METRO VANCOUVER REGIONAL DISTRICT (MVRD)  
BOARD OF DIRECTORS  

REGULAR BOARD MEETING  
Friday, November 1, 2019  
9:00 A.M.  
28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia  

Membership and Votes  

REVISED AGENDA

A. ADOPTION OF THE AGENDA  

1. November 1, 2019 Regular Meeting Agenda  
That the MVRD Board adopt the agenda for its regular meeting scheduled for November 1, 2019 as circulated.  

B. ADOPTION OF THE MINUTES  

1. October 4, 2019 Regular Meeting Minutes  
That the MVRD Board adopt the minutes for its regular meeting held October 4, 2019 as circulated.  

2. October 23, 2019 Metro Vancouver Board Budget Meeting Minutes  
That the MVRD Board adopt the minutes for the joint meeting of the MVRD, MVHC, GVWD and GVS&DD Boards held October 23, 2019, as circulated.  

C. DELEGATIONS

Added 1. Anita Huberman, Surrey Board of Trade  
Subject: George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options  

2. Nathan Davidowicz  
Subject: TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization  

D. INVITED PRESENTATIONS

1 Note: Recommendation is shown under each item, where applicable. All Directors vote unless otherwise noted.

November 1, 2019  
Metro Vancouver Regional District
E. CONSENT AGENDA

Note: Directors may adopt in one motion all recommendations appearing on the Consent Agenda or, prior to the vote, request an item be removed from the Consent Agenda for debate or discussion, voting in opposition to a recommendation, or declaring a conflict of interest with an item.

1. HOUSING COMMITTEE REPORTS

No items presented.

2. REGIONAL PLANNING COMMITTEE REPORTS


That the MVRD Board receive for information the report dated September 22, 2019, titled “Metro Vancouver 2040: Shaping our Future – 2018 Procedural Report”.

3. FINANCE AND INTERGOVERNMENT COMMITTEE REPORTS

3.1 George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options

That the MVRD Board:

a) receive for information the report titled “George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options” dated September 24, 2019;

b) based on the Province’s technical analysis, endorse a new eight-lane immersed-tube tunnel with multi-use pathway, including two transit lanes, as the preferred option for the George Massey Crossing for the purposes of public engagement; and

c) request the Province to develop further plans to improve transit, along the entire Highway 99 corridor, to improve transit speed, reliability and capacity.

3.2 TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization

That the MVRD Board approve $149.12 million in funding from the Greater Vancouver Regional Fund for the following transit projects proposed by TransLink in its Application for Federal Gas Tax funding for 2021 Fleet Expansion and Modernization as attached to the report dated October 8, 2019, titled “TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization”:

a) Project 1 – Year 2021 Conventional 60-ft Hybrid Bus, 40-ft Hybrid Bus, and 40-ft Battery Electric Bus Purchases for Fleet Expansion;

b) Project 2 – Year 2021 HandyDART Vehicle Purchases for Fleet Replacement;

c) Project 3 – Year 2021 HandyDART Vehicle Purchases for Fleet Expansion;

d) Project 4 – Year 2021 Community Shuttles Vehicle Purchases for Fleet Replacement;

e) Project 5 – Year 2021 Community Shuttle Vehicle Purchases for Fleet Expansion; and

f) Project 6 – Mark 1 SkyTrain Cars Refurbishment.
4. CLIMATE ACTION COMMITTEE REPORTS

4.1 Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver
That the MVRD Board:
   a) direct staff to proceed with engagement and consultation on the proposed approach to regulating air emissions from open-air burning activities, based on the discussion paper attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver” dated October 1, 2019; and
   b) endorse the engagement plan attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver”, dated October 1, 2019.

4.2 Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings
That the MVRD Board write a letter to the Community Energy Association offering in-kind staff support to develop strategies to accelerate low-carbon building retrofits, as outlined in the report dated September 19, 2019, titled “Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings”.

4.3 Atl’ka7tsem/Howe Sound Biosphere Region – UNESCO Nomination
That the MVRD Board:
   a) endorse the nomination of Alt’ka7tsem/Howe Sound as a UNESCO biosphere region; and
   b) authorize the Corporate Officer to sign the nomination form on behalf of Metro Vancouver.

5. CHIEF ADMINISTRATIVE OFFICER REPORTS

5.1 Metro Vancouver External Agency Activities Status Report - November 2019
That the MVRD Board receive for information the following reports from Metro Vancouver representatives to external organizations:
   a) Municipal Finance Authority;
   b) Sasamat Volunteer Fire Department Board of Trustees;
   c) Delta Heritage Airpark Management Committee;
   d) Pacific Parklands Foundation;
   e) Union of British Columbian Municipalities; and
   f) Fraser Basin Council Society,
   as presented in the report dated October 18, 2019, titled “Metro Vancouver External Agency Activities Status Report - November 2019”.

F. ITEMS REMOVED FROM THE CONSENT AGENDA

G. REPORTS NOT INCLUDED IN CONSENT AGENDA
1. REGIONAL PLANNING COMMITTEE REPORTS

1.1 Amending Metro Vancouver 2040: Shaping our Future to Align with the IPCC Special Report on Global Warming of 1.5°C – Bylaw 1295, 2019

[Recommendation a), b), and c): simple weighted majority vote.]

That the MVRD Board:

a) initiate a Type 3 minor amendment to Metro Vancouver 2040: Shaping our Future to reflect a commitment to a carbon neutral region by 2050, and an interim target of reducing greenhouse gas emissions by 45% from 2010 levels by 2030;

b) give first, second, and third readings to “Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1295, 2019”; and

c) direct staff to notify affected local governments and agencies as per Section 6.4.2 of Metro Vancouver 2040: Shaping our Future.

2. REGIONAL PARKS COMMITTEE REPORTS

2.1 Regional Parks Service Amendment Bylaw No. 1290

[Recommendation a) and b): simple weighted majority vote.]

That the MVRD Board:

a) give first, second and third reading to Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019; and

b) direct staff to seek consent of at least 2/3 of the participants to amend the service area to add an extraterritorial area to the regional park function, and following that, forward the Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019 to the Inspector of Municipalities for approval.

3. CHIEF ADMINISTRATIVE OFFICER REPORTS

3.1 Election of the MVRD Representative on the 2019-2020 Union of British Columbia Municipalities Executive

[Election: simple unweighted majority vote.]

3.2 2019 Year End Review

That the MVRD Board receive for information the report dated October 28, 2019, titled “2019 Year End Review”.

Metro Vancouver Regional District
4. BUDGET REPORTS

4.1 MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291

[Recommendation 1] and [3]: simple weighted majority vote.
[Recommendation 2]: simple weighted majority vote (only Anmore and Belcarra may vote).
[Recommendation 4a]: simple weighted majority vote.
[Recommendation 4b]: 2/3 weighted majority vote.

1. That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”, in the following schedules:
   - Revenue and Expenditure Summary
   - Affordable Housing
   - Air Quality
   - E911 Emergency Telephone Service
   - Electoral Area Service
   - General Government Administration
   - General Government Zero Waste Collaboration Initiatives
   - Labour Relations
   - Regional Economic Prosperity
   - Regional Emergency Management
   - Regional Global Positioning System
   - Regional Parks
   - Capital Programs & Project Totals - Regional Parks
   - Regional Planning

2. That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 as presented for the Sasamat Fire Protection Service, and shown in the following schedules:
   - Revenue and Expenditure Summary
   - Sasamat Fire Protection Service

(Only Anmore and Belcarra may vote)

3. That the MVRD Board approve the 2020 Reserve Applications as shown in Attachment 2 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”.

4. That the MVRD Board:
   a) give first, second and third reading to Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019; and
   b) pass and finally adopt Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN

Metro Vancouver Regional District
I. OTHER BUSINESS

1. MVRD Board Committee Information Items and Delegation Summaries

J. BUSINESS ARISING FROM DELEGATIONS

K. RESOLUTION TO CLOSE MEETING

Note: The Board must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.

That the MVRD Board close its regular meeting scheduled for November 1, 2019 pursuant to the Community Charter provisions, Section 90 (1) (a), (e), (k) and (m) as follows:

“90 (1) A part of a board meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the regional district or another position appointed by the regional district;

(e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district;

(k) negotiations and related discussions respecting the proposed provision of a regional district service that are at their preliminary stages and that, in the view of the board or committee, could reasonably be expected to harm the interests of the regional district if they were held in public; and

(m) a matter that, under another enactment, is such that the public may be excluded from the meeting.”

L. RISE AND REPORT (Items Released from Closed Meeting)

M. ADJOURNMENT/CONCLUSION

That the MVRD Board adjourn/conclude its regular meeting of November 1, 2019.
Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Board of Directors held at 9:11 a.m. on Friday, October 4, 2019 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:
Burnaby, Chair, Director Sav Dhaliwal
North Vancouver City, Vice Chair Director Linda Buchanan
Anmore, Director John McEwen
Belcarra, Director Neil Belenkie
Bowen Island, Director David Hocking
Burnaby, Director Mike Hurley
Burnaby, Alternate Director Colleen Jordan for Pietro Calendino
Coquitlam, Director Craig Hodge
Coquitlam, Director Richard Stewart
Delta, Director George Harvie
Delta, Director Lois Jackson
Electoral Area A, Jen McCutcheon
Langley City, Director Val van den Broek
Langley Township, Director Jack Froese
Langley Township, Director Kim Richter
Lions Bay, Alternate Director Fred Bain for Ron McLaughlin
Maple Ridge, Director Mike Morden
New Westminster, Director Jonathan Coté
North Vancouver District, Director Lisa Muri
Port Coquitlam, Director Brad West
Port Moody, Alternate Director Hunter Madsen for Rob Vagramov
Richmond, Director Malcolm Brodie
Richmond, Director Harold Steves
Surrey, Director Doug Elford
Surrey, Director Laurie Guerra
Surrey, Director Jack Singh Hundial
Surrey, Director Brenda Locke
Surrey, Director Doug McCallum
Surrey, Director Allison Patton
Tsawwassen, Director Ken Baird
Vancouver, Director Christine Boyle
Vancouver, Director Adriane Carr
Vancouver, Director Melissa De Genova
Vancouver, Director Lisa Dominato
Vancouver, Alternate Director Pete Fry for Kennedy Stewart
Vancouver, Director Colleen Hardwick
Vancouver, Director Michael Wiebe
West Vancouver, Director Mary-Ann Booth
White Rock, Director Darryl Walker

MEMBERS ABSENT:
Pitt Meadows, Director Bill Dingwall

STAFF PRESENT:
Ravi Chhina, Acting Chief Administrative Officer
Genevieve Lanz, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer
A. ADOPTION OF THE AGENDA

1. October 4, 2019 Regular Meeting Agenda

Main Motion
It was MOVED and SECONDED
That the MVRD Board adopt the agenda for its regular meeting scheduled for October 4, 2019 as circulated.

Members considered amending the agenda to add a delegation request.

Amendment to the Main Motion
It was MOVED and SECONDED
That the MVRD Board amend the agenda for its regular meeting scheduled for October 4, 2019 by adding Item C.1 Roderick Louis.

CARRIED

Question on the Main Motion as Amended
Question was then called on the Main Motion as amended and it was

CARRIED

B. ADOPTION OF THE MINUTES

1. July 26, 2019 Regular Meeting Minutes

It was MOVED and SECONDED
That the MVRD Board adopt the minutes for its regular meeting held July 26, 2019 as circulated.

CARRIED

C. DELEGATIONS

C.1 Roderick Louis
Roderick Louis spoke to the Board in relation to Item 2.3 Metro 2050 Scope and Status Update, expressing concerns related to public consultation by TransLink as part of the development of Metro 2050, requesting that the Board direct staff to host regional public forums for input on existing and potential transit infrastructure, service, and development of transit-oriented urban centres.

On-table summary and presentation material are retained with the October 4, 2019 MVRD Board agenda.
D. INVITED PRESENTATIONS

1. Cynthia Lulham, Project Manager, Federation of Canadian Municipalities/Railway Association of Canada
   Cynthia Lulham, Project Manager, Federation of Canadian Municipalities/Railway Association of Canada spoke to members regarding the FCM-RAC Proximity Guidelines, highlighting the relationship between municipalities and railways, memorandum of understanding between the Federation of Canadian Municipalities and Railway Association of Canada, and guidelines for proximity building.

   Presentation material titled “FCM-RAC Proximity Initiative” is retained with the October 4, 2019 MVRD Board agenda.

E. CONSENT AGENDA

At the request of Directors, the following items were removed from the Consent Agenda, in the following order, for consideration under Section F. Items Removed from the Consent Agenda:

2.2 Metro 2050 Engagement Plan
2.4 Establishment of an Intergovernmental Advisory Committee for the Update to the Regional Growth Strategy
3.1 Regional Parks Land Acquisition and Development Funding
1.1 Affordable Housing Proposed Partnership Funding Model

It was MOVED and SECONDED

That the MVRD Board adopt the recommendations contained in the following items presented in the October 4, 2019 MVRD Board Consent Agenda:

2.1 Squamish-Lillooet Regional District Regional Growth Strategy Amendment Bylaw No. 1562-2018
2.3 Metro 2050 Scope and Status Update
2.5 City of Vancouver’s Regional Context Statement – 5 Year Review
3.2 Campbell Valley Regional Park – Proposed Campbell Valley Nature Centre Location
4.1 Integrated Public Engagement Process for the Metro Vancouver Clean Air Plan and Climate 2050
5.1 2020 Schedule of Regular Board Meetings

CARRIED

The items and recommendations referred to above are as follows:

2.1 Squamish-Lillooet Regional District Regional Growth Strategy Amendment Bylaw No. 1562-2018
Recommendation:
That the MVRD Board accept Squamish-Lillooet Regional District Regional Growth Strategy Amendment Bylaw No. 1562-2018 and notify the Squamish-Lillooet Regional District Board of its acceptance.

Adopted on Consent

2.3 Metro 2050 Scope and Status Update
Report dated August 15, 2019 from Sean Tynan, Acting Senior Planner, Regional Planning, Planning and Environment, providing the Board with an update on the development of Metro 2050.

Recommendation:
That the MVRD Board receive for information the report titled “Metro 2050 Scope and Status Update” dated August 15, 2019.

Adopted on Consent

2.5 City of Vancouver’s Regional Context Statement – 5 Year Review
Report dated August 14, 2019 from Sean Tynan, Acting Senior Planner, Regional Planning, Planning and Environment, seeking Board acceptance of the City of Vancouver’s 2013 Regional Context Statement.

Recommendation:
That the MVRD Board accept the City of Vancouver’s Regional Context Statement as submitted to Metro Vancouver on July 26, 2019.

Adopted on Consent

3.2 Campbell Valley Regional Park – Proposed Campbell Valley Nature Centre Location
Report dated July 17, 2019 from Doug Petersen, Acting Division Manager, and Lydia Mynott, Park Planner, East Area, Regional Parks, Parks and Housing Services, seeking Board approval for the South Valley Activity Area as the future location for the Campbell Valley Nature Centre in Campbell Valley Regional Park.

Recommendation:
That the MVRD Board approve the South Valley Activity Area in Campbell Valley Regional Park as the future location for the Campbell Valley Nature Centre.

Adopted on Consent

4.1 Integrated Public Engagement Process for the Metro Vancouver Clean Air Plan and Climate 2050
Report dated August 27, 2019 from John Lidner, Air Quality Planner, Jason Emmert, Senior Planner, and Laura Taylor, Public Engagement Coordinator, Planning and Environment, seeking Board approval of the scope of the Clean Air Plan and authorization to begin the engagement process, including integration with the Climate 2050 engagement.

Recommendation:
That the MVRD Board, based on the report dated August 27, 2019, titled “Integrated Public Engagement Process for the Metro Vancouver Clean Air Plan and Climate 2050”:
   a) approve the scope of the proposed Clean Air Plan as presented in the Clean Air Plan Backgrounder;
   b) authorize staff to proceed with the engagement process on the Clean Air Plan; and
   c) direct staff to integrate the Clean Air Plan engagement process with the Climate 2050 engagement process.

Adopted on Consent

5.1 2020 Schedule of Regular Board Meetings

Report dated August 21, 2019 from Chris Plagnol, Corporate Officer, providing the Board with its 2020 schedule of regular board meetings.

Recommendation:
That the MVRD Board receive for information the schedule of regular board meetings, as follows:
   a) Meeting Dates
     • Friday, January 31, 2020
     • Friday, February 28, 2020
     • Friday, March 27, 2020
     • Friday, April 24, 2020
     • Friday, May 29, 2020
     • Friday, July 3, 2020
     • Friday, July 31, 2020
     • Friday, October 2, 2020
     • Wednesday, October 21, 2020 (Budget Workshop)
     • Friday, October 30, 2020
     • Friday, November 27, 2020 (Inaugural Meeting)
     • Friday, December 11, 2020
   b) Meeting Place and Time
     Metro Vancouver Boardroom, 28th Floor, 4730 Kingsway, Burnaby BC, at 9:00 a.m., unless otherwise specified on the Metro Vancouver public notice board, the Metro Vancouver website, and the respective agenda.

Adopted on Consent

F. ITEMS REMOVED FROM THE CONSENT AGENDA

The items removed from the Consent Agenda were considered in numerical order.

1.1 Affordable Housing Proposed Partnership Funding Model

Report dated August 21, 2019 from Ravi Chhina, General Manager, Parks and Housing Services, seeking MVRD Board approval to establish annual funding through a property tax requisition to facilitate new MVHC housing development
projects in partnership with MVRD members on lands owned by member jurisdictions.

Main Motion
It was MOVED and SECONDED
That the MVRD Board direct staff to include in the 2020 Affordable Housing budget a $4.0M tax requisition for the purpose of dedicated funding for new MVHC affordable housing development projects on lands owned by MVRD member jurisdictions.

Members discussed the use of funds for development of lands held by Metro Vancouver Regional District.

Amendment to the Main Motion
It was MOVED and SECONDED
That the MVRD Board amend the Main Motion, by adding the phrase “by MVRD or” before the phrase “by MVRD member jurisdictions”.

CARRIED

Members clarified the process of including the proposed tax requisition in the 2020 budget.

Amendment to the Main Motion
It was MOVED and SECONDED
That the MVRD Board amend the Main Motion, by adding the phrase “for approval” following the phrase “direct staff to include”.

CARRIED

Question on the Main Motion as Amended
Question was then called on the Main Motion as amended and it was

CARRIED

The Main Motion as amended now reads as follows:
That the MVRD Board direct staff to include for approval in the 2020 Affordable Housing budget a $4.0M tax requisition for the purpose of dedicated funding for new MVHC affordable housing development projects on lands owned by MVRD or by MVRD member jurisdictions.

2.2 Metro 2050 Engagement Plan
Report dated August 15, 2019 from Sean Tynan, Acting Senior Planner, Regional Planning, Planning and Environment and Lucy Duso, Policy Coordinator, External Relations, seeking Board approval of the updated Metro 2050 Engagement Plan, and seeking direction on the inclusion of a regional public hearing in the engagement process.
A member commented on a preference to hold a Regional Public Hearing reconvened in three locations, and subsequently moved Alternative 2 as presented in the report.

**It was MOVED and SECONDED**
That the MVRD Board:

a) approve the updated *Metro 2050* Engagement Plan as outlined in the report dated August 15, 2019, titled “*Metro 2050* Engagement Plan”;

b) in alignment with the requirements of Subsection 434(3) of the Local Government Act, direct staff to include a Regional Public Hearing as part of the engagement process for *Metro 2050* and provide direction that the Regional Public Hearing should be reconvened in three locations with at least one location south of the Fraser River;

c) as per Subsection 433(4) of the *Local Government Act*, notify affected local governments and the Minister of Municipal Affairs and Housing of the initiated update to *Metro 2040*; and

d) direct staff to offer each municipality the opportunity to co-host a public information meeting on *Metro 2050* aligned with respective Council presentations.

Members discussed the effectiveness of public hearings and opportunities for alternative forms of public engagement.

**Distinct Propositions**
At the request of a Director, the recommendation was separated into distinct propositions.

Proposition a) was before the Board.

Question was then called on Proposition a) and it was **CARRIED**

Proposition b) was before the Board.

Question was then called on Proposition b) and it was **DEFEATED**

Proposition c) was before the Board.

Question was then called on Proposition c) and it was **CARRIED**

Proposition d) was before the Board.

Question was then called on Proposition d) and it was **CARRIED**
Members considered Part b) of the staff recommendation to include one Regional Public Hearing as part of the engagement process for Metro 2050.

**It was MOVED and SECONDED**

That the MVRD Board, in alignment with the requirements of Subsection 434(3) of the *Local Government Act*, direct staff to include a Regional Public Hearing as part of the engagement process for Metro 2050.

**CARRIED**

The above two Main Motions, reflecting the four propositions, now read as follows:

*That the MVRD Board:*

a) approve the updated Metro 2050 Engagement Plan as outlined in the report dated August 15, 2019, titled “Metro 2050 Engagement Plan”;

b) as per Subsection 433(4) of the *Local Government Act*, notify affected local governments and the Minister of Municipal Affairs and Housing of the initiated update to Metro 2040; and

c) direct staff to offer each member jurisdiction the opportunity to co-host a public information meeting on Metro 2050 aligned with respective Council presentations.

*That the MVRD Board, in alignment with the requirements of Subsection 434(3) of the *Local Government Act*, direct staff to include a Regional Public Hearing as part of the engagement process for Metro 2050;*

### 2.4 Establishment of an Intergovernmental Advisory Committee for the Update to the Regional Growth Strategy

Report dated August 19, 2019 from James Stiver, Division Manager, Growth Management and Transportation, Regional Planning, Planning and Environment, seeking Board direction on the establishment and membership of an Intergovernmental Advisory Committee for the update to the regional growth strategy, Metro 2050.

