

May 5, 2017

Ray Ritcey, Chair
Halifax Water
Halifax, Nova Scotia

A special meeting of the Halifax Water Board will be held on Friday, May 5, 2017, at 3:00 p.m. in the Boardroom at 450 Cowie Hill Road, Halifax.

AGENDA

Regular Reports

1. Sullivan's Pond Storm Sewer System Replacement

Original Signed By:

James G. Spurr
Secretary

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: *Original Approved By:*

Jamie Hannam, P. Eng., Director, Engineering & Information Services

APPROVED: *Original Approved By:*

Carl Yates, M.A.Sc., P. Eng., General Manager

DATE: May 5, 2017

SUBJECT: **Sullivan's Pond Storm Sewer System Replacement**

ORIGIN

Halifax Water Board approval for the Sullivan's Pond Storm Sewer System Replacement project in relation to the Clean Water & Wastewater Fund (CWWF), at the meeting of February 2, 2017.

RECOMMENDATION

The Halifax Water Board approve additional funding in the amount of \$2,100,531 for the construction phase of the Sullivan's Pond Storm Sewer Replacement Project for a revised gross total project cost of \$11,682,524.

BACKGROUND

The February 2, 2017 report to the Halifax Water Board provided a full overview for the Sullivan's Pond Storm Sewer System Replacement project. In summary, the project can be described as follows:

Technical

The Sullivan's Pond Stormwater Outlet Structure and Pipe system in Dartmouth conveys stormwater from Sullivan's Pond to Halifax Harbour. Sullivan's Pond receives stormwater

from a large watershed (1500 hectare) surrounding the upstream lakes that form part of the former Shubenacadie Canal System.

The existing stormwater pipe system is constructed of 2700mm diameter corrugated steel pipe (CSP) that was installed in the late 60s/early 70s as well as a section of 2400mm diameter concrete pipe installed in 2005. The system is approximately 580 m long and transmits flows from Sullivan's Pond to an open channel leading to Halifax Harbour. The system is now at the end of its life and requires replacement.

Early in 2016 it was anticipated that the first phase to be constructed would be the lower section adjacent to Halifax Harbour. Halifax Water was then advised by the Halifax Municipality that they were investigating the potential for major street realignment in this area. Should this street realignment proceed, it would have significant implications for the Sullivan's Pond Storm Sewer and thus it was decided that the first phase to be constructed should be the upper section (adjacent Sullivan's Pond). Pending approved funding, the lower section would proceed once the municipality has finalized any changes to the street alignment.

Financial

In 2011, \$300,000 was approved for engineering services to undertake preliminary design work and the scope was based on the premise that there would be a feasible option to rehabilitate the existing infrastructure (i.e. pipe lining) and that fish passage would not be required. In 2014 and 2016, the Halifax Water Board approved total funding in the amount of \$650,000 to complete the preliminary design and undertake the detailed design to incorporate full system replacement and fish passage as this became a project requirement by the federal Department of Fisheries [DFO].

The February 25, 2016 Halifax Water Board report provided an estimate of \$17.44M for the entire project and noted that the first phase could be constructed for an estimated cost of \$8.25M. The \$8.25M was estimated based on the assumption that the construction of the first phase would cost 50% of \$16.5M (\$17.44M less \$950K for design).

Halifax Water received approval for Federal and Provincial infrastructure funding in the amount of \$6,321,893 for this project through the Clean Water and Wastewater Fund (CWWF). This is based upon CWWF funding 75% of the total eligible project cost which at the time of the CWWF application was \$8,429,190. Ineligible costs include Halifax Water internal costs (staff time plus overheads) and external costs incurred prior to funding approval. A condition of the CWWF approval is that all eligible costs must be incurred by March 31, 2018.

As referenced in the February 2, 2017 Halifax Water Board Report, the pre-tender total estimated project cost was \$9,581,993 inclusive of a construction cost estimate of \$7.81M (including 20% contingency and net HST).

DISCUSSION

Halifax Water issued a public tender for the project on March 24, 2017. The tender closed on April 21, 2017. Halifax Water received three bids as follows:

Atlantic Road Construction and Paving Ltd.	\$13,325,949
Brycon Construction Limited	\$ 8,986,000
Dexter Construction Company Limited	\$ 8,721,640

These bids are exclusive of HST. Based on the lowest compliant bid, Dexter Construction Company Limited (Dexter) is the preferred proponent for the project. Based on the bid price, the revised total project cost exceeds the approved budget by just over \$2M.

Subsequent to the tender close, Halifax Water staff undertook a value engineering review with Dexter to identify opportunities to reduce the project cost without significantly impacting the final product. The review did not identify any opportunities for cost reduction.

As per the attached correspondence, Halifax Water's project consultant, CBCL Limited, is of the opinion that the current Dexter proposal is a fair cost and the delay of part, or all, of the project into a future year is unlikely to result in costs savings.

The opportunity cost to Halifax Water of not proceeding with this project at this time is the loss of the \$6,321,893 in federal and provincial cost sharing through the CWWF program and the continued risk of operation with a system at the end of its useful life.

