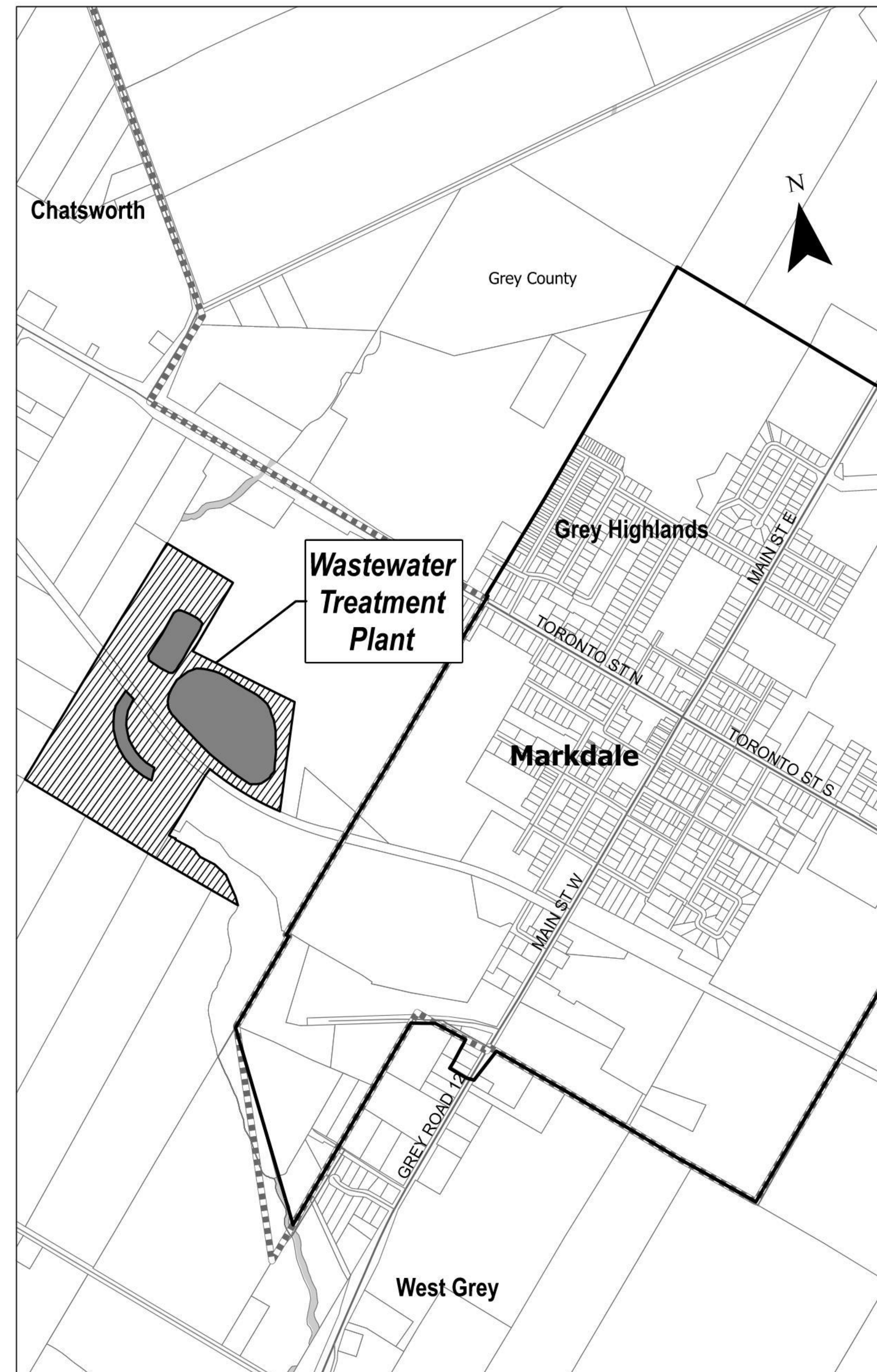
