

Clause No. 35 in Report No. 12 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on June 26, 2014.

35

CONSULTANT SELECTION FOR DETAILED DESIGN, CONTRACT ADMINISTRATION AND SITE INSPECTION SERVICES FOR UPPER YORK SEWAGE SOLUTIONS PROJECTS 74270 AND 75360

Committee of the Whole recommends adoption of the following recommendations contained in the report dated June 5, 2014 from the Commissioner of Environmental Services:

1. RECOMMENDATIONS

It is recommended that:

1. Council approve the award of contract for detailed design, contract administration and site inspection services related to the Upper York Sewage Solutions Project to Conestoga-Rovers & Associates, pursuant to Request for Proposal P-14-17 at a total cost of \$49,599,564, excluding taxes, and authorize the execution of the contract on behalf of the Region.
2. Council authorize the Commissioner of Environmental Services to adjust the contract administration and site inspection fees using the competitive unit price of \$15,600 per contract week, excluding taxes, and not exceeding the Capital Spending Authority for this project.

2. PURPOSE

Council authorization is requested to retain engineering services for detailed design, contract administration and site inspection for the Upper York Sewage Solutions project.

York Region's Purchasing Bylaw requires Council authorization to award Request for Proposals over \$2,000,000 or when the recommended proponent is not the lowest cost. In this case, the recommended proponent has not submitted the lowest cost and their bid is greater than \$2,000,000.

3. BACKGROUND

Upper York Sewage Solutions project will provide sustainable sewage servicing for planned growth in the Towns of Aurora, East Gwillimbury and Newmarket

The purpose of the Upper York Sewage Solutions project is to develop a local sustainable sewage servicing solution to accommodate planned growth for employment and communities totalling 153,000 residents in the Towns of Aurora (34,500), East Gwillimbury (91,500) and Newmarket (27,000). All of these municipalities are located within the Lake Simcoe watershed.

Upper York Sewage Solutions moving through the Individual Environmental Assessment Process

Upper York Sewage Solutions project followed the planning process established under the *Environmental Assessment Act* for Individual Environmental Assessments. The project was conducted in two parts – a Terms of Reference (essentially a road map as to how the environmental assessment would be undertaken) and the Environmental Assessment itself. Approval of the Terms of Reference was received from the Minister of the Environment on March 11, 2010 with inclusion of an added alternative innovative wastewater treatment technologies condition.

The Environmental Assessment completed three distinct stages:

- Alternatives to the Undertaking
- Alternative Methods of Carrying Out the Undertaking
- Impact Assessment of the Proposed Undertaking

Extensive scientific study, environmental analysis and stakeholder/First Nations consultation established key design elements

After more than five years of extensive scientific study, environmental analysis and stakeholder/First Nations consultation, the following key preferred design elements have been established for the Upper York Sewage Solutions project:

- Proposed water reclamation centre situated on the east side of 2nd Concession approximately one kilometre north of Queensville Sideroad (see *Attachment 1*).
- Trunk sewer pipes on 2nd Concession and Queensville Sideroad to provide necessary conveyances to and from proposed water reclamation centre (see *Attachment 1*).
- Proposed water reclamation centre outfall located on the south side of Queensville Sideroad discharging into the East Holland River (see *Attachment 1*).
- Modifications to the existing York-Durham Sewage System between the existing Newmarket, Aurora and Bogart Creek Pumping Stations, which include new trunk sewer pipes adjacent to the existing forcemain (see *Attachment 2*).

- Candidate stormwater management remediation sites to achieve phosphorus off-sets of 170kg/yr have been updated based on recent feedback from the Ministry of the Environment (see *Attachment 3*).

Key stakeholders include the general public, regulatory agencies and local municipalities. Consultation with First Nations was conducted in accordance with a mutually agreed upon protocol.

Consultation with Ministry of the Environment over four years confirmed key elements of innovative water reclamation centre

Proposing a water reclamation centre within the Lake Simcoe watershed required compliance with the province's Lake Simcoe Protection Plan. The proposed water reclamation centre will ultimately replace the existing Holland Landing Lagoons Water Pollution Control Plant. To accomplish this within provisions of the Lake Simcoe Protection Plan, the proposed water reclamation centre will use advanced treatment processes of low-pressure membranes (microfiltration) and reverse osmosis membranes coupled with a project-specific phosphorus off-setting program to achieve the effluent phosphorus loading cap associated with the Holland Landing Lagoons.