The attached revised total project cost estimate restates the anticipated total project cost as \$11,682,524 based on the Dexter bid price.

BUDGET IMPLICATIONS

The revised gross total project cost is estimated at \$11,682,524.

The Halifax Water funding approved to date totals \$9,581,993 as follows:

- Funding in the amount of \$300,000 including net HST was previously approved on June 30, 2011.
- Funding in the amount of \$250,000 including net HST was previously approved on February 27, 2014.
- Funding in the amount of \$400,000 including net HST was previously approved on February 25, 2016.
- Funding in the amount of \$2,310,100 including net HST was previously approved on February 2, 2017.
- External funding in the amount of \$6,321,893 approved from the CWWF program.

The balance of the Halifax Water funding, in the amount of \$2,100,531 is available as follows:

- Funding in the amount of \$300,000 is available from the Clement Street Berm Rehabilitation of Stormwater Control Structure project. Funding for this project was approved in the amount of \$400,000. Approximately \$100,000 was spent on the design phase. Nova Scotia Environment has recently stated that they will not approve the project and thus it is proposed that \$300,000 be reallocated to the Sullivan's Pond Storm Sewer System Replacement project.
- Funding in the amount of \$151,000 is available from the Cole Harbour Road (near #1560) - Culvert Replacement project. The culvert replacement project will be deferred to a future capital budget.
- Funding in the amount of \$205,000 is available from the Yankeetown Road (near #16) - Culvert Replacement project. The culvert replacement project will be deferred to a future capital budget.
- Funding in the amount of \$220,000 is available from the Kipawa Crescent (near #14) - Culvert Replacement project. The culvert replacement project will be deferred to a future capital budget.
- Funding in the amount of \$700,000 is available from the accumulated Stormwater operating surplus as of March 31, 2017.
- Funding in the amount of \$524,531 is proposed to be derived from "debt".

The additional debt servicing will be added to the 2018/19 Operating Budget, as the issuance of debt associated with this project would occur as part of the 2018 Spring Debenture.

The proposed expenditure meets the "No Regrets – Unavoidable Needs" approach of the 2012 Integrated Resource Plan. The proposed work meets the NR-UN criteria of ensure Infrastructure Integrity and Safety.

ALTERNATIVES

There are no recommended alternatives.

ATTACHMENTS

Attachment 1 - Memo from CBCL Limited
Attachment 2 - Revised Project Cost Estimate

Report Prepared by: *Original Approved By:*
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Infrastructure, 902-490-6716

Financial Reviewed By: *Original Approved By:*
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MEMORANDUM

ITEM # 1
HRWC Board
May 5, 2017
ATTACHMENT 1

DATE: May 3, 2017

PROJECT NO: 131025.02

MEMO TO	Peter Maynard, P.Eng. – Halifax Water
PROJECT NAME	Sullivan’s Pond Storm Sewer Replacement
SUBJECT	Review of Contractor Bids
FROM	Rick Giffin, P.Eng.
COPIES TO	File

As requested, we have reviewed the bids for the above project. A total of three bids were received as follows:

Dexter	\$8,721,640.00
Brycon	\$8,986,000.00
ARCP	\$13,325,949.00

The above bid values are exclusive of HST.

The two lowest bids only differ by \$174,360 or almost exactly 2% of the low bid price. This often indicates that the documents were interpreted by both of the bidders in a similar fashion. The third bid is higher by a substantial margin, or approximately 50% higher than the average of the lower two bids.

The unit prices provided by the low bidder are significantly higher than the predicted unit prices. The predicted unit prices were based on historical costs for similar construction carried out in the metro area in recent years. Based on these results and other tenders recently closed by CBCL it is our opinion that current market conditions had a great influence on the prices. It is becoming evident that federal infrastructure money and the hard deadline for the stimulus program is having an inflationary effect on construction prices for municipal infrastructure. The market conditions appear favourable for inflation in the construction industry. Even though contractors may not yet be at full at capacity yet, they may see no reason to bid with low margins as more work is coming up for bid, and more contractors are reaching capacity as the weeks go by.

This project also has some significant risks – mainly weather related. While there is an ability to cut off flow through Sullivan’s Pond and thus the work site, a wet summer would make the work more difficult and given the market conditions, this risk was likely not deemed acceptable to the bidders and therefore they have included a large amount of money to provide pumping. It appears that this allowance has been built into the cofferdam item on both lower bids.



ITEM # 1
HRWC Board
May 5, 2017
ATTACHMENT 2

Project Name: **Sullivan's Pond Storm Sewer Renewal**
Date: **May 1, 2017**

Item	Total Cost
Engineering	\$1,100,000
Construction	\$8,721,640
Contingency (10%)	\$982,164
Subtotal	\$10,803,804
Net HST (4.286%)	\$463,051
Subtotal	\$11,266,855
Halifax Water Staff Cost	\$300,000
Subtotal	\$11,566,855
Interest and Overhead (1%)	\$115,669
Total Project Cost Estimate	\$11,682,524