

NO: **R101** COUNCIL DATE: **May 28, 2012**

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **May 23, 2012**
FROM: **General Manager, Engineering** FILE: **4711-904**
SUBJECT: **Local Area Service Initiative for the Phase 2 Area of the Bridgeview Vacuum Sewer System Replacement Program**

RECOMMENDATIONS

The Engineering Department recommends that Council:

1. Approve a Local Area Service (LAS) initiative as a means to finance the replacement of the existing Vacuum Sewer System (VSS) in the Phase 2 Area of the Bridgeview Low Pressure Sewer system as illustrated in Appendix I at an estimated recovery rate of \$600 per frontage meter, \$2,900 per service lateral and \$23,000 per pump connection;
2. Authorize staff to initiate the LAS as a Council initiative subject to the counter petitioning process as provided in the Community Charter;
3. Approve the compensation formula as outlined in this report for each owner of a property for which the service connection for the property is converted from the VSS system to the Low Pressure Sewer (LPS) system; and
4. Adopt as a policy the mandatory reconnection of each existing private sewer connection within the local service area from the VSS to the new replacement sewer system at the completion of the replacement system.

INTENT

The purpose of this report is to obtain Council's approval to initiate a LAS for Phase 2 Area of the Bridgeview Vacuum Sewer System, which will result in a more reliable sanitary sewer system for the properties in that area and will allow the City to recover its contribution to the project from the owners of properties within the area.

BACKGROUND

In 2006, Council adopted a replacement strategy for the Bridgeview Vacuum Sewer System (VSS) based on the information contained in Corporate Report No. R251; 2006, which addressed that matter. The replacement strategy calls for a low-pressure sewer system (LPS) to service the

industrial and commercial areas and a steep-grade gravity sewer system (SGS) to service the residential areas.

At its Regular meeting on July 13, 2009, Council considered Corporate Report No. R119; 2009, which authorized an LAS initiative as a means to finance the replacement of the existing VSS in the Phase 1 Area (West Bridgeview) of the Bridgeview Low Pressure Sewer Area. Council also approved as policy the mandatory reconnection of each private sewer connection for every property within that local service area from the VSS to the new replacement sewer system by the end of a five-year grace period, which commenced on the date of completion of the replacement system.

Based on a Local Area Service petition process and a \$5.67 million grant under the BC Build Canada Infrastructure Program, the City constructed the replacement sewer system in the Phase 1 area of the West Bridgeview Vacuum Sewer Replacement System. The grant included \$4.67 million for the replacement steep grade gravity sewer system in the residential area and \$1.0 million for the replacement low pressure sewer system in the business area.

The construction of Phase 1 Area system is now complete and the final project costs have now been determined. The final project cost for each of the benefiting properties is generally consistent with the original estimate for each respective property. The final project cost after taking the grant funding into account is \$1,881,561.44, with \$891,483.81, or 47.38%, of the costs to be recovered through a local area service charge. Specifically, the local area service charge for each benefiting property is as follows:

- Cost per linear metre of frontage: \$217.16;
- Cost per sewer lateral: \$2,777.39; and
- Cost per pump connection: \$10,974.19.

South Fraser Perimeter Road (SFPR)

In 2010, Fraser Transportation Group (FTG) was awarded the design and construction of the South Fraser Perimeter Road (SFPR), which is aligned in part through the Bridgeview area. Construction of the SFPR has commenced, and is scheduled to be completed in mid-2014.

As the existing VSS is vulnerable to damage from differential settlement related to the SFPR construction and on this basis it is preferable to undertake the VSS replacement in the Phase 2 Area of Bridgeview before the SFPR is completed with a view to avoiding future repairs to the VSS along the SFPR as these repairs will be expensive due to limitations related to the construction of the SFPR. Recognizing the advantages replacing the VSS in the Phase 2 Area, the FTG has agreed to provide \$152,000 as a contribution towards the project. In addition to the SFPR project, there are several local development interests along Musqueam Drive, which will benefit from an accelerated construction schedule for the sewer replacement in the Phase 2 Area.

Scope of Work

The properties that will benefit directly from the replacement sewer (Phase 2) are illustrated in Appendix I.