**Main Motion**

**It was MOVED and SECONDED**

That the MVRD Board:

a) establish an Intergovernmental Advisory Committee to advise on the development and implementation of the update of the regional growth strategy, as required by Section 450 of the *Local Government Act*;

b) appoint the Director of Regional Planning and Electoral Area Services and the Division Manager of Growth Management and Transportation of Metro Vancouver to the Intergovernmental Advisory Committee;

c) invite the following authorities and organizations to make appointments to the Intergovernmental Advisory Committee:

i) Metro Vancouver member jurisdictions;

ii) South Coast British Columbia Transportation Authority;
iii) Provincial Government;
iv) Fraser Valley Regional District and the Squamish-Lillooet Regional District;
v) Port of Vancouver;
vi) Vancouver Airport Authority;
vii) Agricultural Land Commission;
viii) Fraser Health and Vancouver Coastal Health; and
ix) the University of British Columbia.

Members discussed inviting Simon Fraser University and Kwantlen Polytechnic University to make appointments to the Intergovernmental Advisory Committee.

**Amendment to the Main Motion**

**It was MOVED and SECONDED**

That the MVRD Board amend the Main Motion, in Part c), subsection ix), following the phrase “the University of British Columbia”, by adding the phrase “Simon Fraser University and Kwantlen Polytechnic University”.

**CARRIED**

Members considered further amending the Main Motion to include local First Nations to participate in the Intergovernmental Advisory Committee.

**Amendment to the Main Motion**

**It was MOVED and SECONDED**

That the MVRD Board amend the Main Motion, at the end of Part c) of the motion, by adding “x) Local First Nations”.

**CARRIED**

**Question on the Main Motion as Amended**

Question was then called on the Main Motion as amended and it was **CARRIED**

*The Main Motion as amended now reads as follows:

That the MVRD Board:

a) establish an Intergovernmental Advisory Committee to advise on the development and implementation of the update of the regional growth strategy, as required by Section 450 of the Local Government Act;
b) appoint the Director of Regional Planning and Electoral Area Services and the Division Manager of Growth Management and Transportation of Metro Vancouver to the Intergovernmental Advisory Committee;
c) invite the following authorities and organizations to make appointments to the Intergovernmental Advisory Committee:
   i) Metro Vancouver member jurisdictions;
   ii) South Coast British Columbia Transportation Authority;
   iii) Provincial Government;*
iv) Fraser Valley Regional District and the Squamish-Lillooet Regional District;
v) Port of Vancouver;
vi) Vancouver Airport Authority;
vii) Agricultural Land Commission;
viii) Fraser Health and Vancouver Coastal Health;
ix) the University of British Columbia, Simon Fraser University and Kwantlen Polytechnic University; and
x) Local First Nations.

3.1 Regional Parks Land Acquisition and Development Funding
Report dated September 18, 2019 from the Regional Parks Committee, together with report dated September 9, 2019 from Ravi Chhina, General Manager, and Mike Redpath, Director, Regional Parks, Parks and Housing Services, seeking Board approval to establish annual funding through property tax requisition for land acquisition and park development.

Main Motion
It was MOVED and SECONDED
That the MVRD Board:
a) direct staff to include in the Regional Parks 2020 budget an additional contribution of $4 million to advance the Regional Parkland Acquisition Reserve Fund and include an additional $4 million increase annually until 2024; and
b) prepare an amendment to the Greater Vancouver Regional District Bylaw 735, the bylaw that established a Regional Parkland Acquisition Reserve Fund, to enable capital funding provisions for both land acquisition and park development for Board approval.

Members clarified including the proposed annual contribution in the 2020 budget process.

Amendment to the Main Motion
It was MOVED and SECONDED
That the MVRD Board amend the Main Motion, in Part a) of the motion, by adding the phrase “for approval” following the phrase “direct staff to include”.

CARRIED
Director Baird was absent at the vote.

Question on the Main Motion as Amended
Question was then called on the Main Motion as amended and it was CARRIED
The Main Motion as amended now reads as follows:
That the MVRD Board:
  a) direct staff to include for approval in the Regional Parks 2020 budget an
     additional contribution of $4 million to advance the Regional Parkland
     Acquisition Reserve Fund and include an additional $4 million increase
     annually until 2024; and a
  b) prepare an amendment to the Greater Vancouver Regional District Bylaw 735,
     the bylaw that established a Regional Parkland Acquisition Reserve Fund, to
     enable capital funding provisions for both land acquisition and park
     development for Board approval.

G. REPORTS NOT INCLUDED IN CONSENT AGENDA

1.1 Amending Metro Vancouver 2040: Shaping our Future to Reflect Accepted
Regional Context Statements – Metro Vancouver Regional District Regional
Growth Strategy Amendment Bylaw No. 1285, 2019
Report dated September 18, 2019 from Heather McNell, Director, Regional
Planning and Electoral Area Services, Planning and Environment and Chris Plagnol,
Corporate Officer, providing the Board with a summary of comments received as
a result of the notification to local governments and agencies, and seeking
adoption of Metro Vancouver Regional District Regional Growth Strategy
Amendment Bylaw No. 1285, 2019.

It was MOVED and SECONDED
That the MVRD Board:
  a) receive for information the comments from the affected local governments
     and agencies as presented in the report dated August 20, 2019, titled
     “Amending Metro Vancouver 2040: Shaping our Future to Reflect Accepted
     Regional Context Statements – Metro Vancouver Regional District Regional
     Growth Strategy Amendment Bylaw No. 1285, 2019”; and
  b) pass and finally adopt Metro Vancouver Regional District Regional Growth
     Strategy Amendment Bylaw No. 1285, 2019.

CARRIED

1.2 Regional Growth Strategy Amendment Bylaw No. 1283 – MK Delta Lands, City
of Delta
Report dated September 17, 2019 from Heather McNeill, Director, Regional
Planning and Electoral Services, Planning and Environment and Chris Plagnol,
Corporate Officer, providing the Board with a summary of comments received as
a result of the notification to local governments and agencies, and seeking third
and final readings and adoption of Metro Vancouver Regional District Regional
Growth Strategy Amendment Bylaw No. 1283, 2019.
It was MOVED and SECONDED
That the MVRD Board:
   a) receive for information the comments from the affected local governments and agencies as presented in the report dated September 17, 2019 titled “Regional Growth Strategy Amendment Bylaw No. 1283 – MK Delta Lands, City of Delta”;
   b) give 3rd reading to Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1283, 2019.

CARRIED
Directors McCallum, McCucheon, van den Broek and West absent at the vote.

It was MOVED and SECONDED
That the MVRD Board pass and finally adopt Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1283, 2019 and notify the City of Delta.

CARRIED
Directors McCallum, van den Broek absent at the vote.

It was MOVED and SECONDED
That the MVRD Board accept the City of Delta’s amended Regional Context Statement showing, for the MK Delta Lands site, a regional Industrial land use designation, and alteration of the Urban Containment Boundary.

CARRIED
Directors McCallum, van den Broek absent at the vote.

H. MOTIONS FOR WHICH NOTICE HAS BEEN GIVEN
No items presented.

I. OTHER BUSINESS

1. MVRD Board Committee Information Items and Delegation Summaries

   It was MOVED and SECONDED
   That the MVRD Board receive for information the MVRD Board Committee Information Items and Delegation Summaries, dated October 4, 2019.

   CARRIED

J. BUSINESS ARISING FROM DELEGATIONS
No items presented.
K. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED
That the MVRD Board close its regular meeting scheduled for October 4, 2019 pursuant to the Community Charter provisions, Section 90 (1) (a), (c) and (e) as follows:

“90 (1) A part of a board meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
(a) personal information about an identifiable individual who holds or is being considered for a position as an officer, employee or agent of the regional district or another position appointed by the regional district;
(c) labour relations or other employee relations; and
(e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district.”

CARRIED

Directors McCallum and van den Broek were absent at the vote.

L. RISE AND REPORT (Items Released from Closed Meeting)
No items presented.

M. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED
That the MVRD Board adjourn its regular meeting of October 4, 2019.

CARRIED
(Time: 11:18 a.m.)

CERTIFIED CORRECT

________________________________________  ______________________________________
Chris Plagnol, Corporate Officer               Sav Dhaliwal, Chair
MINUTES OF THE REGULAR JOINT MEETING OF THE MVRD, GVWD, GVS&DD, AND THE MVHC BOARDS OF DIRECTORS

MINUTES OF THE REGULAR JOINT MEETING OF THE MVRD, GVWD, GVS&DD, AND THE MVHC BOARDS OF DIRECTORS HELD ON WEDNESDAY, OCTOBER 23, 2019

METRO VANCOUVER BOARD BUDGET WORKSHOP

Minutes of the Regular Joint Meeting of the Metro Vancouver Regional District (MVRD), the Greater Vancouver Water District (GVWD), the Greater Vancouver Sewerage and Drainage District (GVS&DD), and the Metro Vancouver Housing Corporation (MVHC) Boards of Directors held at 9:03 a.m. on Wednesday, October 23, 2019 in the 28th Floor Boardroom, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

- Burnaby, Chair, Director Sav Dhaliwal
- North Vancouver City, Vice Chair Director Linda Buchanan
- Anmore, Director John McEwen
- Belcarra, Director Neil Belenkie
- Bowen Island, Director David Hocking
- Burnaby, Director Mike Hurley
- Burnaby, Alternate Director Joe Keithley for Pietro Calendino
- Coquitlam, Alternate Director Dennis Marsden for Craig Hodge
- Coquitlam, Director Richard Stewart
- Delta, Director George Harvie (arrived at 9:15 a.m.; departed at 9:22 p.m.)
- Delta, Director Lois Jackson
- Electoral Area A, Jen McCutcheon
- Langley City, Director Val van den Broek
- Langley Township, Alternate Director Steve Ferguson for Jack Froese (arrived at 10:05 a.m.)
- Langley Township, Director Kim Richter
- Lions Bay, Director Ron McLaughlin
- Maple Ridge, Director Mike Morden
- New Westminster, Alternate Director Mary Trentadue for Jonathan Coté
- North Vancouver District, Director Lisa Muri
- Pitt Meadows, Director Bill Dingwall
- Port Coquitlam, Director Brad West (arrived at 9:36 a.m.)
- Richmond, Director Malcolm Brodie
- Richmond, Director Harold Steves
- Surrey, Director Doug Elford
- Surrey, Director Laurie Guerra
- Surrey, Director Brenda Locke (arrived at 9:15 a.m.)
- Surrey, Director Doug McCallum (departed at 11:55 a.m.)
- Surrey, Director Allison Patton
- Tsawwassen, Director Ken Baird (departed at 12:36 p.m.)
- Vancouver, Director Christine Boyle (departed at 1:10 p.m.)
- Vancouver, Director Adriane Carr (departed at 1:08 p.m.)
- Vancouver, Director Melissa De Genova (arrived at 9:11 a.m.; departed at 1:14 p.m.)
- Vancouver, Director Lisa Dominato (departed at 1:08 p.m.)
- Vancouver, Director Colleen Hardwick (departed at 1:10 p.m.)
- Vancouver, Director Kennedy Stewart (arrived at 9:05 a.m.; departed at 1:08 p.m.)
- Vancouver, Director Michael Wiebe (departed at 1:13 p.m.)
- West Vancouver, Director Mary-Ann Booth
- White Rock, Director Darryl Walker
- West Vancouver, Director Mary-Ann Booth
- White Rock, Director Darryl Walker

MEMBERS ABSENT:

- Port Moody, Director Rob Vagramov
- Surrey, Director Jack Singh Hundial

STAFF PRESENT:

Carol Mason, Chief Administrative Officer
Genevieve Lanz, Legislative Services Coordinator, Board and Information Services
Chris Plagnol, Corporate Officer
ADOPTION OF THE AGENDA

It was MOVED and SECONDED
That the MVRD, GVWD, GVS&DD, and MVHC Boards adopt the agenda for its regular meeting scheduled for October 23, 2019.

CARRIED

1. PRESENTATION

1.1 2020 Budget and Annual Work Plans and 2020-2024 Financial Plan – Metro Vancouver Districts and Housing Corporation

Carol Mason, Commissioner/Chief Administrative Officer, introduced the 2020 Metro Vancouver Districts and Housing Corporation Budget and 2020 – 2024 Financial Plan, highlighting the financial planning process and guiding policies, 2020 Budget summary, expenditures, and revenue.

9:11 a.m. Director De Genova arrived at the meeting.
9:15 a.m. Directors Harvie and Locke arrived at the meeting.
9:36 a.m. Director West arrived at the meeting.

Water Services

Tim Jervis, General Manager, Water Services, provided members with a presentation on the 2020 Water Services Budget and 2020 – 2024 Financial Plan, highlighting Water Services 2020 capital program and 2020 – 2024 major capital projects, expenditures and revenues, and wholesale water rate comparison with other jurisdictions.

10:05 a.m. Alternate Director Ferguson arrived at the meeting.

Members discussed increases to the household tax impact, staffing, water rate, water metering and alternative revenue sources, and a GVWD development cost charge program.

It was MOVED and SECONDED
That the GVWD Board:
   a) endorse the 2020 Budget and 2020 - 2024 Financial Plan for Water Services, as presented; and
   b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 GVWD Board meeting for consideration.

CARRIED

Directors Richter and West voted in the negative.
Liquid Waste Services
Peter Navratil, General Manager, Liquid Waste Services, provided members with an overview of the 2020 Liquid Waste Services Budget and 2020 – 2024 Financial Plan, highlighting decreased projected household impact, direct application of development cost charges for growth capital projects, expenditures and revenues, and liquid waste services cost comparison with other jurisdictions.

A member commented that reference to the North Shore Wastewater Treatment Plant in the report should be updated to reflect “tertiary” treatment, not “secondary” as presented.

It was MOVED and SECONDED
That the GVS&DD Board:
   a) endorse the 2020 Budget and 2020 - 2024 Financial Plan for Liquid Waste Services, as presented; and
   b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 GVS&DD Board meeting for consideration.

CARRIED

Solid Waste Services
Paul Henderson, General Manager, Solid Waste Services, provided members with an overview of the 2020 Solid Waste Services Budget and 2020 – 2024 Financial Plan, highlighting tipping fee increases, projected waste disposal, and upcoming capital projects.

11:00 a.m. Chair Dhaliwal left the meeting and Vice Chair Buchanan presided over the meeting.
11:06 a.m. Chair Dhaliwal reassumed the chair.

In response to questions, members were informed of regional green waste disposal sites, and the breakdown of tipping fees.

It was MOVED and SECONDED
That the GVS&DD Board:
   a) endorse the 2020 Budget and 2020 - 2024 Financial Plan for Solid Waste Services, as presented; and
   b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 GVS&DD Board meeting for consideration.

CARRIED

Director Richter voted in the negative.
Directors Brodie, Harvie, McCallum, K. Stewart, R. Stewart and van den Broek absent at the vote.
Metro Vancouver Housing Corporation
Ravi Chhina, General Manager, Parks and Housing Services, provided members with an overview of the 2020 MVHC Budget and 2020 – 2024 Financial Plan, highlighting major capital projects, revenues and expenditures, and proposed staffing changes.

It was MOVED and SECONDED
That the MVHC Board:
  a) endorse the 2020 Budget and 2020 - 2024 Financial Plan for Metro Vancouver Housing Corporation, as presented; and
  b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 MVHC Board meeting for consideration.

CARRIED
Directors Baird, McCallum and R. Stewart absent at the vote.

Metro Vancouver Regional District Services
Dean Rear, Acting General Manager, Financial Services/Chief Financial Officer, provided members with an overview of the MVRD 2020 Budget, highlighting the one-time tax requisition for affordable housing and 5-year annual tax requisition for Regional Parks.

Affordable Housing
Ravi Chhina, General Manager, Parks and Housing Services, provided members with an overview of the 2020 Affordable Housing Budget and 2020 – 2024 Financial Plan, highlighting requisition revenues and expenditures, implementation of the Redevelopment and Development Plans to increase MVHC affordable housing, and estimated household impact.

It was MOVED and SECONDED
That the MVRD Board:
  a) endorse the 2020 Budget and 2020-2024 Financial Plan for the Affordable Housing Service, as presented; and
  b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Regional District Board meeting for consideration.

CARRIED
Directors Jackson and R. Stewart absent at the vote.

Regional Parks
Ravi Chhina, General Manager, Parks and Housing Services, provided members with an overview of the 2020 Regional Parks Budget and 2020 – 2024 Financial Plan, highlighting MVRD tax requisition revenues, capital expenditures, and key actions in 2020.
Members considered the Regional Parks Budget and Financial Plan, and provided the following comments:

- Comparison of MVRD Regional Parks land acquisition with other regional districts
- Land acquisition priorities and strategy
- Difference between regional parks and municipal parks

11:55 a.m. Director McCallum departed the meeting.

**Main Motion**

It was MOVED and SECONDED

That the MVRD Board:

a) endorse the 2020 Budget and 2020-2024 Financial Plan for the Regional Parks Service, as presented; and

b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Regional District Board meeting for consideration.

Discussion ensued on deferring the annual land acquisition contribution for the years 2021 to 2024, and the benefits and constraints of current and future land acquisition opportunities.

**Amendment to the Main Motion**

It was MOVED and SECONDED

That the MVRD Board amend the Main Motion by replacing Part a) of the Motion with the following:

“That the MVRD Board endorse the 2020 budget as presented and defer the $4M in acquisition contribution for the years 2021-2024 and endorse the 2020-2024 Financial Plan as amended to allow time to refine the land acquisition and greenways plan.”

As a number of Directors spoke in opposition to the amendment, arising out of a procedural inquiry, consideration was given to withdrawing the amendment in the interests of expediency.

**Withdrawal Motion**

It was MOVED and SECONDED

That the MVRD Board withdraw the following Amendment to the Main Motion:

“That the MVRD Board endorse the 2020 budget as presented and defer the $4M in acquisition contribution for the years 2021-2024 and endorse the 2020-2024 Financial Plan as amended to allow time to refine the land acquisition and greenways plan.”

CARRIED
**Question on the Main Motion**

Question was then called on the Main Motion and it was **CARRIED**

Directors Locke and van den Broek absent at the vote.

12:36 p.m. Director Baird departed the meeting.

**Air Quality**

Neal Carley, General Manager, Planning and Environment, provided members with an overview of the 2020 Air Quality Budget and 2020 – 2024 Financial Plan, highlighting revenue sources and expenditures, *Climate 2050* development, and total household impact.

**It was MOVED and SECONDED**

That the MVRD Board:

a) endorse the 2020 Budget and 2020-2024 Financial Plan for the Air Quality Service, as presented; and

b) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Regional District Board meeting for consideration.

**CARRIED**

Director Steves absent at the vote.

1:03 p.m.

**Board Meeting Extension**

Members were advised that the Board meeting had been in session for four hours from the time the meeting was convened, and is deemed adjourned unless the Board resolved to extend the meeting.
It was MOVED and SECONDED
That the MVRD, GVWD, GVS&DD, and MVHC Boards extend its meeting of October 23, 2019 beyond four hours pursuant to the Procedure Bylaw.

CARRIED

Metro Vancouver Regional District Services
Dean Rear, Acting General Manager, Financial Services/Chief Financial Officer, provided members with an overview of the 2020 Regional District Service Areas Budget and 2020 – 2024 Financial Plan, highlighting Electoral Area A and Sasamat Fire Protection services.

On the MVRD Services Budget, members commented on the Regional Economic Prosperity Initiative, the 911 E-Comm contract, and cybersecurity, and requested comparative information on budgets from the previous five years.

It was MOVED and SECONDED
That the Metro Vancouver Regional District Board:

a) endorse the 2020 Budget and 2020-2024 Financial Plan for the Regional District Service Areas, as presented; which includes the following:
b) endorse the 2020 Budget and 2020-2024 Financial Plan for the Electoral Area A Service Area, as presented; and
c) endorse the 2020 Budget and 2020-2024 Financial Plan for the Sasamat Fire Protection Service, as presented; and
d) direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Regional District Board meeting for consideration.

CARRIED

1:08 p.m. Directors Carr, Dominato and K. Stewart departed the meeting.
1:10 p.m. Directors Boyle and Hardwick departed the meeting.

Centralized Support
Carol Mason, Commissioner/Chief Administrative Officer, provided members with the 2020 Centralized Support Budget, highlighting departmental expenditures, key actions, and 2020 Metro Vancouver Districts and Housing Corporation budget summary.

1:13 p.m. Director Wiebe departed the meeting.
1:14 p.m. Director De Genova departed the meeting.
2. REPORTS

2.1 2020-2024 Financial Plan – Metro Vancouver Districts and Housing Corporation
Report dated October 18, 2019 from Carol Mason, Commissioner/Chief Administrative Officer and Dean Rear, Acting General Manager, Financial Services/Chief Financial Officer, presenting the 2020 Budget and 2020 – 2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation for consideration.

2.2 Proposed 2020 Metro Vancouver Position Requests
Report dated October 15, 2019 from Carol Mason, Commissioner/Chief Administrative Officer and Dean Rear, Acting General Manager, Financial Services/Chief Financial Officer, providing information on the rationale for proposed new permanent positions to be considered as part of the 2020 Metro Vancouver budget process.

3.REFERENCE MATERIAL

3.1 2020 – 2024 Financial Plan – Standing Committee Reports

4. Q&A/COMMENTS FROM THE PUBLIC

Chair Dhaliwal asked if there were any members of the public wishing to speak to the proposed Metro Vancouver Districts and Housing Corporation Budgets. The following citizens offered comments:

Don Mackenzie – Mr. Mackenzie spoke to members regarding involving Metro Vancouver’s Indigenous Relations department in Metro Vancouver projects, Indigenous youth participation in the annual National Zero Waste Council meeting, and increasing the GVWD water rate, and posed a question regarding land acquisition and reconciliation.

