York Region

Clause No. 2 in Report No. 6 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on November 21, 2013.

2
WATER AND WASTEWATER CAPITAL INFRASTRUCTURE STATUS UPDATE

Committee of the Whole recommends:

1. **Receipt of the presentation by Daniel Kostopoulos, Director, Capital Planning and Delivery, and**

2. **Adoption of the following recommendation contained in the report dated October 30, 2013 from the Commissioner of Environmental Services:**

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to the Clerks of the local municipalities.

2. PURPOSE

This report updates Council on the status of key water and wastewater infrastructure projects required to meet system demands identified as triggers for release of additional servicing capacity and associated approvals.

3. BACKGROUND

Capacity assigned to local municipalities serviced by York-Durham Sewage System totaling 1,157,796 people to facilitate growth to the beginning of 2017

In June 2005, Council assigned capacity up to 970,000 people to local municipalities serviced by the York-Durham Sewage System and Peel Diversion System for growth up

to 2010. Subsequently, between 2007 and 2012, additional capacity assignments were made to enable each municipality to maintain a minimum 4-year supply of water/wastewater capacity. With the recent capacity assignment by Council in June 2013, the cumulative assigned servicing capacity in the York-Durham Sewage System and Peel Diversion System, including inflow and infiltration pilot projects and reserve for East Gwillimbury Prepaid Development Charge Agreement, totals 1,157,796 people. The June 2013 capacity assignment also provided a future capacity outlook of 50,722 which will allow local municipalities to achieve their 2021 Regional Official Plan targets.

Past capacity assignments are summarized in Table 1.

Table 1
Capacity Assignment in York-Durham Sewage System Service Area*

Date	Capacity Assignment (People Equivalent)	Cumulative Assignment	Growth Up To Year**
23-Jun-05	970,000	970,000	2010
15-Nov-07	35,737	1,005,737	2011
18-Dec-08	36,264	1,042,001	2012
18-Feb-10	36,328	1,078,329	2013
11-Apr-12	20,655	1,098,984	2016
27-Jun-13	58,812***	1,157,796	2017

* The existing YDSS serviced population in 2012 is approximately 1,003,000
** Based on Regional Official Plan and Local Official Plan population projections
*** Including inflow and infiltration pilot projects and reserve for East Gwillimbury Development Charge Agreement

In communities outside the York-Durham Sewage System service area, the Region is either in the process of completing or has completed major water and wastewater system upgrades. Upon completion of works identified in Table 4 of this report, a total servicing capacity of over 75,000 people exists in Schomberg, Mount Albert, Nobleton, Kleinburg, Keswick, and Ballantrae.

The last update to Council on the status of delivering key water and wastewater infrastructure projects was provided on May 16, 2013 in Clause 2 of Report No. 4 of Environmental Services Committee. The next update is scheduled for Q1/Q2 2014.

4. ANALYSIS AND OPTIONS

Capacity triggers ensure timing of new home occupancy coincides with available water and wastewater services

Monitoring progress of trigger projects assists the Region in better managing two key steps in the planning approvals process:

- Pre-sales of homes
- Final plan approvals

A trigger project is defined as a project that is required to meet committed capacity assignment to local municipalities. Capacity triggers are required to avoid premature occupancy of new dwellings in advance of completion of municipal water and wastewater services.

In general, pre-sales of homes are only permitted if required infrastructure is expected to be in place within one year and final plan approvals are granted if the required infrastructure is expected to be in place within six months. At the discretion of the local municipality, high-density development may move to final approval within eighteen months of completion of required infrastructure and complex high-rise developments within thirty-six months of completion of required infrastructure.

Permission for pre-sales of ground-related units pertaining to the post-2013 capacity assignment expected to occur in early 2014

For all developments pertaining to pre-2013 capacity assignments, local municipalities have been advised that final plan approval can proceed for all service areas with the exception of Queensville/Holland Landing/Sharon which is contingent on completion of the Queensville/Holland Landing/Sharon servicing projects.

With construction of the new Southeast Collector Trunk Sewer progressing as scheduled, local municipalities have been advised of the following:

- Issuance of building permits for all high-rise units pertaining to the 2013 and post-2013 capacity assignments can proceed except for developments located in Queensville/Holland Landing/Sharon and Pomona sewershed.
- Registration of ground-related units pertaining to the 2013 capacity assignment can proceed except for developments in Queensville/Holland Landing/Sharon as well as Pomona and North Don sewersheds.

The projected date for permitting pre-sales of ground-related units pertaining to the post-2013 capacity assignment residential units is January 2014.

Key project status highlights for York-Durham Sewage System service area

Status of key projects required to service growth beyond 2013 is summarized below and in *Attachment 1*. Project locations are illustrated in *Attachment 2.* The only remaining project required to service growth reliant on capacity assignment up to 2013 is the Queensville/Holland Landing/Sharon wastewater servicing project. Status of this project is summarized below and its location is illustrated in *Attachment 2*.

Three contracts for Queensville/Holland Landing/Sharon servicing are under construction with all remaining linear works to be tendered this fall

The Amended Agreement for the Queensville/Holland Landing/Sharon wastewater servicing project for the communities of Queensville, Holland Landing and Sharon was executed on March 28, 2012. This allowed for the award of the Queensville Elevated Tank No. 1 tender on March 30, 2012 with a project completion date of Q4 2013.

The Queensville/Holland Landing/Sharon wastewater servicing system is currently planned to be constructed under six separate tenders. Contracts for the first three tenders (Holland Landing Sewage Pumping Station, 2nd Concession Sewage Pumping Station and Queensville West Sewage Pumping Station) have been awarded and are all currently under construction. Remaining linear works will be tendered in three contracts: water and wastewater linear work combined with the 2nd Concession Road Widening project, the Sharon Trunk Sewer and remaining linear works outside of 2nd Concession. The Sharon Trunk Sewer is subject to execution of an additional Prepaid Development Charge Credit Agreement with the Sharon Landowners and was tendered in October 2013. Linear works outside 2nd Concession will be tendered in November 2013 and the 2nd Concession Road Widening project will be tendered in Q1 2014. The in-service date for the Queensville/Holland Landing/Sharon Wastewater Servicing system is currently scheduled for Q2 2015 (last reported 2015).

Three Tunnel Boring Machines actively mining on Southeast Collector Trunk Sewer

Construction of the Southeast Collector Trunk Sewer continues and the commissioning date is forecast to occur in late 2014 (last reported: late 2014). Work already underway or completed includes:

- Phases 1 - 3 of Bob Hunter Memorial Park are complete
- Reconstruction and realignment of York-Durham Line is complete
- Construction continues at all shaft and mining site compounds
- One of the tunnel bores is now complete. The remaining 3 are actively mining with nearly 10,000m or 67 percent of the trunk sewer now constructed
- Construction of the Odour Control Facility, two Air Handling Facilities, a Corrosion Control Facility and the Central Duffin Collector Metering Chamber are all underway

Construction of Duffin Creek Stages 1 and 2 upgrades well underway

Duffin Creek Water Pollution Control Plant Stages 1 and 2 upgrades are required as a condition of the Ministry of the Environment Certificate of Approval (Air) for the Duffin Creek Water Pollution Control Plant Stage 3 Expansion. The project is currently progressing in stages: the New Stages 1 & 2 Electrical Substation construction contract was awarded in December 2012 and is approximately 50 per cent complete; the new Disinfection Building has also been awarded and construction has commenced; the new Preliminary Treatment Building and Influent Pumping Station is expected to be issued for tender in Q4 2013; and refurbishment of the Stages 1 & 2 liquid treatment trains are in detailed design. It is anticipated that these construction contracts and several equipment pre-purchase contracts will be issued and awarded over the next year with commissioning and overall substantial performance expected in late 2016 (last reported: 2016).

Implementation of the current Odour Management Plan will continue with additional sampling and testing scheduled upon completion of the Stages 1 & 2 Upgrades and Refurbishment projects which is anticipated in 2017. (last reported: 2017)

Commissioning for Duffin Creek Stage 3 Influent Pumping Station by end of year

The new Duffin Creek Stage 3 Influent Pumping Station is required to facilitate connection of the new Southeast Collector Sewer to the existing York-Durham Sewage System and to prevent surcharge conditions during construction and in the future. The main pumping construction contract was awarded in December 2012 and construction is well underway with commissioning expected to commence in Q4 of 2013, with substantial performance expected in Q1 2014 (last reported: late 2013). Final delivery of equipment in the pre-purchase contracts is expected to be complete in Q4 2013.

Environmental Assessment for Duffin Creek Plant Outfall planned for completion by the end of the year

York Region and Durham Region jointly initiated a Schedule ‘C’ Class Environmental Assessment study in December 2010 to identify the preferred solution for addressing limitations of the existing outfall and diffuser system at the Duffin Creek Water Pollution Control Plant. The present flow capacity limit is 520 ML/day and the preferred solution will permit the Duffin Creek Water Pollution Control Plant to fully realize the new expanded plant treatment capacity of 630 ML/day.

Baseline studies have been completed including geotechnical investigations, a water quality modelling report for near-shore lake water and a natural environment and fisheries report. Each of these reports have been peer reviewed by independent subject matter experts and found to be appropriate for assessing the alternative solutions for providing additional outfall capacity for the Duffin Creek Water Pollution Control Plant.

After evaluation, the EA process has determined the following phased Recommended Solution:

- Short-term – optimize operation of existing upgraded plant (Stages 1, 2 and 3)
- Medium-term – modify existing outfall diffuser with a variable port technology to achieve outfall hydraulic capacity to at least 630 MLD

The phased Recommended Solution was presented to the Stakeholders Advisory Committee on November 22, 2012 and to the public at Public Information Forums held on February 26 and 27, 2013 in the City of Pickering and Town of Ajax, respectively. An Independent Peer Review of the phased Recommended Solution has been completed with positive results and useful suggestions to improve technical documentation of the Environmental Assessment process. Work is currently underway on the final phase of the Environmental Assessment process to look at methods to implement the Recommended Solution. A peer review will also be completed on the final EA documentation before submission to the MOE. Implementation recommendations have been presented to the Stakeholders Advisory Committee on October 1, 2013. Final public meetings to present the results of the final recommendations of the Environmental Assessment took place on October 29, 2013 in City of Pickering and on October 30, 2013 in Town of Ajax. Work is ongoing with key stakeholders such as the Town of Ajax to address, to the extent possible, any outstanding water quality issues along the Town of Ajax shoreline.

The Environmental Assessment Study is on schedule for completion by the end of 2013 with construction of the short- and medium-term solutions following Ministry of the Environment approval of the Environmental Assessment.

A long term planning option for a new outfall was also looked at under the EA process however a long term solution for flows beyond 630 MLD will require a new EA in the future to assess available options for providing additional outfall hydraulic capacity when required. The timing for the long-term planning option for a new outfall will be evaluated as part of the next Water and Wastewater Master Plan Update in 2015 based on future hydraulic needs of the plant.

"Impact Assessment of the Preferred Undertaking" for Upper York Sewage Solutions Environmental Assessment now complete

The Upper York Sewage Solutions project is required to accommodate provincially approved growth within the Towns of Aurora, Newmarket and East Gwillimbury by 2031. As part of the Environmental Assessment Study currently nearing completion, a "Lake Simcoe Water Reclamation Centre" with associated collection and conveyance infrastructure systems (proposed to be located in East Gwillimbury), in addition to proposed modifications to the existing York-Durham Sewage System in Newmarket and Aurora, has been identified as the Preferred Undertaking for the Upper York Sewage Solutions project. An extensive public consultation program has been undertaken as part

of the environmental assessment for the project to allow timely input from the public and key stakeholders over the last five years.

The Lake Simcoe Water Reclamation Centre is proposed to be sited on the east side of 2nd Concession about 1.5 kilometres north of Queensville Sideroad in East Gwillimbury. The proposed location for the outfall that will discharge clear treated water will be located on the south side of Queensville Sideroad at the East Holland River. Finally, the York-Durham Sewage System modifications, consisting of a proposed new forcemain between the Newmarket, Bogart Creek and Aurora pumping stations, will follow a route essentially paralleling the existing York-Durham Sewage System forcemain through Newmarket and Aurora.

Innovative public consultation for Upper York Sewage Solutions allowed stakeholders a unique approach to be engaged

An impact assessment of each element of the Upper York Sewage Solutions preferred undertaking has been determined, evaluated and mitigation applied. The project team, in a June 2013 public open house trade show format, shared visuals, information/fact sheets, maps, and interactive displays, and invited residents, the public and all stakeholders to learn about the outcome of this innovative York Region endeavor.

Preparations underway for submission of the Upper York Sewage Solutions Environmental Assessment Report to government review agencies, members of the public, First Nations and Metis organizations

Following the June 2013 public open house in East Gwillimbury and a final presentation at the ROC in the Town of Georgina of the impact and mitigation of the elements of the Upper York Sewage Solutions preferred undertaking, the project team is preparing the documentation for a pre-submission of the Environmental Assessment Report.

Consultation with Chippewas of Georgina Island First Nation continues as their technical advisor completes review of Upper York Sewage Solutions documents

In accordance with First Nations' protocol, a separate consultation process (Chippewas of Georgina Island First Nation Technical Review Communications Protocol) engaging the Chippewas of Georgina Island First Nation is ongoing. Under this protocol, York Region has provided funding for FHR Inc. as an advisor to the Chippewas of Georgina Island First Nation, to complete a technical review of four groups of documents relevant to the proposed Lake Simcoe Water Reclamation Centre. Comments and questions on the final set of documents were discussed with First Nations at a meeting held on September 30, 2013.

Upper York Sewage Solutions Project on schedule for delivery by the end of 2018

Subject to provincial approval, commissioning of the overall project is scheduled for late 2018 (last reported: late 2018). This date will be reviewed and updated following formal approval of the Individual Environmental Assessment by the Minister of the Environment, which is anticipated to occur in late 2014. To maintain ability to meet this schedule prequalification of engineering consultants for detailed design, construction administration and site inspection services has been completed. It is anticipated detailed design will proceed in 2014 in advance of Individual Environmental Assessment approval.

Kennedy Road Watermain tunnel contract well underway with two tunnel boring machines actively mining

The Toronto East Water Supply project involves construction of a 1500mm diameter watermain along Kennedy Road from the Milliken Pumping Station on 14th Avenue to Major Mackenzie Drive. The project is required to provide additional water from Toronto to Markham Pressure District 6 to meet long-term growth demands. The work is being completed under two contracts. On the tunnelling contract currently in construction, both tunnel boring machines are actively mining with two shifts on the southbound tunnel boring machine. To date approximately 1000 metres has been completed, representing 35 percent of the 2825 meters of the tunnel to be completed under this contract. The open cut contract is complete. Commissioning of the entire watermain from Milliken Pumping Station to Major Mackenzie Drive is expected to be completed by Q2 2014 (last reported: Q2 2014). The completion date is not anticipated to delay or impact timing of approved development within the service area.

