



City of Richmond

Report to Committee

To: Public Works and Transportation Committee **Date:** June 13, 2014
From: John Irving, P.Eng. MPA **File:** 10-6000-01/2014-Vol
 Director, Engineering 01
Re: **Graybar Road Drainage and Sanitary Main Replacement**

Staff Recommendation

That funding of \$325,000 from the Sanitary Utility Reserve and \$275,000 from the Drainage Utility Reserve be included as an amendment to the 5 Year Financial Plan (2014-2018) to complete the Graybar Road Drainage and Sanitary Main Replacement Project.

John Irving, P.Eng. MPA
 Director, Engineering
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| REPORT CONCURRENCE | | |
|--|--|---------------------------------------|
| ROUTED TO: | CONCURRENCE | CONCURRENCE OF GENERAL MANAGER |
| Finance Division Sewerage & Drainage | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | |
| REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE | INITIALS: | APPROVED BY CAO |

Staff Report

Origin

In May 2014, staff were advised that ground settlement was occurring on City and private property along the northern portion of Graybar Road near Westminster Highway. Further investigation has indicated that the settlement is likely due to infiltration into the sanitary and drainage mains. While the system is still operational, it is necessary to replace these sections of sewer main to prevent further ground settlement and property damage.

The purpose of this report is to seek Council's support for the replacement of the Graybar Road Sanitary and Drainage Mains under the 2014 Capital Program, with funding from the Sanitary and Drainage Utility Reserves.

Analysis

There are approximately 620km of drainage mains and 565km of sanitary mains owned and maintained by the City. The drainage network collects stormwater throughout the City, and the sanitary network collects wastewater from City residents and businesses. Stormwater is discharged directly to the Fraser River, and wastewater is treated at the Metro Vancouver Lulu Island Wastewater Treatment Plant before it is ultimately discharged to the Fraser River.

The City has a proactive program of utility infrastructure upgrades funded through the appropriate utility. Upgrades are planned utilizing asset management and capacity models developed for Richmond's extensive water, sanitary, drainage and roadway systems. The Graybar Road drainage and sewer mains were not included in the current 5 Year Capital Plan because they are not nearing the end of their original design life.

In May 2014, ground settlement on the western side of Graybar Road was reported to staff. The settlement is affecting the boulevard as well as portions of a paved parking lot on private property. Subsequent inspection of the adjacent drainage and sanitary mains revealed settlement of the pipes and infiltration to both systems.

While the drainage and sanitary systems remain operational, the replacement of approximately 95m of 600mm diameter drainage main and 75m of 200mm diameter sanitary main is necessary to address the settlement issues and prevent further property damage. The estimated cost to complete this work is \$600,000.

Financial Impact

The total capital cost is \$600,000. Funding of \$325,000 for the sanitary portion of the work is available from the Sanitary Utility Reserve. Funding of \$275,000 for the drainage portion of the work is available from the Drainage Utility Reserve.

The 5 year Financial Plan (2014-2018) will be amended to reflect these changes.

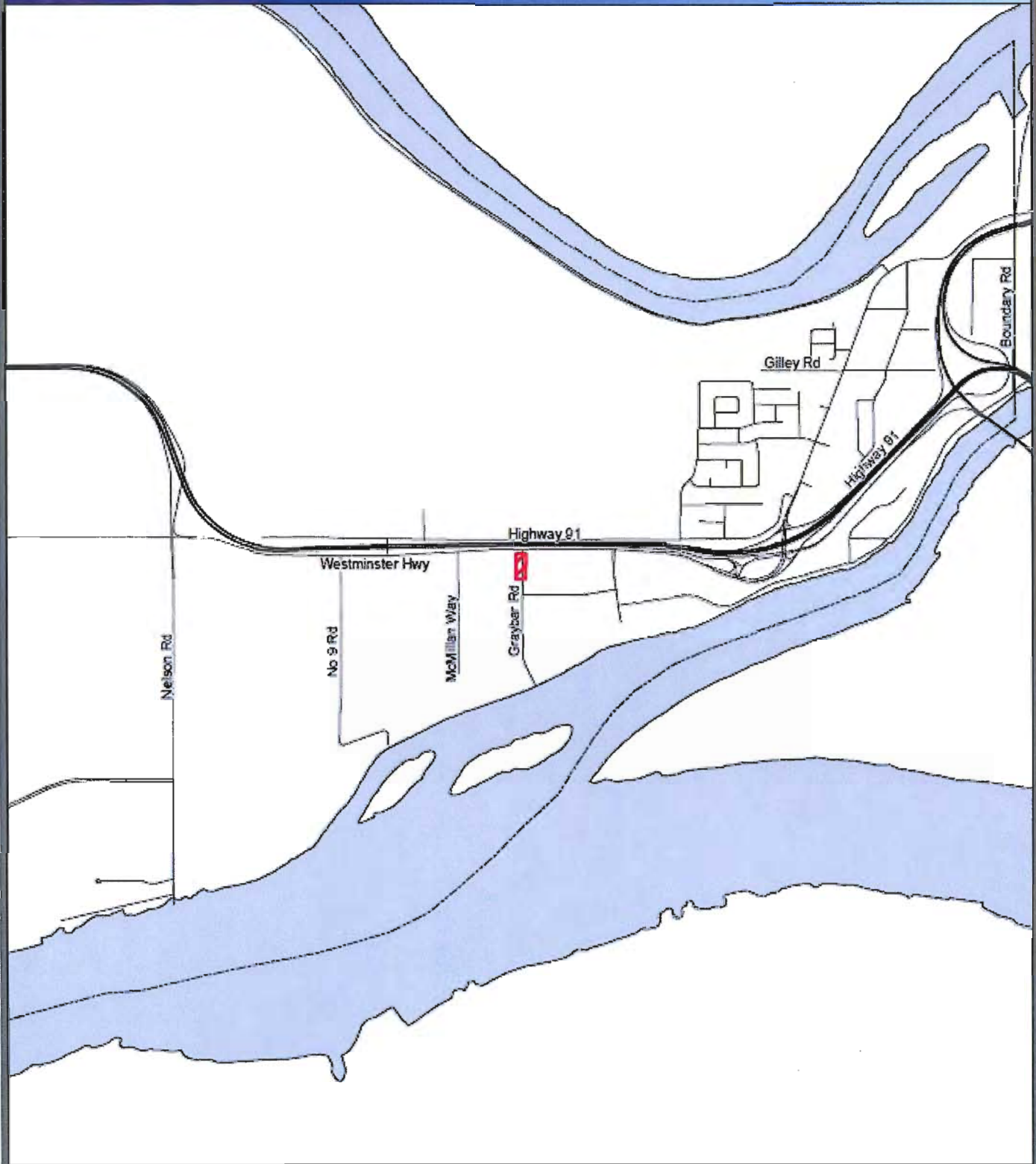
Conclusion

The drainage and sanitary mains at the north end of Graybar Road have settled and there is infiltration into these pipes. It is necessary to replace these sections of sewer to prevent further ground settlement and damage to private property.





Milton Chan, P.Eng
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MC:mc



Legend

-  Mains To Be Replaced
-  City of Richmond Boundary

Note:
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