Nathan Davidowicz – Mr. Davidowicz spoke to members regarding varying tax requisition amounts among member jurisdictions, and the need for regional coordination of transit accessibility.

1:22 p.m. Director Harvie departed the meeting.

Chair Dhaliwal asked three times if there were any additional members of the public wishing to speak to the proposed Metro Vancouver Districts and Housing Corporation Budgets. No additional persons stepped forward.
It was MOVED and SECONDED
That the MVRD, GVWD, GVS&DD, and MVHC Boards conclude its joint meeting of October 23, 2019.

CARRIED
(Time: 1:23 p.m.)

CERTIFIED CORRECT

__________________________  _________________________
Chris Plagnol, Corporate Officer  Sav Dhaliwal, Chair
October 31, 2019

Summary of Surrey Board of Trade Presentation to
Metro Vancouver Regional District Board

RE: George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options

The delegation (Anita Huberman) would like to present to the Metro Vancouver Regional Development Board regarding the George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options. Anita Huberman represents the Surrey Board of Trade as CEO, and over 6,000 business contacts, as members of the Surrey Board of Trade.

The Surrey Board of Trade is a city-building organization that supports business and attracts business As the business community - including its labour force - would be the ones to utilize one of the proposed 6 options, they will be affected by transportation bottlenecks, economic activity, taxation/costs, and various other economic and social implications.

The current government has tasked a project team to research potential options for a replacement of the George Massey Tunnel. The potential options for replacement include:

1. New eight-lane immersed-tube tunnel with multi-use pathway.
2. New eight-lane bridge with multi-use pathway.
3. New eight-lane deep-bored tunnel plus use of the existing tunnel for a multi-use pathway.
4. New six-lane immersed-tube tunnel plus use of the existing tunnel to provide two dedicated lanes for transit.
5. New six-lane bridge plus use of the existing tunnel to provide two dedicated lanes for transit.
6. New six-lane deep-bored tunnel plus use of the existing tunnel to provide two dedicated lanes for transit.

The Surrey Board of Trade asks the Board to consider a Massey bridge with 10 lanes. The Surrey Board of Trade has advocated for the building of a 10-lane bridge in the past as options 3 to 6 are dangerous for the public because of the structural integrity of the current tunnel. Any use of the tunnel could be disastrous should a large-scale earthquake occur.
If there is no more room for negotiations with the proposed options, the Surrey Board of Trade supports the building of a new eight-lane bridge with a multi-use pathway - option 2, however, this still does not consider for the needs of the region even 10 years from now. With a growing population and immigration on the rise due to Federal mandates, we anticipate that the Lower Mainland will need larger infrastructure to move people and goods.

The Surrey Board of Trade is not supportive of the Metro Vancouver Task Force recommendation of a eight lane tunnel. The new tunnel would be an immersed tube, like the existing four-lane Massey Tunnel, which means it’s constructed in pieces that are sunk into a river bottom trench and joined together. It would have six lanes for regular traffic and two dedicated to transit, plus a multi-use path. The number of lanes means the tunnel would be a choke point for traffic from Day 1.

This option would require about a kilometre of tunnel, a large staging area, soil removal and ground compacting. It would have a significant environmental impact in and around the river during construction and require a complex environmental assessment, however it is considered to have little long-term impact.

It’s expected to take three years for an environmental assessment and five years for construction.

Deep-bored tunnels are considered high risk and would require one of the largest tunnel-boring machines in the world. There is a risk of multiple sinkholes during construction, interchanges would have to be reconfigured, ground densification would be needed on both sides of the river, and it would take the longest to build.

We must plan for transportation needs for the future – for the 1.3 million people that are expected to move into Metro Vancouver by 2050. And yes, we can’t just build this in isolation, it has to have a robust rapid transit system. There were no price estimates on any of the options.

A bridge could be built faster — two years for environmental assessment and five for construction. Much of the work to build a bridge has already been done.
To: Regional Planning Committee

From: Heidi Lam, Senior Policy and Planning Analyst, Regional Planning

Date: September 22, 2019

Meeting Date: October 11, 2019

Subject: Metro Vancouver 2040: Shaping our Future - 2018 Procedural Report

RECOMMENDATION
That the MVRD Board receive for information the report dated September 22, 2019, titled “Metro Vancouver 2040: Shaping our Future - 2018 Procedural Report”.

PURPOSE
This report conveys the 2018 Metro Vancouver 2040: Shaping our Future Procedural Report as required under the Regional Growth Strategy Procedures Bylaw No. 1148, 2011.

BACKGROUND
Metro Vancouver 2040: Shaping our Future (Metro 2040), the regional growth strategy, as well as the Greater Vancouver Regional District Regional Growth Strategy Procedures Bylaw No. 1148, 2011 (RGS Procedures Bylaw) were adopted by the MVRD Board in July 2011. The RGS Procedures Bylaw includes requirements for reporting on operational performance measures associated with Metro 2040, including such items as the number of amendments processed and resources required to implement the regional growth strategy.

PROCEDURAL PERFORMANCE REPORTING
Procedural reporting requirements are in addition to, and separate from, reporting on the performance measures listed in Section G of Metro 2040, which Metro Vancouver is required to report on annually as per Subsection 452 (1)(b) of the Local Government Act.

The RGS Procedures Bylaw states:

8. Additionally, the Regional Growth Strategy Annual Report shall include a report on the following measures:
   a. Metro Vancouver staff time, expressed in the number of full-time equivalent staff budgeted to administer the Regional Growth Strategy;
   b. The total cost of implementing, managing, monitoring and amending the Strategy for the calendar year, including the cost Metro Vancouver and municipal staff, costs related to referral of requested amendments to the Technical Advisory Committee [now called: Regional Planning Advisory Committee], external consultants, external legal advisors and all other resources;
   c. The number of requested amendments and approved amendments to the Regional Growth Strategy by type;
d. A comparison of items a), b) and c) year over year and pre- and post-adoption of the Regional Growth Strategy: and

e. A record of the timelines to process amendments to the Regional Growth Strategy, including staff, Technical Advisory Committee [now called: Regional Planning Advisory Committee] and Board review.

9. If requested by an Affected Local Government, Metro Vancouver will make a presentation on the Regional Growth Strategy Annual Report to that Affected Local Government’s Council or board, answer any questions that may arise and report back to the Board on information received during the presentation.

There are a number of different tasks associated with implementing Metro 2040, including reviewing Regional Context Statements, preparing supporting implementation documents, conducting policy research and analysis, and processing proposed amendments. Consistent with the RGS Procedures Bylaw, the 2018 Metro Vancouver 2040: Shaping our Future Procedural Report provides an update on procedural performance measures for 2018.

ALTERNATIVES
This is an information report. No alternatives are provided.

FINANCIAL IMPLICATIONS
Staffing and resources to support the implementation and monitoring of Metro 2040 are incorporated into the annual budget for Regional Planning approved by the MVRD Board on an annual basis.

SUMMARY / CONCLUSION
This report conveys the Metro Vancouver 2040: Shaping our Future 2018 Procedural Report as required under the Regional Growth Strategy Procedures Bylaw No. 1148, 2011. The report documents the resources that have been required to implement, administer and amend the regional growth strategy since its adoption to year end 2018.

Staffing and resources required to implement Metro 2040 include a variety of tasks, such as preparing and reviewing Regional Context Statements, preparing supporting implementation documents, conducting policy research and analysis, and processing proposed amendments. Since the adoption of Metro 2040 in mid-2011, the number of staff directly associated with regional planning has remained consistent. Total costs have also remained relatively consistent.

In keeping with the RGS Procedures Bylaw, Metro Vancouver staff are available to make a presentation on annual regional growth strategy performance monitoring to any affected local government’s Council or Board on request, answer any questions that may arise, and report back to the MVRD Board on information received during the presentation(s) if required.

Attachment: Metro Vancouver 2040: Shaping our Future 2018 Procedural Report

31729082
Introduction

Metro Vancouver 2040: Shaping our Future (Metro 2040), the regional growth strategy, and the Greater Vancouver Regional District Regional Growth Strategy Procedures Bylaw No. 1148, 2011 (RGS Procedures Bylaw) were both adopted by the Greater Vancouver Regional District (GVRD) Board in July 2011. The RGS Procedures Bylaw includes requirements for reporting on procedural performance measures associated with Metro 2040, such as the number of amendments processed and resources required to implement the regional growth strategy.

Supporting Work to Implement Metro 2040

To advance Metro 2040 implementation, Metro Vancouver conducts research and undertakes supporting analysis and studies. These publications include Metro 2040 implementation guidelines to support interpretation and procedures, and specific studies/reports providing technical information, analysis and recommendations on particular Metro 2040 strategies and actions.

By year-end 2018, eight Implementation Guidelines had been prepared for adopted by the MVRD Board to advance the implementation of Metro 2040.

- Implementation Guideline #1: Regional Context Statements (2012). Guidance for municipalities on developing Regional Context Statements
- Implementation Guideline #2 - Amendments to the Regional Growth Strategy (2012; updated in 2014). Detailed explanation of Metro 2040 amendment procedures (should be read with the Regional Growth Strategy Procedures Bylaw)
- Implementation Guideline #4: Identifying Frequent Transit Development Areas (2013). Information for municipalities on how to Identify Frequent Transit Development Areas, a key tool for transit-oriented development
- Implementation Guideline #7: Extension of Regional Sewerage Services (2017). Information on Metro 2040 policies and procedures for connection to regional sewerage services in Agricultural and Rural areas of Metro Vancouver.

On June 27, 2014, the Regional Growth Strategy Procedures Amendment Bylaw No. 1206, 2014 (Procedures Bylaw) was adopted to improve the amendment process. The related Metro 2040 Implementation Guideline # 2 – Amendments to the Regional Growth Strategy was also updated in this effort to improve the amendment process.
Progress on the Completion of Regional Context Statements
Per the British Columbia *Local Government Act*, within the first two years following adoption of a regional growth strategy member municipalities are required to submit an updated Regional Context Statements (RCS) that clearly lays out how local plans and aspirations as expressed in Official Community Plans align with the regional objectives laid out in *Metro 2040*. All required RCSs had been accepted by the MVRD Board.

The *Local Government Act* requires that municipalities review the regional context statement at least once every 5 years after acceptance by the Board, and if no amendment is proposed, submit the statement to the Board for its continued acceptance.

Table 1: Status of Regional Context Statements to mid-year 2019

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Status</th>
<th>Year</th>
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<tbody>
<tr>
<td>Anmore</td>
<td>Accepted</td>
<td>2019</td>
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<tr>
<td>Belcarra</td>
<td>Accepted</td>
<td>2011</td>
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<td>Burnaby</td>
<td>Accepted</td>
<td>2019</td>
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<tr>
<td>Coquitlam</td>
<td>Accepted</td>
<td>2013</td>
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<tr>
<td>Delta</td>
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<td>2013</td>
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<td>Langley City</td>
<td>Accepted</td>
<td>2013</td>
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<td>Langley Township</td>
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<td>2016</td>
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<td>Lions Bay</td>
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<td>2016</td>
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<tr>
<td>Maple Ridge</td>
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<td>2018</td>
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<tr>
<td>New Westminster</td>
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<tr>
<td>North Vancouver City</td>
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<tr>
<td>North Vancouver District</td>
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<td>2014</td>
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<tr>
<td>Pitt Meadows</td>
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<td>2019</td>
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<td>Port Coquitlam</td>
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<td>2013</td>
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<td>Port Moody</td>
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<tr>
<td>Surrey</td>
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<td>Tsawwassen First Nation</td>
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<td>University of British Columbia*</td>
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<tr>
<td>University Endowment Lands*</td>
<td>Not Required</td>
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</table>

*within Electoral Area A
**Metro 2040 Amendments**

In 2018, the MVRD Board processed two Type 3 Minor Amendment requests from member jurisdictions to amend regional land use designations. The Type 3 Minor Amendment from City of Port Moody for the Flavelle site was approved on May 25, 2018, and the Type 3 Minor Amendment from Township of Langley for the Williams Neighbourhood Plan was approved on September 28, 2018 (please see Appendix 1 for further information).

Table 2 shows the number and type of requested Metro 2040 amendments, and those approved for the years 2011-2018 by calendar year.

**Table 2: Metro 2040 Bylaw Amendments Requested, Approved and Declined, 2011-2018**

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<td><strong>Requested Amendments</strong></td>
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</table>

The Type 3 Minor Amendments were processed as part of the regular work program of Metro Vancouver’s Regional Planning and Electoral Area Services division, with no additional resources required to complete this work. Type 2 Minor Amendments require a regional public hearing and, as such, there are additional costs associated with organizing, advertising and holding the meeting.

The average processing time for approved amendment requests between 2011 and 2018 was **30** weeks. In 2012, a Type 1 amendment requested by the City of Coquitlam which required approval from each member municipality was initiated just after the adoption of the regional growth strategy, and took 78 weeks to process. If this outlier is removed from the inventory of amendments, the average processing time drops to **27** weeks, and includes review by the Regional Planning Advisory Committee, review by the Regional Planning Committee, initiation of an early readings of an associated amendment bylaw from the Board, a notification period to allow for affected local government comment, and final consideration of the amendment bylaw by the Board. The key milestones and associated timeline for Metro 2040 amendments to year-end 2018 are provided in Appendix 1.
**Metro 2040 Implementation Costs and Staffing**

Between 2011 and year-end 2018, *Metro 2040* was primarily supported by Regional Planning and Electoral Area Services staff and resources, which includes financial resources for planning staff as well as other resources such as consulting and data acquisition. Regional Planning staff also work on and support initiatives throughout the organization.

The Regional Planning Budget is adopted annually by the MVRD Board. Information regarding the 2018 budget for staffing, consulting and data acquisition associated with the development, administration, implementation and monitoring of *Metro 2040* can be found in Report G4.1 titled “MVRD 2019 Budget and 2019 – 2023 Financial Plan and Five Year Bylaw 1280” at: [http://www.metrovancouver.org/boards/GVRD/RD_2018-Oct-26_AGE.pdf](http://www.metrovancouver.org/boards/GVRD/RD_2018-Oct-26_AGE.pdf)

Previous year budgets can also be found on the Metro Vancouver website.
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</tr>
</thead>
<tbody>
<tr>
<td>Type 1 Did Not Proceed</td>
<td>District of North Vancouver</td>
<td>Process Amendment: Amend the RGS to require a 2/3 majority vote for Conservation &amp; Recreation lands to be converted to Agricultural land and then Industrial lands in two steps conversion</td>
<td>Mar 22, 2011</td>
<td>Sept 6, 2011</td>
<td>Sept 16, 2011</td>
<td>Sept 23, 2011</td>
<td>Sept 23, 2011: Board declined amendment request; did not proceed to bylaw readings. Issue addressed in RGS Procedures Amendment Bylaw No. 1206, 2014 and Implementation</td>
<td>26</td>
<td></td>
</tr>
</tbody>
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¹ Regional Planning Advisory Committee (previously named Technical Advisory Committee)
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### Appendix 1: Summary of Processed Amendments to *Metro Vancouver 2040: Shaping our Future, 2011-2018*

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<tbody>
<tr>
<td>Type 2 Did Not Proceed</td>
<td>Corporation of Delta</td>
<td>Land Use Designation Amendment (MK Delta Lands): Conservation and Recreation to General Urban and expand the Urban Containment Boundary</td>
<td>Jun 12, 2013</td>
<td>Jun 19, 2013</td>
<td>Jul 5, 2013</td>
<td>Jul 26, 2013</td>
<td>On hold at the request of the Corporation of Delta (Submitted new amendment request on Jan 29, 2019)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Type 2 Did Not Proceed</td>
<td>Township of Langley</td>
<td>Land Use Designation Amendment (North Murrayville and Hendricks): Agricultural to General Urban</td>
<td>Jun 24, 2013</td>
<td>Jun 19, 2013</td>
<td>Jul 5, 2013</td>
<td>Jul 26, 2013</td>
<td>Oct 11, 2013: Board declined the RGS amendment request; did not proceed with bylaw readings.</td>
<td></td>
<td>16</td>
</tr>
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<tr>
<td>Type 3 Did Not Proceed</td>
<td>Township of Langley</td>
<td>Land Use Designation Amendment (Highway #1 at 200th Street): Mixed Employment to General Urban</td>
<td>Jun 24, 2013</td>
<td>Jun 19, 2013</td>
<td>Jul 5, 2013</td>
<td></td>
<td>Oct 11, 2013: Board declined the RGS amendment request; did not proceed with bylaw readings.</td>
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<tr>
<td>Type 3 Bylaw No. 1207, 2014</td>
<td>City of Surrey</td>
<td>Land Use Designation Amendment (Central Newton Cultural Commercial District): Industrial to Mixed Employment (1 site, 6.5 ha)</td>
<td>May 2, 2014</td>
<td>May 22, 2014</td>
<td>June 6, 2014</td>
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<tr>
<td>Type 3 Bylaw No. 1209, 2014</td>
<td>City of Port Moody</td>
<td>Land Use Designation Amendment (Moody Centre Transit Oriented Development Area and Murray Street Boulevard Area): Mixed Employment and Industrial to General Urban (1 site, 8.3 ha)</td>
<td>Jun 2, 2014</td>
<td>June 20, 2014</td>
<td>July 4, 2014</td>
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<td>Jul 11, 2014</td>
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<td>May 15, 2015</td>
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<tr>
<td>Type 3 Did Not Proceed</td>
<td>City of Port Moody</td>
<td>Land Use Designation Amendment (Andres Wine Site): Industrial to General Urban</td>
<td>Jun 2, 2014</td>
<td>June 20, 2014</td>
<td>July 4, 2014</td>
<td></td>
<td>Jul 11, 2014</td>
<td>July 11, 2014: Board declined the RGS amendment request; did not proceed with bylaw readings.</td>
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<tr>
<td>Type 3 Did Not Proceed</td>
<td>City of Port Moody</td>
<td>Land Use Designation Amendment (Mill and Timber Site): Industrial to General Urban (1 site)</td>
<td>Jun 2, 2014</td>
<td>June 20, 2014</td>
<td>July 4, 2014</td>
<td></td>
<td>Jul 11, 2014</td>
<td>July 11, 2014: Board declined the RGS amendment request; did not proceed with bylaw readings.</td>
<td></td>
</tr>
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<tbody>
<tr>
<td>Type 3 Bylaw No. 1222, 2015</td>
<td>Township of Langley</td>
<td>Land Use Designation Amendment (2 adjacent sites in the Latimer area): Mixed Employment to General Urban (1 site, 1 ha), and General Urban to Mixed Emp. (1 site, 7.5 ha)</td>
<td>April 2, 2015</td>
<td>May 1, 2015</td>
<td>May 22, 2015</td>
<td>June 12, 2015</td>
<td>June 12, 2015</td>
<td>Sept 4, 2015</td>
<td>22</td>
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<tr>
<td>Type 3 Bylaw No. 1223, 2015</td>
<td>Metro Vancouver (North Vancouver District, Anmore, Surrey, New Westminster, North Vancouver City, West Vancouver, and Port Moody)</td>
<td>Incorporate changes stemming from 7 GVRD board accepted RCS. Amendment includes revisions to regional land use designation boundaries, the addition of Frequent Transit Development Areas (FTDAs), and local centres. The proposed amendment also includes updates to the Metro 2040 Appendix A, Table A-1: Population, Dwelling Unit and Employment Projections for Metro Vancouver Sub regions and Municipalities.</td>
<td>n/a</td>
<td>Jun 5, 2015</td>
<td>Jul 10, 2015</td>
<td>Jul 31, 2015</td>
<td>Jul 31, 2015</td>
<td>Oct 30, 2015</td>
<td>21</td>
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<tr>
<td>Type 2 Did not Proceed</td>
<td>Corporation of Delta</td>
<td>Land Use Designation Amendment (Ladner Trunk Road): Agricultural to Rural (1 site, 0.23 ha)</td>
<td>May 27, 2016</td>
<td>n/a</td>
<td>Jul 15, 2016</td>
<td>Jul 29, 2016: Board determined the proposed RGS amendment request is not required</td>
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<tr>
<td>Type 2 Bylaw No. 1236, 2016</td>
<td>Metro Vancouver</td>
<td>Text Amendment: Update the policy provisions regarding the extension of regional sewerage services, and adopt associated implementation guidelines #7, Extension of Regional Sewerage Services.</td>
<td>n/a</td>
<td>n/a</td>
<td>Sept 9, 2016</td>
<td>Sept 23, 2016: Board determined the proposed RGS amendment request is not required</td>
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</tbody>
</table>

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Metro Vancouver Regional District
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<tr>
<td>Type 3 Bylaw No. 1237, 2016</td>
<td>Metro Vancouver</td>
<td>Text Amendment (Appendix A Table A.2): update figures on 10 years regional and municipal household growth projections by tenure.</td>
<td>n/a</td>
<td>Sept 8, 2016</td>
<td>Oct 14, 2016</td>
<td>Oct 28, 2016</td>
<td>Oct 28, 2016</td>
<td>Apr 28, 2017</td>
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<tr>
<td>Type 3 Bylaw No. 1246, 2017</td>
<td>Metro Vancouver (Langley Township, Surrey, and North Vancouver City)</td>
<td>Incorporate land use designation and overlay map revisions stemming from 3 MVRD Board accepted RCS amendments</td>
<td>n/a</td>
<td>Jun 23, 2017</td>
<td>Jun 9, 2017</td>
<td>Jun 23, 2017</td>
<td>Jun 23, 2017</td>
<td>Oct 27, 2017</td>
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<td>Type 3 Bylaw No. 1259, 2018</td>
<td>City of Port Moody</td>
<td>Land Use Designation Amendment (Flavelle Mill Site): Industrial to General Urban (12.7 ha), removal of special study area</td>
<td>Sep 15, 2017</td>
<td>Nov 17, 2017</td>
<td>Feb 2, 2018</td>
<td>Feb 23, 2018</td>
<td>May 25, 2018</td>
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<tr>
<td>Type 2 Did Not Proceed</td>
<td>City of Surrey</td>
<td>Land Use Designation Amendment (Hazelmere): Rural to General Urban, 23.7 ha, extension of UCB</td>
<td>Oct 23, 2017</td>
<td>Nov 17, 2017</td>
<td>Feb 2, 2018</td>
<td>Feb 23, 2018</td>
<td>Mar 23, 2018: Board declined the RGS amendment request; did not proceed with bylaw readings.</td>
<td>22</td>
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</tr>
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</thead>
<tbody>
<tr>
<td>Type 3 Did Not Proceed</td>
<td>City of Surrey</td>
<td>Land Use Designation Amendment (South Campbell Heights): Rural &amp; Special Study Area (235 ha) to General Urban (143 ha), Mixed Emp (37 ha), Con Rec (55 ha) &amp; extension of UCB; Mixed Emp (22.4 ha) to Con Rec (16.4 ha), General Urban (6 ha); Rural &amp; Special Study Area (12 ha) to Agricultural &amp; ALR</td>
<td>Jan 16, 2018</td>
<td>Apr 20, 2018</td>
<td>May 4, 2018</td>
<td>May 25, 2018</td>
<td>May 25, 2018: Board referred the amendment back to City of Surrey to consider an alternative amendment.</td>
<td></td>
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<tr>
<td>Type 3 Under Review</td>
<td>Corporation of Delta</td>
<td>Land Use Designation Amendment (MK Delta Lands): Agricultural to Industrial (62.7 ha) and extension of UCB</td>
<td>Jan 29, 2019</td>
<td>Mar 15, 2019</td>
<td>Apr 5, 2019</td>
<td>May 24, 2019</td>
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<td>Under review</td>
</tr>
<tr>
<td>Type 3 Under Review</td>
<td>Metro Vancouver (Vancouver, Anmore, and New Westminster)</td>
<td>Incorporate land use designation amendment and addition of new FTDAs stemming from 3 MVRD Board accepted RCS amendments</td>
<td>n/a</td>
<td>Apr 12, 2019</td>
<td>May 3, 2019</td>
<td>May 24, 2019</td>
<td></td>
<td></td>
<td>Under review</td>
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¹ Regional Planning Advisory Committee (previously named Technical Advisory Committee)
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FINANCE AND INTERGOVERNMENT COMMITTEE RECOMMENDATION
That the MVRD Board:

a) receive for information the report titled “George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options” dated September 24, 2019;

b) based on the Province’s technical analysis, endorse a new eight-lane immersed-tube tunnel with multi-use pathway, including two transit lanes, as the preferred option for the George Massey Crossing for the purposes of public engagement; and

c) request the Province to develop further plans to improve transit, along the entire Highway 99 corridor, to improve transit speed, reliability and capacity.

