

NO: R138

COUNCIL DATE: July 8, 2024

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **July 2, 2024**

FROM: **General Manager, Engineering** FILE: **1724-002/05**

SUBJECT: **Award of Contract No. 1724-002 D3**  
**Design of the 72 Avenue Extension from 152 Street to 176 Street**

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## RECOMMENDATION

The Engineering Department recommends that Council:

1. Award Consultant Design Agreement No. 1724-002 D3 to Aplin & Martin Consultants Ltd. at an estimated fee limit of \$743,787.87 (including GST) for the preliminary design of the 72 Avenue Extension from 152 Street to 176 Street;
2. Set the expenditure authorization limit for Consultant Design Agreement No. 1724-002 D3 at \$820,000.00 (including contingencies and GST);
3. Authorize the inclusion in the Consultant Design Agreement an option in favour of the City to retain Aplin & Martin Consultants Ltd. to provide engineering services for the optional detailed design services of the 72 Avenue Extension from 152 Street to 176 Street at an estimated fee limit of \$580,000.00 (including contingencies and GST);
4. Authorize the inclusion in the Consultant Design Agreement an option in favour of the City to retain Aplin & Martin Consultants Ltd. to provide engineering services for the optional construction services of the 72 Avenue Extension from 152 Street to 176 Street.
5. Authorize the General Manager, Engineering to award and execute Consultant Agreements with Aplin & Martin Consultants Ltd. for the preliminary design and optional detailed design of the 72 Avenue Extension from 152 Street to 176 Street should the optional detail design services to retain Aplin & Martin Consultants Ltd. be undertaken.

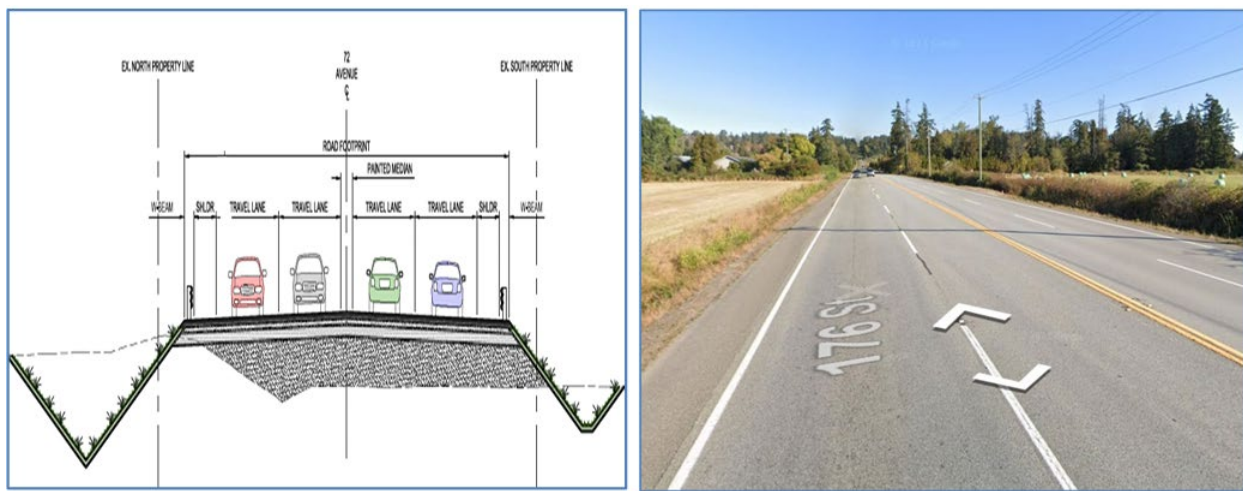
## INTENT

The intent of this report is to seek Council's approval to award Consultant Design Agreement No. 1724-002 D3 for engineering services for the design of the 72 Avenue Extension from 152 Street to 176 Street, as illustrated on the map attached to this report as Appendix "I".

## BACKGROUND

At the March 11, 2024 Regular Council Meeting, Council approved Corporate Report No. R052; 2024 which directed staff to proceed with procurement for the detail design of the 72 Avenue extension between 152 Street to Highway 15. The 72 Avenue corridor extension will serve to meet growing capacity needs and alleviate traffic congestion on Highway 10, 64 Avenue, and 88 Avenue.