Wastewater treated through the membrane systems followed by disinfection will comply with Ministry of the Environment criteria for effluent (including phosphorus) and be discharged as clean treated water to the East Holland River to improve water quality in this degraded river and augment baseflow during drier summer months.

These key design elements were developed in extensive consultation with the Ministry of the Environment over the past four years.

Final Environmental Assessment Report to be submitted for formal Minister of the Environment approval in the near future

In accordance with the Upper York Sewage Solutions approved Terms of Reference, the completion of the Draft Environmental Assessment Report was advertised and made available to all interested parties, including stakeholders, the government review team and First Nations for final review and comment. The formal review period ran from February 18 to March 28, 2014. Consolidated comments were received from the Ministry of the Environment in mid-May and staff have attended follow-up meetings with staff of the Ministry of the Environment as well as the Ministry of Natural Resources. All comments received are being appropriately addressed and incorporated as required in the final Environmental Assessment report which is on track for submission to the Minister of the Environment for approval in the near future. Regional staff anticipates formal approval of the undertaking from the Minister of the Environment in 2015.

Upper York Sewage Solutions Project moving forward with the detailed design phase prior to approval of the Individual Environmental Assessment

Commissioning of the Upper York Sewage Solutions Project is currently scheduled for the end of 2018. The project team is moving forward with detailed design of the project and property acquisition in anticipation of formal approval of the Individual Environmental Assessment by the Minister of the Environment in 2015. The Region is permitted to proceed with detailed design as a measure to maintain this critical project schedule.

4. ANALYSIS AND OPTIONS

Pre-qualification process initiated in 2013 to select qualified engineering firms

In August 2013, Request for Pre-qualification P-13-113 for the Upper York Sewage Solutions project was advertised in the *Daily Commercial News* and electronically on *Biddingo.com* and the Regional website. During the pre-qualification stage, consulting firms were invited to submit, for evaluation, their team experience and past project experience applicable to the project's scope of work.

The following four consulting firms submitted a formal response to this Request for Pre-qualification:

- AECOM Canada Limited.
- CH2M HILL Canada Limited
- Conestoga-Rovers & Associates
- MMM Group Limited

All four engineering firms pre-qualified and were issued Request for Proposal P-14-17

All four engineering firms pre-qualified and, in accordance with the Region's Purchasing Bylaw, were issued Request for Proposal P-14-17 for the Upper York Sewage Solutions project in February 2014.

Request for Proposal P-14-17 detailed the scope of work required, which included the following services:

- Project management, planning and control, including stakeholder engagement financial reporting and schedule tracking
- Environmental management
- Detailed design and tendering, including pre-design reporting, value engineering and constructability reviews

- Pre-selection and design incorporation of micro-filtration and reverse osmosis technologies
- Development of building and landscape architectural concepts and designs
- Obtaining regulatory approvals and permits associated with project construction
- Contract administration and site inspection services
- Overall project quality assurance and quality control

Proposals evaluated using two-envelope system

Proposals were evaluated using the two-envelope system with technical and financial information submitted in separate envelopes. The overall proposal score was evaluated based on a weighting of 80 points for the technical proposal and 20 points for the financial proposal. Technical proposals were evaluated prior to any knowledge of financial information.

The Region's proposal evaluation team reviewed all four technical proposals based on the following criteria as listed in Request for Proposal P-14-17:

- Corporate experience
- Project manager experience
- Key and technical staff/sub-consultant experience
- Understanding and experience with advanced treatment technologies including micro-filtration and reverse osmosis
- General project understanding
- Project approach methodology
- Project schedule, work plan and deliverables
- Project management approach and manpower efforts
- Value added/innovative concepts
- Implementation of quality assurance and control process
- Approach to health and safety

Technical components of the proposal must achieve a minimum technical score of 60 per cent (48 points out of the potential 80 points) to have the financial portion of the proposal considered. If a proponent does not achieve this minimum technical score, their financial proposal is returned unopened. Technical and financial results are summarized in Table 1.