At its October 16, 2019 meeting, the Finance and Intergovernment Committee considered the attached report titled “George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options”, dated October 2, 2019. The Committee subsequently amended the recommendation as presented above in underline style.

This matter is now before the Board for its consideration.

Attachment
“George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options”, dated October 2, 2019
To: Finance and Intergovernment Committee

From: George Massey Crossing Task Force

Date: October 2, 2019  
Meeting Date: October 16, 2019

Subject: George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options

GEORGE MASSEY CROSSING TASK FORCE RECOMMENDATION

That the MVRD Board:

a) receive for information the report titled “George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options” dated September 24, 2019;

b) based on the Province’s technical analysis, endorse a new eight-lane immersed-tube tunnel with multi-use pathway as the preferred option for the George Massey Crossing for the purposes of public engagement; and

c) request the Province to develop further plans to improve transit, along the entire Highway 99 corridor, to improve transit speed, reliability and capacity.

At its October 2, 2019 meeting, the George Massey Crossing Task Force received a presentation from the Province’s George Massey Crossing Project team providing the results of the technical evaluation on the six short-listed options. The presentation included information on the key messages from the consultation to date, information on use of the existing tunnel, and a review of the each of the technologies considered – Deep Bored Tunnel, Immersed Tube Tunnel, and Long Span Bridge. For each of the technologies, the provincial team considered feasibility, cost, construction risk, environmental impacts, other impacts including noise, visual and shading, timeline for completion, and alignment with project goals. The provincial team’s presentation is attached for information.

The Task Force also considered the attached report titled “George Massey Crossing Project – Results of Technical Evaluation of the Six Short Listed Options”, dated September 24, 2019 and subsequently passed the recommendation as presented above.

This matter is now before the Finance and Intergovernment Committee for its consideration.

Attachments

1. “George Massey Crossing Project – Results of Technical Evaluation of the Six Short Listed Options”, dated September 24, 2019

2. Province’s presentation to the George Massey Crossing Task Force
To: George Massey Crossing Task Force

From: Neal Carley, General Manager, Planning and Environment
       Heather McNell, Director, Regional Planning and Electoral Area Services

Date: September 24, 2019

Meeting Date: October 2, 2019

Subject: George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options

RECOMMENDATION
That the George Massey Crossing Task Force receive for information the report titled “George Massey Crossing Project – Results of Technical Evaluation on the Six Short Listed Options” dated September 24, 2019.

PURPOSE
To provide an update on the Province’s George Massey Crossing Project technical evaluation on the short listed options for the George Massey Crossing.

BACKGROUND
The Finance and Intergovernment Committee and MVRD Board received updates on the George Massey Crossing project in February, March and April 2019. At the April meeting, the MVRD Board passed a resolution for general support of the principles and goals for the George Massey Crossing developed by the Ministry of Transportation and Infrastructure.

The George Massey Crossing Task Force, struck by Chair Dhaliwal earlier in 2019, held meetings on June 27, 2019 and July 24, 2019. At the June meeting, the Task Force received a presentation by the provincial project team on the project status, an evaluation framework for the options, and a long list of 18 options for a preliminary evaluation.

At the July meeting, the Task Force received a presentation by the provincial project team that included a short list of six options for further evaluation. The Task Force provided feedback to the provincial project team at both meetings and the provincial project team has continued with the technical evaluation of the six technical options.

This report provides an update to the George Massey Crossing Task Force on the technical evaluation by the provincial project team on the short listed technical options for the George Massey Crossing.

GEORGE MASSEY CROSSING PROJECT
In 2018, the Province completed an independent technical review of the George Massey Tunnel replacement and the 10-lane bridge that had been approved at the time. The technical review was released in December 2018 and a provincial project team through the Ministry of Transportation and Infrastructure started the technical evaluation of the options for the new crossing in light of the findings of the independent technical review. The provincial project team is working closely with
Metro Vancouver, TransLink, member jurisdictions, and First Nations to develop and evaluate the crossing options.

The provincial project team has undertaken a detailed technical evaluation of the following six options:

1. New eight-lane immersed-tube tunnel with multi-use pathway.
2. New eight-lane bridge with multi-use pathway.
3. New eight-lane deep-bored tunnel plus use of the existing tunnel for a multi-use pathway.
4. New six-lane immersed-tube tunnel plus use of the existing tunnel to provide two dedicated lanes for transit.
5. New six-lane bridge plus use of the existing tunnel to provide two dedicated lanes for transit.
6. New six-lane deep-bored tunnel plus use of the existing tunnel to provide two dedicated lanes for transit.

The provincial project team held staff workshops on August 8, August 15 and September 12, 2019. The workshops were led by the provincial project team and their consultant team and attended by staff from Metro Vancouver, TransLink, City of Richmond, City of Delta, and the Tsawwassen First Nation.

At the workshops, the provincial project team provided additional information on the potential use of the existing tunnel and the options for a new crossing using either a deep-bored tunnel, immersed-tube tunnel or a bridge.

**Existing Tunnel**

With regular maintenance and rehabilitation, the existing George Massey Tunnel has approximately 50 years of serviceable life remaining; however, it does not meet current seismic standards for new or improved infrastructure. Based on feedback from the George Massey Crossing Task Force, the provincial project team considered the use of the existing tunnel for one of the following three options:

i) multi-use path and as a utility crossing;
ii) 2 lanes dedicated for transit and as a utility crossing; or
iii) utilities crossing only.

For the multi-use path and transit options, the existing tunnel would require ground densification to increase the seismic resistance to withstand a one-in-475-year seismic event. The existing tunnel would also require additional flood protection around entrances. The cost of these upgrades would substantial.

**Deep Bored Tunnel Options**

The deep-bored tunnel options (both six and eight lane) are technically challenging and are assessed as high risk. A tunnel boring machine would be required to bore a total distance of 7 km to install two tunnels of approximately 3.5 km each and would be about 79m at the deepest point. The tunnels would extend beyond the current interchanges on both sides of the river to enable a maximum 5 per cent grade for the road. During the boring stages, the tunnel boring machine would numerous cutting head changes (each change poses a risk of sink hole formation) and removal of three million cubic
meters of salt-contaminated soil during construction. With an outside diameter estimated to be 18.5 meters, the tunnel-boring machine would be one of the largest in the world. For comparison, the Bertha tunnel-boring machine for the Alaskan Way Viaduct replacement tunnel project in Seattle was 17.5 meters in diameter, and this project would require two tunnels that diameter.

Ground densification for seismic resistance would be required on both sides of the river where the tunnel is within or just under the liquefaction zone, but not under the river where the tunnel would be well below the liquefaction zone. Ground densification on either side of the existing tunnel would also be required because for both six- and eight-lane options, the existing tunnel would be used as a multi-use pathway, as the deep bored tunnel options have been deemed inappropriate for that use.

Large launching pits for the tunnel boring machine would be required on both sides of the river. The pits are being estimated to be as deep as a 10-storey building and as wide and long as a football field. The feasibility of constructing these pits in the prevailing soil conditions has not yet been confirmed.

An environmental assessment will be required due to the potential environmental risks to the river during construction and the ground densification that will be required. Costs are not yet available, but this option is estimated to be about three times more expensive than the immersed-tube tunnel and the bridge options (both of which are estimated to be fairly similar).

For Metro Vancouver, there would be no impacts to Deas Island Regional Park. Staff would have to assess potential impacts on Metro Vancouver utilities if either of the deep bored tunnel options proceed.

**Immersed-Tube Tunnel Options**

The immersed-tube tunnel options (both six and eight lane) are moderately challenging as they would require around 1 km of tunnel, a large staging area and removal of 1.5 million cubic meters of salt-contaminated soil during construction. These options would have the greatest environmental impact during construction as the approaches would require excavation on both sides of the river and the river bottom trenched to hold the tunnel. Ground densification for seismic resistance would be required over the full length of the tunnel length including within the river. For the six-lane option, ground densification on either side of the existing tunnel would also be required.

The environmental assessment is expected to be the most complex due to the in-river and riverbank work. Construction would be limited around a six-month window each year and would likely require two or more construction seasons. Costs are not yet available but are expected to be similar to a bridge crossing. Under the new federal *Fisheries Act*, temporary disturbance to the river would be assessed and will require habitat offsets. The extent of the habitat offsets has not been determined.

For Metro Vancouver, Deas Island Regional Park would be impacted during construction as the east and west portions of the park would be separated by the excavation for the Delta side approach, likely for two years and possibly longer. After construction, the park would be restored and any ongoing impacts to the park would be limited to the added two to four lanes of traffic in the immediate area. Staff would have to assess for potential impacts on Metro Vancouver utilities if either of the immersed tube tunnel options proceed.
Bridge Options
The bridge options (both six and eight lane) would require around 3 km of bridge and approaches. The bridge abutments would be on land and the foundations would be 80 m deep or more.

The environmental assessment is expected to be the least complex, as much, but not all, of the assessment would be similar to the previous 10-lane bridge. Costs are not yet available but are expected to be similar to an immersed tube tunnel option.

For Metro Vancouver, Deas Island Regional Park would be impacted during construction as the east and west portions of the park would be separated during the construction of the structure over this area of the park. After construction, the park would be impacted by the traffic noise, lights and shade of the bridge for the life of the bridge. This impact will extend to the river and some nearby communities, particularly in Delta. Staff would have to assess for potential impacts on Metro Vancouver utilities if either of these options proceed.

Consultation with TransLink
TransLink staff, through consultation, have expressed that they do not support the use of the existing tunnel for transit purposes. This is due to the additional transit travel time that is required for use of the existing tunnel.

Interim Improvements to Address Congestion
In addition to the technical options for the George Massey Crossing, the August 15, 2019 workshop focused on interim improvements that could alleviate some of the congestion challenges while the crossing option is being designed and constructed.

The provincial project team is working with staff from the various agencies to evaluate improvement options at the Steveston Interchange, the Highway 17 interchange area, as well as a number of enhancements to improve transit movement through Delta and Richmond. The interim improvements will depend on which crossing option is selected. The objective is to have the package of interim improvements ready for tender by the fall of 2020.

Next Steps
The Province will be presenting the results of the technical evaluation on the six short listed options at the October 2, 2019 Task Force meeting, and will be seeking the Task Force’s endorsement of a preferred option(s) for the purpose of their public engagement. The Task Force’s recommendation would then go to the Finance and Intergovernment Committee and MVRD Board. It is staff’s understanding that public engagement includes engagement with affected local councils.
ALTERNATIVES


2. That the MVRD Board, based on the Province’s technical analysis, endorse a new eight-lane immersed-tube tunnel with multi-use pathway as the preferred option for the George Massey Crossing for the purposes of public engagement.

3. That the MVRD Board, based on the Province’s technical analysis, endorse a new eight-lane bridge with multi-use pathway as the preferred option for the George Massey Crossing for the purposes of public engagement.

4. That the MVRD Board, based on the Province’s technical analysis, endorse a new eight-lane deep-bored tunnel plus use of the existing tunnel for a multi-use pathway as the preferred option for the George Massey Crossing for the purposes of public engagement.

5. That the MVRD Board, based on the Province’s technical analysis, endorse a new six-lane immersed-tube tunnel plus use of the existing tunnel to provide two dedicated lanes for transit as the preferred option for the George Massey Crossing for the purposes of public engagement.

6. That the MVRD Board, based on the Province’s technical analysis, endorse a new six-lane bridge plus use of the existing tunnel to provide two dedicated lanes for transit as the preferred option for the George Massey Crossing for the purposes of public engagement.

7. That the MVRD Board, based on the Province’s technical analysis, endorse a new six-lane deep-bored tunnel plus use of the existing tunnel to provide two dedicated lanes for transit as the preferred option for the George Massey Crossing for the purposes of public engagement.

FINANCIAL IMPLICATIONS

If the MVRD Board chooses Alternative 1, the Board may choose to request further information on one or more of the short-listed options. Any financial implications for Metro Vancouver that arise due to the George Massey Crossing project will be assessed and reported to the Task Force as the project is developed.

If the MVRD Board chooses one of Alternatives 2-7, the Province will proceed with public engagement on the preferred option(s), including engagement with affected local government councils.

SUMMARY / CONCLUSION

At its July meeting, the George Massey Crossing Task Force received a presentation by the provincial project team that included a short list of six options for further evaluation. The Task Force provided feedback to the provincial project team who has since continued with the technical evaluation of the six options. The existing George Massey Tunnel has approximately 50 years of serviceable life remaining, but it does not meet current seismic standards for new or improved infrastructure.
The two deep-bored tunnel options (six and eight lane) are technically challenging and are assessed as high risk. A boring machine would be required to bore 7 km to install two tunnels of approximately 3.5 km each and would be about 79 m at the deepest point. Ground densification for seismic resistance would be required on both sides of the river where the tunnel is within or just under the liquefaction zone. An environmental assessment would be required due to the potential environmental risks to the river during construction and the ground densification that would be required. This option is estimated to be about three times more expensive than the immersed-tube tunnel and bridge options.

The two immersed-tube tunnel options (six and eight lane) are moderately challenging, requiring about 1 km of tunnel. These options would have the greatest environmental impact during construction. Ground densification for seismic resistance would be required for the full length of the tunnel length including within the river. The environmental assessment is expected to be the most complex due to the in-river and riverbank work. For Metro Vancouver, Deas Island Regional Park would be impacted during construction as the east and west portions of the park would be separated by the excavation for the Delta side approach, likely for two years and possibly longer.

The two bridge options (six and eight lane) would require about 3 km of bridge and approaches. The bridge abutments would be on land and the foundations would be 80 m deep or more. The environmental assessment is expected to be the least complex as much, but not all, of the assessment would be similar to the previous 10-lane bridge. Costs are not yet available but are expected to be about the same as an immersed tube tunnel option.

The Province will be presenting the results of the technical evaluation on the six short listed options to the Task Force, and will be seeking endorsement of a preferred option(s) for the purpose of public engagement. The Task Force’s recommendation would then go to the Finance and Intergovernment Committee and MVRD Board.
George Massey Crossing Project

Phase 2: Crossing Options
Mayors’ Task Force
October 2, 2019
Agenda

• Process and schedule
• What we heard
• Options analysis
• Request to select preferred option
Task Force Engagement Process

Phase 1
- Confirm principles, goals and objectives

June 27
- Confirm long-list of options and evaluation framework

July 24
- Confirm short-list of options

Oct 2
- Select Task Force’s preferred option to proceed to public engagement

Nov 27
- Recommend preferred solution to MV Board for approval and recommendation to Minister

WE ARE HERE
Success Milestones To Date

Consensus on:

• Principles, goals and objectives
• The number of lanes for the crossing
• 18 long-list options and evaluation framework
• 6 short-list options
Endorsed Options Short-list

All options include 2 lanes dedicated for transit and cycling/pedestrian paths

- 8-lane deep bored tunnel (DBT)
- 8-lane immersed tube tunnel (ITT)
- 8-lane bridge
- 6-lane DBT + transit lanes in existing tunnel
- 6-lane ITT + transit lanes in existing tunnel
- 6-lane bridge + transit lanes in existing tunnel
What we’ve heard so far

• Urgency to move forward quickly
• Promoting transit use is imperative
• Concern about lifespan of existing tunnel
• Desire to manage risk and cost
Existing Tunnel

Options using the existing tunnel have greater impacts than all-new options due to:

- In-river ground densification
- Environmental Assessment extended timeline
- Up to 5 minutes longer for transit trips
- Shorter lifespan
- Additional cost (hundreds of millions)
Comparative Height/Depth of Options

- **STEVESTON HWY**
  - New bridge (+57m)
- **HWY 17A**
  - New ITT (-29.5m)
  - New DBT (-78.5m)
  - Pan Pacific 81m

**GLACIAL TILL DEPTH 300m+**
Benchmark Comparisons for Costing

Deep Bored Tunnel:
• 8 recent projects in the U.S., Italy, Hong Kong and Australia
• None with our soil or seismic conditions

Immersed Tube Tunnel:
• 7 projects in the U.S. and northern Europe
Deep Bored Tunnel Concept Design
Deep Bored Tunnel Size Reference

Canada Line

Evergreen Line

SR99 (Bertha)
Slightly smaller than would be required
Deep Bored Tunnel Cross Section
Deep Bored Tunnel

- Significant risk of multiple sinkholes
- Longest timeframe to completion
- Extends beyond Steveston and Hwy 17A I/C
- Increased transit trip times
- Existing tunnel must be retained for pedestrians and cyclists
- ALR impacts – up to 200 acres
- Approx. 3 times cost of ITT/bridge
Deep Bored Tunnel Interchange Footprint

Preliminary draft for discussion purposes only

Metro Vancouver Regional District

GMC Phase 2 Task Force
Immersed Tube Tunnel Concept Design
Immersed Tube Tunnel Concept Planview
Immersed Tube Tunnel Portal
Immersed Tube Tunnel

- Temporary environmental impact during construction; lowest long term impact
- Greatest potential for environmental enhancements
- Medium timeframe to completion
- Low property impact
- Comparable order of magnitude cost to bridge
Long Span Bridge Concept Planview
Long Span Bridge Concept Design
Long Span Bridge

- Long term noise, visual and shading impacts
- Land-side property impacts
- No in-river disturbance
- Shortest timeframe to completion
- Comparable order of magnitude cost to ITT
- Local construction expertise
## Technology Summary

<table>
<thead>
<tr>
<th>Option</th>
<th>Bore Tunnel</th>
<th>Immersed Tube</th>
<th>Long-span Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environment Impacts</strong></td>
<td>• Sinkhole potential</td>
<td>• In-river construction</td>
<td>• Noise, visual and shade</td>
</tr>
<tr>
<td></td>
<td>• ALR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ground densification</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In-river construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Noise, visual and shade</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Est. Schedule</strong></td>
<td>• 3 yr</td>
<td>• 3 yr</td>
<td>• 2 yr</td>
</tr>
<tr>
<td></td>
<td>• 7 yr</td>
<td>• 5 yr</td>
<td>• 5 yr</td>
</tr>
<tr>
<td><strong>Construction Risk</strong></td>
<td>• High</td>
<td>• Medium</td>
<td>• Low</td>
</tr>
<tr>
<td><strong>High level cost estimate</strong></td>
<td>• Approx. 3 times cost of ITT/bridge</td>
<td>• Comparable cost to bridge</td>
<td>• Comparable cost to ITT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Goals Summary

Key differences by goal area:

- **Goal 1**: ALR impact, timeline
- **Goal 2**: Transit, cycling + pedestrian experience
- **Goal 3**: Goods and service reliability, industrial land impact
- **Goal 4**: In-river impact, community livability

- Not aligned
- Somewhat aligned
- Aligned
## Goal Achievement Analysis Summary

<table>
<thead>
<tr>
<th>Goal</th>
<th>Bored Tunnel</th>
<th>Immersed Tube</th>
<th>Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 1: Support community sustainability</strong></td>
<td>![Not aligned]</td>
<td>![Aligned]</td>
<td>![Aligned]</td>
</tr>
<tr>
<td><strong>Goal 2: Increase share of sustainable modes</strong></td>
<td>![Not aligned]</td>
<td>![Aligned]</td>
<td>![Somewhat aligned]</td>
</tr>
<tr>
<td><strong>Goal 3: Enhance regional goods movement</strong></td>
<td>![Somewhat aligned]</td>
<td>![Aligned]</td>
<td>![Aligned]</td>
</tr>
<tr>
<td><strong>Goal 4: Support healthy environment</strong></td>
<td>![Somewhat aligned]</td>
<td>![Aligned]</td>
<td>![Aligned]</td>
</tr>
</tbody>
</table>

- **Not aligned**
- **Somewhat aligned**
- **Aligned**

Metro Vancouver Regional District
Request to Task Force

• Select preferred option(s) to endorse for Metro Vancouver Board recommendation to take to public engagement
Thank You
To: Finance and Intergovernment Committee

From: Raymond Kan, Senior Planner, Regional Planning

Date: October 8, 2019               Meeting Date: October 16, 2019

Subject: TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization

RECOMMENDATION
That the MVRD Board approve $149.12 million in funding from the Greater Vancouver Regional Fund for the following transit projects proposed by TransLink in its Application for Federal Gas Tax funding for 2021 Fleet Expansion and Modernization as attached to the report dated October 8, 2019, titled “TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization”:

a) Project 1 – Year 2021 Conventional 60-ft Hybrid Bus, 40-ft Hybrid Bus, and 40-ft Battery Electric Bus Purchases for Fleet Expansion;

b) Project 2 – Year 2021 HandyDART Vehicle Purchases for Fleet Replacement;

c) Project 3 – Year 2021 HandyDART Vehicle Purchases for Fleet Expansion;

d) Project 4 – Year 2021 Community Shuttles Vehicle Purchases for Fleet Replacement;

e) Project 5 – Year 2021 Community Shuttle Vehicle Purchases for Fleet Expansion; and

f) Project 6 – Mark 1 SkyTrain Cars Refurbishment.