West Richmond Hill Pumping Station construction contract tendered

West Richmond Hill Pumping Station is a new pumping facility identified in the 2009 Water and Wastewater Master Plan Update to pump water from Pressure District 6 to Pressure Districts 7, 8 and 9. The Environmental Assessment was filed on October 13, 2011 and detailed design commenced in February 2012. The construction contract was tendered in October 2013. The project is expected to be commissioned by Q4 2015 (last reported: Q4 2014). The one-year delay is due to a number of factors that were not known during the initial stages of design and only became evident after additional field investigations were completed. This includes the need to complete additional geotechnical and hydrogeological investigations required to design and subsequently construct a separate building for disinfection of the water supply before routing to the existing adjacent storage reservoir on the property. Also, extensive dewatering in addition to very specialized, complex, deeper and much more time intensive methods of shoring construction will be required to facilitate construction of the proposed pumping station.

Environmental Assessment for West Vaughan Sewage Servicing is now complete

The West Vaughan Sewage Servicing project was identified in the 2009 Water and Wastewater Master Plan Update to provide sanitary sewage capacity to service growth in the West Vaughan area (the area west of Highway 27 including Kleinburg-Nashville) is now complete.

The Environmental Assessment recommended a design concept for the preferred servicing solution to construct 14 kilometers of new Regional trunk sewer system primarily within the Region's road rights-of-way along Rutherford Road, Highway 27 and Highway 7. The servicing solution also included expanding the Humber Pumping Station from the existing capacity of 1,700 L/s to a capacity of 2,400 L/s. Segments of the proposed trunk sewer are described in Table 2 below.

Table 2
Proposed Trunk Sewer Segments

Sewer Segments	Length (approx. km)	Size (approx. mm)	Proposed Construction Method
Northern segment (along Highway 27 from Kleinburg WPCP to Rutherford Road)	3.3	900	Micro-tunnelling
West segment (along Rutherford Road from Huntington Road to Highway 27)	1.8	1000	Micro-tunnelling/Open-cut
Central and South segments (along Highway 27 & Highway 7 to existing Humber Pumping Station)	8.9	3000	Tunnelling with Earth Pressure Balance Tunnel Boring Machine

This recommended design concept was established through a comprehensive evaluation of eight applicable alternatives. The evaluation identified numerous advantages with the recommended design concept, such as lower life-cycle cost, reduced environmental impacts and minimized social disruption during construction. Field investigations and agency consultations through the course of the study identified surface and underground constraints in the area, which will be addressed with as part of the detailed design. Request for Proposals from design engineering firms will be issued in Q4 2013. Now that the final recommended sewer route has been selected, the schedule for completing the overall project is determined to be Q4 2018 (last reported: 2017).

Leslie Street Sewage Pumping Station Upgrades in energy and efficiency improvements are at the peak of activity

The Leslie Street Sewage Pumping Station collects wastewater flow from areas of Vaughan, Richmond Hill and Markham. The facility pumps wastewater to the Duffin Creek Water Pollution Control Plant. The upgrade project will increase station pumping capacity to meet growth requirements in the service area and also includes major electrical, Supervisory Control and Data Acquisition (SCADA), standby power and building envelope upgrades. The tender was awarded in December 2012 and construction commenced in January 2013. Although the entire project is scheduled for completion by Q1 2016 (last reported: Q1 2016), increased pumping capacity will be commissioned by Q4 2014 (last reported: Q4 2014).

New Primary Trunk Sewer required to service future growth beyond 2026

The Primary Trunk Sewer project involves constructing a new sewer along a yet-to-be-determined route, from the terminus of the Southeast Collector Trunk Sewer to the Duffin Creek Water Pollution Control Plant, in the City of Pickering. The new primary trunk sewer will provide additional conveyance capacity to the existing primary trunk sewer. During the 2013 budget project prioritization process, staff assessed capacity requirements and confirmed that timing for this project can be deferred without impacting planned growth or capacity assignment in York Region. The project is now scheduled for completion after 2026 (last reported: 2026) and specific timing will be re-evaluated as part of the next Water and Wastewater Master Plan Update.

North Don Relief Sewer tendered and construction has started

The North Don Sanitary Relief Sewer will divert flows from the North Don Sewer at Carville Road to the Bathurst Collector Trunk Sewer to alleviate capacity constraints in the existing North Don Sewer system and support growth in Richmond Hill, Vaughan and Markham. The project has been tendered and construction has started with anticipated commissioning/in-service date of Q4 2014 (last reported: 2014).

Staff continues to monitor status of Peel and Toronto cost-shared projects

Provision of water and wastewater services through partnerships with Toronto and Peel Region is a key component of the Region's long-term servicing strategy. Twenty-one water projects and 15 wastewater projects in Peel Region and six water projects in City of Toronto are currently underway to provide capacity to service growth in the Region including seven in construction. Regional staff conduct regular meetings with Toronto and Peel staff to discuss issues regarding supply commitments including cost-shared project delivery schedules. Based on the current progress of Peel and Toronto's projects, it is expected that both partners will meet their long-term water supply agreement commitments to the Region.

All three contracts for Hanlan Feedermain have been released for tender

In 2009 the Region of Peel completed a Schedule 'C' Class Environmental Assessment study to identify the preferred route for the new 2400 mm diameter Hanlan Feedermain, which will extend approximately 12 km north from Lakeview Water Treatment Plant to Hanlan Pumping Station. This project is required to meet future water supply needs to support growth. The first contract (tunneling) closed on September 25, 2013 and construction is scheduled to commence in late 2013. The second contract (open cut) has been tendered and closed on October 16, 2013 and construction tentatively scheduled for early 2014. The last contract (open cut/tunnelling) was tendered on October 18, 2013 with construction tentatively scheduled for Q2 2014. The project will be completed in late 2016. A summary of the capacity of water supply sources servicing York Region for the years 2013 and 2031 is provided in Table 3.

Table 3
Water Supply Capacity to York Region

	2013		2031	
Water Supply Sources	**Capacity (MLD)**	**% of Supply**	**Capacity (MLD)**	**% of Supply**
York Water System				
• City of Toronto	502	62	509	49
• Peel Region	165	21	388	38
• Yonge Street Aquifer Wells	62	8	62	6
• Stouffville Wells	12	1	12	1
Georgina Water System	40	5	45	4
Stand-alone Groundwater Systems (e.g. Schomberg, Nobleton, Kleinburg*, Ballantrae, Mount Albert, and Ansnorveldt)	23	3*	20	2*
Total	**804**	**100**	**1,036**	**100**

* Lake-based water supply to Kleinburg was completed in 2013 and will reduce reliance on groundwater system in this community

Major system upgrades completed in most communities outside York-Durham Sewage System

In addition to major works pertaining to the York-Durham Sewage System service area, communities outside the York-Durham Sewage System service area are either in the process of being completed or have completed major water and wastewater system upgrades. A summary of major capacity upgrades in these communities is presented in Table 4.

Table 4
Major Capacity Upgrades
Communities outside York-Durham Sewage System Service Area

Community	Recent Water and Wastewater Upgrades (since 2005)	Total Capacity in Persons after Upgrades
Schomberg	• Completed new water pollution control plant in 2009 • Completed water supply system upgrade including a well, water treatment plant and reservoir in 2010	3,450
Mount Albert	• Completed water pollution control plant expansion in 2005 • Completed water supply system upgrade including watermain along Centre Street and one additional well in 2010 and 2011 respectively	6,000
Nobleton	• Completed new water pollution control plant in 2010 • Completed new elevated tank in 2012 • Completed upgrades to existing Russell Snider Drive elevated tank in Q3 2013 • Upgrades to Well 3 scheduled for Q3 2014 • Water supply system upgrade involving an additional well are scheduled for commissioning in Q3 2014	6,500
Kleinburg	• Completed water pollution control plant expansion in 2012 • Water supply system upgrade involving extension of lake-based supply via Huntington Road watermain, phase one of Nashville Road watermain, and booster pumping stations commissioned	7,500
Keswick	• Completed Joe Dales Pumping Station upgrade in 2012 • Water Pollution Control Plant Phase 2 Expansion was commissioned in Q2 2013 and scheduled for Total Completion in Q4 2013. Outfall expansion is scheduled for commissioning in late 2013 and completion in Q2 2014 • Georgina Water Treatment Plant Phase 2 Expansion completed in 2011 • North Keswick Elevated Tank and associated watermain along Woodbine Avenue completed in 2012 • West Park Heights Reservoir upgrades to be completed in Q4 2013	49,000
Ballantrae	• Water supply system upgrade involving an additional well is now commissioned • Ballantrae Well No. 3 is now operational	5,600

Note: With completion of all expansion works listed in Table 4, there will be available capacity in stand-alone systems to service growth of an additional 30,000 people

Link to Key Council-approved Plans

Timely delivery of critical infrastructure projects identified in this report is essential to ensure that water and wastewater system capacity is available to service the targeted growth of the Regional Official Plan. By prioritizing and integrating delivery of critical infrastructure projects with timing of planning approvals to address growth needs in an efficient manner, community benefit is being optimized in accordance with the goals of the 2011-2015 Strategic Plan to continue to deliver and sustain critical infrastructure and supports focus growth along Regional centres and corridors.

5. FINANCIAL IMPLICATIONS

Of the total $3.5 billion of capital works included in this update, $3.4 billion or 93.7 percent is funded through development charges, 3.7 percent through user rates and the remaining 2.6 percent is paid for by other municipal servicing partners

A summary of the costs of infrastructure projects since 2005 in communities outside York-Durham Sewage System service area is provided in Table 5. The total cost of these works amounts to $312 million.

Table 5
Cost Estimates for Infrastructure Projects in
Communities Outside York-Durham Sewage System Service Area

Project	Project Cost Estimates
Schomberg Water Supply System Upgrade and New Water Pollution Control Plant	$31,600,000
Mount Albert Water Supply System Upgrade* and Water Pollution Control Plant Expansion*	$16,900,000
Nobleton Water Supply System Upgrade and New Water Pollution Control Plant*	$37,100,000
Kleinburg Water Supply System Upgrade and Water Pollution Control Plant Expansion	$60,400,000
Keswick Water Supply and Sewage Systems Upgrade including Expansion of Georgina Water Treatment Plant and Keswick Water Pollution Control Plant	$161,200,000
Ballantrae Water Supply System Upgrade	$4,600,000
Total	**$311,800,000**

* Works were carried out under a Prepaid Development Charge Credit Agreement

A summary of priority infrastructure project costs in the York-Durham Sewage System service area is provided in Table 6. The total cost of these works is $3.2 billion, including cost shared capital works with Toronto and Peel.

Table 6
Cost Estimates for Key Infrastructure Projects
York-Durham Sewage System Service Area

Project	Project Cost Estimates
Queensville Elevated Tank No. 1	$9,300,000
Queensville/Holland Landing/Sharon York-Durham Sewage System Connection	$150,400,000
Southeast Collector Trunk Sewer	$563,500,000
Duffin Creek Water Pollution Control Plant Stages 1 and 2 Upgrades*	$212,300,000
Duffin Creek Stage 3 Pumping Station	$42,000,000
Duffin Creek Water Pollution Control Plant Outfall*	$143,100,000
Upper York Sewage Solutions	$509,900,000
Kennedy Road Watermain	$70,300,000
West Richmond Hill Pumping Station	$42,000,000
West Vaughan Sewage Servicing	$209,000,000
Leslie Street Pumping Station Upgrades	$30,800,000
Primary Trunk Sewer*	$179,200,000
North Don Relief Sewer	$17,100,000
Subtotal	**$2,178,900,000**
Toronto Cost Shared Projects**	$391,300,000
Peel Water Cost Shared Projects**	$577,900,000
Peel Wastewater Cost Shared Projects**	$57,900,000
Total	**$3,206,000,000**

* Cost shown does not include Durham share budgeted at $55M for Duffin Creek Stages 1 and 2 Upgrades, $16M for Duffin Creek Outfall and $20M for Primary Trunk Sewer. These amounts are subject to ongoing cost share negotiation with Durham Region.

** Toronto and Peel project costs represent York's share expenditures for the last 5 years plus budgeted cost for the next 10 years. Peel and Toronto project costs are subject to annual review with changes brought forward as part of the annual capital budget process.

Expenditures within the current Capital Spending Authority are included in approved 2013 Capital Budget

Cost estimates shown in Tables 5 and 6 only include capital funding requirements. Costs in this update include previously spent and remaining-to-be-spent amounts. The majority of these works are debt financed. As part of the annual budget process, associated funding and resource requirements for operations and asset management of expanded infrastructure systems are assessed and included in the annual budget. The Operations, Maintenance and Monitoring Branch resource plan currently includes the addition of 21 staff during the three-year period from 2014 to 2016 required to support the increased asset base and the growth-related capital program.

The 2.6 percent of other funding is from Peel and Durham Regions where York Region has entered into a cost sharing agreement.

6. LOCAL MUNICIPAL IMPACT

Staff continues to work closely with municipalities affected by capital works program to minimize impacts on planned community growth

Priority projects detailed in this report are crucial to providing timely servicing capacity to municipalities serviced by the York-Durham Sewage System and the York Water System. This water and wastewater capacity is necessary to meet growth expectations, while maintaining a high level of environmental and public health protection.

Additional servicing capacity for development is created through timely completion of key infrastructure projects

Release of additional capacity, as well as granting of approvals in each phase of the plan approval process, is contingent on all of these projects being completed as planned. Projects are continually monitored to ensure risk of delay is minimized and capacity will be available as planned. Staff continues to collaborate with local municipalities affected by the capital works program to ensure impacts to planned community growth are minimized to the extent possible considering capacity constraints created by any delay of these projects. A collaborative approach with the local municipalities will continue to assist with reporting on their local capacity allocation in a timely manner to support Regional capacity assignment and ensure fiscal sustainability.

Formal reporting by local municipalities will continue to assist in monitoring system capacity

Senior works and planning staff from all local municipalities and from the Region will continue to work together on annual reporting of development applications and allocation

of previously assigned servicing capacity. This information provides a clear understanding of available existing capacity and timing for anticipated servicing needs of planned and approved growth. Coordinated efforts with local municipalities will also continue on implementation of the inflow and infiltration reduction and water conservation and efficiency programs to reduce flows to the York-Durham Sewage System and thereby better manage system risk while continuing to increase available system capacity.