Table 1
Consultant Proposal Evaluation Summary

Consulting Engineering Firm	Technical Score (out of 80)	Total Fee (\$) (excluding taxes)	Financial Score (out of 20)	Total Score (out of 100)
Conestoga-Rovers & Associates	61.3	49,599,564.00	16.9	78.2
MMM Group Limited	50.7	41,973,514.61	20.0	70.7
CH2M HILL Canada Limited	*46.1	N/A	N/A	N/A
AECOM Canada Limited	*44.8	N/A	N/A	N/A

*Financial proposal returned unopened

Evaluation of proposals revealed Conestoga-Rovers & Associates achieved the highest total score

Evaluation of the proposals revealed that Conestoga-Rovers & Associates achieved the highest overall score and is therefore recommended for this assignment. Had any of the other bidders achieved an overall score within five points of Conestoga-Rovers & Associates' highest overall score, a dollar cost per technical point methodology would have been applied to determine the winning bid. In this case, the next second highest overall score was not within the required five points.

Conestoga-Rovers & Associates' proposal demonstrated comprehensive experience on projects with similar specialized advanced wastewater treatment designs

The state-of-the-art water reclamation centre is the main component of the project which represents 75 per cent of the total project cost. Through their technical proposal, Conestoga-Rovers & Associates clearly demonstrated their thorough understanding of the unique complexities and requirements of the project from their five-year involvement in the previous Individual Environmental Assessment relating to this project.

The technical proposal submitted by Conestoga-Rovers & Associates provided a strong team with proven hands-on experience in similar water reclamation center projects including:

- Scottsdale Water Campus – Scottsdale, Arizona
- Queensland Government Bundamba Advanced Treatment Plant Western Corridor Recycled Water Scheme – Brisbane, Australia
- Orange County Water District Groundwater Replenishment Scheme – Orange County, California
- Richmond Advanced Recycling Expansion Water Project – East Bay, California
- Changi I and II “NEWater” Plants – Singapore
- Santa Clara Valley Water District South Bay Advanced Recycled Water Treatment Program – San Jose, California

None of the other proposals demonstrated this extensive level of experience on these types of facilities and in particular in the North American regulatory environment. Furthermore, Conestoga-Rovers & Associates’ proposal committed level of effort was in line with the Region’s expectation of resources to deliver this one-of-a-kind water reclamation centre in Canada.

Detailed analysis of financial proposals confirms that Conestoga-Rovers & Associates’ bid represents good value for the Region

Conestoga-Rovers & Associates has been the lead consulting firm on the Individual Environmental Assessment study undertaken on this project as outlined in the background of this report. Over the past five years in this role, Conestoga-Rovers & Associates has acquired a comprehensive understanding of the key challenges that lay ahead on the project and has already developed strong working relationships with all project stakeholders, including community groups, regulatory authorities and local municipalities.

While the overall bid from Conestoga-Rovers & Associates is higher than that of MMM Group Limited, an analysis of the distribution of their bid clearly demonstrates that Conestoga-Rovers & Associates has taken full advantage of their experience by allocating sufficient resources towards the specific services that will ensure successful delivery of this highly complex and multifaceted project. The bid from MMM Group Limited allocated a comparatively lower amount of funding towards critical project components related to overall project planning, management and controls as well as overall construction services. As such, the detailed analysis of the submitted financial proposals confirms that Conestoga-Rovers & Associates’ bid represents good value for the Region.

Supplies and Services Branch reviewed the evaluation summary and issued their report confirming that Conestoga-Rovers & Associates be recommended as the successful overall proponent to undertake detailed design, contract administration and site inspection services for the Upper York Sewage Solutions project.

Even though AECOM Canada Limited and CH2M HILL Canada Limited pre-qualified for this assignment, their technical proposals did not achieve the minimum passing grade

AECOM Canada Limited and CH2M HILL Canada Limited are highly experienced and well-respected engineering consulting firms who both qualified to submit a proposal for this assignment. A fundamental component of the Region's evaluation process, however, is that each proposal is scored against specific predetermined criteria and is based solely on the contents of their submission without being unduly influenced by the firm's overall reputation within the industry.