The replacement system includes both a LPS system and a small section of SGS to service the area between 126A Street and 128 Street and on 112B Avenue. The fronting sewer on Industrial Road from address 12221 to 114 Avenue for Area A3 is excluded from this LAS as the sewer will be constructed under a separate LAS project, which was adopted by Council on April 2, 2012 under Corporate Report No. Ro61:2012.

Although the LAS appears spatially fragmented, the replacement strategy developed for the Phase 2 Area will allow for the decommissioning of the West Bridgeview Vacuum Sewer Station, which will result in operations and maintenance savings of over \$200,000 per year.

DISCUSSION

Rationale

The construction of the LPS to service the Phase 2 Area of Bridgeview will allow for the decommissioning of both the remaining VSS in West Bridgeview and the West Bridgeview Vacuum Sewer Station. It will also facilitate industrial development along the South Fraser Perimeter Road.

Cost Recovery Principles

It is recommended that payments by the owners of benefiting properties toward the LAS project be based on the following principles:

1. The City will continue to provide sanitary sewer service to its existing customers without sewer replacement charges being applied irrespective of whether the sanitary system has been improved or replaced, except where new development occurs or where a connection is provided to a property that did not have an active connection;
2. The City will contribute its operational and maintenance savings from decommissioning the West Bridgeview Vacuum Sewer Station to help fund the project; and
3. New developments will pay for all remaining costs for the infrastructure being constructed under the LAS to service the area.

New development includes subdivisions, consolidations, development permits, some building permits, development variance permits, temporary use permits, rezonings and new connections to properties where no active connection existed in advance of the LAS project.

Cost Recovery Exemptions

Exemptions will be granted to any residential property where a house is demolished and a new one is constructed that is consistent with the existing zoning on the lot. This exemption does not apply to industrial and commercial properties as the replacement system will be relieving the restrictions on sewage flows that are currently stipulated under the *Sanitary Sewer Regulation and Charges By-law* for industrial and commercial properties, since such a change will add value to these properties.

Most of the sanitary service connections in Bridgeview are older than 30 years. The cost for service connection replacement will fall to the owner of each property based on the *Sanitary*

Sewer Regulation and Charges By-law, which requires the owner to replace the service connection to their property if it is more than 30 years old. This applies across the entire City.

The fronting sewer on Industrial Road from address 12221 to 114 Avenue is being constructed as part of a separate LAS project. Only the cost for the pump connections and service laterals for those properties will be included as part of the LAS to which this report refers.

Under the LAS Policy, the frontage to be used in calculating the share of the costs to be borne by any particular property is based on the minimum frontage stipulated in the Zoning By-laws for the Zone, which is applicable to the property. Since the Industrial (I4) Zone is considered a “holding” zone to allow for the consolidation of properties for development, it is proposed for any property that falls under the I4 Zone that actual frontage of the property be used in calculating the LAS charges.

Cost Apportionment and Recovery

The estimated cost to the City of this LPS work is \$9.6 million. The City will be contributing approximately \$5.0 million to the project in recognition of the operational and maintenance savings from decommissioning the West Bridgeview Vacuum Sewer Station. This amount, combined with the contribution received from FTG as referenced above, equates to 52.62% of the total project cost, which is approximately equal to the amount of non-recoverable financial assistance that was provided to the property owners in the Phase 1 Area LAS.

The remaining cost for the LPS work is \$4.6 million. This amount will be apportioned to each property within the local service area based on the length of its frontage in comparison to the total frontage in the area and based on the number of service connections servicing each particular property. The total of the LAS charges across all properties within the Area will allow the City to fully recover the \$4.6 million project cost. LAS charges will be collected at the time of development of any particular property or when a new sewer service connection is provided to a property that did not have a sanitary sewer connection prior to the LAS project.

Based on preliminary calculations, the LAS charge will be approximately \$600 per frontage metre, \$2,900 per service lateral and \$23,000 per pump connection. These costs are higher than the Phase 1 Area costs since a significant number of the properties within the Phase 2 Area front on streets that have private property fronting only one side of the street while most of the Phase 1 Area had private properties fronting both sides of the street, which allowed the cost for the pipe in the street to be shared equally to both sides.