Council provided direction to proceed with the procurement for the detailed design of the 72 Avenue extension based on a road design providing two travel lanes in each direction, improved agricultural ditches, and providing wide road shoulders to allow farm vehicles to use the road while allowing vehicles to pass along the inside travel lane. The wider road shoulders would also allow for confident cyclists, but not those of all ages and abilities. The road design would look similar to 176 Street south of 8 Avenue, as illustrated in the graphics below.



The estimated construction value of the road corridor is \$138 million.

## SCOPE OF WORK

Work within this design assignment involves engineering services for the preliminary design of the 72 Avenue Extension from 152 Street to 176 Street. The preliminary design phase involves overall project management, structural and geotechnical design, road design, environmental and agricultural permitting, and liaison with third party utilities.

At this time, an agreement will be awarded for the preliminary design with the option to award the detailed design services upon successful completion of the preliminary design phase. Staff will report to Council on the results of the preliminary designs and City-led public engagement efforts, which is anticipated before the end of 2024.

Construction of this project is anticipated to commence in multiple phases. The first phase of work is anticipated to begin by Fall 2025, subject to Council approval and securing the necessary environmental permits, third-party utility approvals, and property. Construction would then be anticipated to be completed by 2030.

## EVALUATION

The City invited four engineering consultants to respond to a Request for Proposals (“RFP”):

- Aplin & Martin Consultants Ltd. (“Aplin”);
- Atkins Realis (“Atkins”);
- McElhanney Ltd. (“McElhanney”); and
- Parsons Corporation (“Parsons”).

Parsons declined to submit a proposal. The proposals were evaluated using the following criteria:

- Understanding of the assignment;
- Experience relative to the assignment;
- Strength of project manager and project team;
- Work plan and schedule; and
- Financial considerations.

Three submissions were received and were carefully reviewed for accuracy and completeness by a panel of four staff members, following a structured and standard evaluation process.

Aplin’s proposal demonstrated a thorough understanding of the scope of work and a strong proposed work plan. Furthermore, Aplin have put forth a team with considerable experience related to similar work. Their total engineering fee is competitive, is considered reasonable for this type of engineering assignment, and represents the best value for the City. Staff therefore recommend that this assignment be awarded to Aplin.

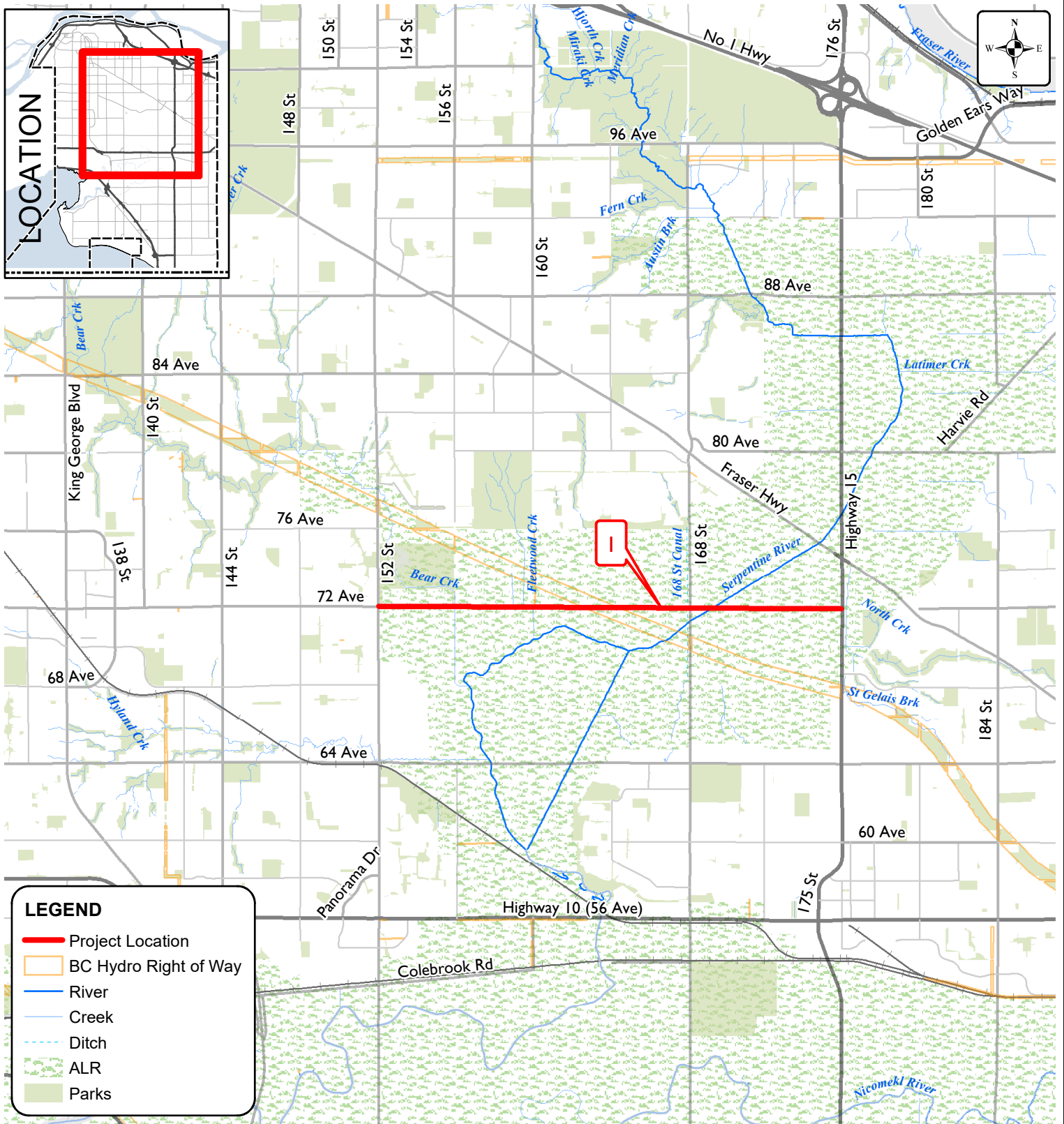
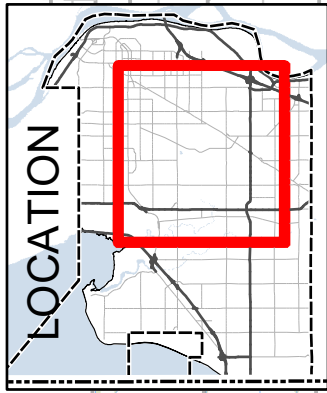
## FUNDING