Based solely on their own merit, the proposals submitted by AECOM Canada Limited and CH2M HILL Canada Limited did not demonstrate a clear understanding nor discussion of the key aspects of this unique project. Furthermore, while the listing of key team members matched those pre-qualified to undertake this assignment, the amount of time committed by these key team members clearly fell short of the Region's expectations; expectations confirmed by third-party independent analysis of the minimum human resourcing and effort that will be required to successfully deliver this complex project.

As such, the proposals submitted by AECOM Canada Limited and CH2M HILL Canada Limited did not achieve the minimum score required to have the financial portion of their proposals considered.

Link to Key Council-approved Plans

The Upper York Sewage Solutions project is a critical component of the Region's future wastewater infrastructure, facilitating 153,000 in population growth within the approved urban boundary of communities within the Towns of Aurora, Newmarket and East Gwillimbury.

The project aligns with the Region's *2011 to 2015 Strategic Plan* objectives of continuing to deliver and sustain critical infrastructure, focusing growth along Regional centres and corridors. This is in keeping with the long-term Council-adopted *Vision 2051* and the *Regional Official Plan*, which envision livable cities and complete communities.

5. FINANCIAL IMPLICATIONS

Funding for this engineering assignment is included in the approved 2014, 10 Year Capital Plan under Project 74270 Upper York Sewage Solutions and Project 75360 Upper York, York-Durham Sewage System (YDSS) Improvements with Total Project Budgets of \$418,800,000 and \$64,000,000, respectively. The Capital Spending Authorities for both projects are \$84,400,000 and \$12,800,000, respectively. The price submitted by Conestoga-Rovers & Associates is in line with the project budget estimates. Accordingly, there are sufficient funds in these Total Budgets and Capital Spending Authorities to cover the cost of these engineering fees.

Engineering fees submitted by Conestoga-Rovers & Associates equate to approximately 10 per cent of the estimated total value of the combined construction costs, which is well within industry standards for this highly complex and multi-faceted project.

Pending approval of the Individual Environmental Assessment by the Ministry of the Environment and as the Upper York Sewage Solutions project progresses, project timing, cost estimates, budget and Capital Spending Authority will be updated and included in future 10 Year Capital Plans.

Fees for this proposed work include detailed design, contract administration and site inspection services for an estimated duration of 500 contract weeks. Based on the competitive price within the financial proposal submitted by Conestoga-Rovers & Associates, the weekly rate for these services is \$15,600. However, contract administration and site inspection services will be paid according to actual hours spent by the consultant during construction of the work. The weekly rate will be used to calculate either the increase or decrease in the fee, as the case may be, to account for actual duration of construction.

Should the actual duration of construction increase, as determined by the detailed design and specified in the tender documents, it is recommended that the Commissioner of Environmental Services be authorized to adjust the fee accordingly by the amount of \$15,600 per week, excluding taxes, and not exceeding Capital Spending Authority.

6. LOCAL MUNICIPAL IMPACT

Upper York Sewage Solutions project will provide sustainable sewage servicing to accommodate planned approved growth

The purpose of the Upper York Sewage Solutions project is to develop a local sustainable sewage servicing solution to accommodate planned growth in the Towns of Aurora, East Gwillimbury and Newmarket. All of these municipalities are located within the Lake Simcoe watershed.

The Upper York Sewage Solutions project is being conducted within defined parameters, guidelines and processes as detailed in a Terms of Reference document approved by the Ministry of the Environment in March 2010. York Region will continue extensive consultation with local municipalities as the project moves into the detailed design phase.