Compensation for Owners Where a Private Pump System is Required

A private pump system will be installed in each fronting property to pump sewage from the property to the new low pressure main. The City will operate and maintain the force main while the owner of such private property will be responsible for operating and maintaining the private pump system located within the property. The LPS system will be much less expensive to operate and maintain for the City than the current VSS. It is reasonable for the City to compensate the owners of those properties on which private pumps will be required a lump sum amount of \$12,500 per property to cover the on-going cost of operation, maintenance and replacement of these private pump systems. These costs are included in the \$9.6 million project cost estimate.

Compensation of \$12,000 per property was provided to owners of properties in the Phase 1 Area that were faced with a similar circumstance.

The conversion of sewer connections from each property to the new LPS system will need to be carried out immediately upon completion of the LPS system due to the schedule for completion of the SFPR. In this regard a notice will be provided to the owner of each property advising that a consent for the service connection to the new LPS must be completed within 3-months of completion of the LPS. This notice will be delivered 4 months before the completion of the LPS system. All benefiting property owners in the Phase 2 Area will also be advised of this requirement as part of the counter petitioning process.

Public Open House

An Open House will be held to explain the proposed sewer replacement work, the LAS initiative, the counter petitioning process, the timing for payment of charges under the LAS, the compensation provisions for transferring the private service connections from the VSS to the LPS, and the schedule for transferring the private service connections from the VSS to the LPS. This Open House will be held at the commencement of the counter petitioning period related to the proposed LAS. Feedback from the Open House will be reported to Council at the end of the counter-petitioning period along with appropriate recommendations in relation to an LAS By-law.

Future Replacement Works in Bridgeview

With the Phase 1 and Phase 2 of the Bridgeview Sewer System Replacement having been addressed, the following table documents the remaining phases of work to complete the replacement of the sewer system in Bridgeview:

Phase	Description	Schedule
3	Replacement of the East Cell vacuum sewer area with a low pressure system on 115A and 115B Avenues	To be considered in the next 5 years or earlier should external funding materialize
4	Replacement of the remaining East Cell vacuum sewer area with a Steep Grade Sewer System	To be considered in the next 5 years or earlier should external funding materialize

The areas to which the above-referenced phases apply are illustrated on the map attached as Appendix I to this report.

Staff is attempting to secure funding from other orders of government to accelerate the works related to Phases 3 and 4, respectively.

The completion of Phases 3 and 4 will allow for the decommissioning of the east cell vacuum sewer system, which will result in further annual operational savings for the Sewer Utility.

Sustainability Considerations

The Local Area Service Initiative for the Phase 2 Area of the Bridgeview Vacuum Sewer Replacement will assist in achieving the objectives of the City's Sustainability Charter in relation to:

- Minimizing the operations and maintenance costs for the sewer system in Bridgeview;
- Reducing extraneous inflow into the sewer system, which in turn reduces the energy required to pump and treat the sewage;
- Reducing the sewage flow to Metro Vancouver's trunk system and sewage treatment plant will reduce the need for additional construction resources to build larger conveyance and treatment systems to handle the larger flow; and
- Facilitating industrial developments in the Bridgeview area leading to increased employment in Surrey that will act to support the City's objective of having a balance between local jobs and resident workers in Surrey.

Specifically, the Local Area Service Initiative for the Phase 2 Area of the Bridgeview Vacuum Sewer Replacement Program supports the following goals of the City's Sustainability Charter:

- EC2: Economic Development Strategy and an Employment Land Strategy;
- EC3: Sustainable Infrastructure Maintenance and Replacement;
- EN1: Energy Efficiency;
- EN8: Sustainable Engineering Standards and Practice; and
- EN16: Land, Water and Air Quality Management.

