

Waterfront Stormwater and Sanitary Servicing Infrastructure Request for Capital Approval

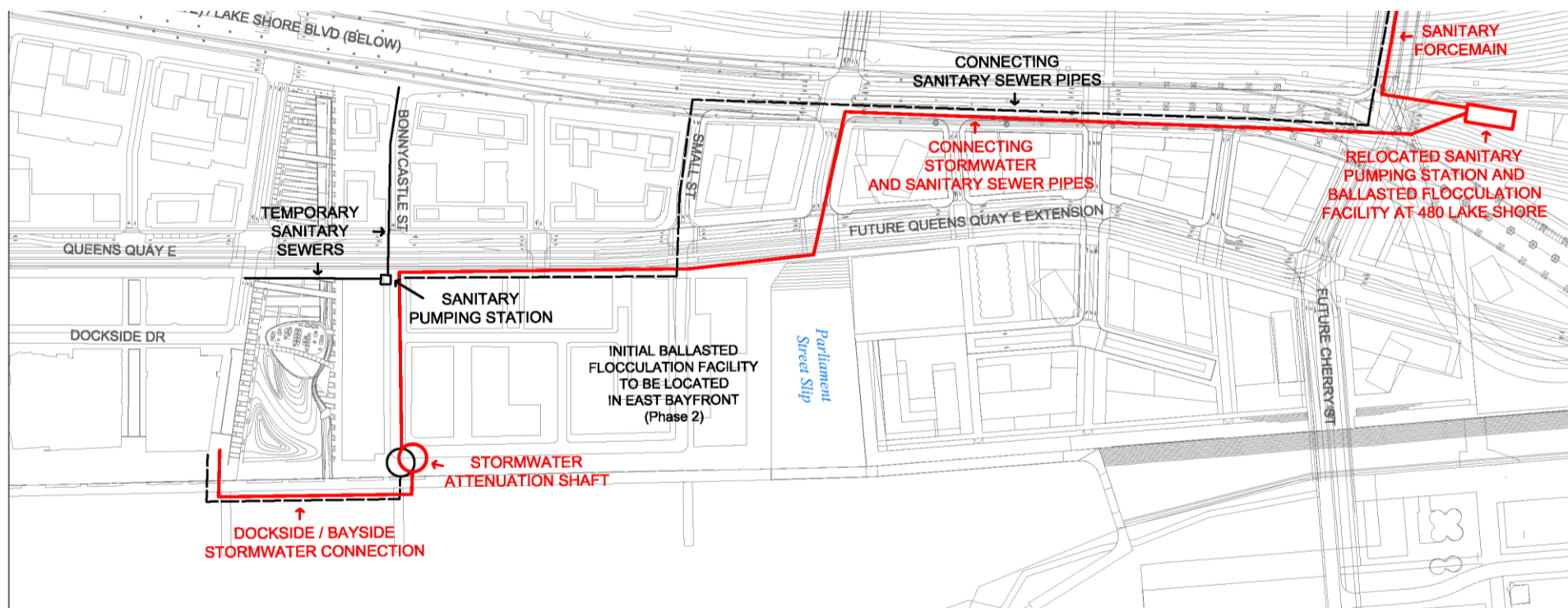


June 25, 2014

Background

- Toronto Water and Waterfront Toronto have collaborated to optimize stormwater and sanitary servicing infrastructure for Waterfront Toronto's Bayside subdivision and adjacent development areas
- at the City's request, previous designs are being revised to consolidate pumping and treatment facilities for multiple precincts at 480 Lakeshore Boulevard and to provide additional capacity for development in the North Keating Precinct
- centralized facilities reduce both overall capital and ongoing operating costs, but require that certain investments be made sooner
- the revised servicing strategy, which will be implemented in a single phase rather than two, will also eliminate throw-away costs for temporary infrastructure
- Toronto City Council approved additional funding on July 26, 2013 (over and above the \$500M initial contribution) for the revised strategy, which incorporates expanded infrastructure and acceleration of Phase 2 installations
- Project Delivery and Funding Agreement with the City was executed on March 24, 2014