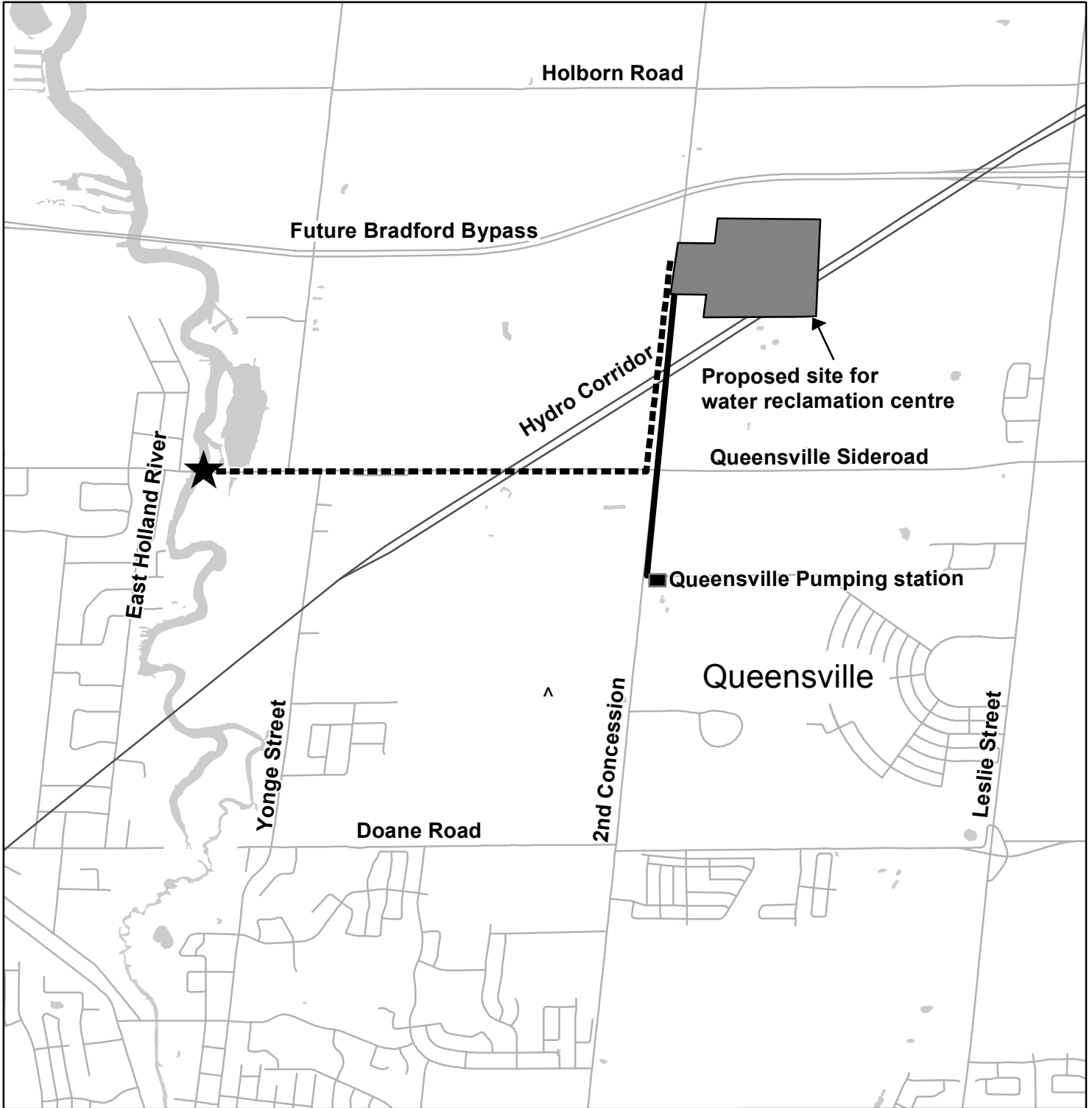
7. CONCLUSION

Four proposals from consulting firms were received and evaluated for this project in accordance with the Region's Purchasing Bylaw. The Proposal from Conestoga-Rovers & Associates represents good value for money to the Region. It is recommended that Conestoga-Rovers & Associates be engaged to undertake detailed design, contract administration and site inspection services for the Upper York Sewage Solutions project, at a fee of \$49,599,564 excluding taxes.

For more information on this report, please contact Mike Rabeau, Director, Capital Planning and Delivery, Environmental Services at 905-830-4444 Ext. 75157.

The Senior Management Group has reviewed this report.