Funding for this Contract is available in the approved 2024 Transportation Budget.

Scott Neuman, P.Eng.  
General Manager, Engineering

VJ/cc

Appendix “I” – Map of Project Location  
Appendix “II” - Corporate Report No. R052; 2024



**LEGEND**

- Project Location
- BC Hydro Right of Way
- River
- Creek
- - - Ditch
- ALR
- Parks

Produced by GIS Section: 05-Jun-2024

Scale: 1:55,000 0 500 M



## Contract No. 1724-002 D3 72 Avenue Extension Between 152 Street to Highway 15

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.

NO: R052 COUNCIL DATE: March 11, 2024

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### REGULAR COUNCIL

TO: Mayor & Council DATE: March 7, 2024  
FROM: General Manager, Engineering FILE: 1724-002/00  
SUBJECT: Feasibility of 72 Avenue Extension between 152 Street to Highway 15

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### RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report for information;
2. Direct staff to proceed with procurement for the detail design of the 72 Avenue extension between 152 Street to Highway 15 based on Scenario 3, as outlined in this report and in the attached Appendix "I"; and
3. If and only if Council approves Recommendation 2 of this report, then:
  - a. Direct staff to change the designation of the 'Bear Creek Connector' from a major road to a greenway corridor for pedestrian and cyclists, as outlined in this report;
  - b. Direct staff to designate 72 Avenue between 152 Street to Highway 15 as a truck route;
  - c. Direct staff to initiate discussions with TransLink to designate 72 Avenue between 152 Street to Highway 15 into the TransLink Major Road Network; and
  - d. Authorize staff to initiate applications, including non-farm use applications if necessary, to the Agricultural Land Commission for the 72 Avenue corridor extension between 152 Street and Highway 15.

### INTENT

The intent of this Corporate Report is to seek direction from Council on its preferred direction on the 72 Avenue extension between 152 Street and Highway 15, as illustrated in Appendix "II".

## BACKGROUND

At the May 15, 2023 Regular Council Meeting, Council endorsed through Corporate Report No. R071; 2023 (attached as Appendix “III”), the strategic transportation short-term projects which identified and prioritized developing specific arterial roads to support the City’s growth which is projected to reach one million people as early as 2042. One of the key corridors identified included assessing the feasibility of extending 72 Avenue between 152 Street and Highway 15.