PURPOSE
To present for MVRD Board consideration TransLink’s request for federal gas tax funding from the Greater Vancouver Regional Fund (GVRF) under Metro Vancouver’s Federal Gas Tax Fund Expenditures Policy (GVRF Policy).

BACKGROUND
On October 8, 2019, Metro Vancouver received TransLink’s application for $149.12 million in GVRF funding (Attachment 3). With this application, TransLink is seeking approval of six projects for federal gas tax funding from the GVRF to expedite the delivery of new transit vehicles beginning in 2021. The MVRD Board has approval authority over requests for GVRF funding, including any scope changes.

Since adopting the GVRF Policy in May 2016, the MVRD Board has approved approximately $536 million in GVRF funds to TransLink for eligible regional transportation projects. Continuous investment in the expansion and modernization of the transit fleet is crucial to supporting the achievement of the MVRD Board’s regional growth management, environmental, and economic objectives. The Union of British Columbia Municipalities (UBCM) holds the federal gas tax funds and transfers the funds to TransLink upon formal notification by the MVRD Board of its approval of applications per the GVRF Policy.
GREATER VANCOUVER REGIONAL FUND POLICY REQUIREMENTS

The GVRF Policy sets out the application process, information requirements, and evaluation criteria that are to be used to evaluate and respond to TransLink’s request for GVRF funding. TransLink’s application was evaluated using the current application guide. Additional context about the GVRF Policy and overarching Federal Gas Tax Administrative Agreement can be found in Attachment 1; recently approved GVRF applications are summarized in Attachment 2.

PROPOSED PROJECTS

TransLink is seeking approval for six projects totaling $149.12 million in GVRF funding; details about costs, GVRF funding amounts, and deployment are set out in Table 1. The fleet expansion projects (Projects 1, 3, 5) fulfill a large portion of the transit vehicle expansion commitment set out in the 2018 Phase Two Investment Plan. Projects 2 and 4 are to replace aging HandyDART and Community Shuttles, respectively. Project 6 will extend the useful life of Mark 1 SkyTrain cars.

Table 1 – Project Descriptions

<table>
<thead>
<tr>
<th>Project</th>
<th>Vehicles</th>
<th>Units</th>
<th>Total Cost ($ millions)</th>
<th>Prior Approved GVRF Funding ($ millions)</th>
<th>2019 GVRF Funding Request ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2021 Conventional Bus Purchases for Expansion</td>
<td>60-ft hybrid diesel-electric</td>
<td>30</td>
<td>51.5</td>
<td>0</td>
<td>49.6</td>
</tr>
<tr>
<td></td>
<td>40-ft hybrid diesel-electric</td>
<td>39</td>
<td>45.0</td>
<td>0</td>
<td>43.4</td>
</tr>
<tr>
<td></td>
<td>40-ft battery electric</td>
<td>9</td>
<td>15.3</td>
<td>0</td>
<td>14.8</td>
</tr>
<tr>
<td>2. 2021 HandyDART Purchases for Replacement</td>
<td>HandyDART vehicles</td>
<td>42</td>
<td>6.6</td>
<td>0</td>
<td>6.4</td>
</tr>
<tr>
<td>3. 2021 HandyDART Vehicle Purchases for Expansion</td>
<td>HandyDART vehicles</td>
<td>10</td>
<td>1.6</td>
<td>0</td>
<td>1.6</td>
</tr>
<tr>
<td>4. 2021 Community Shuttle Purchases for Replacement</td>
<td>Community Shuttle vehicles</td>
<td>62</td>
<td>14.1</td>
<td>0</td>
<td>13.7</td>
</tr>
<tr>
<td>5. 2021 Community Shuttle Purchases for Expansion</td>
<td>Community Shuttle vehicles</td>
<td>9</td>
<td>2.6</td>
<td>0</td>
<td>2.4</td>
</tr>
<tr>
<td>6. Mark 1 SkyTrain Cars Refurbishment</td>
<td>Mark 1 500-800 series cars</td>
<td>36</td>
<td>17.7</td>
<td>0</td>
<td>17.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>237</td>
<td>154.40</td>
<td>0</td>
<td>149.1</td>
</tr>
</tbody>
</table>
Project Deployment
TransLink is currently preparing a service plan for the 2021 service expansion, which will identify the specific annual service hours associated with each vehicle type, and the routes to which the vehicles will be deployed (see Table 2).

Table 2 – Planned Project Deployment

<table>
<thead>
<tr>
<th>Project</th>
<th>Service Initialization / End of Service</th>
<th>Deployment</th>
</tr>
</thead>
</table>
| 1. 2021 Conventional Bus Purchases for Expansion | 2021/2038                             | • 60-ft hybrids: RapidBus corridors (Richmond to Metrotown; Scott Road 120th Street)  
• 40-ft hybrids: region-wide  
• Battery electric: #100 Marine Drive, Vancouver/New Westminster |
| 2. 2021 HandyDART Purchases for Replacement  | 2021/2028                             | • Region-wide deployment                        |
| 3. 2021 HandyDART Purchase for Expansion     | 2021/2028                             | • Region-wide deployment                        |
| 4. 2021 Community Shuttles Purchases for Replacement | 2021/2026 | • Region-wide deployment                        |
| 5. 2021 Community Shuttle Purchases for Expansion | 2021/2026 | • Region-wide deployment                        |
| 6. March 1 SkyTrain Cars Refurbishment        | 2020/2027                             | • Region-wide deployment                        |

METRO VANCOUVER STAFF ANALYSIS
A summary of staff’s analysis based on the evaluation criteria is presented below.

Application Completeness and Screening Criteria. TransLink’s application meets the application information requirements and screening criteria.

Integrated Criteria Evaluation. The application represents a significant contribution towards the transit service expansion commitments set out in the 2018 Phase Two Investment Plan. Improved service levels and expanded capacity could encourage greater modal shift from personal vehicles, thereby reducing transportation emissions associated with the light duty vehicle fleet.

The expansion diesel-electric hybrid buses and battery electric buses are consistent with TransLink’s Low Carbon Fleet Strategy and efforts to move towards zero emissions transportation technologies. It should be noted that the MVRD Board approved $6.9 million in GVRF funds in April 2017 for four battery electric buses and one on-route charging unit for evaluation as part of a national battery electric bus pilot program. That pilot program has now been completed. The current application also modernizes HandyDART and Community Shuttle vehicles, and extends the useful life of the Mark 1 500-800 series cars until 2027.
In the aggregate, the application is broadly consistent and supportive of the MVRD Board’s policies on regional growth management, air quality, and climate protection, as well as the MVRD Board’s interest in economic prosperity.

**Summary of Evaluation Criteria**
The application was evaluated against the integrated criteria set out in the *GVRF Policy*. This evaluation is summarized in Table 3.

### Table 3 – Evaluation of Screening Criteria

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>MV Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Screening Criteria</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible Project Category</td>
<td>Local roads and bridges, including active transportation, OR public transit.</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement.</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Meets criterion</td>
</tr>
<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions, and infrastructure.</td>
<td>Meets criterion</td>
</tr>
</tbody>
</table>

#### Integrated Criteria: Regional Growth Strategy

| Criteria                                    | Description                                                                 | MV Assessment                                                                 |
|---------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|---|
| Supports the Regional Growth Strategy       | The degree to which the project assists in achieving the five goals in Metro 2040. | Excellent: Expansion vehicles will serve new RapidBus corridors and enhance service elsewhere. |
| Urban Centres and Frequent Transit Development Areas | Where applicable, the project is located in, or demonstrates tangible benefits to, the overall performance of Urban Centres and Frequent Transit Development Areas. | Good: subject to performance monitoring as service expands, especially on the new RapidBus corridors. |

#### Integrated Criteria: Transportation Performance

<p>| Criteria                                    | Description                                                                 | MV Assessment                                                                 |
|---------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|---|
| Headline Targets                            | Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share. | Good: subject to performance monitoring as service expands. |
| Other Transportation Outcomes               | Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project. | Good: subject to performance monitoring as service expands. |
| Project Type                                | Demonstrated value of the project type.                                     | Good: expansion and modernization projects provide good value.                |---|</p>
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>MV Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integrated Criteria: Regional Environmental Objectives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan.</td>
<td>Good: modernizes and expands the transit fleet to capture more ridership and encourage modal shift from personal vehicles, and deploys hybrids zero emission battery electric buses. TransLink should explore low or zero-emission alternatives to gasoline-based HandyDART and Community Shuttle vehicles.</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project.</td>
<td>Good: subject to performance monitoring as service expands.</td>
</tr>
<tr>
<td><strong>Integrated Criteria: Economic Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports Regional Prosperity</td>
<td>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity.</td>
<td>Good: modernizes and expands the transit fleet to encourage modal shift.</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</td>
<td>Good: subject to performance monitoring as service expands.</td>
</tr>
</tbody>
</table>

**ALTERNATIVES**

1. That the MVRD Board approve $149.12 million in funding from the Greater Vancouver Regional Fund for the following transit projects proposed by TransLink in its Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization and as attached to the report dated October 8, 2019, titled “TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization”:
   a) Project 1 – Year 2021 Conventional 60-ft Hybrid Bus, 40-ft Hybrid Bus, and 40-ft Battery Electric Bus Purchases for Fleet Expansion;
   b) Project 2 – Year 2021 HandyDART Vehicle Purchases for Fleet Replacement;
   c) Project 3 – Year 2021 HandyDART Vehicle Purchases for Fleet Expansion;
   d) Project 4 – Year 2021 Community Shuttles Vehicle Purchases for Fleet Replacement;
   e) Project 5 – Year 2021 Community Shuttle Vehicle Purchases for Fleet Expansion; and
   f) Project 6 – Mark 1 SkyTrain Cars Refurbishment.

2. That the MVRD Board endorse in principle the report dated October 8, 2019, titled “TransLink Application for Federal Gas Tax Funding for 2021 Fleet Expansion and Modernization” and refer it to the Mayors’ Council on Regional Transportation for comment prior to final consideration by the MVRD Board.

**FINANCIAL IMPLICATIONS**

If the MVRD Board approves alternative one, the UBCM will be notified within seven business days of the Board’s decision to approve $149.1 million in GVRF funding for all of the projects in TransLink’s application.
If the MVRD Board approves alternative two, the Metro Vancouver report and recommendations, along with the TransLink application, will be forwarded to the Mayors’ council for comment prior to consideration by the MVRD Board.

**SUMMARY / CONCLUSION**
TransLink is requesting approval of six projects for federal gas tax funding from the GVRF totaling $149.1 million. The expansion vehicles partially fulfill the fleet expansion commitments set out in the 2018 *Phase Two Investment Plan*, and the replacement vehicles will help support the ongoing modernization of the transit fleet.

For the expansion / refurbishment projects, TransLink proposes to purchase 30 60-ft conventional hybrid buses, 39 40-ft conventional hybrid buses, 9 battery electric buses, 9 Community Shuttles and 10 HandyDART vehicles. For replacement projects, TransLink proposes to purchase 62 Community Shuttles and 42 HandyDART vehicles, and the refurbishment of 36 Mark 1 500-800 series SkyTrain cars. The conventional hybrid buses will release less air emissions in comparison to alternative diesel buses (on the order of 20%); the battery electric buses will release zero tailpipe emissions.

In the aggregate, the application is broadly consistent and supportive of the MVRD Board’s policies on regional growth management, air quality, and climate protection, as well as the Board’s interest in economic prosperity.

For these reasons, staff recommend alternative one.

**Reference:**
TransLink 10-Year Investment Plan: [https://www.translink.ca/Plans-and-Projects/10-Year-Plan.aspx](https://www.translink.ca/Plans-and-Projects/10-Year-Plan.aspx)

**Attachments:**
1. Background on Federal Gas Tax Administrative Agreement and Greater Vancouver Regional Fund Policy
2. Recent GVRF Application Approvals
3. Application for Federal Gas Tax funding from the Greater Vancouver Regional Fund for 2021 Fleet Expansion and Modernization (dated October 8, 2019)
Background on Federal Gas Tax Administrative Agreement and Greater Vancouver Regional Fund Policy

Federal Gas Tax Administrative Agreement
The renewed Administrative Agreement on Federal Gas Tax Fund in British Columbia came into effect in April 2014. The Agreement sets out the roles and responsibilities of the federal government, provincial government, and Union of British Columbia Municipalities (UBCM) for the administration of the Federal Gas Tax Fund. The Agreement also sets out the following:

- The GVRF pools 95% of the MVRD and its member municipalities’ per-capital allocation of federal gas tax funds to support regional transportation projects proposed for funding by TransLink.
- The MVRD Board must approve all eligible projects proposed by TransLink for funding.
- The MVRD must notify UBCM of the eligible projects that it has approved for funding, after which the UBCM may provide funding to TransLink.
- In order to receive GVRF funding, TransLink must sign a Funding Agreement with UBCM.
- The remaining 5% of federal gas tax funds is allocated among local governments in Metro Vancouver through the Community Works Fund.
- Requests for new projects, amendments to the scope of prior approved projects, and use of approved but unspent funds for other projects must receive approval from the MVRD Board.

Greater Vancouver Regional Fund Policy
On May 27, 2016, the MVRD Board adopted the Greater Vancouver Regional Fund Policy, which establishes the process and criteria for approving expenditures from the GVRF for regional transportation projects proposed by TransLink. The UBCM holds the GVRF monies in trust, and transfers the requested amount of funds to TransLink only upon notification by the MVRD Board of its approval. The GVRF Policy sets out the application process, information requirements, and evaluation criteria to respond to TransLink’s request for GVRF funding. Under the provisions of the GVRF Policy, the MVRD Board will issue a call for proposals on an annual basis by April 1. The deadline for TransLink to submit final proposals is September 1. The MVRD Board makes its decisions by November 30.
Recent GVRF Application Approvals

A summary of recent GVRF applications approved by the MVRD Board is provided below.

- September 23, 2016 – the MVRD Board approved $127.182 million in GVRF funds to TransLink for nine projects comprising replacement transit fleet vehicles only (84 community shuttles, 75 HandyDART vehicles, and 238 conventional buses). These projects were consistent with TransLink’s 2014 Base Plan and Mayors’ Council Transportation and Transit Plan.

- April 28, 2017 – the MVRD Board approved $121.280 million in GVRF funds to TransLink for six projects comprising expansion transit fleet vehicles, four battery electric buses for a pilot program, and equipment for deferred retirement of transit vehicles.

- July 28, 2017 – the MVRD Board approved scope changes and $24.210 million in additional GVRF funds to TransLink for three projects approved in 2016. The scope changes involved the purchase of conventional CNG and hybrid buses, rather than conventional diesel buses.

- October 27, 2017 – the MVRD Board approved $121.150 million in GVRF funds to TransLink for seven projects comprising expansion and replacement transit vehicles.

- March 23, 2018 – the MVRD Board approved a scope change to one project approved in 2017. The scope change involved procuring five 60-ft hybrid buses in lieu of seven 40-ft hybrid buses. There was no change to the previously approved GVRF funding amount of $7.29 million.

- October 26, 2018 – the MVRD Board approved $142.1 million in GVRF funds to TransLink for five projects comprising expansion and replacement transit vehicles.

- As at December 31, 2018, the balance in the GVRF was $147 million (the Federal Government transfers new funds into an account held by UBCM in July and November of each year).
To: Carol Mason, Chief Administrative Officer, Metro Vancouver

From: Christine Dacre, Chief Financial Officer and Vice President, Financial Services, TransLink
Geoff Cross, Vice President, Transportation Planning and Policy, TransLink

Date: October 8, 2019

Subject: Application for Federal Gas Tax Funding from the Greater Vancouver Regional Fund for 2021 Fleet Expansion and Modernization

PURPOSE

TransLink is requesting the Metro Vancouver Regional District (Metro Vancouver) approve $149.1 million in Federal Gas Tax Funds (FGTF) from Greater Vancouver Regional Fund (GVRF) for 97 new bus vehicles for service expansion and 104 new bus vehicles for fleet modernization. These vehicles are critical to delivering the service expansion stated in the 2018-2027 Investment Plan (2018 Investment Plan), while ensuring the transit fleet remains in a state of good repair and the reliability of the transit system is maintained. The 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board, advances the goals identified in TransLink’s long-term Regional Transportation Strategy, and supports goals identified in Metro Vancouver’s Regional Growth Strategy, Metro Vancouver 2040: Shaping Our Future (Metro 2040), and supports the goals of metro Vancouver’s new Climate 2050 goals, recently released.

The funding requests detailed in this application are consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board. This application is the administrative process to access the funding outlined and approved in the 2018 Investment Plan.

This request, which includes 69 hybrid (39 40-ft and 30 60-ft) buses and 9 40-ft zero emissions battery-electric buses, will support the region’s environmental policies, specifically:

- TransLink’s effort to reduce greenhouse gas (GHG) and criteria air contaminants (CAC) emissions and support the development of a Low Carbon Fleet Strategy.
- Metro Vancouver’s Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP) strategies:
  - Strategy 1.1 – Reduce emissions of and public exposure to diesel particulate matter;
  - Strategy 1.4 – Reduce air contaminant emissions from cars, trucks, and buses; and
  - Strategy 3.3 – Reduce the carbon footprint of the region’s transportation system.
- Supports Metro Vancouver’s Climate 2050 by expanding our clean transportation zero-emission battery-electric bus fleet. This supports:
  - Ensuring infrastructure, ecosystems, and communities are resilient to the impacts of climate change.
- Metro Vancouver 2040: Shaping Our Future (Metro 2040) actions to encourage transportation infrastructure that reduce energy consumption and greenhouse gas emissions and improve air quality:
o Action 3.3.6 – That TransLink pursue reductions of common air contaminants and greenhouse gas emissions from on-road transportation sources in support of regional air quality objectives and greenhouse gas reduction targets; and

o Action 3.3.7 – That TransLink manage its transit fleet and operations with the goal of increasing fuel efficiency and reducing common air contaminants and greenhouse gas emissions over time, in support of the Regional Growth Strategy and Air Quality Management Plan.

BACKGROUND
Since the FGTF program began in 2005, TransLink has received $1,308.601 million in funding to expand and modernise the transit network. Interest earned on funds received, which must be used for approved FGTF projects, totalled $46.754 million at June 30, 2019. Currently, there is $312.117 million in funds available to TransLink. Metro Vancouver has specified that their portion of FGTF funding go to public transportation, with a small amount going to the Community Works Fund, in the renewed program. A summary of the funds and usage is provided below:

**Greater Vancouver Regional Fund**
(as of June 30, 2019)

<table>
<thead>
<tr>
<th>In millions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved GVRF Funds</td>
<td>$1,308.601</td>
</tr>
<tr>
<td>Interest earned on funds received</td>
<td>46.754</td>
</tr>
<tr>
<td>Unapproved GVRF Funds</td>
<td>278.078</td>
</tr>
<tr>
<td><strong>Total Gas Tax Funds</strong></td>
<td><strong>$1,633.433</strong></td>
</tr>
<tr>
<td>Less</td>
<td></td>
</tr>
<tr>
<td>Funds applied to completed projects</td>
<td>$(434.082)</td>
</tr>
<tr>
<td>1 Approved funds for active projects</td>
<td>(872.746)</td>
</tr>
<tr>
<td>Interest allocated to completed projects</td>
<td>(14.488)</td>
</tr>
<tr>
<td><strong>Funds Available for use</strong></td>
<td><strong>$312.117</strong></td>
</tr>
<tr>
<td>2 Proposed project Funding</td>
<td>(149.121)</td>
</tr>
<tr>
<td><strong>Funds Remaining</strong></td>
<td><strong>$162.996</strong></td>
</tr>
</tbody>
</table>

1. See table of active projects with FGTF funding below. Excludes interest allocated to active projects
2. See table of proposed GVRF projects below

This application is based on TransLink’s 2018 Investment Plan approved in June 2018 and is aligned with the Mayors’ Council 10-Year Vision (10-Year Vision). Appendix A includes a summary of TransLink’s strategic plan, the 2018 Investment Plan, including the projects funded or anticipated to be funded by the GVRF, as required under the application process. Included in Appendix A is other funding anticipated in the strategic plan. Additionally, Appendix B provides a short description of each line item in Appendix A.
**Active Projects**

Table 1 below shows the status of active projects with GVRF funding. The total forecasted project cost for active projects is $996.929 million, with $872.746 million in FGTF funds approved for these projects. At June 30, 2019, project costs totalled $711.581 million, with $592.479 million in FGTF funds spent.

