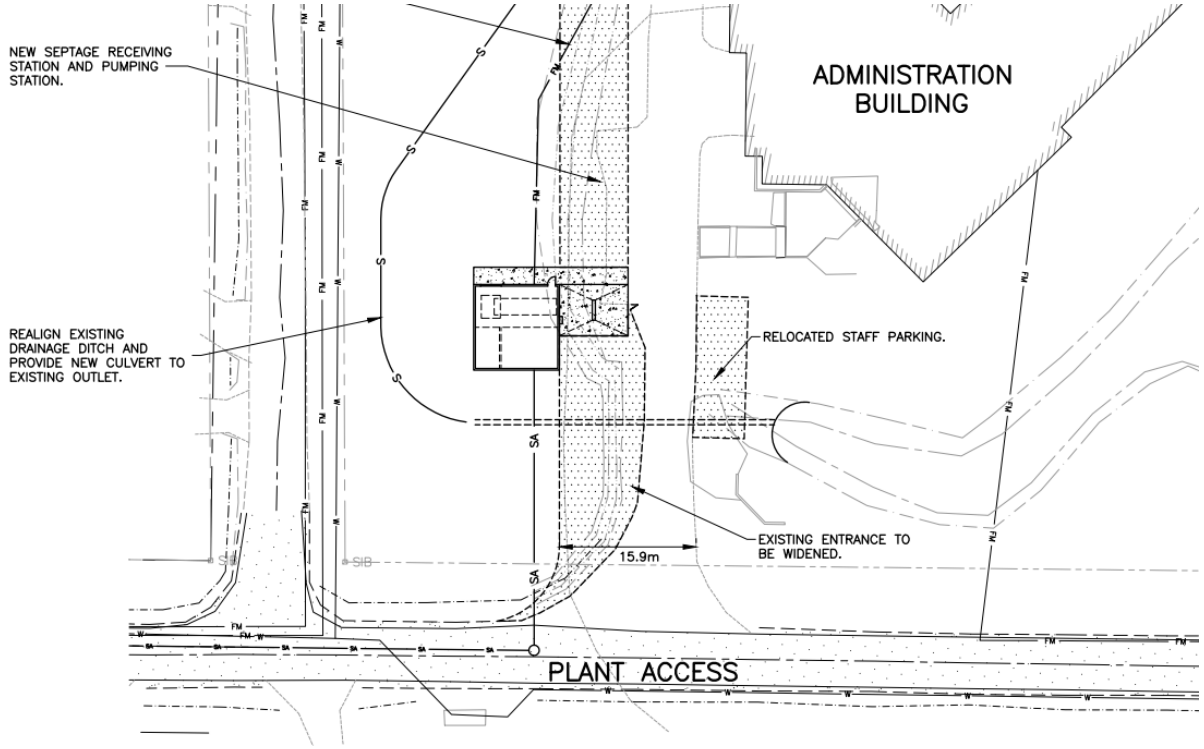
**Septage and Leachate Receiving Station**

- Access via existing secondary access from Brophy's Lane
- Drive through design to improve safety and efficiency.
- Integrated with pumping station to allow for dilution and odour management.
- Complementary use adjacent to WWTP.