Key Plan: Stormwater & Sanitary Servicing Infrastructure



LEGEND

- INITIAL PHASE 1
- INITIAL PHASE 2
- REVISED INFRASTRUCTURE

1:2,800

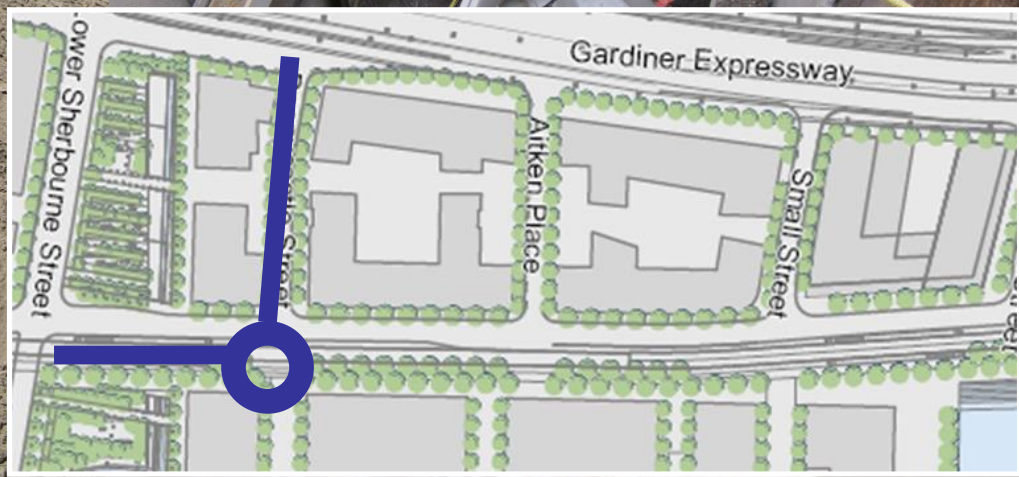
The initial strategy for meeting the City's stormwater quality management requirements for Bayside Phase 1 involved constructing a 12m diameter and 20m deep stormwater attenuation shaft (SAS), complete with mechanical controls, located within the Bayside subdivision. Additional stormwater quality management facilities were planned in conjunction with Bayside Phase 2



Initial Strategy: Stormwater Attenuation Shaft



The initial sanitary servicing strategy for Bayside Phase 1 required construction of temporary sewers located within the Queens Quay and Bonnycastle right-of-ways along with a dedicated sanitary pumping station (SPS) to be located within East Bayfront. Construction of permanent sewers linking East Bayfront to the existing Cherry St. (WDL) sanitary sewer would only be required for Phase 2 development



Initial Strategy: External Sanitary Sewer

Revised Strategy: Stormwater Infrastructure

In addition to the stormwater attenuation shaft, the following components are required to implement the revised stormwater infrastructure strategy for Bayside Phase 1:

- Cherry St. Stormwater Quality Facility (Ballasted Flocculation Facility - BFF), located at 480 Lakeshore Boulevard, expanded to service all of the West Don Lands, East Bayfront, and North Keating Precincts
- piping to convey stormwater from the Bayside stormwater attenuation shaft to the Cherry St. Stormwater Quality Management Facility
- piping to convey stormwater to the Sherbourne Common Ultraviolet (UV) Treatment Facility for final disinfection
- conveyance piping to connect the Dockside subdivision to the Bayside stormwater attenuation shaft

Revised Strategy: Sanitary Servicing Infrastructure

The revised sanitary servicing strategy includes the following new and modified components:

- Sanitary Pumping Station, relocated from East Bayfront to 480 Lakeshore Blvd. and enlarged to serve both East Bayfront and North Keating Precincts
- gravity flow sanitary sewer from Bayside to Cherry Street along Lakeshore Blvd.
- sanitary forcemain from the Sanitary Pumping Station north on Cherry Street to the existing sanitary sewer

The revised strategy also eliminates the following temporary works:

- Bonnycastle Street sanitary sewer
- Queens Quay sewer from Bayside westward to Sherbourne St.