72 Avenue has been identified as a four-lane arterial road on the City’s Road Classification Map (R-91). Two segments of 72 Avenue, 144 Street to 152 Street and Fraser Highway to 188 Street, are planned to be widened as part of the approved 10-Year Servicing Plan. The central segment between 152 Street and Highway 15 is not within the City’s 10-Year Servicing Plan nor is it identified on the City’s Road Classification Map. However, on May 22, 1875, the British Columbia Gazette established a 20-metre wide road corridor for the 72 Avenue corridor between 152 Street and Highway 15.

The City recently undertook a feasibility study for the extension of 72 Avenue between 152 Street and Highway 15. As part of the feasibility study, the City undertook an agricultural impact assessment, geotechnical screening, environmental site reviews, topographical surveys, archaeological screening review, and traffic analysis, as well as consultations with local property owners and farmers including the Agricultural and Food Policy Committee (“AFPC”). This information has informed the development of functional designs scenarios for the 72 Avenue corridor project. This report summarizes the results of the feasibility study and functional design scenarios developed.

## DISCUSSION

### 72 Avenue Corridor Traffic Analysis

72 Avenue between 120 Street to 152 Street and from Fraser Highway to 196 Street is classified as an arterial road. Staff have recently developed high level traffic modelling forecasts for the following land-use/populations timelines and scenarios to assess the impacts of the 72 Avenue extension.

1. 2022 baseline condition;
2. 2050 baseline condition (without a continuous four-lane 72 Avenue, however still including major transit investments such as the Surrey-Langley SkyTrain (“SLS”) and King George Boulevard Bus Rapid Transit); and
3. 2050 with a continuous four-lane 72 Avenue (including major transit investments).

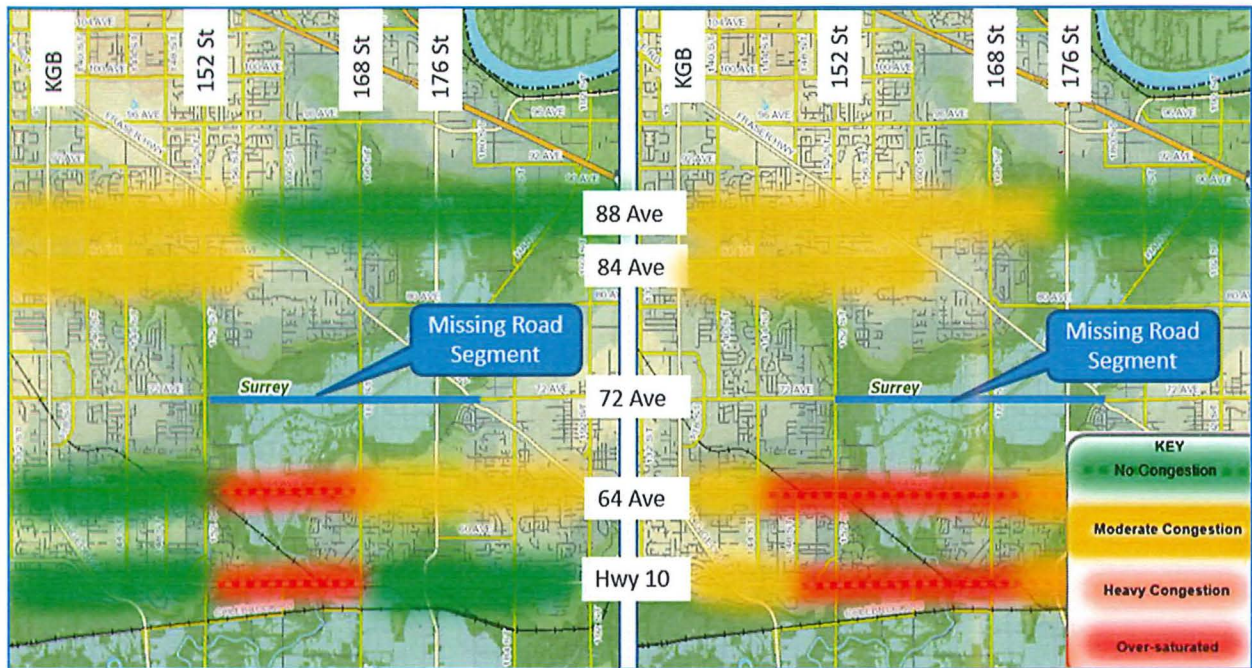
The estimated traffic volumes on a few select road segments are summarized in Table 1.