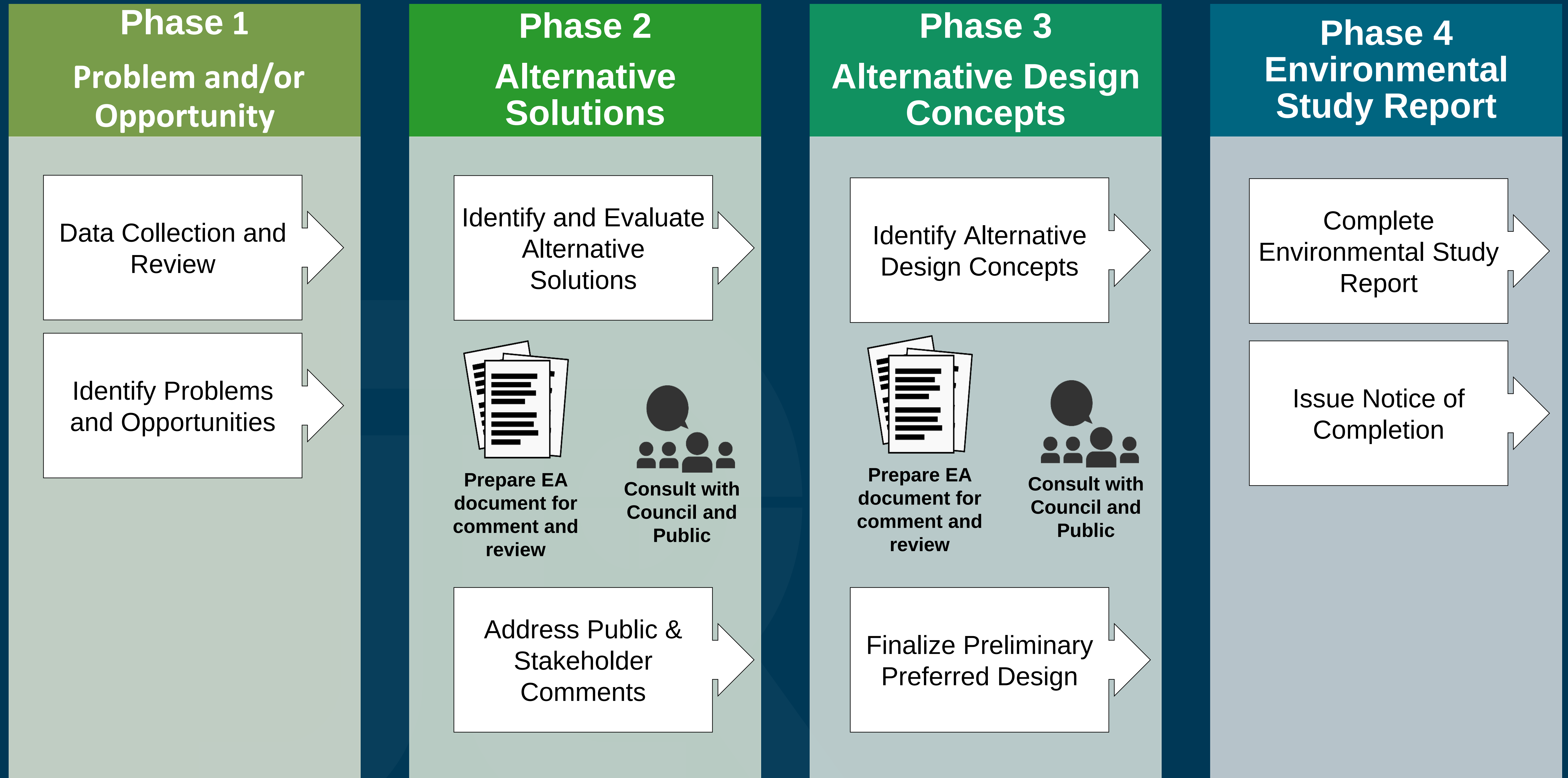