7. CONCLUSION

Total cost of infrastructure projects included in this update is over $3.5 billion, of which 46 percent has been spent and an additional 50 per cent will be spent in the next five years

This report provides Council with a status of priority projects and their relationship to the timing of plan approvals. Continuing to monitor these projects will ensure that both capacity allocation and granting of planning approvals are synchronized with project delivery schedules. The majority of these projects are required to be completed before the end of 2016. Total cost of infrastructure projects included in this update is over $3.5 billion, of which 46 percent has been spent by the end of September, 2013 and 50 percent will be spent in the next five years. The remaining 4 percent will be spent beyond the five years.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at (905) 830-4444 Ext. 5070.

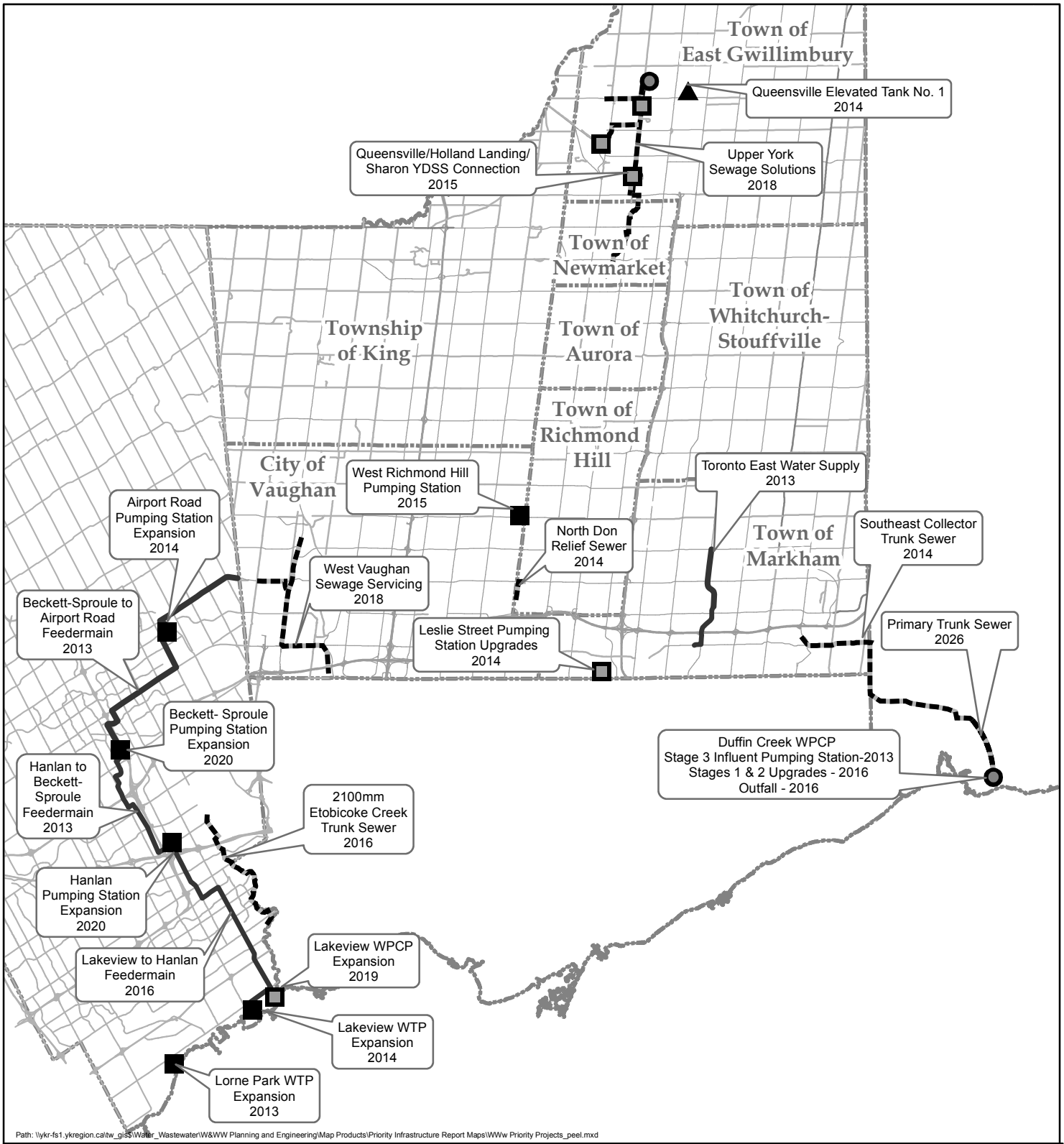
The Senior Management Group has reviewed this report.

(The two attachments referred to in this clause are attached to this report.)

Status of Key Infrastructure Projects

Required within the next 10 years to service beyond 1,157,796 people as of October 2013

Project Name	Description	Current Status	Expected Project Commissioning Date
Queensville/Holland Landing/Sharon Servicing	Elevated tank and new pumping stations and linear works	Construction	Q2 2015 (last reported 2015)
Southeast Collector Sewer	Twinning of existing trunk sewer to provide additional conveyance capacity	Construction	Late 2014 (last reported: Late 2014)
Duffin Creek Stages 1 and 2 Upgrades	Upgrade and refurbish existing Stages 1 and 2	Detailed Design	2016 (last reported: 2016)
Duffin Creek Stage 3 Influent Pumping Station	New pumping station to convey sewage to Stage 3 Liquid Process Expansion	Construction	**Q1 2014** **(last reported: Late 2013)**
Duffin Creek Outfall	New outfall to address diffusion requirements and increase plant capacity to 630MLD	Class Environmental Assessment	2016 (last reported: 2016)
Upper York Sewage Solutions	Sanitary servicing solution to accommodate growth in Holland Landing, Queensville, Sharon and parts of Aurora and Newmarket	Individual Environmental Assessment	Late 2018 (last reported: Late 2018)
Toronto East Water Supply	Watermain along Kennedy Road from Milliken Pumping Station to Major Mackenzie Drive	Construction	Q2 2014 (last reported: Q2 2014)
West Richmond Hill Pumping Station	New pumping station near Bathurst Street and Elgin Mills Road to pump water from Pressure District (PD) 6 to PD7 and PD8	Detailed Design	**Q4 2015** **(last reported: Q4 2014)**
West Vaughan Sewage Servicing	Sanitary servicing solution to accommodate growth in West Vaughan area	Class Environmental Assessment	**Q4 2018** **(last reported: 2017)**
Leslie Pumping Station Upgrades	Upgrades include pump replacement, electrical & standby power improvements	Construction	Q4 2014 (last reported: Q4 2014)
Primary Trunk Sewer	New sewer to provide additional conveyance capacity	Project Initiation	After 2026 (last reported: After 2026)
North Don Relief Sewer	New sewer to provide relief for existing YDSS conveyance capacity	Project Initiation	Q4 2014 (Last reported: Q4 2014)



Path: \\ykr-fs1.ykregion.ca\tw_gis$\Water_Wastewater\W&WW Planning and Engineering\Map Products\Priority Infrastructure Report Maps\WWw Priority Projects_peel.mxd

LOCATION PLAN
Key Infrastructure Projects

Water and Wastewater Capital Infrastructure Status
November 14, 2013.

York Region yorkmaps

Produced by: Capital Planning and Delivery Branch
Environmental Services Department

N

0 5,000 10,000 m

Priority Water Projects & Expected Commissioning Date

Priority Wastewater Projects & Expected Commissioning Date

Capital Infrastructure Status Update

Committee of the Whole

Daniel Kostopoulos

November 14, 2013

WHAT WE HAVE ACHIEVED IN THE LAST SIX MONTHS

Water

Tendered

- Bayview Avenue Watermain
- West Richmond Hill Pump Station
- Hanlan Feedermain (Peel)

Commissioned

- Nashville Road Watermain
- Huntington Road Watermain
- Whisper Lane Booster Pump Station
- Nobleton Elevated Tank Upgrade
- Keswick Elevated Tank
- Beckette Sproule Feedermain (Peel)
- Airport Road Pumping Station Upgrade (Peel)

Wastewater

Tendered

- North Don Relief Sewer
- Duffin Creek Stages 1 & 2 Primary Bridges
- Duffin Creek Stages 1 & 2 Disinfection Building
- Sharon Trunk Sewer

Commissioned

- Keswick WPCP and Outfall

Environmental Assessments

- Initiate East Vaughan Water and Wastewater Servicing EA
- Complete West Vaughan Sewage Servicing EA

WHAT WE WILL ACHIEVE IN THE NEXT SIX MONTHS

Water

Environmental Assessments

- Complete Phase 1 EA report for Richmond Hill Gateway (Water & Wastewater)

Tender / Award

- 2nd Concession Watermain
- Aurora East Elevated Tank
- Nashville Road Watermain

Commission

- Queensville Elevated Tank
- West Park Heights Reservoir

Wastewater

Environmental Assessments

- Complete Duffin Creek Outfall EA
- Formal IEA submission for UYSS

Tender/Award

- Duffin Creek Stages 1 & 2 IPS and Headworks
- Non-2nd and 2nd Concession linear works for QHLS Wastewater Servicing
- Markham Collector Sewer Rehab
- Black Creek SPS Upgrade
- Lakeview WPCP Phase 3 Expansion (Peel)
- Newmarket SPS Upgrade

Commission

- Duffin Creek Stage 3 Solids
- Duffin Creek Stage 3 IPS

Key Water & Wastewater Capital Projects

DUFFIN CREEK WATER POLLUTION CONTROL PLANT

STAGE 3 EXPANSION

Budget:

$628 Million
$594 Million delivered

Status:

Influent Pumping Station 75% complete

Commissioning:

Liquids Process expansion completed
Solids Process expansion in commissioning
IPS commissioning Q1 2014

STAGE 1&2 UPGRADES

Budget:

$267 Million
$31 Million delivered

Status:

Electrical Substation 25% complete
Disinfection Building 15% complete
Primary Bridges tendered
Tender headworks and IPS Q4 2013

Commissioning:

Late 2016

OUTFALL

Budget:

$145 Million - New Outfall
$2 Million - Modification to existing Outfall

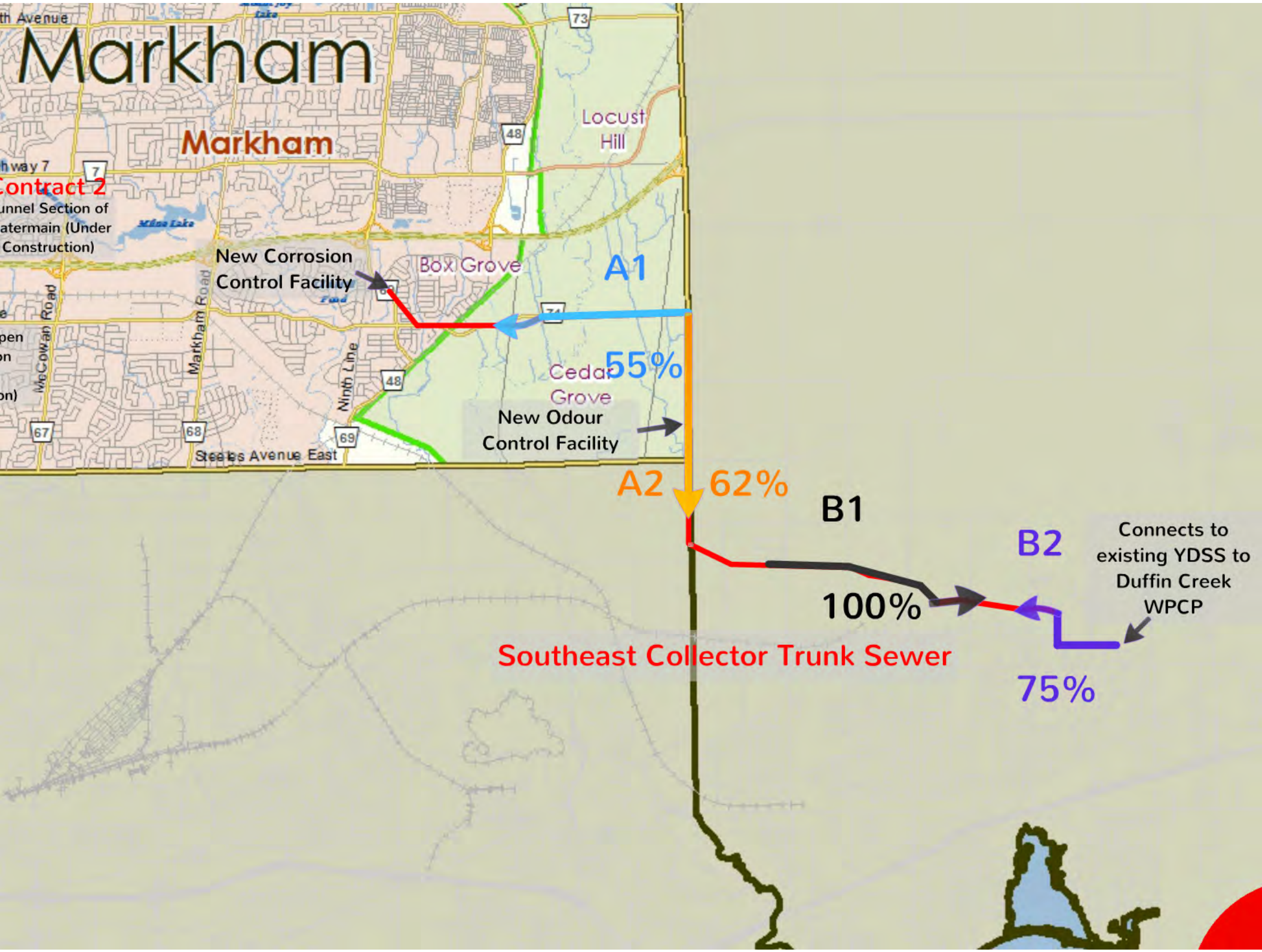
Status:

Ongoing Class EA - Completion Q4 2013

Commissioning:

Modification - 2014
New Outfall - Beyond 2031




Markham
Markham
Locust Hill
Box Grove
Cedar Grove
Contract 2
unnel Section of
atermain (Under
Construction)
New Corrosion
Control Facility
New Odour
Control Facility
Markham Road
Ninth Line
McCowan Road
Steeles Avenue East
A1
55%
A2
62%
B1
100%
B2
75%
Connects to existing YDSS to Duffin Creek WPCP
Southeast Collector Trunk Sewer

SOUTHEAST COLLECTOR TRUNK SEWER

Budget:

$564 Million

$400 Million delivered to date

Status:

Over 10km of tunnel completed to date (70%)

TBM Drive B1 completed

Odour Control Facility, Air fans, and Corrosion Control Facility are all under construtions

Commissioning:

Late 2014

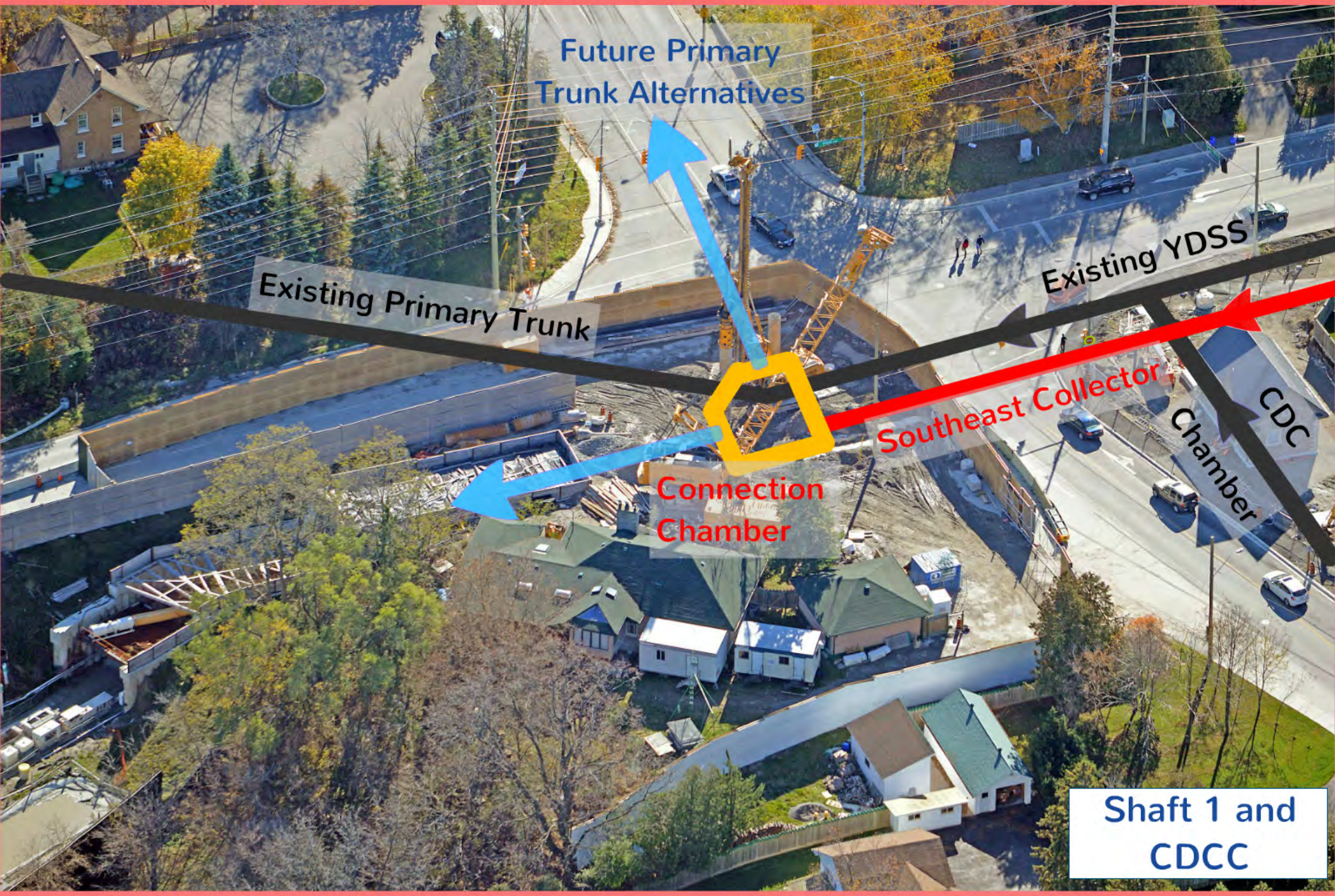







Central Duffin's
Collector Chamber
Shaft 1 and
CDCC


Central Duffin's
Collector Chamber

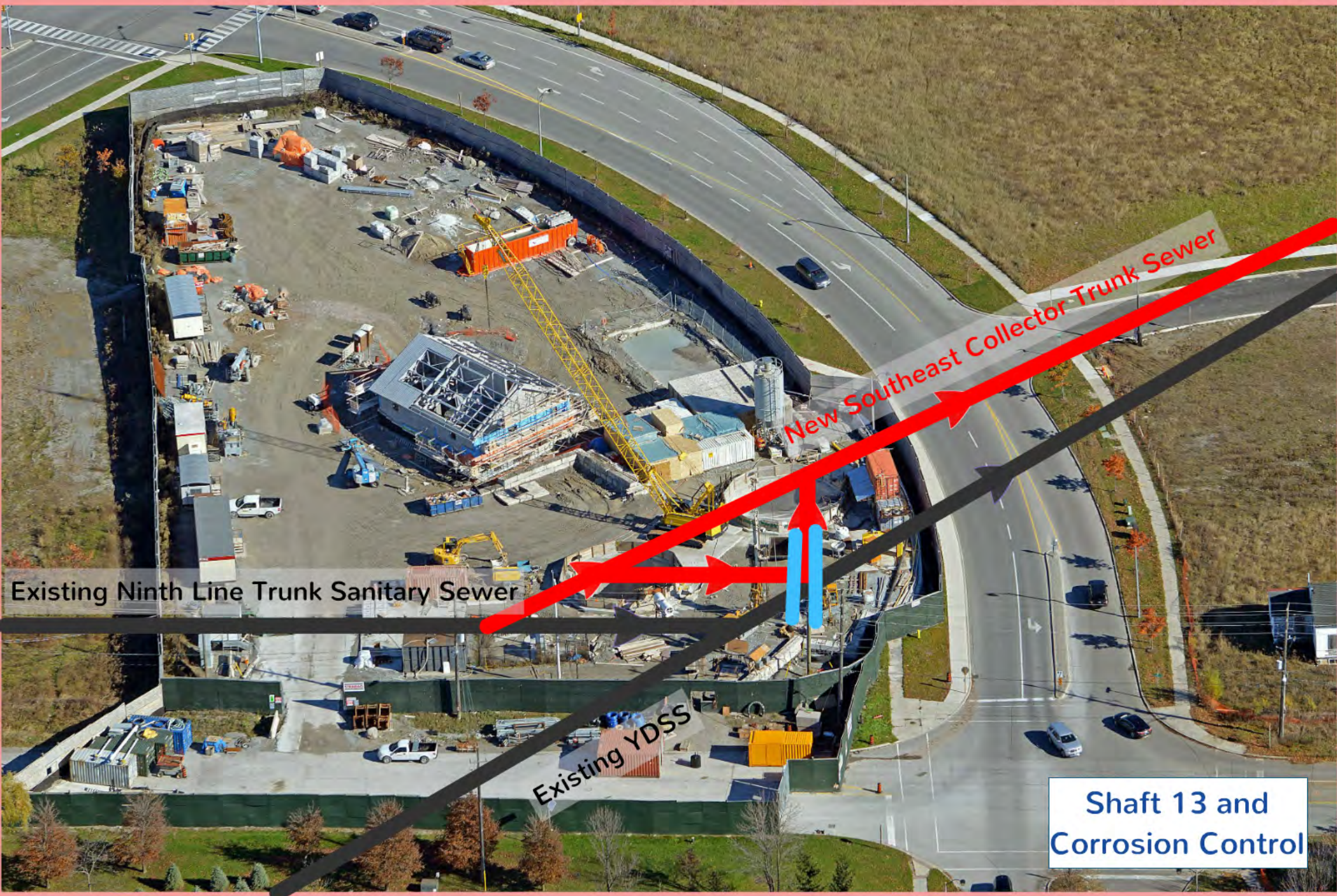

Future Primary
Trunk Alternatives
Existing Primary Trunk
Existing YDSS
Southeast Collector
CDC
Chamber
Connection
Chamber
Shaft 1 and
CDCC

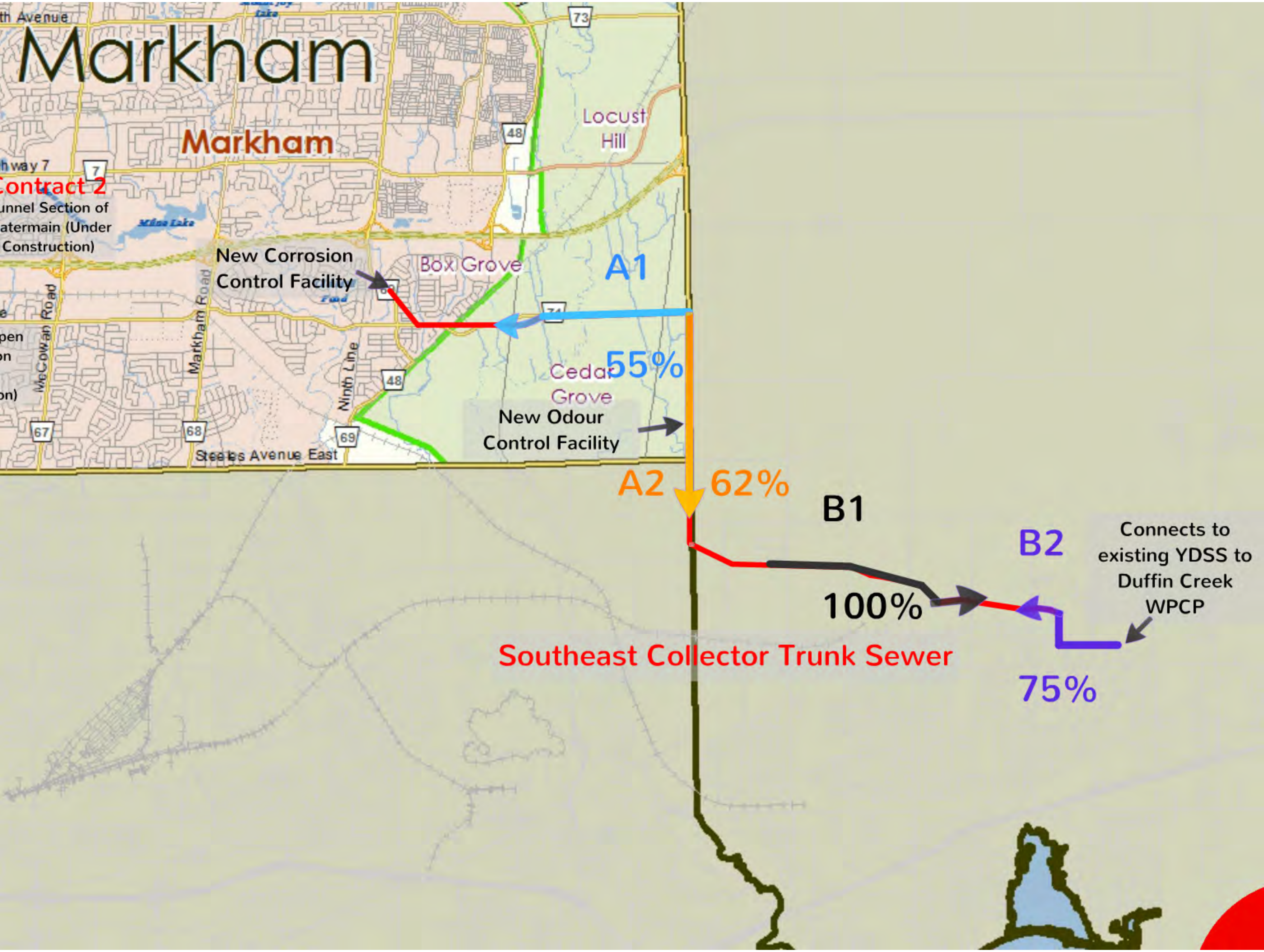

Shaft 9 TBM
Breakthrough

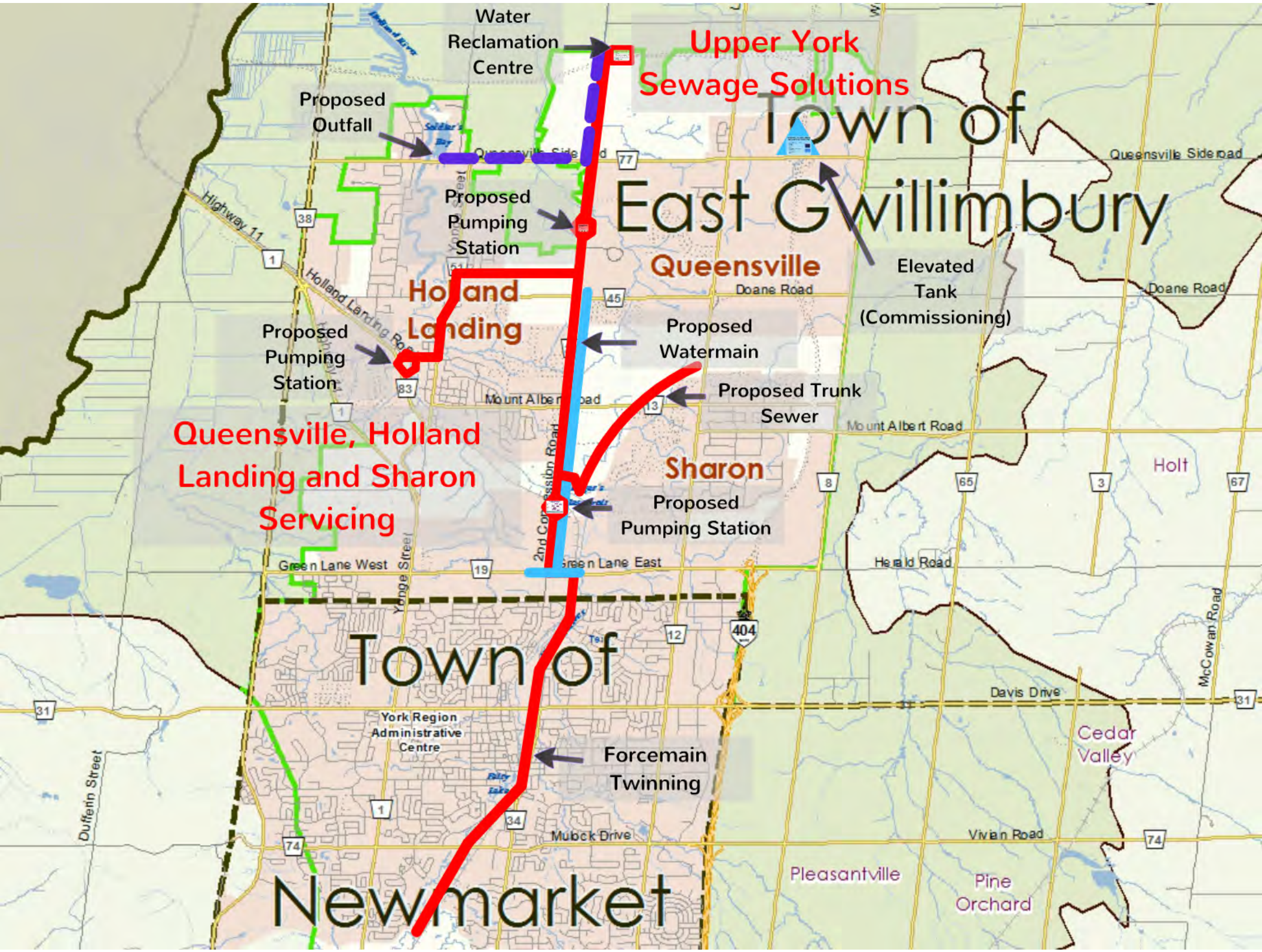
Shaft 4 TBM Removal


OCF
Rendering


Shaft 9 and
OCF


New Southeast Collector Trunk Sewer
Existing Ninth Line Trunk Sanitary Sewer
Existing YDSS
Shaft 13 and
Corrosion Control