Table 1: Active projects

<table>
<thead>
<tr>
<th>Active Projects with GVRF Funding</th>
<th># of Vehicles</th>
<th>Forecast Final Cost</th>
<th>Approved Funding</th>
<th>Costs to Date</th>
<th>Funds Spent</th>
<th>Unspent Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metrotown - Trolley Overhead Rectifier Replacement</td>
<td>N/A</td>
<td>5.757</td>
<td>4.725</td>
<td>3.312</td>
<td>3.174</td>
<td>1.551</td>
</tr>
<tr>
<td>2016 Conventional Bus Replacement - 40'</td>
<td>85</td>
<td>61.134</td>
<td>57.264</td>
<td>43.947</td>
<td>34.096</td>
<td>23.169</td>
</tr>
<tr>
<td>2016 Conventional Bus Replacement - 60'</td>
<td>26</td>
<td>33.182</td>
<td>25.360</td>
<td>23.853</td>
<td>25.360</td>
<td>-</td>
</tr>
<tr>
<td>Expo Line Propulsion Power System Upgrade</td>
<td>N/A</td>
<td>57.141</td>
<td>42.000</td>
<td>57.141</td>
<td>42.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Surrey Transit Centre - CNG Facility Retrofit</td>
<td>N/A</td>
<td>15.791</td>
<td>4.000</td>
<td>15.791</td>
<td>4.000</td>
<td>-</td>
</tr>
<tr>
<td>Automated Train Control Equipment Replacement</td>
<td>N/A</td>
<td>4.610</td>
<td>4.500</td>
<td>4.333</td>
<td>4.257</td>
<td>0.243</td>
</tr>
<tr>
<td>2nd SeaBus Replacement</td>
<td>1</td>
<td>20.479</td>
<td>19.697</td>
<td>20.124</td>
<td>19.285</td>
<td>0.412</td>
</tr>
<tr>
<td>Hamilton Transit Centre</td>
<td>N/A</td>
<td>135.033</td>
<td>84.978</td>
<td>135.033</td>
<td>84.978</td>
<td>-</td>
</tr>
<tr>
<td>2016 Community Shuttle Vehicle Replacement</td>
<td>20</td>
<td>3.111</td>
<td>3.560</td>
<td>3.111</td>
<td>3.075</td>
<td>0.485</td>
</tr>
<tr>
<td>2017 Community Shuttle Vehicle Replacement</td>
<td>20</td>
<td>3.746</td>
<td>3.500</td>
<td>3.426</td>
<td>3.384</td>
<td>0.116</td>
</tr>
<tr>
<td>2017 HandyDART Vehicle Replacement</td>
<td>35</td>
<td>4.375</td>
<td>5.013</td>
<td>4.276</td>
<td>3.998</td>
<td>1.015</td>
</tr>
<tr>
<td>SkyTrain Mark I Vehicle Refurbishment</td>
<td>N/A</td>
<td>30.111</td>
<td>24.360</td>
<td>22.508</td>
<td>12.924</td>
<td>11.436</td>
</tr>
<tr>
<td>2014 Conventional Bus</td>
<td>45</td>
<td>25.035</td>
<td>24.391</td>
<td>25.035</td>
<td>24.391</td>
<td>-</td>
</tr>
<tr>
<td>2014 HandyDART Vehicle</td>
<td>65</td>
<td>7.594</td>
<td>7.523</td>
<td>7.594</td>
<td>7.523</td>
<td>-</td>
</tr>
<tr>
<td>2018 HandyDART Vehicle Replacement</td>
<td>40</td>
<td>5.229</td>
<td>5.405</td>
<td>5.101</td>
<td>4.797</td>
<td>0.808</td>
</tr>
<tr>
<td>2018 Conventional Bus Replacement</td>
<td>92</td>
<td>69.561</td>
<td>61.925</td>
<td>52.351</td>
<td>49.136</td>
<td>12.789</td>
</tr>
<tr>
<td>2018 Community Shuttle Vehicle Replacement</td>
<td>20</td>
<td>3.775</td>
<td>3.830</td>
<td>2.893</td>
<td>2.698</td>
<td>1.132</td>
</tr>
<tr>
<td>2018 40' Conventional Bus Purchases - Expansion</td>
<td>94</td>
<td>94.120</td>
<td>85.584</td>
<td>91.138</td>
<td>85.584</td>
<td>0.000</td>
</tr>
<tr>
<td>Equipment for Deferred Retirement Program</td>
<td>N/A</td>
<td>2.826</td>
<td>6.120</td>
<td>0.716</td>
<td>0.680</td>
<td>5.440</td>
</tr>
<tr>
<td>Electric Battery Bus Purchases - Pilot</td>
<td>4</td>
<td>9.807</td>
<td>6.892</td>
<td>5.204</td>
<td>5.070</td>
<td>1.822</td>
</tr>
<tr>
<td>2018 HandyDART Vehicle Purchases - Expansion</td>
<td>13</td>
<td>1.832</td>
<td>2.193</td>
<td>1.802</td>
<td>1.693</td>
<td>0.500</td>
</tr>
<tr>
<td>2018 Community Shuttle Vehicle Purchases - Expansion</td>
<td>12</td>
<td>2.010</td>
<td>3.175</td>
<td>1.993</td>
<td>1.868</td>
<td>1.307</td>
</tr>
<tr>
<td>2019 Conventional Bus Expansion - 60’ hybrid</td>
<td>47</td>
<td>75.960</td>
<td>68.130</td>
<td>39.553</td>
<td>36.146</td>
<td>31.984</td>
</tr>
<tr>
<td>2019 HandyDART Vehicle Purchase – Expansion</td>
<td>10</td>
<td>1.933</td>
<td>1.350</td>
<td>1.242</td>
<td>1.151</td>
<td>0.099</td>
</tr>
<tr>
<td>2019 Double Decker Bus Purchase – Replacement</td>
<td>27</td>
<td>33.917</td>
<td>30.000</td>
<td>5.509</td>
<td>4.839</td>
<td>25.161</td>
</tr>
<tr>
<td>2019 HandyDART Vehicle Purchase – Replacement</td>
<td>40</td>
<td>5.702</td>
<td>5.200</td>
<td>5.362</td>
<td>4.983</td>
<td>0.217</td>
</tr>
<tr>
<td>2019 Community Shuttle Purchase – Replacement</td>
<td>49</td>
<td>12.000</td>
<td>10.800</td>
<td>-</td>
<td>-</td>
<td>10.800</td>
</tr>
<tr>
<td>2020 Conventional - Replacement</td>
<td>25</td>
<td>32.500</td>
<td>29.080</td>
<td>-</td>
<td>-</td>
<td>29.080</td>
</tr>
<tr>
<td>2020 Conventional - Expansion</td>
<td>62</td>
<td>89.700</td>
<td>103.450</td>
<td>-</td>
<td>-</td>
<td>103.450</td>
</tr>
<tr>
<td>2020 HandyDart - Replacement</td>
<td>42</td>
<td>6.450</td>
<td>6.130</td>
<td>-</td>
<td>-</td>
<td>6.130</td>
</tr>
<tr>
<td>2020 HandyDart - Expansion</td>
<td>10</td>
<td>1.600</td>
<td>1.440</td>
<td>-</td>
<td>-</td>
<td>1.440</td>
</tr>
<tr>
<td>2020 Community Shuttle</td>
<td>9</td>
<td>2.220</td>
<td>2.000</td>
<td>-</td>
<td>-</td>
<td>2.000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,015</strong></td>
<td><strong>996.929</strong></td>
<td><strong>872.746</strong></td>
<td><strong>711.581</strong></td>
<td><strong>592.479</strong></td>
<td><strong>280.267</strong></td>
</tr>
</tbody>
</table>
**PROPOSED PROJECTS AND FUNDING**

This application is requesting $150.1 million for six projects, as shown in Table 2. The projects are consistent with the 2018 Investment Plan and the 10-Year Vision. Detailed project descriptions are included in Appendix C.

Table 2: Summary of Projects, Total Costs, and Gas Tax Funding Request

<table>
<thead>
<tr>
<th>Projects</th>
<th>Scope</th>
<th>Total Project Budget ($millions)</th>
<th>Requested Gas Tax Funding ($millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Conventional 60-ft and 40-ft Bus Purchase – Expansion</td>
<td>60-foot hybrid diesel-electric buses</td>
<td>51.5</td>
<td>49.6</td>
</tr>
<tr>
<td>2021 Conventional 60-ft and 40-ft Bus Purchase – Expansion</td>
<td>40-foot diesel-electric hybrid buses</td>
<td>45.0</td>
<td>43.4</td>
</tr>
<tr>
<td>2021 Conventional 60-ft and 40-ft Bus Purchase – Expansion</td>
<td>40-foot zero emissions battery-electric buses</td>
<td>15.3</td>
<td>14.8</td>
</tr>
<tr>
<td>2021 HandyDART Vehicle Purchase – Replacement</td>
<td>HandyDART vehicles</td>
<td>6.6</td>
<td>6.4</td>
</tr>
<tr>
<td>2021 HandyDART Vehicle Purchase – Replacement</td>
<td>HandyDART vehicles</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>2021 Community Shuttle Vehicle Purchase – Replacement</td>
<td>Community shuttle vehicle</td>
<td>14.1</td>
<td>13.7</td>
</tr>
<tr>
<td>2021 Community Shuttle Vehicle Purchase – Replacement</td>
<td>Community shuttle vehicle</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Mark 1 500-800 Refurbishment</td>
<td>Mark I 500-800 series cars</td>
<td>17.7</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>237 vehicles</strong></td>
<td><strong>154.4</strong></td>
<td><strong>149.1</strong></td>
</tr>
</tbody>
</table>

**Project and Propulsion Selection**

All vehicle projects are evaluated based on vehicle purchase cost, fuel and maintenance cost, lifecycle cost, emissions of GHG, NOx, Hydrocarbon and particulate matter (PM), and aspects of vehicle performance and customer and driver environment such as noise and ride quality. Route characteristics such as topography and average route speed (based on bus stop spacing and traffic conditions) can affect the performance of different technologies. Fuel infrastructure and depot space are considerations in fleet deployment. TransLink considers all these factors in identifying the most advantageous propulsion technology for different vehicle projects, consistent with financial and environmental goals and policies. Based upon the most current information and policy preference, diesel propulsion is no longer a preferred option for any of our operations compared to CNG, hybrid-electric or full zero emission battery-electric, except for highway routes. Diesel propulsion is an option for highway routes as CNG or hybrid would have higher capital cost but marginal emissions reduction due to higher operating speeds. TransLink is nearing completion of Phase II of the Low Carbon Fleet Strategy and will soon be starting the last Phase, which will be a fully complete roadmap for fleet electrification.

Fleet procurement projects are brought to an internal steering committee to ensure alignment with the Investment Plan and Regional Transportation Strategy, consider operational aspects to fleet deployment, prioritize the projects, and submit the business cases and project financials. Projects are then reviewed by TransLink’s Senior Executive to ensure that the business case and financials are sound, and to evaluate the project against TransLink’s affordability criteria. The final list of recommended capital projects is submitted to the Board of Directors for approval within the Annual Capital Budget.

Selection of propulsion technology for projects in this application is based on the following:

- Hybrid propulsion is not available for these vehicles. However, replacing retiring diesel HandyDART vehicles with new gasoline vehicles would result in lower greenhouse gas and
NOx emissions. A combination of zero emission battery–electric and hybrid diesel-electric for 40-foot and 60-foot buses. As mentioned above, TransLink is continuing to develop a Low Carbon Fleet Strategy, and the zero-emission battery-electric buses demonstrate our commitment to reducing emissions, even prior to the full strategy being complete. Both hybrid diesel-electric and electric-battery result in emission reductions compared to the diesel alternatives that are still present in the market.

Project Summaries

2021 Conventional 60-ft and 40-ft Bus Purchase – Expansion: This project adds 30 60-foot hybrid diesel-electric buses, 39 40-foot hybrid diesel-electric buses, and 9 40-foot battery-electric buses.

The 30 60-foot hybrid diesel-electric buses will allow implementation of B-Line service on the Richmond to Expo line and Scott Road 120th Street corridors. The procurement of hybrid buses, instead of new diesel, would result in emission reductions of approximately 20% in GHG and NOx, and 25% in PM.

The 39 40-foot hybrid diesel-electric buses will support existing routes and expand service outlined in the 2018 Investment Plan. The procurement of hybrid buses, instead of new diesel, would result in emission reductions of approximately 22% in GHG, 8.5% in NOx, and 20% in PM.

The 9 40-foot battery-electric buses will be used to expand service. Battery-electric 40-foot buses are considered zero-emission buses and eliminate greenhouse gas and criteria air contaminants in the Metro Vancouver Region. The procurement of battery-electric buses, instead of new diesel, would result in tailpipe emission reductions of 100% in GHG, NOx, and PM. These 9 battery-electric buses will serve Route 100 to supplement existing electric buses along this route and make this a fully electrified route. These 9 new battery-electric buses support TransLink’s goal of reducing greenhouse gas and criteria air contaminants in the Metro Vancouver Region and support Metro Vancouver’s Climate 2050 goals.

2021 HandyDART Vehicle Purchase – Replacement: This project procures 42 HandyDART vehicles to retire vehicles that have reached the end of useful life and to modernize the HandyDART vehicle fleet. These new vehicles will support maintaining transit system reliability for HandyDART trips. The replacement vehicles are gasoline instead of diesel have approximately 3.0% less GHG emissions (g/km) and 44% less NOx (g/km) than diesel engines used previously in these vehicles (based on GM L96 engine for gasoline vs. GM LGH engine for diesel).

2021 HandyDART Vehicle Purchase – Expansion: This project procures 10 HandyDART vehicles for service expansion across Metro Vancouver. The expansion of the HandyDART fleet supports the delivery of additional HandyDART trips to meet customer demand as outlined in the 10-Year Vision and the Custom Transit Service Delivery Review, approved by the TransLink Board in March 2017. This project also reduces wait times by making a larger number of vehicles available.

2021 Community Shuttle Purchase – Replacement: This project procures 62 community shuttles to retire vehicles that have reached the end of useful life and to modernize the vehicle fleet.
**2021 Community Shuttle Purchase – Expansion**: This project procures 9 community shuttles to expand service as outlined in the 2018 Investment Plan. These shuttles would improve accessibility over the existing high floor shuttle fleet and allow for improved service quality.

**2021 Mark I (500 – 800) Refurbishment**: The project would refurbish the thirty-six Mark I 500-800 series cars in order to allow them to continue to provide safe and reliable SkyTrain service until their planned retirement in 2027/2028.

**Service Expansion and Deployment of Proposed Projects**
Service expansion projects were identified as part of the Phase 2 Investment plan which was approved by the Mayors’ Council and the TransLink Board in June 2018.

| Table 3. Service expansion and deployment of proposed expansion vehicle projects |
|-------------------------------------------------|-----------------|-------------------------|---------------------------------|---------------------------------|
| **Project Type**                                  | **# of Expansion Vehicles** | **Service Expansion** | **Service Areas for 2021 Vehicles** |
| **Funded to Date**                               | **2021 Vehicles (Current Application)** | **Investment Plan (2018-2027) Total** | **Expansion with 2021 Vehicles** | **Investment Plan 2021 Vehicles** |
| Conventional 60-ft Bus Purchase - Expansion      | 62               | 30                      | 73*                             | Annual service hours 90,428 following 2021 service plan | Phase 2 RapidBus (Surrey, Delta, Richmond, Burnaby) |
| Conventional 40-ft Hybrid Bus Purchase - Expansion | 0**             | 39                      | 60                             | Annual service hours 107,253 following 2021 service plan | Region-wide |
| Conventional 40-ft Battery-Electric Bus Purchase - Expansion | 6**             | 9                       | 0                              | 24,751 Annual Service Hours | Route 100 (Marpole – 22nd Street Stn) |
| Community Shuttle Vehicle Purchase - Expansion  | 9                | 9                       | 18                             | Annual service hours 39,094 following 2021 service plan | Region-wide |
| HandyDART Vehicle Purchase - Expansion          | 10               | 10                      | 20                             | 39,000 annual trips | 39,000 annual trips | Region-wide |

* Total 60-ft buses identified in the Investment Plan does not include additional vehicles required as part of the Broadway Subway and SNG LRT project. The total number of 60-ft vehicles is expected to exceed the total anticipated at the time of the Investment Plan to provide increased capacity to Broadway during subway construction, to address crowding on the 96 B-Line due to the cancellation of SNG, and to manage higher than anticipated growth on other routes.

** As per the previously approved application, the introduction of the 2019 B-Lines will free up additional 40-ft buses that can be used to run expansion service outlined in the Investment Plan. This is expected to result in fewer 40-ft buses overall than anticipated at the time of the Investment Plan.
Table 4. Deployment of proposed replacement/refurbishment vehicle projects

<table>
<thead>
<tr>
<th>Project Type</th>
<th># of Replacement/Refurbishment Vehicles for 2021 (Current Application)</th>
<th>Service Areas for 2021 Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Shuttle Purchase – Replacement</td>
<td>62</td>
<td>Region-wide</td>
</tr>
<tr>
<td>HandyDART Vehicle Purchase – Replacement</td>
<td>42</td>
<td>Region-wide</td>
</tr>
<tr>
<td>Mark I (500 – 800) Refurbishment</td>
<td>36</td>
<td>Region-wide</td>
</tr>
</tbody>
</table>

**BENEFITS**

**Continued Electrification of Route 100**
Nine battery-electric buses will be purchased in this application to further advance the deployment of electric buses on Route 100 (Marpole-22nd Street Station). With the introduction of these 9 buses, 100% of the buses assigned to Route 100 during weekdays will be battery-electric.

**Improving Accessibility**
The continued transition of step less low-floor community shuttles across the system will improve accessibility with a front door deployable ramp and kneeling feature that is presently not available with existing high floor shuttle vehicles.

**Delivering on the Mayors’ Vision – Expanded RapidBus Service**
The 30 conventional articulated buses will be deployed on Richmond-Expo Line and Scott Road RapidBus services in 2021. These routes have been identified for RapidBus service in the Phase 2 Investment Plan to provide an enhanced high frequency limited stop service on these two key regional transit corridors.

**Emissions Reduction**
Increasing the hybrid diesel-electric and adding in 9 additional zero-emissions battery-electric bus fleet supports the 10-Year Vision’s goal of reducing greenhouse gas emissions and TransLink’s efforts to reduce emissions under the work being done with TransLink’s Low Carbon Fleet Strategy (Phase II complete Sept 2019). The 9 battery electric buses will be utilized to fully electrify Route 100 (this will bring total battery electric buses to 19), which is the first route to be fully supported by battery buses in Metro Vancouver. Further, there is an overall reduction of PM and NOx emissions relative to baseline diesel as detailed in Table 5 which supports Metro Vancouver’s Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP) goal of protecting public health and the environment, improving air quality and reducing the contribution of global climate change. It additionally supports Metro 2040 goals of reducing energy consumption and greenhouse gas emissions while improving air quality.
### Table 5: Emissions reductions from vehicles relative to baseline diesel projects

<table>
<thead>
<tr>
<th>Projects</th>
<th>Propulsion</th>
<th>GHG Approx. Impact</th>
<th>NOx Approx. Impact</th>
<th>PM Approx. Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Conventional 60-ft Bus Purchase – Expansion</td>
<td>Hybrid</td>
<td>20% reduction compared to baseline diesel</td>
<td>20% reduction compared to baseline diesel</td>
<td>25% reduction compared to baseline diesel</td>
</tr>
<tr>
<td>2021 Conventional 40-ft Hybrid Bus Purchase – Expansion</td>
<td>Hybrid</td>
<td>22% reduction compared to baseline diesel</td>
<td>8.5% increase compared to baseline diesel</td>
<td>20% reduction compared to baseline diesel</td>
</tr>
<tr>
<td>2021 Conventional 40-ft Battery Electric Bus Purchase – Expansion</td>
<td>Battery Electric</td>
<td>100% reduction from baseline diesel</td>
<td>100% reduction from baseline diesel</td>
<td>100% reduction from baseline diesel</td>
</tr>
<tr>
<td>2021 HandyDART Vehicle Purchase – Replacement¹</td>
<td>Gasoline</td>
<td>No change for gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
</tr>
<tr>
<td>2021 HandyDART Vehicle Purchase – Expansion</td>
<td>Gasoline</td>
<td>No change from gasoline to new gasoline</td>
<td>No change from gasoline to new gasoline</td>
<td>No change from gasoline to new gasoline</td>
</tr>
<tr>
<td>2021 Community Shuttle Vehicle Purchase – Replacement</td>
<td>Gasoline</td>
<td>No change as gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
</tr>
<tr>
<td>2021 Community Shuttle Vehicle Purchase – Expansion</td>
<td>Gasoline</td>
<td>No change as gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
<td>No change as gasoline to gasoline</td>
</tr>
<tr>
<td>Mark I (500 – 800) Refurbishment</td>
<td>Electric</td>
<td>No change as electric to electric</td>
<td>No change as electric to electric</td>
<td>No change as electric to electric</td>
</tr>
</tbody>
</table>

¹Vehicles being replaced are a mix of gasoline and diesel propulsion

**RISKS**
This request for GVRF funding will allow TransLink to begin procurement of these buses by early 2020 to ensure deliveries in the spring of 2021. If funding is not received in time, TransLink will have to continue to rely on deferred retirement vehicles to deliver on its promises of expansion or possibly defer expansion. Continued use of deferred retirement vehicles pose a risk to reliability, as well as further cost in terms of continued maintenance and additional equipment costs to keep them in service. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Furthermore, use of deferred retirement vehicles could also result in higher greenhouse gas (GHG) and criteria air contaminant (CAC) emissions than new vehicles. TransLink may lose credibility among the general public if service expansion is not reliable.