Road Segment	Daily Traffic Volumes/AADT (vehicles/day)				
	2022	2050 (w/o 72 Ave)	2050 (with 72 Ave)	2022 vs 2050 (w/o 72 Ave)	2022 vs 2050 (with 72 Ave)
88 Avenue: 152 Street to Highway 15	12,500	19,500	17,500	56% increase	40% increase
64 Avenue: 152 Street to Highway 15	27,000	36,600	24,900	36% increase	8% decrease
Highway 10: 152 Street to Highway 15	47,300	53,300	50,000	13% increase	6% increase
72 Avenue: 152 Street to Highway 15	-	-	37,300	-	-
<b>Total Trips</b>	<b>86,800</b>	<b>109,400</b>	<b>129,700</b>	-	-

As indicated in Table 1, by 2050, the east-west central arterial roads are forecasted to experience an increase in 23,000 vehicles per day, which exceeds the threshold of requiring a new four-lane arterial road (generally 18,000 cars/day). A 72 Avenue extension would have a significant calling effect, diverting traffic from other east-west arterial corridors such as 64 Avenue and Highway 10, providing these corridors with significant relief and providing adequate capacity for the east-west corridors in the City into the future, as illustrated in the following graphic.

**Congestion Levels at Year 2022**

**Congestion Levels at Year 2050**



The traffic analysis also indicates that 72 Avenue would have a high demand levels (37,300 vehicles per day), as it provides more complete east-west connectivity for multiple communities in Surrey, and a regional significance, becoming a continuous connection between Highway 91 to Highway 15, and a desirable connection into Langley and Maple Ridge via Highway 15 and Golden Ears Way.

Given the anticipated regional significance of the 72 Avenue corridor for the movement of people and goods throughout the region, the 72 Avenue corridor is a strong candidate for designation to the TransLink Major Road Network (“MRN”), especially considering that 72 Avenue between 120 Street to 152 Street is already designated as a MRN corridor.

Additional details, considerations and implications of the extension of 72 Avenue, including the various design scenarios that have been considered, can be found in the attached Appendix “I”.

### **Next Steps and Project Timing**

Should Council proceed with the detail design for this project the anticipated project schedule moving forward is as follows:

<b>Project Schedule for 72 Avenue Extension between 152 Street to 176 Street</b>	
Initial Detail Design Contract Award(s) <i>(Subject to Council Approval)</i>	May 2024
Detail Design	May 2024 to Spring 2025
Public Engagement (Council Committees)	June 2024
Initiating Regulatory Permitting	August 2024
Second Round Engagement (Council Committees)	Spring 2025
Property Acquisitions	May to September 2025
Pre-load Placement Contract Award(s) <i>(Subject to Council approval, and securing necessary regulatory permitting and property)</i>	Fall 2025
Pre-load Placement & Settlement Period	Fall 2025 to 2028
Roadway Construction	2028 to 2030

**FUNDING**

The preliminary estimated costs of the 72 Avenue extension for Scenario 3 are \$138 million, which includes the cost of design and contingency. It is anticipated that 38% of the project funding would be growth-related and funded through Development Cost Charges, and the remaining 62% of the project would be funded by general revenue collected by the City as Roads and Traffic Safety Levy (the “Levy”), and with potential external funding from TransLink should the 72 Avenue corridor extension be added to the MRN. The current 2023-2027 Five-Year Financial Plan includes a 1% increase in the Levy each of the five years.

The City’s Engineering 10-Year Servicing Plan currently does not include a budget for the 72 Avenue corridor extension. Given the delivery timeline for this project is over six years, it is anticipated that projects within the 10-Year Servicing Plan could be re-prioritized to include the 72 Avenue corridor project without a net overall increase in the 10-Year Plan value. Since the current Levy is insufficient to fund the re-prioritized projects, the current rate of 1% Levy will need to be increased by an additional 1% in 2025 and an additional 1% in 2026, to be dropped back to the current rate of 1% increase in 2027 and future years.

**CONCLUSION**

At the May 15, 2023 Council Meeting, Council directed staff to undertake a feasibility study for the 72 Avenue extension between 152 Street and Highway 15. The intent of this Corporate Report is to seek direction from Council on its preferred direction on the 72 Avenue extension based on the findings of the feasibility study presented in this report.



Scott Neuman, P.Eng.  
General Manager, Engineering

VJ/cc

- Appendix “I” – Additional Considerations and Design Scenarios for the 72 Avenue Extension
- Appendix “II” – Map of Project Location
- Appendix “III” - Corporate Report No. R071; 2023

**Note: Appendices available upon request**