Attachments (3)

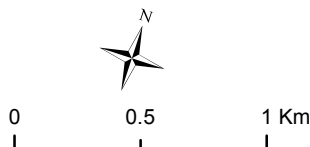


LOCATION PLAN





Consultant Selection for Detailed Design, Contract Administration and Site Inspection Services for Upper York Sewage Solutions Projects 74270 and 75360
 Report of the Commissioner of Environmental Services
 June 19, 2014

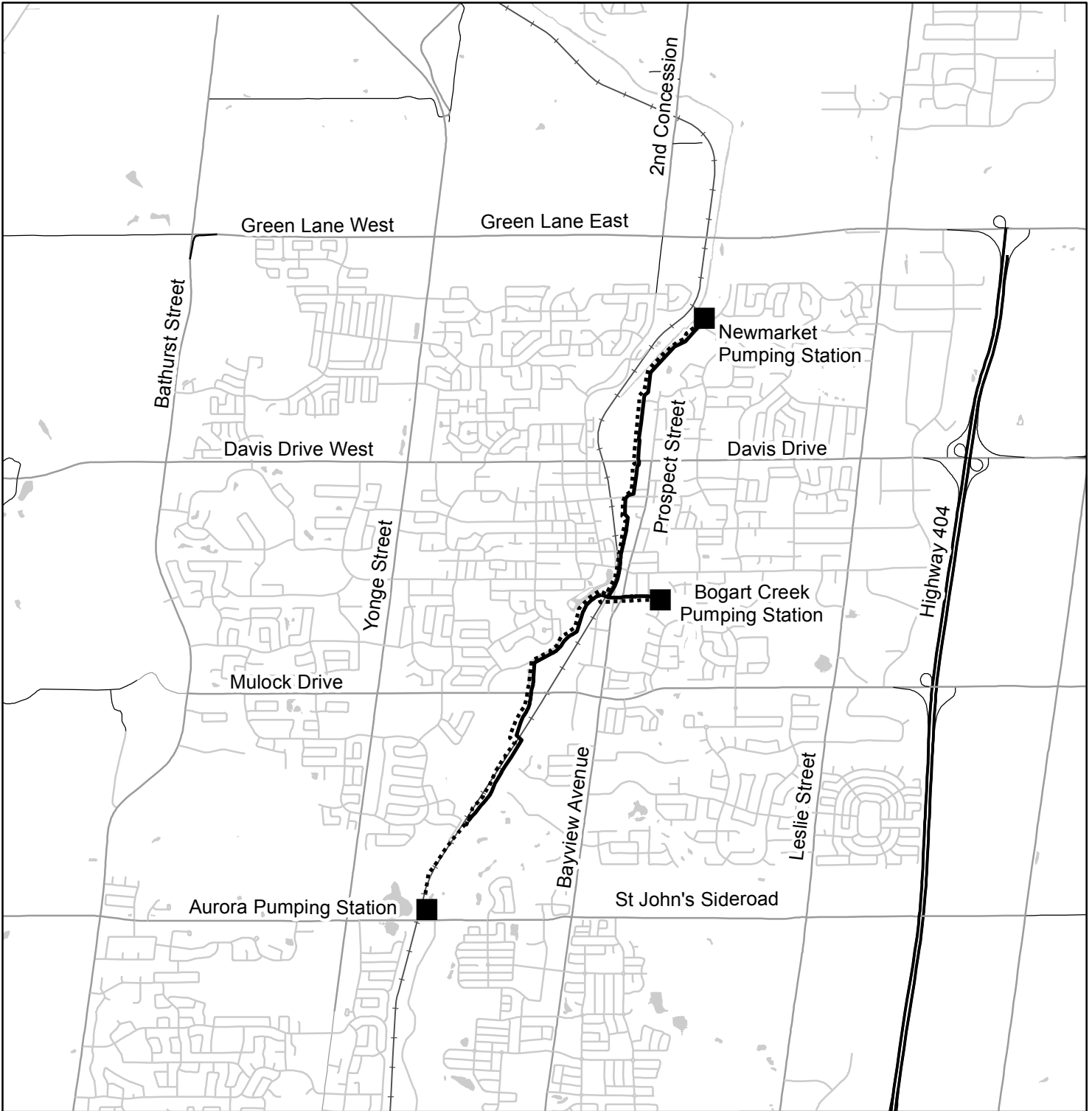


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Legend

-  Water Reclamation Centre Site
-  Proposed routing of trunk sewer to the Water Reclamation Centre
-  Proposed routing of treated water discharge to outfall
-  Proposed outfall location