**CONCLUSION**
TransLink relies on the FGTF funding, made available through the GVRF, to be able to expand the transit fleet and modernize vehicles that have reached the end of their useful life and are ready for replacement. The approval of the requested application will allow TransLink to procure the vehicles necessary to expand transit service and improve customer experience, while also ensuring TransLink’s revenue vehicle fleets are in a state of good repair, avoiding increased maintenance costs and
protecting the reliability of the transit system. The application supports Metro Vancouver’s *Metro 2040* in supporting urban centres and frequent transit development areas and encouraging transportation choices. Finally, reduction of GHG and CAC emission supports the environmental goals of Metro Vancouver’s *IAQGGMP* and *Metro 2040, Climate 2050 goals*, and TransLink’s future Low Carbon Fleet Strategy.
### Appendix A

TransLink 2018-2027 Investment Plan Capital Program and Funding Sources

<table>
<thead>
<tr>
<th>Project Budget</th>
<th>2017 Project Expenditure</th>
<th>Final Forecast Cost</th>
<th>Forecast Cost to Complete</th>
<th>Other Funding</th>
<th>Approved GVRF Funding</th>
<th>Requested GVRF Funding</th>
<th>Planned future GVRF Funding</th>
<th>Total GVRF Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Equipment</td>
<td>20,698</td>
<td>732</td>
<td>998</td>
<td>36,084</td>
<td>34,354</td>
<td>122</td>
<td>9,000</td>
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<tr>
<td>Facilities</td>
<td>23,365</td>
<td>246</td>
<td>8,801</td>
<td>93,479</td>
<td>84,432</td>
<td>16,313</td>
<td>16,313</td>
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<tr>
<td>Infrastructure</td>
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<td></td>
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<tr>
<td>Exchanges</td>
<td>256,435</td>
<td>8,238</td>
<td>16,414</td>
<td>257,834</td>
<td>233,182</td>
<td>77,095</td>
<td>4,000</td>
<td>(4,000)</td>
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<td>Other</td>
<td>69,703</td>
<td>771</td>
<td>20,416</td>
<td>120,695</td>
<td>99,309</td>
<td>46,657</td>
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<tr>
<td>Trolley-Overhead</td>
<td>75,406</td>
<td>3,646</td>
<td>15,777</td>
<td>112,405</td>
<td>92,983</td>
<td>22,588</td>
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<tr>
<td>Technology</td>
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<td>918</td>
<td>4,353</td>
<td>103,083</td>
<td>97,812</td>
<td>10,439</td>
<td>4,725</td>
<td>(4,725)</td>
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<td>1,918</td>
<td>9,547</td>
<td>7,318</td>
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</tr>
<tr>
<td>Vehicle Non-Revenue</td>
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<td>(14)</td>
<td>1,884</td>
<td>21,642</td>
<td>19,773</td>
<td>-</td>
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<tr>
<td><strong>Vehicle - Revenue</strong></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Conventional Buses</td>
<td>513,420</td>
<td>59,777</td>
<td>21,437</td>
<td>1,960,466</td>
<td>1,879,252</td>
<td>-</td>
<td>(330,413)</td>
<td>(132,584) (1,173,084) (1,836,081)</td>
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<td>Community Shuttles</td>
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<td>1,305</td>
<td>12,627</td>
<td>129,410</td>
<td>115,678</td>
<td>-</td>
<td>(35,714)</td>
<td>(2,000) (94,279) (121,993)</td>
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<td>163</td>
<td>109,735</td>
<td>109,287</td>
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<td>(7,528) (64,340) (89,037)</td>
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<td>35,927</td>
<td>21,390</td>
<td>(17,001)</td>
<td>(19,697)</td>
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<td>1,725</td>
<td>225</td>
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<td>33</td>
<td>8,220</td>
<td>5,952</td>
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<td>Bridges</td>
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<td>27,546</td>
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<td>Depots</td>
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<td>844</td>
<td>962</td>
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<td>Other</td>
<td>4,352</td>
<td>660</td>
<td>1,621</td>
<td>17,141</td>
<td>14,861</td>
<td>(2,441)</td>
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<td>Major Construction</td>
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<td>(1,373)</td>
<td>20,874</td>
<td>19,501</td>
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<td>Technology</td>
<td>54,204</td>
<td>3,985</td>
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<td>230,621</td>
<td>201,416</td>
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<td>Vehicle Non-Revenue</td>
<td>9,988</td>
<td>-</td>
<td>1,238</td>
<td>5,811</td>
<td>5,573</td>
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<td><strong>Rail</strong></td>
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<tr>
<td>Equipment</td>
<td>84,883</td>
<td>6,121</td>
<td>20,586</td>
<td>155,799</td>
<td>129,091</td>
<td>35,795</td>
<td>(4,500)</td>
<td>(4,500)</td>
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<tr>
<td>Facilities</td>
<td>666,465</td>
<td>1,444</td>
<td>2,623</td>
<td>593,455</td>
<td>589,388</td>
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</tr>
<tr>
<td>Other</td>
<td>4,696,180</td>
<td>8,473</td>
<td>57,387</td>
<td>4,832,043</td>
<td>4,766,183</td>
<td>(3,548,008)</td>
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<td>Stations</td>
<td>416,437</td>
<td>63,998</td>
<td>72,265</td>
<td>422,658</td>
<td>286,395</td>
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<td>Wayside</td>
<td>18,470</td>
<td>888</td>
<td>10,996</td>
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<td>34,761</td>
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<tr>
<td>Vehicle Non-Revenue</td>
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<td>669</td>
<td>3,096</td>
<td>2,421</td>
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<td>Vehicle - Revenue</td>
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</tr>
<tr>
<td>Canada Line</td>
<td>88,000</td>
<td>-</td>
<td>44,000</td>
<td>88,000</td>
<td>44,000</td>
<td>(79,853)</td>
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<tr>
<td>Sky Train</td>
<td>1,064,925</td>
<td>54,428</td>
<td>43,907</td>
<td>1,230,239</td>
<td>1,131,904</td>
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<td>(24,360)</td>
<td>(40,055) (64,415)</td>
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<td>West Coast Express</td>
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<td>23,235</td>
<td>23,235</td>
<td>20,750</td>
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<td><strong>Roads and Bridges</strong></td>
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<tr>
<td>Infrastructure</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bike</td>
<td>13,410</td>
<td>47</td>
<td>3,504</td>
<td>35,382</td>
<td>32,831</td>
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<tr>
<td>Bridges</td>
<td>37,192</td>
<td>13,410</td>
<td>6,477</td>
<td>56,350</td>
<td>35,501</td>
<td>(150,000)</td>
<td>-</td>
<td>-</td>
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<tr>
<td><strong>Road Network</strong></td>
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<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Bicycle Infrastructure</td>
<td>58,722</td>
<td>155</td>
<td>33</td>
<td>93,396</td>
<td>93,208</td>
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<td>Major Road Network</td>
<td>255,895</td>
<td>140</td>
<td>1,419</td>
<td>165,611</td>
<td>164,053</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>MRNB Pavement rehab and BICCS</td>
<td>53,013</td>
<td>31,936</td>
<td>293,505</td>
<td>261,569</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Transit Priority Implementation Program</td>
<td>10,062</td>
<td>-</td>
<td>486</td>
<td>-</td>
<td>486</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>9,248,774</td>
<td>237,252</td>
<td>470,576</td>
<td>11,394,180</td>
<td>10,686,353</td>
<td>(5,712,579)</td>
<td>(640,579)</td>
<td>(142,112) (1,361,759) (2,144,449)</td>
</tr>
</tbody>
</table>

Note: The above summary has been updated since the release of TransLink’s Phase Two Investment Plan for the following:
- Some Projects categorized as “Corporate” were reclassified as “Rail” to better align with those projects’ scope
# Appendix B

Descriptions of items in the Capital Program

<table>
<thead>
<tr>
<th>TransLink 2018-2027 Investment Plan Project Summary</th>
<th>Project Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bus</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
<td>A wide variety of equipment required to maintain and manage TransLink’s systems related to the bus network. Examples include communication on system and camera equipment replacement and SeaBus terminal elevator/escalator replacement.</td>
</tr>
<tr>
<td><strong>Facilities</strong></td>
<td>Includes improvement projects such as garage roof replacements, hoist replacements, SeaBus Maintenance Dock Expansion; and other projects related to mechanical and civil retrofits to facilities. Also includes PowerSmart upgrades partially funded by BC Hydro.</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Depots</strong></td>
<td>Includes the new bus depot expansion and improvement to existing depot such as the Hamilton Transit Centre.</td>
</tr>
<tr>
<td><strong>Exchanges/Bus loops</strong></td>
<td>Various repairs, replacements and upgrades to keep the exchanges/bus loops in a state of good repair. For example, replacement of lighting and security equipment, shelters and crew washroom facilities. Also includes projects related to priority B-Line corridors.</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Includes general projects related to bus infrastructure such as maintenance and rehabilitation of SeaBus Infrastructure and other facilities and paving replacement.</td>
</tr>
<tr>
<td><strong>Trolley Overhead (TOH)</strong></td>
<td>Includes projects related to maintenance of infrastructure related to the trolley buses such as cables, poles and rectifier buildings and equipment.</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>Includes replacement of the Bus Daily Operations Management System as well as other projects related to software modernization and replacement.</td>
</tr>
<tr>
<td><strong>Non-Revenue Vehicles</strong></td>
<td>Includes modernization of non-revenue generating vehicles used by Transit supervisors, security and maintenance staff.</td>
</tr>
<tr>
<td><strong>Revenue Vehicles</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Conventional Buses</strong></td>
<td>Fleet expansion and modernization of conventional buses to support maintenance of the transit system and realize benefits such as reduced congestion and emissions.</td>
</tr>
<tr>
<td><strong>Community Shuttle</strong></td>
<td>Fleet expansion and modernization of community shuttle vehicles to support maintenance of the transit system and realize benefits such as reduced congestion and emissions.</td>
</tr>
<tr>
<td><strong>HandyDART</strong></td>
<td>Fleet expansion and modernization of HandyDART vehicles to support maintenance of the transit system and provide mobility to those with accessibility issues.</td>
</tr>
<tr>
<td><strong>SeaBus</strong></td>
<td>Procurement of one additional SeaBus vessel, retrofit of an older SeaBus vessel and projects related to ensuring TransLink continues to meet Transport Canada safety standards and also to reduce maintenance and repair costs associated with ageing assets.</td>
</tr>
<tr>
<td>TransLink 2018-2027 Investment Plan Project Summary</td>
<td>Project Descriptions</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td><strong>Corporate</strong></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>A wide variety of equipment such as Ad Panels and radios for Transit Police.</td>
</tr>
<tr>
<td>Facilities</td>
<td>Includes renovation and upgrades to offices and related facilities.</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
</tr>
<tr>
<td>Bridges</td>
<td>Includes Pattullo Bridge Rehabilitation Construction</td>
</tr>
<tr>
<td>Depots</td>
<td>Infrastructure being built at the UBC Bus Terminal</td>
</tr>
<tr>
<td>Other</td>
<td>Includes various general projects related to corporate infrastructure such as efficiency improvement and compliance.</td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to upgrades of various IT applications and systems, security programs, data warehousing etc.</td>
<td></td>
</tr>
<tr>
<td><strong>Vehicles Non-Revenue</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to non-revenue generating vehicles such as TransLink Police cars and administration vehicles.</td>
<td></td>
</tr>
<tr>
<td><strong>Rail</strong></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>A wide variety of equipment required to maintain and manage the SkyTrain lines. Examples include power supply installations, automatic train control equipment, station equipment, passenger address systems etc.</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to maintaining and upgrading facilities such as the operations maintenance and control centre. Examples include space modernization, safety upgrades, yard track reconditioning, seismic upgrades and land improvement cost for the Expo and Millennium Upgrade Program.</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Includes other rail infrastructure projects related to station escalator replacements, upgrades of guideway and running rail infrastructure, seismic upgrades, and various projects related to the Millennium Line Broadway Extension and Surrey - Langley Light Rail Train.</td>
<td></td>
</tr>
<tr>
<td><strong>Stations</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to upgrading SkyTrain stations consisting of station upgrades such as the Burrard, Surrey Central and Joyce Collingwood stations as well as minor equipment upgrades such as roof replacements to ensure assets are maintained in a state of good repair.</td>
<td></td>
</tr>
<tr>
<td><strong>Wayside</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to the propulsion power system for SkyTrain.</td>
<td></td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to the upgrade of various software and systems related to the smooth running of the train system.</td>
<td></td>
</tr>
<tr>
<td><strong>Non-Revenue Vehicles</strong></td>
<td></td>
</tr>
<tr>
<td>Includes projects related to non-revenue generating vehicles used by SkyTrain staff to respond to emergency and routine maintenance.</td>
<td></td>
</tr>
<tr>
<td><strong>Revenue Vehicles</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Canada Line</strong></td>
<td>Includes projects related to fleet expansion of the Canada Line cars.</td>
</tr>
<tr>
<td><strong>SkyTrain</strong></td>
<td>Includes acquisition of additional SkyTrain cars for Expo and Millennium Line fleet expansion, the refurbishment, mid-life overhaul or replacement of older SkyTrain cars.</td>
</tr>
<tr>
<td><strong>WCE</strong></td>
<td>Includes fleet expansion of the West Coast Express cars and refurbishment of 6 locomotives.</td>
</tr>
<tr>
<td><strong>TransLink 2018-2027 Investment Plan Project Summary</strong></td>
<td><strong>Project Descriptions</strong></td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Roads and Bridges</strong></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
</tr>
<tr>
<td>Bikes</td>
<td>Includes projects related to the TransLink owned bicycle infrastructure.</td>
</tr>
<tr>
<td>Bridges</td>
<td>Includes rehabilitation of the Pattullo Bridge, rehabilitation of the Knight Street Bridge as well as other projects related to the Westham Island Bridge.</td>
</tr>
<tr>
<td><strong>Roads Network</strong></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
</tr>
<tr>
<td>Bike Infrastructure</td>
<td>Includes TransLink’s contribution to bicycle infrastructure programs for municipal owned pathways.</td>
</tr>
<tr>
<td>MRN</td>
<td>Consists of TransLink’s contributions to municipalities for rehabilitation of the Major Road Network (MRN).</td>
</tr>
<tr>
<td>MRNB pavement rehab and Bicycle Infrastructure Capital Cost Sharing Program</td>
<td>Consists of projects in three major categories: 1) TransLink’s contribution to the MRN Pavement rehabilitation, 2) Minor capital funding to complete and improve as well as encourage construction of more bicycle routes and remove existing barriers to cyclists, and 3) Funding for bicycle infrastructure improvements across the region</td>
</tr>
</tbody>
</table>
Appendix C

Project Applications for the Greater Vancouver Regional Fund Cover Page

The Mayors’ Council 10-Year Vision (10-Year Vision) on regional transportation outlines a long-term, region-wide, integrated, multi-modal transportation vision to fight congestion, reduce greenhouse gas (GHG) emissions and to keep a fast-growing gateway economy, of almost 2.5 million residents, moving. The 10-Year Vision is built on 3 key strategies to achieve necessary improvements: invest in the most urgent and effective investments, manage the system more effectively and partner to ensure that supportive conditions are in place for these investments to succeed. Following adoption by the Mayors’ Council, in June 2014, the 10-Year Vision was subsequently endorsed by the TransLink Board, as the implementation blueprint for the Regional Transportation Strategy (RTS). The 10-Year Vision includes a package of investments aimed at addressing the most basic needs for enhancements to the regional transportation network, allowing the network to keep up with growth in population and employment. It outlines the following transportation priorities related to bus service in the region:

- 25% increase in bus service across the region
- 200 more kilometres of B-Line or Better routes
- More frequent all-day service
- More frequent peak hour service
- Service to new and growing lower density neighbourhoods
- 80% more NightBus service

On June 28, 2018, the TransLink Board and Mayors’ Council approved the 2018-2027 Investment Plan (2018 Investment Plan), building on top of the 2017-2026 Investment Plan. The 2018 Investment Plan delivers the year of 2021 and 2022 of the 10-Year Vision, specifying new services and infrastructure, as well as strategies to make the transportation system more efficient, innovative and sustainable. The 2018 Investment Plan expands transit service across the region to increase system capacity, reduce overcrowding, and introduce new bus service to new areas. The 2018 Investment Plan outlines actions and policies to advance the goals identified in TransLink’s long-term Regional Transportation Strategy and to support the goals identified in Metro Vancouver’s Regional Growth Strategy, Metro Vancouver 2040: Shaping Our Future (Metro 2040) and the new Climate 2050 goals. Some of the highlights for bus service included in the 2018 Investment Plan are:

- 7% increase in HandyDART service, 8% increase in bus service;
- Improved service on at least 75 different bus routes;
- Two new B-Line routes in 2020 and 2021; and
- New bus service to four new service areas and restructure

These projects support the 10-Year Vision through its strategy to invest in urgent and effective investments. Through expansion and modernization of its fleet, TransLink will be able to increase bus service, and provide more frequent and new service, and in the process meet a number of 10-Year Vision priorities. This project will also support desired outcomes from the 10-Year Vision, such as reducing transit
overcrowding as well as supporting Metro Vancouver’s *Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP).*
APPLICATION FOR FUNDING FROM THE
GREATER VANCOUVER REGIONAL FUND
FOR FEDERAL GAS TAX FUNDS

Project 1 2021 Conventional 60-ft Bus and 40-ft Bus Purchase – Expansion
(Ref# 202132)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

| ☐ | Maintain what is needed in a state of good repair |
| ☐ | Invest in the road network to improve safety, local access and goods movement |
| ☑ | Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods |
| ☐ | Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes |
| ☐ | Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management |
| ☐ | Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress |

Metro Vancouver Regional District
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

   Project Overview

   This project adds thirty (30) diesel-electric hybrid 60’ articulated buses, thirty-nine (39) 40’ hybrid buses and nine (9) zero emission battery-electric 40-foot buses to the TransLink fleet to expand service. The articulated 60’ buses will have a person and seat capacity of 110 and 46 respectively and service Phase 2 of the Rapid Bus program. The 40-foot buses will have a person and seat capacity of 73 and 36 respectively. The Battery-Electric buses will service route 100 Marpole – 22nd Street Station) and the Hybrid buses will provide region wide services These bus deliveries totalling 78 conventional buses will bring the total bus fleet to 1,1745 vehicles. This project is consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board.

   TransLink strives to optimize resources by matching service to passenger demand, including allocating vehicles of an appropriate size to serve the demand on a route. This allocation is optimized through continuous review and planning to distribute resources where they are most needed. This process is determined by ridership data, which has been substantially enhanced with the deployment of Compass Card. TransLink has also undertaken recent work to determine optimal fleet propulsion technology on each route, which is interdependent with vehicle size.

   The 40’ and 60’ Hybrid buses have 20-22% lower GHG emissions and 8.5-25% lower CAC emissions relative to the diesel alternative; and New 40’ buses will be zero emission battery-electric powered, resulting in 100% lower tailpipe GHG and CAC emissions compared to a standard diesel powered 40’ bus. TransLink continues to develop a Low Carbon Fleet Strategy (Phase II will be complete fall 2019) which will present a roadmap to reduce fleet greenhouse gas, and work toward 80 per cent reduction in greenhouse gas emissions by 2050 across the enterprise. The 9 zero emission battery-electric buses demonstrate TransLink’s commitment toward reducing emissions, while still maintaining service requirements. These 9 battery-electric buses will allow for the full electrification of the Route 100 (Marpole Loop – 22nd Street Station). The vehicle commitment on Route 100 is 19 buses. TransLink has purchased 4 battery-electric buses in 2019, 6 in 2020 and with this application 9 buses in 2021, totalling 19 battery-electric buses.

   Tangible Benefits and Outcomes

   The choice of hybrid and zero emission battery-electric buses supports the Metro Vancouver Integrated Air Quality and Greenhouse Gas Management Plan and TransLink’s efforts to reduce emissions under the forthcoming Low Carbon Fleet Strategy. The 40’ and 60’ Hybrid buses have 20-22% lower GHG emissions and 8.5-25% lower CAC emissions relative to the diesel alternative; and zero emission battery-electric buses eliminate tailpipe GHG and CAC emissions.
Project Budget, Expenses, and GVRF Funding Request

The project budget is $111,790,000 with a Greater Vancouver Regional Fund (GVRF) request of $107,820,000. Expenses covered by this budget primarily include vehicle procurement, ancillary on-board equipment and labour and other miscellaneous project costs. The funding requested in this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement dated April 2014.

2. Project Name

2021 Conventional 60-ft Bus and 40-ft Bus Purchase – Expansion (Ref# 202132)

3. Project Need

The objectives are to expand transit service across Metro Vancouver to increase system capacity, maintain high quality customer service; and minimize maintenance and operating costs through the continued provision of reliable, fully accessible transit vehicles, which are appropriate to routes on which they operate.

