



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: May 25, 2018

From: Lloyd Bie, P.Eng.
Acting Director, Engineering

File: 10-6000-01/2018-Vol 01

Re: **Boundary Road Drainage Memorandum of Understanding**

Staff Recommendation

1. That the Chief Administrative Officer and the General Manager, Engineering be authorized to execute, on behalf of the City, a Memorandum of Understanding between the City and the City of New Westminster containing the material terms and conditions set out in the staff report titled, "Boundary Road Drainage Memorandum of Understanding" dated May 25, 2018 from the Acting Director, Engineering;
2. That the 5 Year Financial Plan (2018-2022) be amended to fund the City's share of fronting costs for the Boundary Road Pump Station upgrade of \$960,000 from the Drainage Improvement Reserve and the estimated annual operating cost of \$4,475 be incorporated into the 2019 Budget; and
3. That staff bring forward updates to the Works and Services Cost Recovery Bylaw No. 8752 to include recovery of the fronting costs for the Boundary Road Pump Station upgrade from benefiting developments in the Thompson Boundary Area.

Lloyd Bie, P.Eng.
Acting Director, Engineering
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REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance Department	<input checked="" type="checkbox"/>	
Law	<input checked="" type="checkbox"/>	
Sewerage & Drainage	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

The City of Richmond's Thompson/Boundary area is geographically separated from the rest of Richmond by Highway 91 as identified in Figure 1 below. Richmond's Thompson/Boundary area borders the City of New Westminster's Queensborough area and is adjacent to the Boundary Road canal. The Boundary Road Drainage Pump Station, which serves this canal, is owned and operated by the City of New Westminster. While the majority of drainage from the Thompson/Boundary area drains west, under Highway 91, to the Queens Canal, some of the parcels are discharging into the Boundary Road canal without an agreement in place between Richmond and New Westminster.

Figure 1: Thompson/Boundary Area



Richmond's Official Community Plan identifies the 9.38 ha Thompson/Boundary Area as future townhouses. This future increase in housing density will increase drainage flows for this area which cannot be accommodated by Richmond's current drainage network, including the crossing under Highway 91. Upgrading the existing drainage network to accommodate the future townhouses is estimated to cost \$4.5M.

Staff does not recommend the \$4.5M upgrade to the City's drainage network as utilization of the Boundary Road Pump Station and Boundary Road Canal is identified as a significant cost savings, less disruptive to the community and hydraulically more efficient.

The City of New Westminster is agreeable to utilization of the Boundary Road canal for future Thompson/Boundary drainage. New Westminster is planning to upgrade the Boundary Road Drainage Pump Station and is in a position to increase the size of the proposed station to accommodate drainage from the Thompson/Boundary Area, provided Richmond pays a share of the pump station upgrading capital costs and a share of ongoing operating costs.

There is a current development application under review in the Thompson/Boundary area to upgrade seven residential lots to 120 townhouse units. To accommodate this development, staff propose that the City enter a Memorandum of Understanding with the City of New Westminster that will allow this development as well as subsequent developments to move forward with minimum drainage upgrade costs. Costs for the drainage upgrades will be borne by the benefitting developments under any scenario. The City will be required to front the pump station upgrade costs and recover these costs from development through the City's Works and Services Cost Recovery Bylaw.

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.

6.2. Infrastructure is reflective of and keeping pace with community need.

Analysis

An independent consultant was jointly retained by Richmond and New Westminster to identify potential pump station improvements and propose funding shares based on pump station utilization at build out for both municipalities. The study identified that drainage from Richmond's Thompson/Boundary area at build out will be 16% of the Boundary Road Drainage Pump Station peak discharge capacity and proposes that Richmond's share of upgrading costs and ongoing maintenance be aligned with this value. It further proposes that Richmond contribute 9.5% of the maintenance costs for the Boundary Road Canal. These costs are estimated in Table 1.

Table 1: Estimated Cost Share for Boundary Road Drainage

Item	Estimated Cost	Richmond Share	Richmond Percentage
Boundary Road Drainage Pump Station Upgrade	\$6,000,000	\$960,000	16%
Boundary Road Drainage Pump Station Annual Operating	\$25,000	\$4,000	16%
Boundary Road Canal Annual Maintenance	\$5,000	\$475	9.5%

The City of New Westminster is in the process of procuring design services for the Boundary Road Drainage Pump Station upgrade. Entering a Memorandum of Understanding with the City of New Westminster will allow New Westminster to design the upgraded Boundary Road Pump Station with consideration for Thompson/Boundary drainage volume.

The material terms of the Memorandum of Understanding will include:

- Richmond will be able to drain the Thompson/Boundary Area into the Boundary Road Canal;
- Richmond’s share of the capital and operating costs for the Boundary Road Pump Station will be 16% of actual costs;
- Richmond will contribute 9.5% of the maintenance costs for the Boundary Road Canal; and
- The Memorandum of Understanding is non-binding.

A future agreement regarding cost sharing will be developed based on the Memorandum of Understanding.

Financial Impact

Staff recommends updating the 5 Year Financial Plan (2018-2022) to fund the Boundary Road Pump Station, which includes an estimated \$960,000 City share of fronting costs for pump station upgrades, from the Drainage Improvement Reserve and an estimated \$4,475 City share of annual operating costs be included in the 2019 Budget. Staff also recommends that the Works and Services Cost Recovery Bylaw be updated to include recovery of the City’s share of fronting costs for the pump station upgrades (estimated at \$960,000) from benefiting developments in the Thompson/Boundary Area.

Conclusion

The Thompson/Boundary area is geographically separated from the rest of Richmond by Highway 91. Future development of the Thompson/Boundary Area will require drainage improvements. Staff recommends that the Thompson/Boundary Area utilize the Boundary Road Canal and Pump Station for future drainage based on cost and hydraulic efficiency. The alternative \$4.5M upgrade of the City’s pipe network is not recommended.

Staff recommends that the City enter a Memorandum of Understanding with the City of New Westminster that will allow New Westminster to include Thompson/Boundary drainage flows in the design of an upgraded Boundary Road Pump Station that identifies the cost sharing arrangement for this infrastructure. Staff also recommends that the 5 Year Financial Plan (2018-2022) be updated to fund the City's share of fronting pump station upgrade costs and annual maintenance costs from the Diking and Drainage Utility. Lastly, staff recommends updating the Works and Services Cost Recovery Bylaw to recover the City's share of fronting pump station upgrade costs from benefiting developments in the Thompson/Boundary Area.



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