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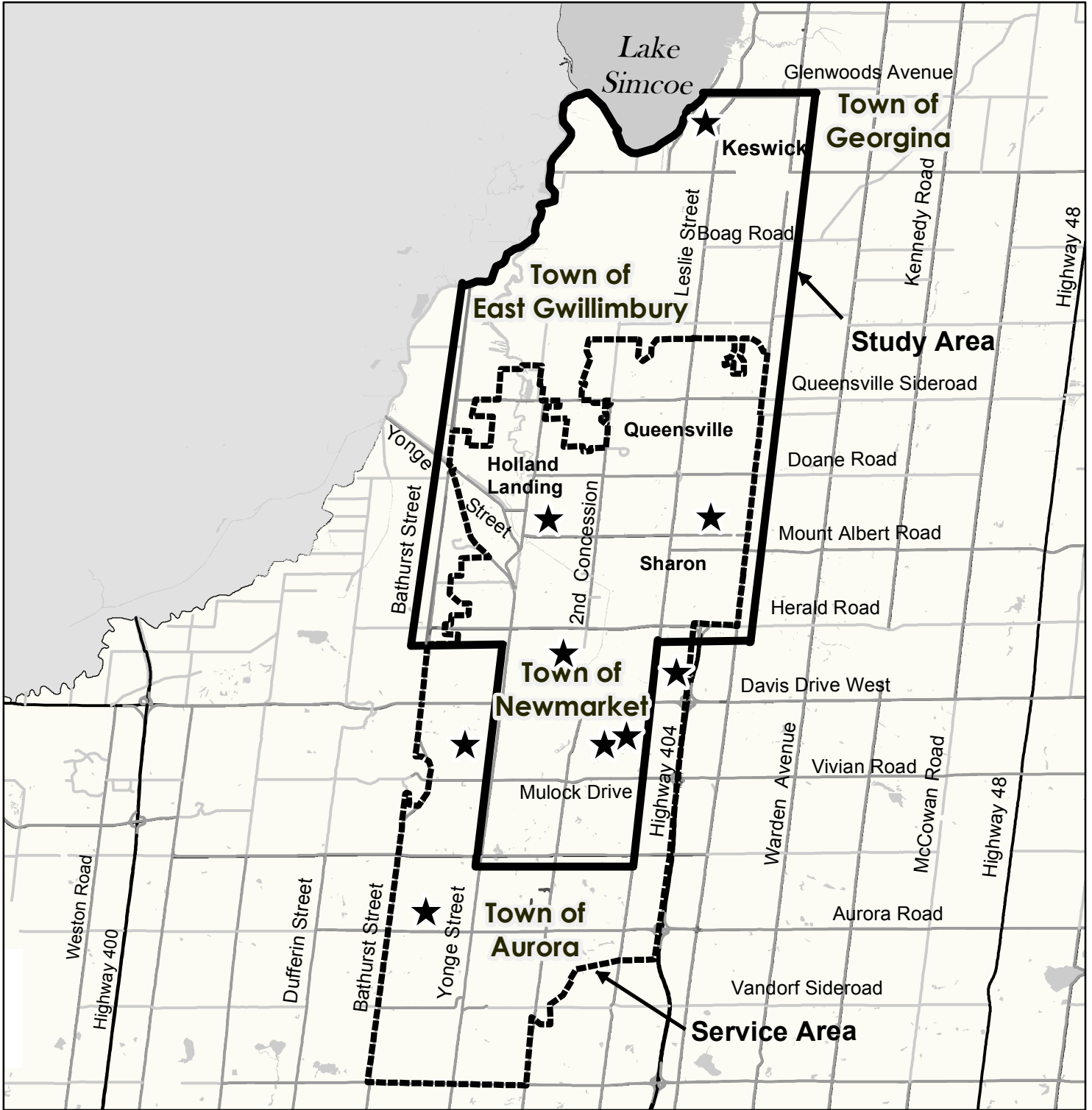


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Legend

- Proposed York-Durham Sewage System Modifications Route
- Existing York-Durham Sewage System Route

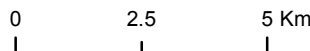


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Legend

- ★ Proposed stormwater retrofit locations
- Limit of development to be serviced
- Limit of potential environmental impact to be studied