Markham
Markham
Locust Hill
Box Grove
Cedar Grove
Contract 2
Tunnel Section of Watermain (Under Construction)
New Corrosion Control Facility
New Odour Control Facility
A1
55%
A2
62%
B1
100%
B2
75%
Connects to existing YDSS to Duffin Creek WPCP
Southeast Collector Trunk Sewer
Highway 7
Markham Road
McCowan Road
Ninth Line
Steeles Avenue East
Milne Lake
73
48
7
68
69
67


Water Reclamation Centre
Upper York Sewage Solutions
Proposed Outfall
Town of East Gwillimbury
Proposed Pumping Station
Queensville
Holland Landing
Elevated Tank (Commissioning)
Proposed Watermain
Proposed Pumping Station
Proposed Trunk Sewer
Queensville, Holland Landing and Sharon Servicing
Sharon
Proposed Pumping Station
Town of Newmarket
Forcemain Twinning
York Region Administrative Centre
Highway 11
Holland Landing Road
Queensville Sideroad
Doane Road
Mount Albert Road
2nd Concession Road
Green Lane West
Green Lane East
Yonge Street
Herald Road
Davis Drive
Mulock Drive
Vivian Road
Dufferin Street
McCowan Road
Holt
Cedar Valley
Pleasantville
Pine Orchard

QUEENSVILLE, HOLLAND LANDING, AND SHARON WATER SERVICING

Queensville Elevated Tank #1

Budget:

$9 Million

Status:

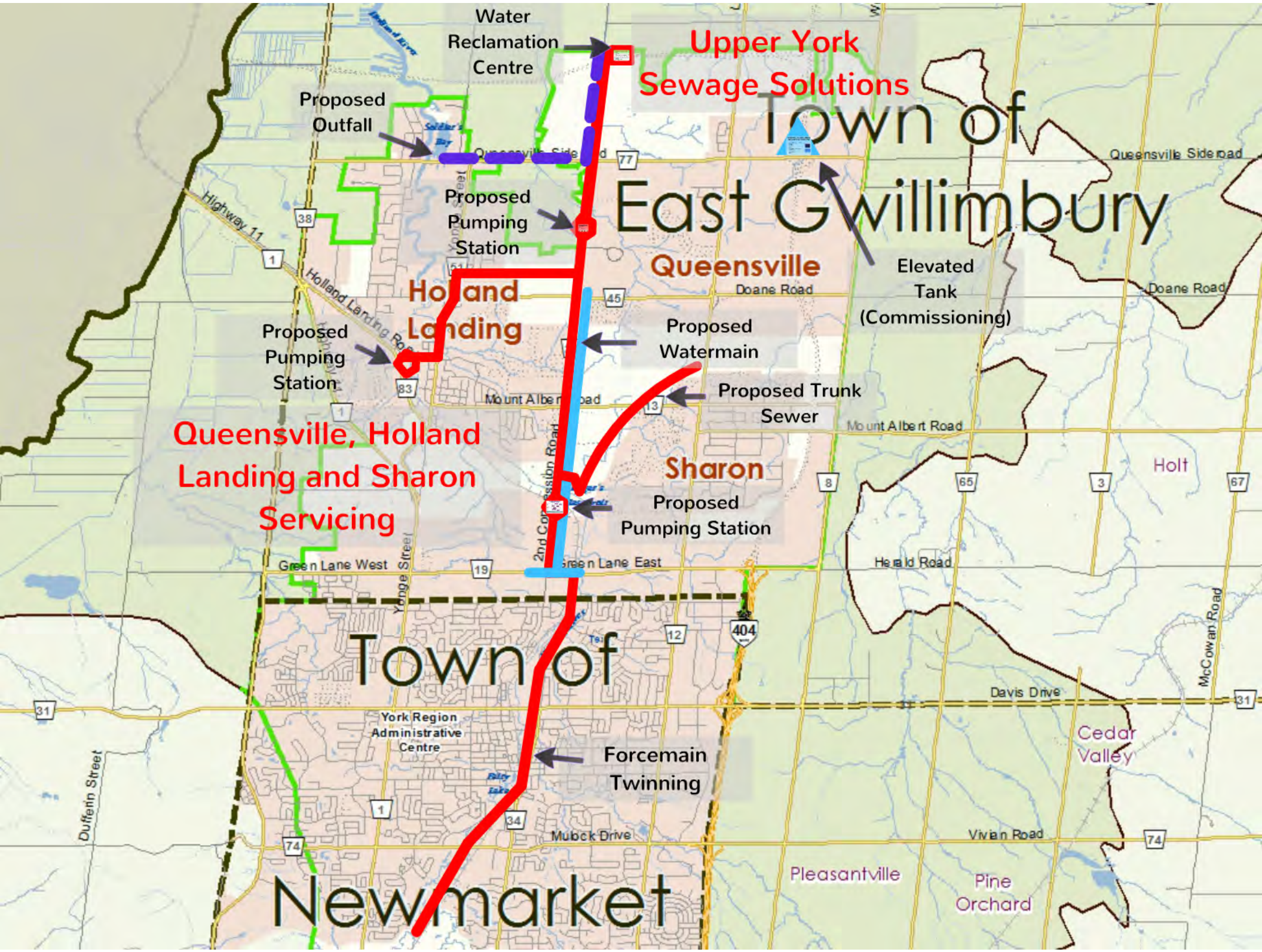
Construction complete, awaiting commissioning

Commissioning:

Q1 2014


York Region
JLG LIFT
United Rentals
United Rentals


Town of
East Gwillimbury


Water Reclamation Centre
Upper York Sewage Solutions
Proposed Outfall
Town of East Gwillimbury
Proposed Pumping Station
Queensville
Holland Landing
Elevated Tank (Commissioning)
Proposed Watermain
Proposed Pumping Station
Proposed Trunk Sewer
Queensville, Holland Landing and Sharon Servicing
Sharon
Proposed Pumping Station
Town of Newmarket
Forcemain Twinning
York Region Administrative Centre
Highway 11
Holland Landing Road
Queensville Sideroad
Doane Road
Mount Albert Road
2nd Concession Road
Green Lane West
Green Lane East
Yonge Street
Herald Road
Davis Drive
Mulock Drive
Vivian Road
Dufferin Street
McCowan Road
Holt
Cedar Valley
Pleasantville
Pine Orchard

QUEENSVILLE, HOLLAND LANDING, AND SHARON WASTEWATER SERVICING

Budget:

$150 Million
$20 Million delivered to date

Status:

All three new pumping stations under construction
All linear works tendered by Q4 2013

Commissioning:

2015





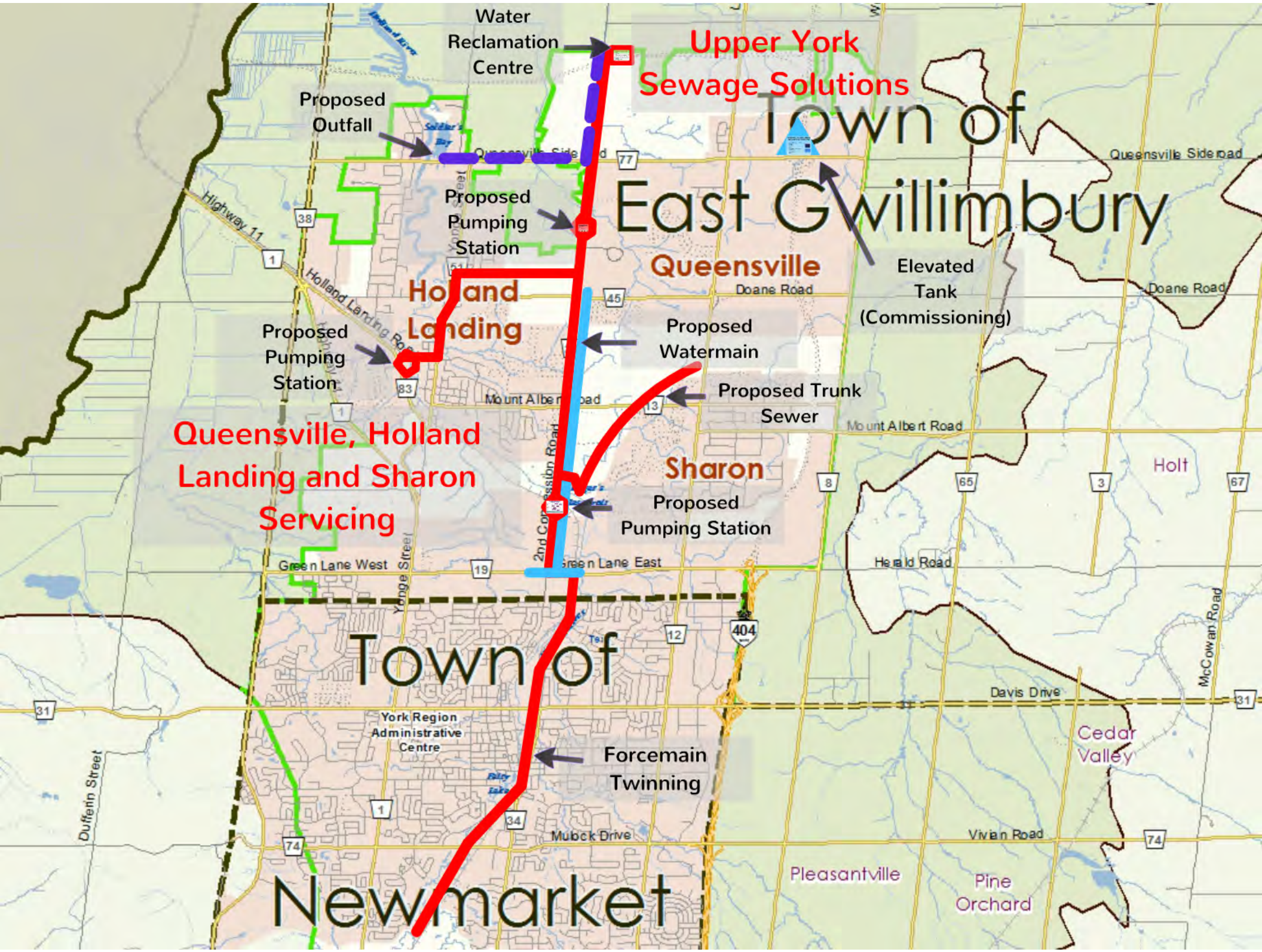



QUEENSVILLE
SANITARY PUMPING STATION
SECOND CONCESSION ROAD
ORIENTATION FACING NORTH
York Region
MMM GROUP


SECOND CONCESSION
SANITARY PUMPING STATION
RAILWAY
SECOND CONCESSION ROAD
York Region
ORIENTATION FACING WEST
MMM GROUP


DANGER
DUE TO
DANGER
DUE TO


NEW HOLLAND LANDING
SANITARY PUMPING STATION
EAST HOLLAND RIVER
BRADFORD ST.
York Region
ORIENTATION FACING NORTH
MMM GROUP


Water Reclamation Centre
Upper York Sewage Solutions
Proposed Outfall
Town of East Gwillimbury
Proposed Pumping Station
Queensville
Holland Landing
Elevated Tank (Commissioning)
Proposed Watermain
Proposed Pumping Station
Proposed Trunk Sewer
Queensville, Holland Landing and Sharon Servicing
Sharon
Proposed Pumping Station
Town of Newmarket
Forcemain Twinning
York Region Administrative Centre
Highway 11
Holland Landing Road
Queensville Sideroad
Doane Road
Mount Albert Road
2nd Concession Road
Green Lane West
Green Lane East
Yonge Street
Herald Road
Davis Drive
Mulock Drive
Vivian Road
Dufferin Street
McCowan Road
Holt
Cedar Valley
Pleasantville
Pine Orchard

UPPER YORK SEWAGE SOLUTIONS

Budget:

$510 Million

$21 Million delivered to date

Status:

Public and First Nations consultation completed

Impact assessment for preferred alternative completed

Formal IEA submission Q4 2013

Procurement for design/engineering services initiated - award Q1 2014

Commissioning:

Forcemain twinning late 2016

WRC late 2018


Square
Elgin Mills Road East
Cashel
Major Mackenzie Drive East
Richmond Hill
Pumping Station
Contract 1
Open Cut Section
of Watermain
(Completed)
City of
Markham
Buttonville
16th Avenue
Unionville
Kennedy Road
Watermain
Markham
Highway 7
Contract 2
Tunnel Section of
Watermain (Under
Construction)
Milliken Pumping
Station and
Reservoir
(Completed)
New Corrosion
Control Facility
14th Avenue
14th Ave Open
Cut Section
(Under
Construction)
Milliken
Leslie SPS
John Street
Steeles Avenue East
Leslie Street
Bayview Avenue
Woodbine Avenue
Warden Avenue
McCowan Road
Markham Road
Ninth Line

KENNEDY ROAD WATERMAIN - MARKHAM

Budget:

$70 Million

$41 Million delivered to date

Status:

Contract 1 complete

Contract 2 35% complete

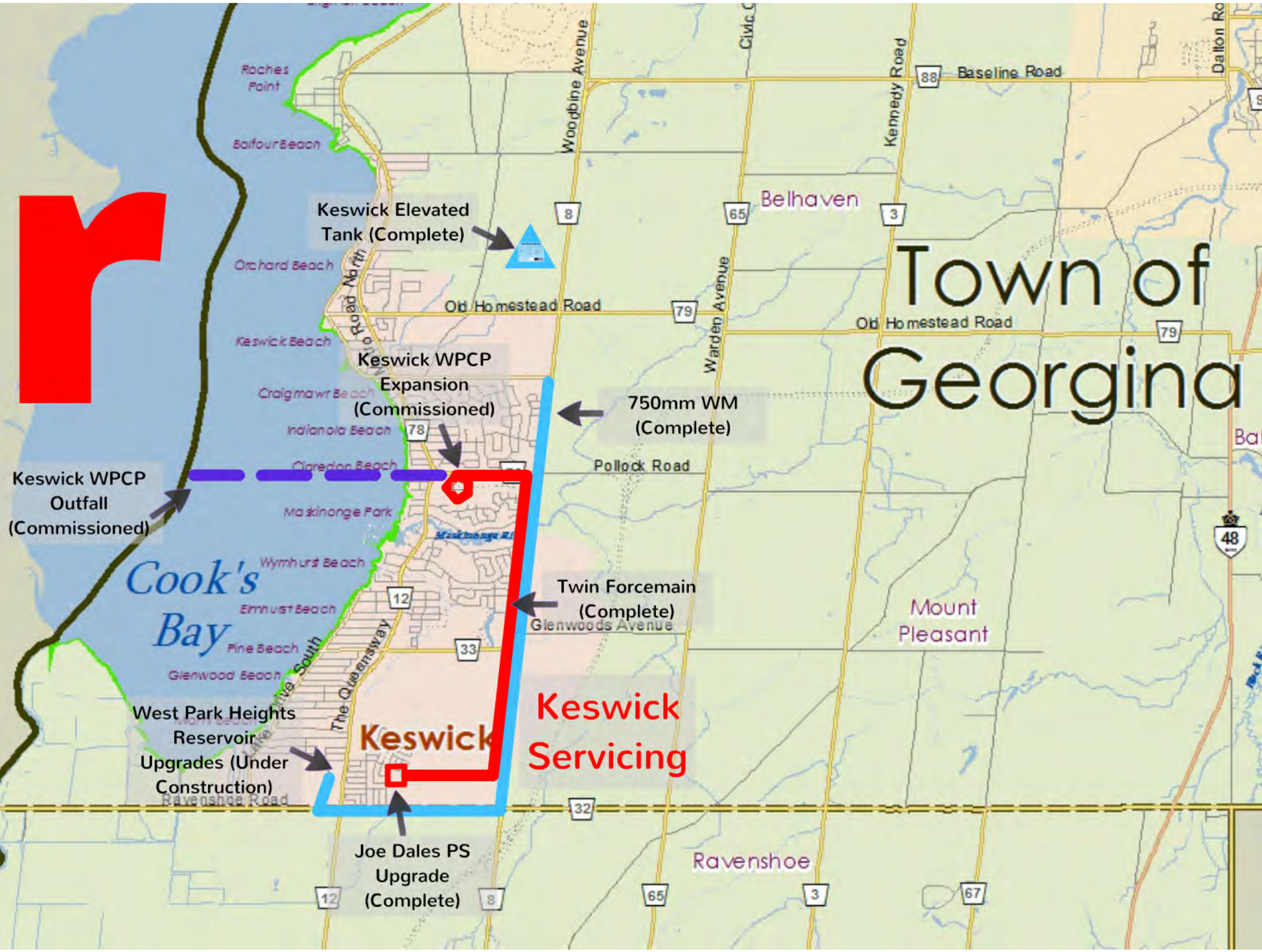
Commissioning:

Contract 1 - December 2012

Contract 2 - August 2014


416 751 2843
1 800 334-6621
ATCO
ATCO


TECHNICORE
UNDERGROUND
OWNER: THE REGIONAL MUNICIPALITY OF YORK
CONSULTANT: MMM GROUP LIMITED
INSTALLATION OF THE KENNEDY ROAD WATERMAIN
TECHNICORE
UNDERGROUND
"DITTO"
GROVE
350
CAT


Keswick Elevated Tank (Complete)
Keswick WPCP Expansion (Commissioned)
750mm WM (Complete)
Keswick WPCP Outfall (Commissioned)
Twin Forcemain (Complete)
West Park Heights Reservoir Upgrades (Under Construction)
Joe Dales PS Upgrade (Complete)
Keswick Servicing
Town of Georgina
Cook's Bay
Belhaven
Mount Pleasant
Ravenshoe
Baseline Road
Old Homestead Road
Pollock Road
Glenwoods Avenue
Ravenshoe Road
Woodbine Avenue
Kennedy Road
Warden Avenue
The Queensway
Roches Point
Balfour Beach
Orchard Beach
Keswick Beach
Craigmawr Beach
Indianola Beach
Claredon Beach
Maskinonge Park
Wymhurst Beach
Elmhurst Beach
Pine Beach
Glenwood Beach

KESWICK WATER SERVICING

ELEVATED TANK

Budget:
$9 Million

Status:
Complete

Completed:
Q3 2012

WATERMAIN

Budget:
$25 Million

Status:
Complete

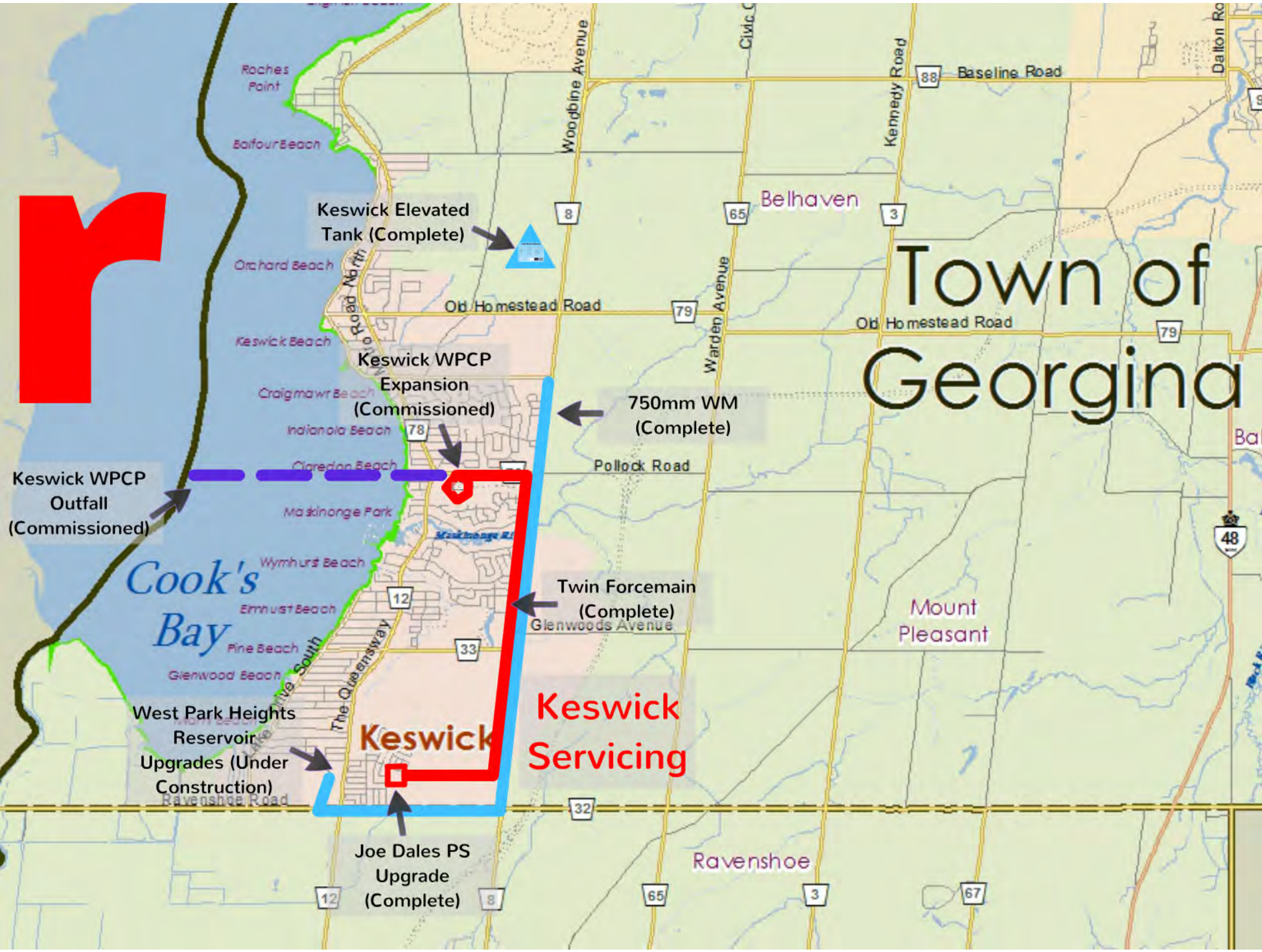
Completed:
Q4 2011

WEST PARK HEIGHTS RES.

Budget:
$1 Million

Status:
Under construction

Commissioning:
Q4 2013


Keswick Elevated Tank (Complete)
Keswick WPCP Expansion (Commissioned)
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Twin Forcemain (Complete)
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Joe Dales PS Upgrade (Complete)
Keswick Servicing
Town of Georgina
Cook's Bay
Belhaven
Mount Pleasant
Ravenshoe
Baseline Road
Old Homestead Road
Pollock Road
Glenwoods Avenue
Ravenshoe Road
Woodbine Avenue
Kennedy Road
Warden Avenue
The Queensway
Roches Point
Balfour Beach
Orchard Beach
Keswick Beach
Craigmawr Beach
Indianola Beach
Claredon Beach
Maskinonge Park
Wymhurst Beach
Elmhurst Beach
Pine Beach
Glenwood Beach

KESWICK WASTEWATER SERVICING

WPCP EXPANSION / OUTFALL

Budget:

$96 Million
$83 Million delivered to date

Status:

WPCP commissioned
Outfall commissioned

Commissioning:

WPCP - Q2 2013
Outfall - Q4 2013

FORCEMAIN / PUMP STATION

Budget:

$21 Million

Status:

Complete

Commissioning:

Q4 2012









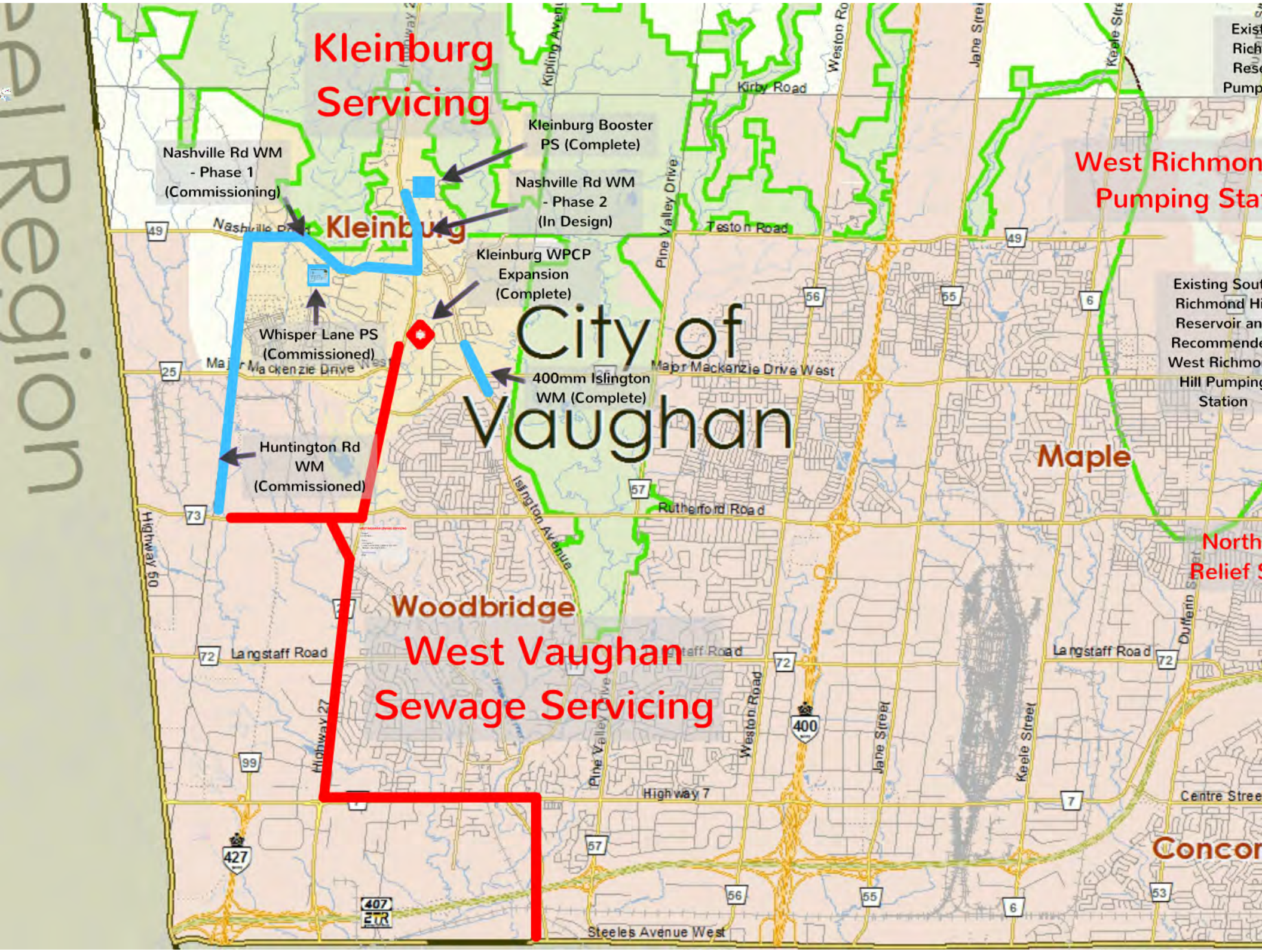
05/15/2013


2013. 7. 5 14:51


2013. 7. 5 14:53


2013. 8.11 16:22


2013. 9. 8 18:10


Kleinburg Servicing
Kleinburg Booster PS (Complete)
Nashville Rd WM - Phase 1 (Commissioning)
Nashville Rd WM - Phase 2 (In Design)
Kleinburg
Kleinburg WPCP Expansion (Complete)
Whisper Lane PS (Commissioned)
City of Vaughan
400mm Islington WM (Complete)
Huntington Rd WM (Commissioned)
Woodbridge
West Vaughan Sewage Servicing
Maple
West Richmon Pumping Sta
Existing Sout Richmond Hi Reservoir an Recommende West Richmo Hill Pumping Station
North Relief S
Concor
Kirby Road
Teston Road
Major Mackenzie Drive West
Rutherford Road
Langstaff Road
Highway 7
Steeles Avenue West
Centre Stree
Pine Valley Drive
Weston Road
Jane Street
Keele Street
Islington Avenue
Dufferin Street
Highway 27
Highway 50
Kipling Avenue
427
407 ETR
400
49
25
73
72
99
57
56
55
6
53
7

KLEINBURG WATER SERVICING

Budget:

$37 Million

$26 Million delivered to date

Status:

Islington Avenue WM completed

Huntington Road WM completed

Nashville Road WM under commissioning

Whisper Lane Booster PS under commissioning

Nashville Road WM (Phase 2) in design

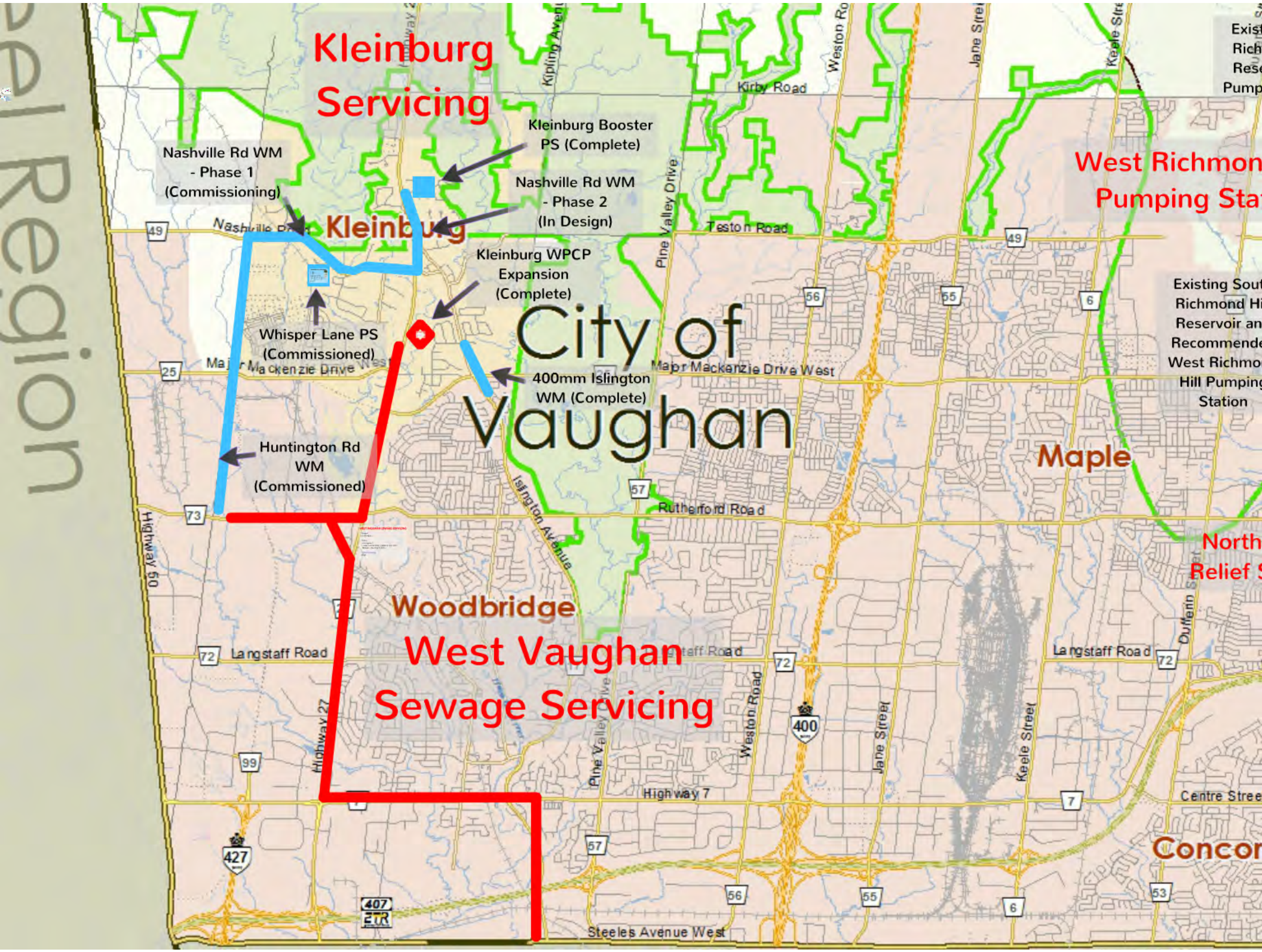
Commissioning:

December 2013


HITACHI
13/08/2013 15:17


McELROY
08/13/2013 18:21


10/09/2013 15:08


Kleinburg Servicing
Kleinburg Booster PS (Complete)
Nashville Rd WM - Phase 1 (Commissioning)
Nashville Rd WM - Phase 2 (In Design)
Kleinburg
Kleinburg WPCP Expansion (Complete)
Whisper Lane PS (Commissioned)
City of Vaughan
400mm Islington WM (Complete)
Huntington Rd WM (Commissioned)
Woodbridge
West Vaughan Sewage Servicing
Maple
West Richmon Pumping Sta
Existing Sout Richmond Hi Reservoir an Recommende West Richmo Hill Pumping Station
North Relief S
Concor
Kirby Road
Teston Road
Major Mackenzie Drive West
Rutherford Road
Langstaff Road
Highway 7
Steeles Avenue West
Centre Stree
Pine Valley Drive
Weston Road
Jane Street
Keele Street
Islington Avenue
Dufferin Street
Highway 27
Highway 50
Kipling Avenue
427
407 ETR
400
49
25
73
72
99
57
56
55
6
53
7

WEST VAUGHAN SEWAGE SERVICING

Budget:

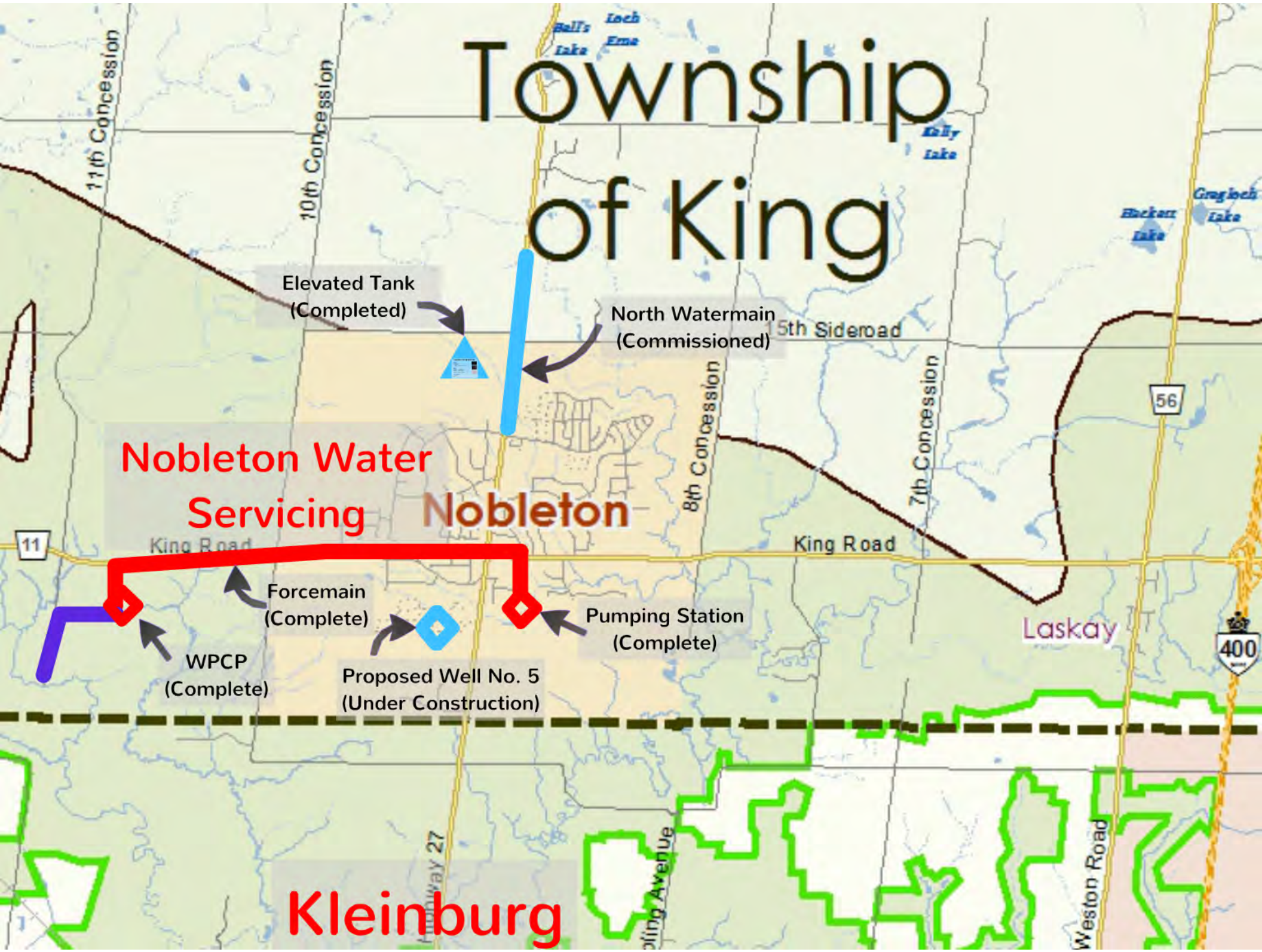
$209 Million

Status:

EA completed
Procurement for design/engineering services initiated - Award Spring 2014

Commissioning:

2018


Township of King
Elevated Tank (Completed)
North Watermain (Commissioned)
15th Sideroad
Nobleton Water Servicing
Nobleton
King Road
Forcemain (Complete)
Pumping Station (Complete)
WPCP (Complete)
Proposed Well No. 5 (Under Construction)
Laskay
Kleinburg
11th Concession
10th Concession
8th Concession
7th Concession
Weston Road
11
56
400

NOBLETON WATER SERVICING

Budget:

$14 Million

$10 Million delivered to date

Status:

Elevated Tank completed

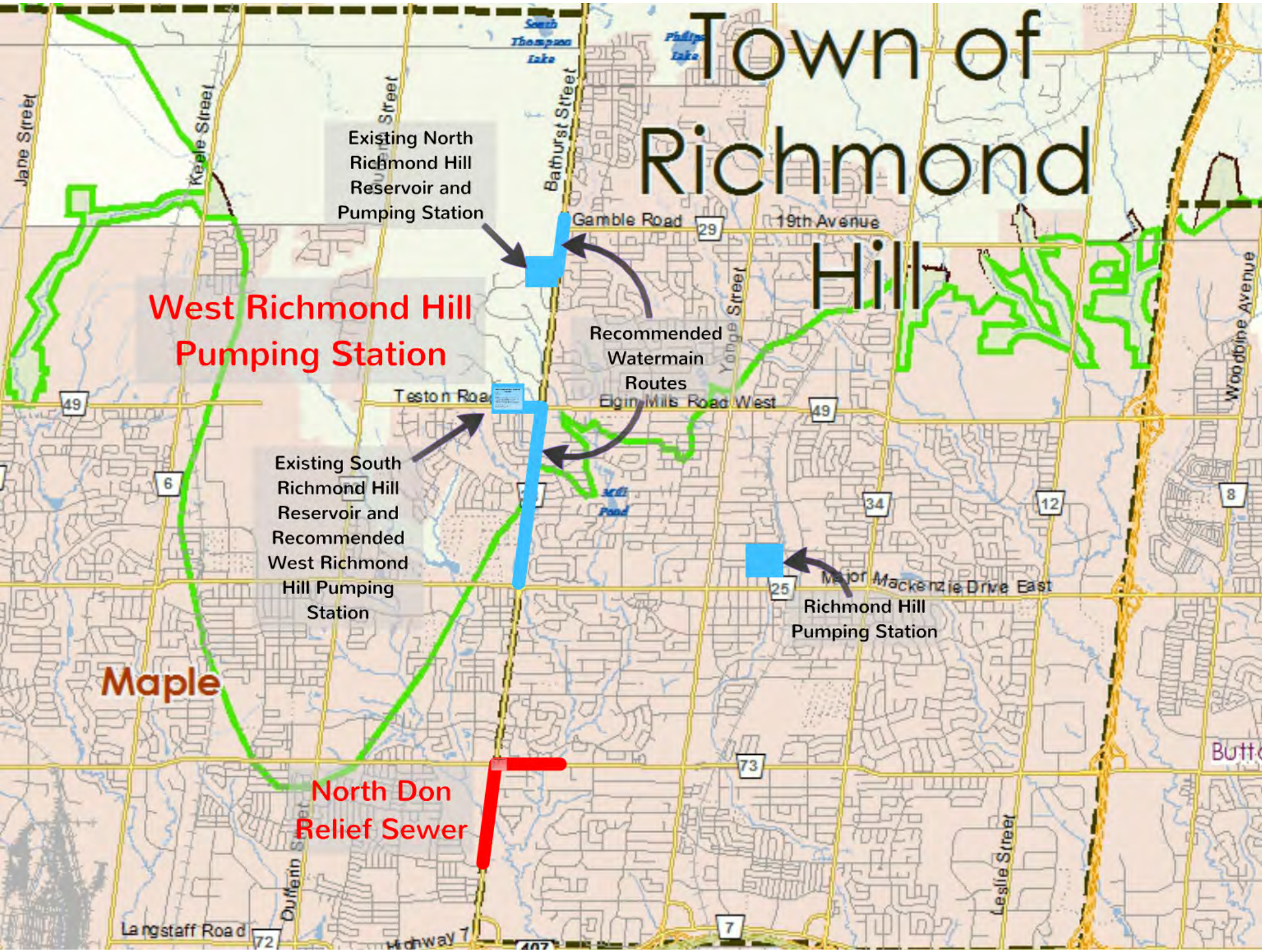
Watermain commissioned

Well Pumphouse under construction

Commissioning:

Q2 2014


York Region
NOBLETON


Town of Richmond Hill
Existing North Richmond Hill Reservoir and Pumping Station
West Richmond Hill Pumping Station
Recommended Watermain Routes
Existing South Richmond Hill Reservoir and Recommended West Richmond Hill Pumping Station
Richmond Hill Pumping Station
North Don Relief Sewer
Maple
Gamble Road
19th Avenue
Teston Road
Elgin Mills Road West
Major Mackenzie Drive East
Langstaff Road
Highway 7
Bathurst Street
Yonge Street
Keele Street
Jane Street
Dufferin Street
Leslie Street
Woodbine Avenue

WEST RICHMOND HILL PUMPING STATION

Budget:

$30 Million

Status:

Pumping Station Tendered - closing Nov 19

- Construction scheduled for early Winter 2013

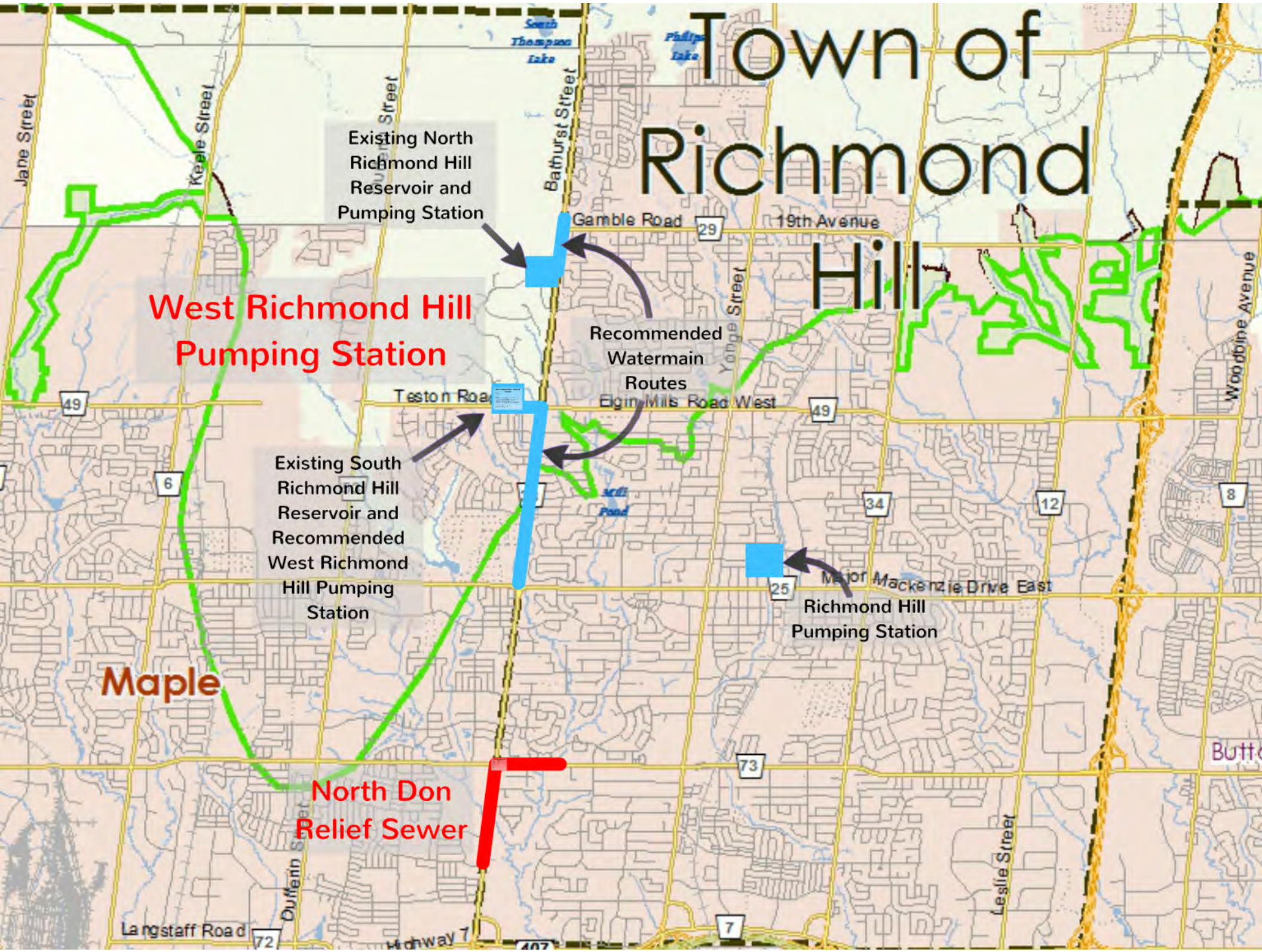
Watermain in design - tender Q1 2014

Richmond Hill Pumping Station under construction

Commissioning:

West Richmond Hill - Q4 2015

Richmond Hill PS - Q2 2014


Town of Richmond Hill
Existing North Richmond Hill Reservoir and Pumping Station
West Richmond Hill Pumping Station
Recommended Watermain Routes
Existing South Richmond Hill Reservoir and Recommended West Richmond Hill Pumping Station
Richmond Hill Pumping Station
North Don Relief Sewer
Maple
Gamble Road
19th Avenue
Teston Road
Elgin Mills Road West
Major Mackenzie Drive East
Langstaff Road
Highway 7
Bathurst Street
Yonge Street
Keele Street
Jane Street
Dufferin Street
Leslie Street
Woodbine Avenue

NORTH DON SANITARY RELIEF SEWER

Budget:

$17 Million

$1 Million delivered to date

Status:

Under construction

Commissioning:

Q4 2014


Square
Elgin Mills Road East
Cashel
Major Mackenzie Drive East
Richmond Hill
Pumping Station
Contract 1
Open Cut Section
of Watermain
(Completed)
City of
Markham
Buttonville
16th Avenue
Unionville
Kennedy Road
Watermain
Markham
Highway 7
Contract 2
Tunnel Section of
Watermain (Under
Construction)
Milliken Pumping
Station and
Reservoir
(Completed)
New Corrosion
Control Facility
14th Avenue
14th Ave Open
Cut Section
(Under
Construction)
Milliken
Leslie SPS
John Street
Steeles Avenue East
Leslie Street
Woodbine Avenue
Warden Avenue
McCowan Road
Markham Road
Ninth Line
Bayview Avenue

LESLIE SPS UPGRADE

Budget:

$31 Million

Status:

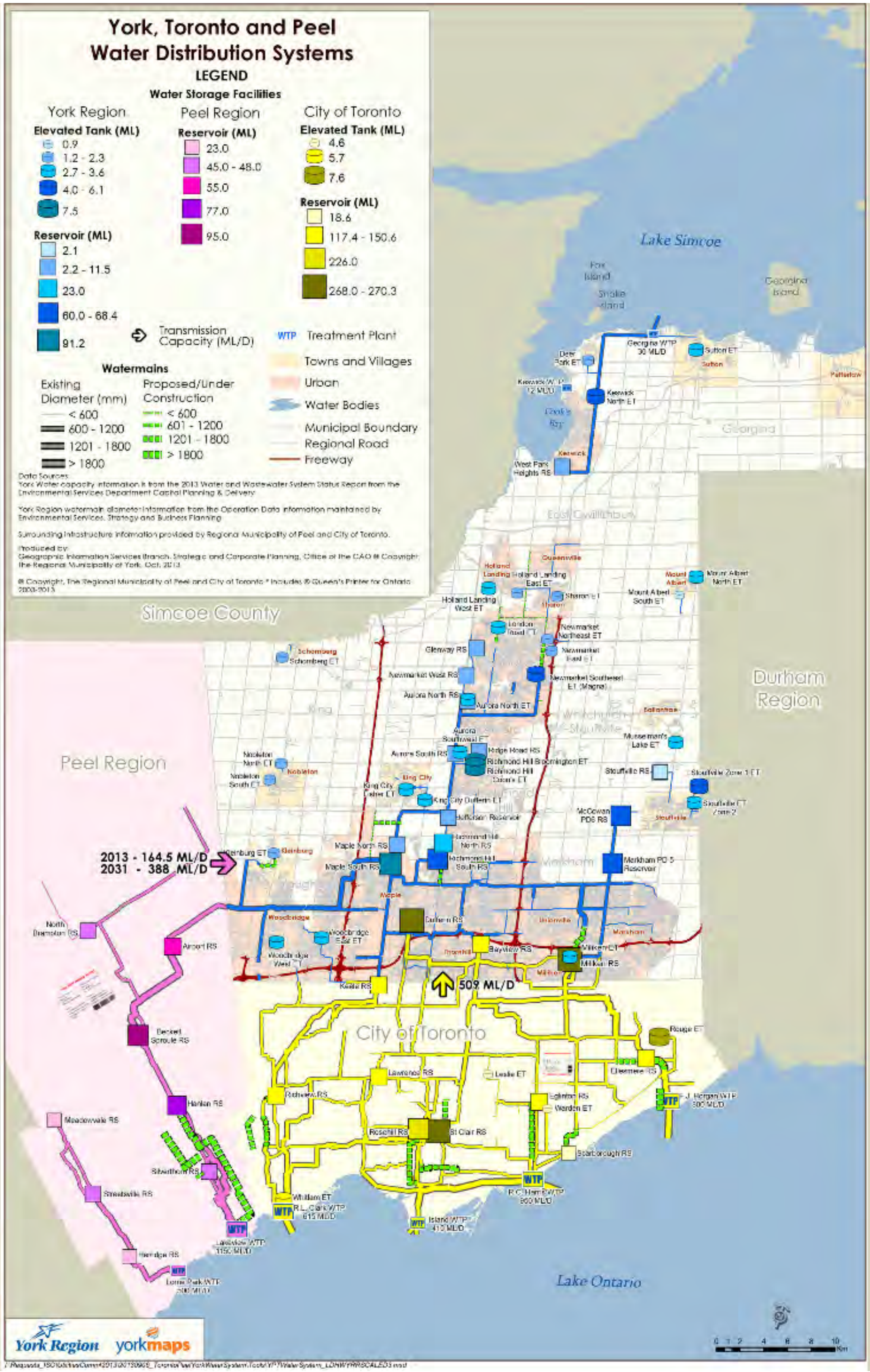
Under construction

Commissioning:

Additional pumping capacity commissioned Q4 2014
Total completion 2016


LULL
WM
Genie S-65
4x4


4


York, Toronto and Peel
Water Distribution Systems
LEGEND
Water Storage Facilities
York Region
Elevated Tank (ML)
0.9
1.2 - 2.3
2.7 - 3.6
4.0 - 6.1
7.5
Reservoir (ML)
2.1
2.2 - 11.5
23.0
60.0 - 68.4
91.2
Peel Region
Reservoir (ML)
23.0
45.0 - 48.0
55.0
77.0
95.0
City of Toronto
Elevated Tank (ML)
4.6
5.7
7.6
Reservoir (ML)
18.6
117.4 - 150.6
226.0
268.0 - 270.3
Transmission Capacity (ML/D)
WTP Treatment Plant
Towns and Villages
Urban
Water Bodies
Municipal Boundary
Regional Road
Freeway
Watermains
Existing Diameter (mm)
< 600
600 - 1200
1201 - 1800
> 1800
Proposed/Under Construction
< 600
601 - 1200
1201 - 1800
> 1800
Data Sources:
York Water capacity information is from the 2013 Water and Wastewater System Status Report from the Environmental Services Department Capital Planning & Delivery
York Region watermain diameter information from the Operation Data information maintained by Environmental Services, Strategy and Business Planning
Surrounding infrastructure information provided by Regional Municipality of Peel and City of Toronto.
Produced by:
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Lake Simcoe
Simcoe County
Durham Region
Peel Region
City of Toronto
Lake Ontario
2013 - 164.5 ML/D
2031 - 388 ML/D
509 ML/D
Georgina WTP 30 ML/D
R.L. Clark WTP 615 ML/D
R.C. Harris WTP 950 ML/D
Island WTP 410 ML/D
F.J. Horgan WTP 800 ML/D
Lakeview WTP 1150 ML/D
Lorne Park WTP 200 ML/D
York Region
yorkmaps


Peel Region
2013 - 164.5 ML/D
2031 - 388 ML/D
509 ML/D
City of Toronto
Lake Ontario
Nobleton North ET
Nobleton South ET
Nobleton
Aurora South RS
Ridge Road RS
Richmond Hill Bloomington ET
Richmond Hill Coon's ET
Stouffville RS
King City
King City Fisher ET
King City Dufferin ET
Jefferson Reservoir
McCowan PD6 RS
Kleinburg ET
Kleinburg
Maple North RS
Richmond Hill North RS
Maple South RS
Richmond Hill South RS
Markham PD 5 Reservoir
Vaughan
Maple
Woodbridge
Dufferin RS
Unionville
Markham
Woodbridge East ET
Woodbridge West ET
Thornhill
Bayview RS
Miliken ET
Miliken RS
Milliken
Keele RS
North Brampton RS
Airport RS
Beckett Sproule RS
Lawrence RS
Leslie ET
Ellesmere RS
Richview RS
Eglinton RS
Warden ET
Hanlan RS
Meadowvale RS
Rosehill RS
St Clair RS
Scarborough RS
Silverthorn RS
Streetsville RS
Whitlam ET
R.L. Clark WTP
615 ML/D
R.C. Harris WTP
950 ML/D
Island WTP
410 ML/D
Lakeview WTP
1150 ML/D
Herridge RS
Lorne Park WTP
500 ML/D
WTP

PEEL COST SHARED WORKS

Water Projects:

Budget:

$725 Million

$467 Million delivered

Status:

16 projects completed

3 projects in construction

3 projects in detailed design

Wastewater Projects:

Budget:

$106 Million

$52 Million delivered

Status:

11 projects completed

1 project in construction

3 projects in detailed design


Maple
Woodbridge
Dufferin RS
Unionville
Markham
Woodbridge East ET
Woodbridge West ET
Thornhill
Bayview RS
Miliken ET
Miliken RS
Milliken
Keele RS
509 ML/D
City of Toronto
Rouge ET
Lawrence RS
Leslie ET
Ellesmere RS
Richview RS
Eglinton RS
Warden ET
F.J. Horgan WTP
800 ML/D
Rosehill RS
St Clair RS
Scarborough RS
WTP
R.C. Harris WTP
950 ML/D
Whitlam ET
WTP
R.L. Clark WTP
615 ML/D
WTP
Island WTP
410 ML/D
WTP
akeview WTP
150 ML/D
Lake Ontario

TORONTO COST SHARED WORKS

Budget:

$459 Million

$189 Million delivered to date

Status:

12 projects completed

1 project in construction

1 project in design/procurement

1 study under way

Deferred $120 Million of Capital beyond 10 years and $140 Million beyond 2031 through joint optimization study

Key Water & Wastewater Capital Projects

DURHAM-YORK ENERGY CENTRE

Budget:

$284 Million - Total project budget (60% delivered)
$74 Million - York Region portion of project budget
$54 Million - Paid by Region to date

Status:

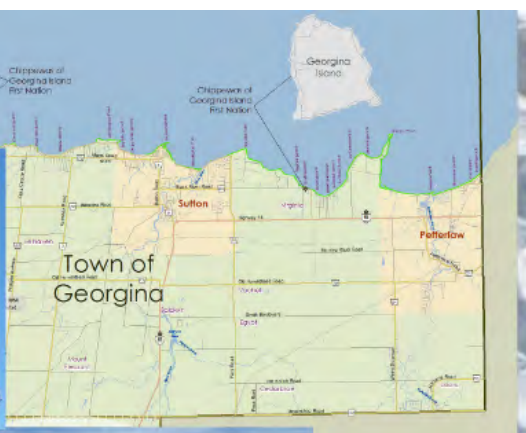
Under construction

Commissioning:

2014



Key Water &
Wastewa
C
P




THANK YOU!