Project Overview

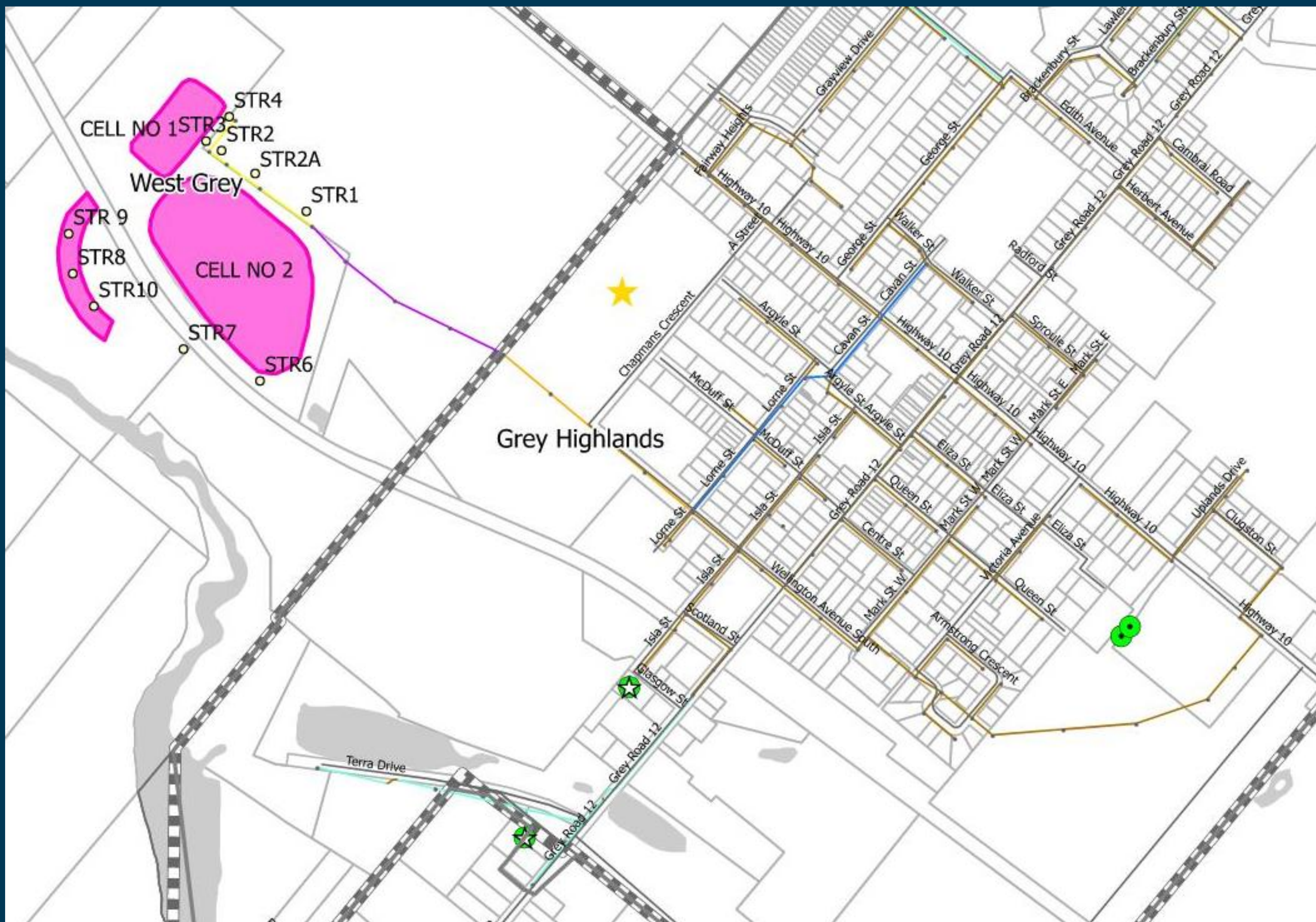
J.L. Richards & Associates Limited (JLR) has been retained by the **Municipality of Grey Highlands** to complete a **Municipal Class Environmental Assessment (MCEA)** to assess the ability of the **Markdale Wastewater Treatment Plant (WWTP)** to accommodate increased demands from future development in the serviced area.



Class EA Process Overview



Markdale System Overview



The Markdale wastewater treatment system consists of:

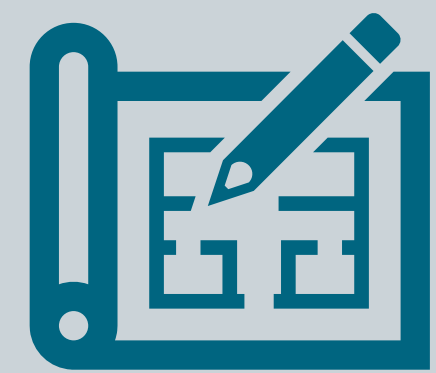
- 200 mm gravity sewers
- Two sewage pumping stations
- A wastewater treatment plant (WWTP)

The WWTP consists of:

- two aerated lagoons cells operating in series
- eight rapid infiltration basins that discharge into the groundwater table

Discharge indirectly reaches the Rocky Saugeen River.

Key Issues



The current committed development and the development with conditional approval will bring the WWTP to its rated capacity.



The **pending development approvals** will **increase the wastewater flow rates beyond the rated capacity of the WWTP.**



The WWTP rated capacity is **limited by the aeration system and the RIBs.**



Increasing the rated capacity of the WWTP will require the **installation of an upgraded aeration system and expansion of the RIBs.**

Alternative 1: Do Nothing

- No changes to the site



Requires no additional work.
Has the lowest costs.

The existing lagoon is unable to accommodate flows from future development.



Archaeology &
Cultural Heritage

Ecology & Natural
Environment

Technical &
Operational
Considerations

Economic Impacts

Recommendation: do not carry forward

Alternative 2: Upgrade Existing Lagoon

- Requires the installation of a headworks system, improved aeration system, and expanded RIBs.



50% increase in flow rating will accommodate future flows and implement operational improvements.

Requires installation of new and updated components.



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Operational
Considerations

Economic Impacts

Recommendation: carry forward as baseline alternative

Alternative 3:

New mechanical WWTP at current site

- Requires the construction of a brand-new facility to house settling, sludge removal, filtration, and/or disinfection systems.



Can accommodate flow ratings higher than the 50% increase while remaining on the existing site.