CONCLUSION

Based on the above discussion, it is recommended that Council:

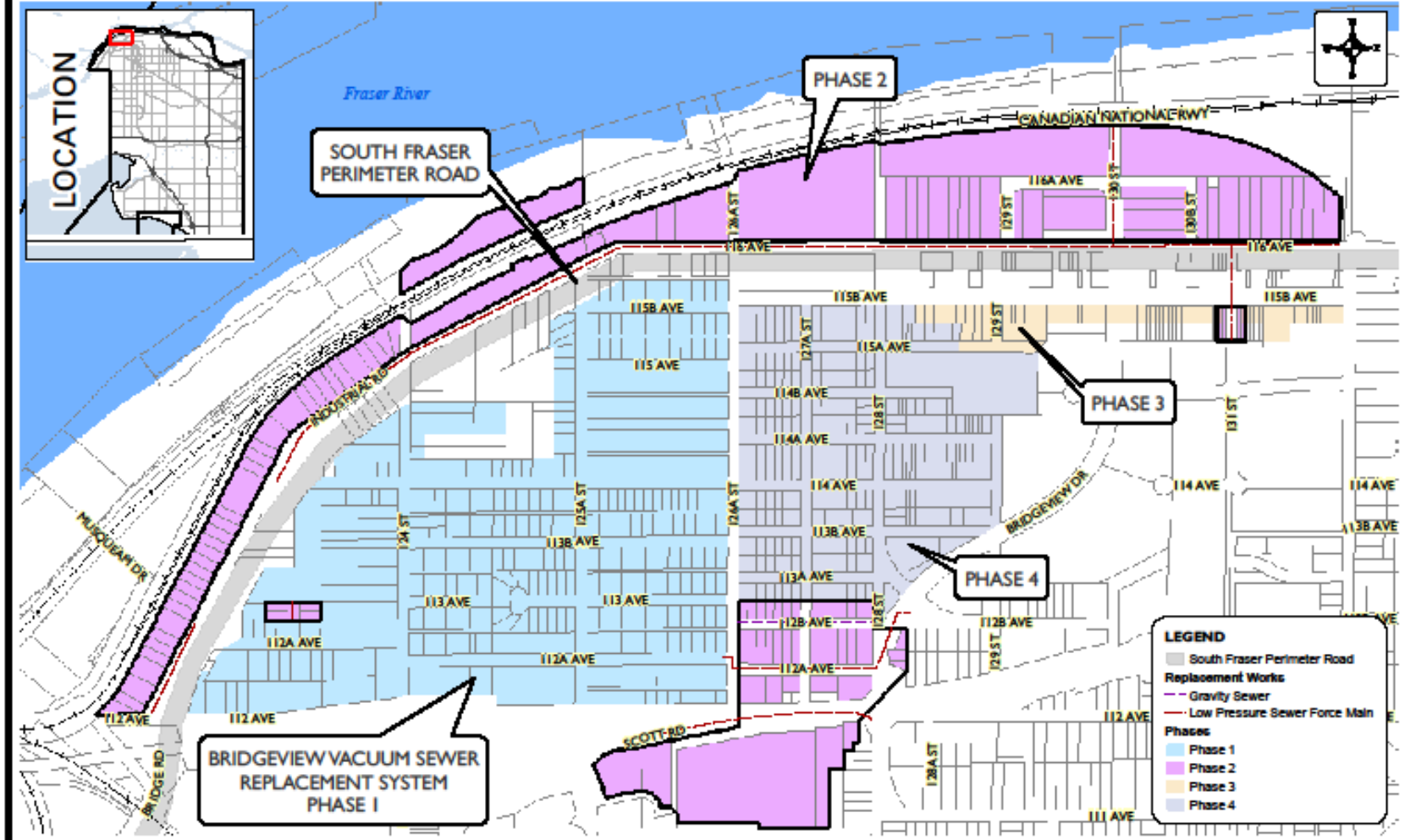
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- Authorize staff to initiate the LAS as a Council initiative subject to the counter petitioning process as provided in the Community Charter;
- Approve the compensation formula as outlined in this report for each owner of a property for which the service connection for the property is converted from the VSS system to the Low Pressure Sewer (LPS) system; and
- Adopt as a policy the mandatory reconnection of each existing private sewer connection within the local service area from the VSS to the new replacement sewer system at the completion of the replacement system.

Vincent Lalonde, P.Eng.
General Manager, Engineering

JA/RL/brb

Appendix I - Phase 2 Benefiting Area for Bridgeview Vacuum Sewer Replacement System - Local Service Area Map

APPENDIX I



Produced by GIS Section: March 19, 2012, AW8



DETAIL BENEFITING AREAS FOR BRIDGEVIEW VACUUM SEWER REPLACEMENT SYSTEM PHASE 2

ENGINEERING DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office.

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