Status Update: Stormwater & Sanitary Servicing Infrastructure

- original servicing strategies were limited to dedicated infrastructure for the East Bayfront, and were to be rolled out in two phases
- revised strategies meet the servicing needs of a significantly larger development area and will be implemented in a single phase, requiring additional “up front” investment
- the City has formally agreed to provide additional funding (over and above the \$500M initial contribution) for the expanded facilities and to finance the acceleration of phase two works
- the Bayside stormwater attenuation shaft (part of the initial strategy) is currently under construction
- design revisions for the expanded and accelerated infrastructure will be completed within the next three months. A value engineering workshop has been completed for the Cherry St. Stormwater Quality Facility
- target completion dates are March 2015 for the sanitary servicing infrastructure and late 2015 for the stormwater infrastructure

Status Update: Stormwater & Sanitary Servicing Infrastructure

- PCL's current mandate encompasses construction management services for the entire stormwater and sanitary servicing infrastructure. PCL will manage the trade contractor tendering process for the balance of the work
- the \$85.2M Board Capital Approval for Bayside Phase 1 Infrastructure, granted on March 27, 2013 included \$17.7M for the initial stormwater and sanitary servicing strategies
- Board Capital Approval in the total amount of \$46.9M is being sought for the revised overall servicing strategies, a net increase of \$29.2M over the prior Phase 1 Capital Approval

Proposed Capital Budget

Description of Work	Budget (\$ millions)
Stormwater Quality Management Facilities	27.5
External Sanitary Servicing Infrastructure	19.4
TOTAL BUDGET	46.9
less Original Phase 1 Budget Previously Approved	- 17.7
Net Additional Budget Approval	\$ 29.2

Budget Allocation	(\$ millions)
Hard (Construction) Costs	35.3
Soft Costs	5.1
Contingency	5.8
Non-recoverable HST	0.7
TOTAL BUDGET	\$ 46.9

Sources of Funding

Source	Funding (\$ millions)
WT Core Government Funding	15.60
Supplementary City Funding (beyond \$500M)	17.04
City Financing (to be repaid from future WT Revenues)	14.26
TOTAL	\$ 46.90

Project Risks



Risk Description	Potential Impact	Mitigation Strategy
Unforeseen site conditions and conflicts during construction	Schedule delays, additional costs and scope changes	Carry construction contingency and undertake test pitting and Sub-surface utility investigation during design phase to identify possible conflicts, identify in tenders prior to start of construction
Schedule impacts of 3rd parties - site congestion, etc	Schedule delays, lack of project integration, additional costs and scope changes	Liaison with MCIC (City of Toronto) Bi-weekly coordination meeting with 3rd party to review schedules.
Budget and funding cap exceeded	Schedule delays and further additional costs.	Detailed cost estimates to be prepared by design consultant and Construction Manager on a regular basis, design to budget, value engineering, early engagement with government on possible issues
Impact of Pam Am games	Schedule delays and additional costs	Liaison with organizing committee to establish impacts & dates and incorporate into project schedule
Schedule of external works - delay	Schedule delays	Monitor schedule - particularly 3rd party approvals Monitor schedule activities continuously
Availability of resources	Schedule delays, additional costs and potential for sole sourcing	Develop a flexible design and procurement strategy with alternate products or methods

Project Risks (cont'd)

Risk Description	Potential Impact	Mitigation Strategy
Permits approval issues	Schedule delays, additional costs and scope	Obtain stakeholder commitment on review times, quality submissions, continuous monitoring and communication, management escalation if required.
Construction Document coordination - poor / untimely	Schedule delays and additional costs during construction	Timely preparation of design & tender documents, regular coordination meetings, document coordination and QA review allowed for in schedule.
Long lead items (BFF)	Schedule delays	Identify any special purchases items and consider alternatives where possible.
Lack of project integration - schedules	Schedule delays and additional costs and reputation impact	Regular project coordination meetings with development parties Identify & mitigate integration issues
Hydro One duct bank	Schedule delays and redesign costs	Team to review asbuilts with the Authority and schedule test pit verification where possible.
Tender higher than budget	Schedule delays. Can not proceed with authorization to award	Exercise value engineering options. Seek additional funding from Stakeholders or through LTFF
Gardiner Expressway Foundations	Additional cost and schedule impact and potential damage to foundations	Explore alternative design solutions to avoid Gardiner, field investigations to determine precise foundation locations

Recommendation

Management recommends Board Capital Approval for the Waterfront Stormwater and Sanitary Servicing Infrastructure in the amount of \$46.9M, an increase of \$29.2M over the value of the previously approved expenditure to provide dedicated servicing for Bayside Phase 1 and Parkside.

Motion

ON MOTION duly made, seconded, and carried, be it **RESOLVED** that the Board approves an additional capital expenditure of \$29.2M, for a total capital expenditure of \$46.9M, to implement the revised Waterfront Stormwater and Sanitary Servicing Infrastructure, which is required in time for the development and occupancy of Bayside Phase 1 and Parkside.