**Other Issues/Impacts**

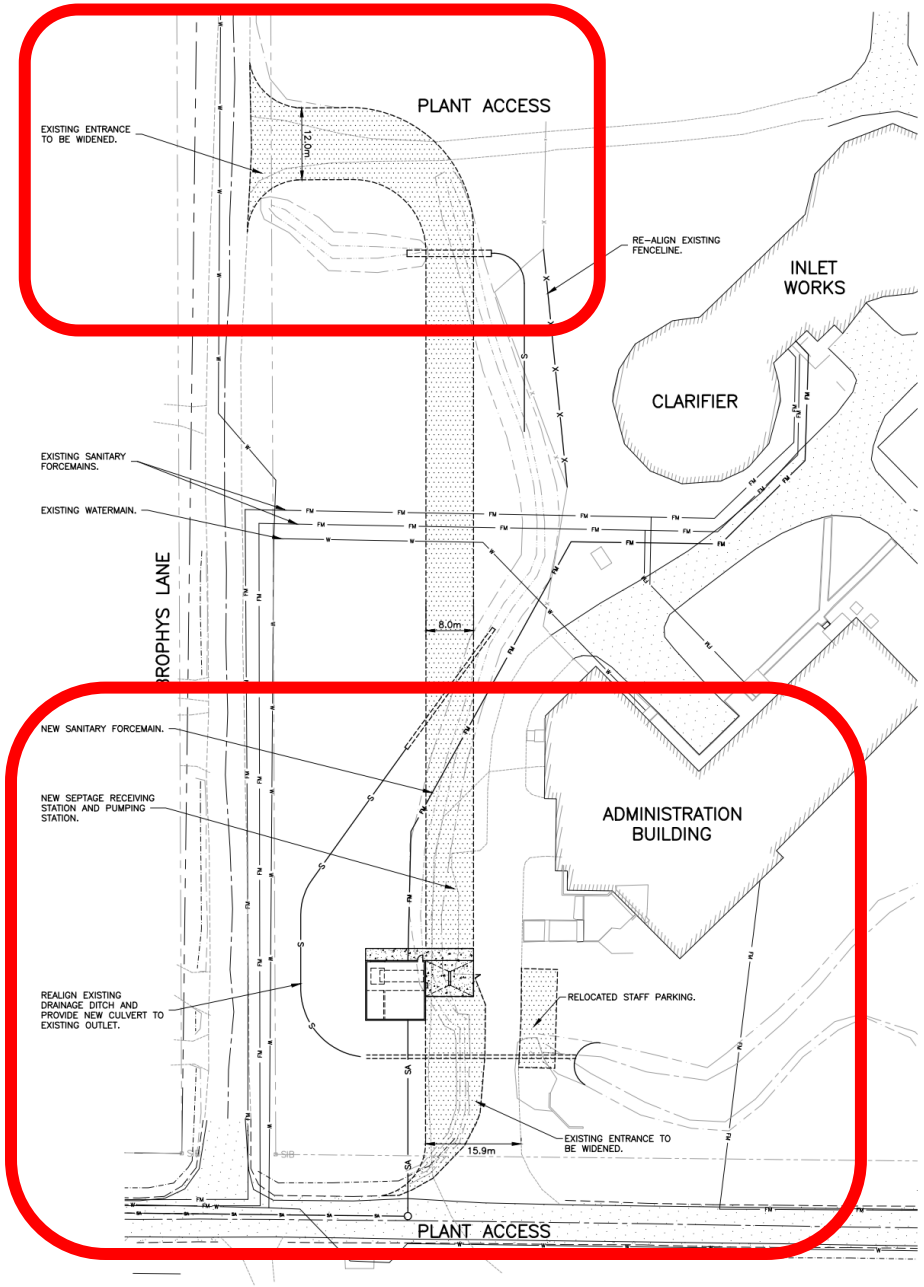
- New SPS emergency power demand can be integrated in cost effective manner with proposed generator upgrade at plant.
- Gravity sewer will have capacity to service Long Point Road and Brophy Lane with sanitary service in future.

# PREFERRED ALTERNATIVE: ALTERNATIVE C – EXTEND SANITARY SEWER ALONG LONG POINT ROAD AND CONSTRUCT NEW PUMPING STATION AT CRAIGLEITH WWTP - MAPS

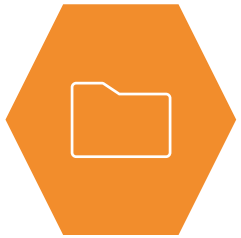



Key Components

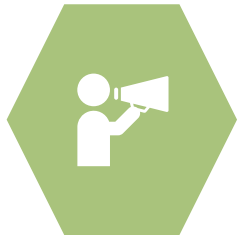
- New Sanitary Pump Station containing Septage/Leachate Receiving Station.
- Changes to Access to site for safety and efficiency.



# NEXT STEPS



COMPLETION OF PROJECT FILE/REPORT FOR CLASS EA



NOTICE OF COMPLETION



PUBLIC REVIEW PERIOD

DEVELOPMENT OF PRELIMINARY DESIGN AND BUDGET APPROVAL

DETAILED DESIGN, TENDERING AND CONSTRUCTION

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# Thank you for your time
# Questions?

For additional project information and updates go to:
www.thebluemountains.ca/LongPointRoadEA

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