Requires cost and time intensive upgrade to mechanical facility.



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Considerations

Economic Impacts

Recommendation: do not carry forward

Alternative 4:

New mechanical WWTP at new site

- Requires the acquisition and assessment of new lands in addition to constructing a brand-new facility.



Can accommodate flow ratings higher than the 50% increase.

Incurs the highest costs due to relocation in addition to the new mechanical facility.



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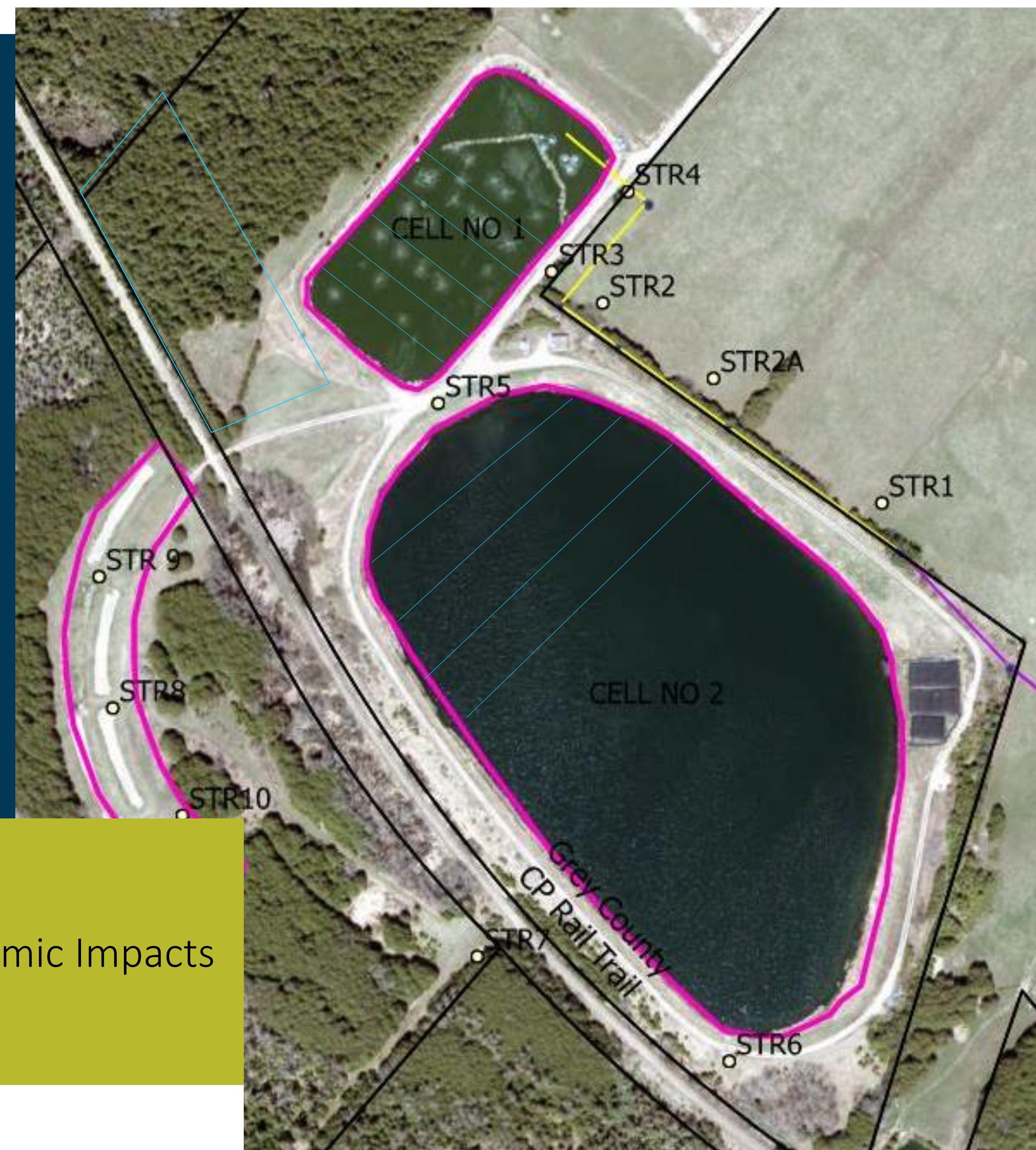
Technical &
Operational
Considerations

Economic Impacts

Recommendation: do not carry forward

Recommended Alternative: Upgrade Existing Lagoon WWTP

- 50% increase in rating to 2575 m³/d
- **Proposed Upgrades:**
 - New headworks
 - Improved aeration
 - Expanded RIBs



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Considerations

Economic Impacts

(TBD – depending
on location of RIBs)

(TBD – depending
on location of RIBs)

Recommendation: Advance to Phase 3 of MCEA

Next Steps