4. Project Eligibility (check one):

☐ Local Roads and Bridges, including active transportation
☒ Public Transit

5. Project Purpose (check one):

☒ Expansion: Expands the carrying capacity of people and/or goods movement.
☐ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☐ Refurbishment
☐ New
☐ Other (please specify: _______________

6. Project Type (check one):

☒ Growth
☐ Upgrade
☐ Risk (Resilience)
☐ Maintenance
☐ Opportunity

Metro Vancouver Regional District
7. Project Staging:

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>2021</td>
<td>2021</td>
<td>N/A</td>
<td>2038</td>
</tr>
</tbody>
</table>

8. Has the project previously received funding through GVRF? Please explain.

No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.

No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.

No. TransLink is planning to complete this project within budget.

11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$111,790,000</td>
<td>$0</td>
<td>$111,790,000</td>
<td>$111,790,000</td>
<td>$0</td>
</tr>
</tbody>
</table>

11.b Project Funding

<table>
<thead>
<tr>
<th>Prior Approved GVRF Funding</th>
<th>Current Year GVRF Funding Request</th>
<th>Other Funding – Specify source and whether confirmed/pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$107,820,000</td>
<td>N/A</td>
</tr>
</tbody>
</table>

11.c Project Budget Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
</table>
GVRF-funded Project Budget |  |  | $103,630,000 | $4,190,000
---|---|---|---|---
Total Project Budget |  |  | $107,488,370 | $4,301,630

12. Project Budget Rationale

Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund

a. Explain how the project reflects the intent of the GVRF

This project expands the regional public transportation system and ensures efficient and effective transit service. In addition, it is expected to reduce overall transportation system GHG, NOx and PM emissions through the reduction of private vehicle trips.

b. In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?

No. TransLink relies on GVRF funding for expansion of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is the Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other sources of funding, as summarized below:

The Public Transit Infrastructure Fund (PTIF) is focused on early works for expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiating in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet expansion.

c. Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.

If funding is not received in time, TransLink will have to rely on deferred retirement vehicles to deliver on its promises of expansion. Continued use of deferred retirement vehicles poses a risk to reliability, as well as incremental maintenance costs to keep them in service. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Further, use of deferred retirement vehicles could also result in higher GHG emissions and criteria air contaminants than new vehicles. TransLink may lose credibility among the general public if service expansion is not reliable.

Metro Vancouver Regional District
d. **How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?**

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with sufficient contingency allowance to fund price and foreign exchange fluctuations.

---

e. **How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?**

Due to recent increases in senior government funding for public transit projects, many suppliers are experiencing larger demands to order vehicles. This may create a backlog with vendors, and if procurement is not initiated soon, could result in further delay in ordering and receiving vehicles.

---

f. **How may foreseeable changes in technology affect the project?**

This application is based on the new vehicles being hybrid and zero emission battery-electric powered. TransLink has taken into account its existing infrastructure, as well as the opportunity to transition to lower emissions vehicles, in arriving at a decision on hybrid and zero emission battery-electric technology.

---

g. **What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?**

Project timeline may be affected by manufacturer’s capacity and schedules, availability of parts and/or time for vehicle delivery from the manufacturer. Budget may fluctuate due to parts pricing and/or foreign exchange.

In order to ensure that the vehicles received are up to the standards expected and delivered on time TransLink conducts regular factory audits and inspections of the manufacturers’ facilities.

The charging stations required for the electric buses (being acquired under an existing GVRF approved project) have experienced slight delays in schedule. Although they are still expected to be in place well before these buses go in to service, further delays in obtaining the charging stations may lead to TransLink having to use diesel or hybrid buses temporarily. This will delay achievement of GHG emissions reduction targets.
D. EVALUATION CRITERIA

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCREENING CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible Project Category</td>
<td>☐ Local roads and bridges, including active transportation</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ Public transit</td>
<td></td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement (Schedule C)</td>
<td>Required</td>
</tr>
<tr>
<td>El. Item</td>
<td></td>
<td>Expenditure</td>
</tr>
<tr>
<td>Articulated 60' Hybrid Buses (30)</td>
<td>$47,249,053</td>
<td></td>
</tr>
<tr>
<td>40' Battery-electric Buses (9)</td>
<td>$11,234,775</td>
<td></td>
</tr>
<tr>
<td>40’ Hybrid Buses (39)</td>
<td>$41,306,172</td>
<td></td>
</tr>
<tr>
<td>Infrastructure – Battery-electric Buses</td>
<td>3,000,000</td>
<td></td>
</tr>
<tr>
<td>On-board equipment</td>
<td>5,030,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$107,820,000</td>
<td></td>
</tr>
<tr>
<td>¹ Per Schedule C, Section 1.1, Part a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ 10-Year Investment Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Mayors’ Council Transportation and Transit Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Metro 2040: Shaping our Future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Regional Transportation Strategy</td>
<td></td>
</tr>
<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions and infrastructure</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ Sustainability policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Environmental policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Emissions policy</td>
<td></td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
<table>
<thead>
<tr>
<th><strong>Criterion</strong></th>
<th><strong>Description</strong></th>
<th><strong>Assessment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure policy – n/a</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INTEGRATED CRITERIA**

**Regional Growth Strategy**

- **Supports the Regional Growth Strategy**
  - The degree to which the project assists in achieving the five goals in Metro 2040.
  - ☐ Create a Compact Urban Area
  - ☒ Support a Sustainable Economy
  - ☒ Protect Environment and Respond to Climate Change Impacts
  - ☒ Develop Complete Communities
  - ☒ Support Sustainable Transportation Choices
  - Poor/Good/Excellent

**Urban Centres and Frequent Transit Development Areas**

- Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas.
- Buses provide services to Metro Vancouver communities within TransLink’s transportation service region and offer an environmentally responsible and sustainable transportation alternative to single occupant vehicle travel. They link communities with business, institutional and social hubs and destinations, and facilitate the creation and expansion of Transit Oriented Developments (TODs). They also provide collector and distribution services to Expo, Millennium, Evergreen and Canada Lines, West Coast Express and SeaBus.
  - Poor/Good/Excellent

**Transportation Performance**

- Headline Targets
  - The project will increase the 40-foot and 60-foot bus fleets size thus increasing passenger capacity. The entire 10-Year Vision is forecast to decrease annual private vehicle kilometers travelled per person to 5,422 kilometers by 2030 – a 15% decrease compared to 2011.
  - The 2018 Investment Plan delivers the second phase of walking, cycling and transit infrastructure in the 10-Year Vision, and in doing so, makes it possible for more people in the region to choose alternatives to driving.
  - This expansion of the bus fleet is an important step in delivering this investment. Additionally, the 2018 Investment Plan is forecast to increase ridership from 252 million annual transit journeys in 2018 to 316 million annual transit journeys by 2027. This fleet expansion is a critical step in providing the transit service necessary to reach this increase in transit trips.
  - Poor/Good/Excellent
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Transportation Outcomes</td>
<td>Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project. Many routes identified for improvement have been selected due to current crowding or overcrowding conditions. Improvements to capacity will occur through more frequent service, resulting in fewer pass-ups and overcrowded vehicles. The full 10-Year Vision is forecast to increase walking, cycling, and transit mode share to 31% by 2030, supporting the RTS target of 50% mode share by 2045. This fleet expansion allows TransLink to expand transit services and continue to make progress toward these targets.</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Project Type</td>
<td>Demonstrated value of the project type (refer to section 6). By growing the reach and capacity of public transport, we will provide more options for mobility and be able to reduce congestion on the roads, increase passenger comfort and reliability and pollutant emissions will be reduced</td>
<td>Poor/Good/Excellent</td>
</tr>
</tbody>
</table>

**Regional Environmental Objectives**

<p>| Supports the Integrated Air Quality and Greenhouse Gas Management Plan | Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP). Through the purchase of hybrid and electric buses, per vehicle GHG emissions for new buses will be lower than those for a baseline new diesel bus. As such, this project supports IAQGGMP strategies 1.4 “Reduce air contaminant emissions from cars, trucks, and buses” and 3.3 “Reduce the carbon footprint of the region’s transportation system.” | Poor/Good/Excellent |
| Measurable Beneficial Effects                  | Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project. Relative to baseline new diesel buses, per vehicle tailpipe emissions will be: - 60’ hybrid: 20% lower GHG and NOx, 25% lower PM - 40’ hybrid: 22% lower GHG, 8.5% lower NOx, and 20% lower PM - 40’ electric: 100% lower GHG and CAC | Poor/Good/Excellent |</p>
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Further, by growing the reach and capacity of public transport, we will provide more options for mobility and be able to reduce congestion on the roads while increasing passenger comfort and reliability. Over time the project is expected to reduce total transportation GHG and CAC emissions through the reduction of private vehicle trips</td>
<td></td>
</tr>
<tr>
<td>Economic Development</td>
<td></td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Supports regional prosperity</td>
<td><em>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity.</em> Having additional buses will provide improved reliability to the regional transportation system by improving the consistency of arterial service to institutional, economic and other transit mode hubs. Passengers will have better access to work and/or leisure activities, reducing the use of single occupant vehicle travel.</td>
<td></td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td><em>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</em> Having additional buses will improve service and make transit a more reliable option, and ultimately improving economic competitiveness within Metro Vancouver. More reliable transit provides better access to jobs, workers, goods, and markets, while reducing congestion. Many proposed service improvements address overcrowding and will reduce congestion for passengers.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
APPLICATION FOR FUNDING FROM THE GREATER VANCOUVER REGIONAL FUND FOR FEDERAL GAS TAX FUNDS

Project 2 2021 HandyDART Vehicle Purchase – Replacement (Ref# 202140)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

- Maintain what is needed in a state of good repair
- Invest in the road network to improve safety, local access and goods movement
- Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods
- Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes
- Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management
- Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress

Metro Vancouver Regional District
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

Project Overview

HandyDART vehicles are operated and maintained by TransLink’s contractors First Canada ULC and Nat’s Repair. These vehicles provide a valuable service to people with disabilities and are booked through a reservation system, with each vehicle being able to accommodate up to 2 wheelchairs.

Criteria for identifying buses due for retirement are based on a number of factors including:

- Age (life expectancy of 7 years for microbuses and midibuses);
- Mileage (generally 250,000 km);
- State of repair/condition; and
- Severity of service duty cycle.

These vehicles must be replaced when they reach end of service life, because maintenance costs and downtime will increase substantially, affecting passenger service reliability. By 2021, major components (e.g. engine, transmission), minor components (e.g. air conditioning, wheelchair lift), and chassis and body (e.g. cracked frames, rusted doorframes, rotting floors) will be worn out.

This project is to replace forty-two (42) HandyDART vehicles that have reached the end of service life and met criteria for replacement, with 42 new buses consisting of 32 microbuses and 10 midibuses. This project is consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board.

The vehicles due to retire were acquired in 2013 and 2014, have a median age of 7-8 years and median mileage of 250,000 km. The new vehicles will have a person and seat capacity of 8 and 6 respectively for microbuses and 12 for midibuses.

TransLink strives to optimize its resource allocation by matching service to passenger demand, which includes allocating vehicles of an appropriate size to serve the demand on a route. Optimization is achieved through continuous review and process planning to allocate resources where they are most needed. This process is informed by ridership data, which has been substantially enhanced with the deployment of Compass Card. TransLink has also undertaken recent work to determine optimal fleet propulsion technology on each route, which is interdependent with vehicle size.

The fleet propulsion technologies currently available to TransLink consist of only conventional gasoline engines, as hybrid gasoline or hybrid diesel propulsion are not available for these vehicles. Although diesel engines are available for the 32 microbuses being acquired, they are not considered due to the high maintenance costs. New gasoline vehicles produce 1-2% less GHG emissions, 44% less NOx emissions, and 100% less diesel particulate matter emissions relative to the existing diesel vehicles they are replacing. Choices of vehicle size and propulsion types will continue to be optimized, as determined by the ongoing monitoring of ridership and propulsion technologies. This may result in the vehicle technology mix changing if it is subsequently determined that a different mix better optimizes our resource allocation.
Tangible Benefits and Outcomes

The new vehicles will allow CMBC to maintain existing service, reduce downtime, avoid incremental operating and maintenance costs, and reduce pollutants. Compared to the retiring vehicles, new vehicles are expected to emit 1-2% less GHGs, 44% less NOx, and 100% less diesel particulate matter.

Project Budget, Expenses, and GVRF Funding Request

The project budget is $6,550,000 with a Greater Vancouver Regional Fund (GVRF) request of $6,379,000. Expenses covered by this budget primarily include vehicle procurement, ancillary on-board equipment and labour, and other miscellaneous project costs. The funding requested in this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement.

2. Project Name

2021 HandyDART Vehicle Purchase – Replacement (Ref# 202140)

3. Project Need

The objectives are to maintain high quality customer service while minimizing maintenance and operating costs through continued provision of reliable, fully-accessible transit vehicles that are appropriate for routes on which they operate.

The criteria for achieving these objectives are: avoidance of incremental maintenance and operating costs, reduced vehicle breakdowns, less vehicle downtime, improved accessibility and fewer reservation cancellations, and reduced HandyDART fleet emissions.

4. Project Eligibility (check one):

☐ Local Roads and Bridges, including active transportation
☒ Public Transit

5. Project Purpose (check one):

☐ Expansion: Expands the carrying capacity of people and/or goods movement.
☒ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☐ Refurbishment
☐ New
☐ Other (please specify :_______________)
6. Project Type (check one):
☐ Growth
☐ Upgrade
☐ Risk (Resilience)
☒ Maintenance
☐ Opportunity

7. Project Staging:

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>2021</td>
<td>2021</td>
<td>N/A</td>
<td>2028</td>
</tr>
</tbody>
</table>

8. Has the project previously received funding through GVRF? Please explain.
   No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.
   No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.
    No. TransLink is planning to complete this project within budget.

11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6,550,000</td>
<td>$0</td>
<td>$6,550,000</td>
<td>$6,550,000</td>
<td>$0</td>
</tr>
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</table>
11.b Project Funding

<table>
<thead>
<tr>
<th>Prior Approved GVRF Funding</th>
<th>Current Year GVRF Funding Request</th>
<th>Other Funding – Specify source and whether confirmed/pending</th>
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</thead>
<tbody>
<tr>
<td>$0</td>
<td>$6,379,000</td>
<td>N/A</td>
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</table>

11.c Project Budget Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVRF-funded Project Budget</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$6,094,000</td>
<td>$285,000</td>
</tr>
<tr>
<td>Total Project Budget</td>
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<td></td>
<td></td>
<td></td>
<td>$6,259,300</td>
<td>$290,700</td>
</tr>
</tbody>
</table>

12. Project Budget Rationale

*Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund*

a. **Explain how the project reflects the intent of the GVRF**

This project ensures TransLink’s assets are maintained in a State of Good Repair, so as to allow TransLink to efficiently and effectively provide transit service to the general public and those who have accessibility challenges. The purchase of replacement vehicles with improved lifecycle GHG emissions and lower NOx and diesel particulate matter emissions also aligns with Metro Vancouver’s IAQGGMP goals.

b. **In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?**

No. TransLink relies on GVRF funding for replacement of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is the Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other source of funding.

The Public Transit Infrastructure Fund (PTIF) is focused on expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiated in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet modernization projects.
c. **Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.**

TransLink requires these vehicles to be in service for 2021 in order to retire vehicles reaching the end of their useful service lives. Also, there is an approximate lead time of 12 to 18 months between TransLink ordering the vehicles and those vehicles entering service. As such, it is important to have the funding in place to ensure the timely retirement of vehicles before they reach the end of their useful service lives.

If funding is not received in time, TransLink will have to rely on deferred retirement vehicles to deliver transit service. Continued use of deferred retirement vehicles poses a risk to reliability, as well as incremental maintenance costs to keep them in service. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Further, use of deferred retirement vehicles could also result in higher CAC and GHG emissions than new vehicles. TransLink may lose credibility among the general public if service expansion is not reliable.

d. **How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?**

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with a sufficient contingency allowance to fund price and foreign exchange fluctuations.

e. **How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?**

Due to recent increases in senior government funding for public transit projects, many suppliers are experiencing larger demands to order vehicles. This may create a backlog with vendors, and if procurement is not initiated soon, could result in further delay in ordering and receiving vehicles.

f. **How may foreseeable changes in technology affect the project?**

This application is based on the new vehicles being powered by conventional gasoline engines. TransLink needs to consider that these vehicles are operated and maintained by contractors who may not be able to support fueling or maintenance for a change in propulsion technology.

TransLink does not anticipate vendors providing alternative fuel/propulsion options for HandyDART vehicles that meet our needs to deliver reliable and cost-effective service to customers in the immediate future. TransLink continues to monitor the vehicle technology industry very closely to identify what options are available in the market, and to evaluate their suitability for its fleet.

Metro Vancouver Regional District
g. What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?

There are no foreseeable corporate or external factors that could alter the project need or scope of this project. Project timeline may be affected by manufacturer’s capacity and schedules, availability of parts and/or time for vehicle delivery from the manufacturer. Budget may fluctuate due to parts pricing and/or foreign exchange.

In order to ensure that the vehicles received meet standards and delivery expectation TransLink conducts regular factory audits and inspections of the manufacturers’ facilities.
**D. EVALUATION CRITERIA**

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCREENING CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible Project Category</td>
<td>☐ Local roads and bridges, including active transportation  ☑ Public transit</td>
<td>Required</td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement (Schedule C)</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eligible Item</td>
</tr>
<tr>
<td></td>
<td>HandyDART vehicles (42)</td>
<td>$6,325,000</td>
</tr>
<tr>
<td></td>
<td>On-board equipment</td>
<td>54,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>$6,379,000</td>
</tr>
<tr>
<td></td>
<td>¹ Per Schedule C, Section 1.1, Part a)</td>
<td></td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ 10-Year Investment Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Mayors’ Council Transportation and Transit Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Metro 2040: Shaping our Future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Regional Transportation Strategy</td>
<td></td>
</tr>
<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions and infrastructure</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ Sustainability policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Environmental policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Emissions policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ Infrastructure policy – n/a</td>
<td></td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supports the Regional Growth Strategy</td>
<td>The degree to which the project assists in achieving the five goals in Metro 2040.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
|                                               | ☐ Create a Compact Urban Area  
☐ Support a Sustainable Economy  
☒ Protect Environment and Respond to Climate Change Impacts  
☒ Develop Complete Communities  
☒ Support Sustainable Transportation Choices |                                                                                 |                                  |
<p>| Urban Centres and Frequent Transit Development Areas | Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas.                                 | Poor/Good/ Excellent             |
|                                               | HandyDART buses provide a valuable service to the community for people with disabilities. The service promotes greater mobility for social connectivity, running errands, attending appointments and improving quality of life. The buses also connect disabled people to the current transit network of train stations and bus hubs. |                                                                                 |                                  |
| Transportation Performance                    |                                                                                                                                                                                                             |                                  |
| Headline Targets                              | Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share.                                                                                             | Poor/Good/ Excellent             |
|                                               | This is a like-for-like vehicle fleet replacement project with no change in service provided (i.e. incremental vehicle-kilometers travelled or shift to walk/cycle/transit mode share).                   |                                                                                 |                                  |
| Other Transportation Outcomes                 | Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project.                                 | Poor/Good/ Excellent             |
|                                               | This is a like-for-like vehicle fleet replacement project with no change in service provided. As such, there are no incremental benefits to vehicle congestion, transit passenger congestion, transit ridership and/or transportation safety. |                                                                                 |                                  |
| Project Type                                  | Demonstrated value of the project type (refer to section 6).                                                                                                                                             | Poor/Good/ Excellent             |
|                                               | By maintaining TransLink’s assets in good repair, vehicles will have fewer breakdowns and service disruptions, operating costs will not increase, and pollutant emissions will be reduced. |                                                                                 |                                  |</p>
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Environmental Objectives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP). New vehicles built with year 2020 compliant gasoline engines will have lower GHG, NOx, thus reducing the emissions impact of the service provided by the project. As such, this project supports IAQGGMP strategies 1.1 “Reduce emissions of and public exposure to diesel particulate matter”, 1.4 “Reduce air contaminant emissions from cars, trucks, and buses”, and 3.3 &quot;Reduce the carbon footprint of the region’s transportation system.”</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project. The newer vehicles will have 1-2% less GHG emissions, 44% less NOx emissions, and 100% less diesel particulate matter emissions relative to the existing diesel vehicles they are replacing</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supports regional prosperity</td>
<td>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity. Replacement of HandyDART vehicles will provide improved reliability to the regional transportation system, resulting in improved service reliability to people with disabilities. Passengers will have better access to conventional bus routes and hubs, train stations, healthcare providers, and social functions. Passengers will enjoy a better quality of life and benefit from greater independence.</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Tangible beneficial effects on the movement of people and/or goods for the duration of the project. Replacement of HandyDART vehicles will improve service and make transit a more reliable option via ensuring that service requests are not denied due to a lack of availability. The improved reliability of the transit network will help customers with disabilities be more independent and increase their contributions towards the economic success of the region.</td>
<td>Poor/Good/Excellent</td>
</tr>
</tbody>
</table>
APPLICATION FOR FUNDING FROM THE
GREATER VANCOUVER REGIONAL FUND
FOR FEDERAL GAS TAX FUNDS

Project 3 2021 HandyDART Vehicle Purchase – Expansion
(Ref# 202142)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

☐ Maintain what is needed in a state of good repair
☐ Invest in the road network to improve safety, local access and goods movement
☒ Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods
☐ Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes
☐ Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management
☐ Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

Project Overview

HandyDART vehicles are operated by TransLink’s contractors First Canada ULC and maintained by Nat’s Repair. These vehicles provide a valuable service to people with disabilities and are booked through a reservation system, with each vehicle being able to accommodate up to 2 wheelchairs.

This project adds ten (10) HandyDART midibuses to TransLink’s current fleet. The new vehicles acquired will have a person and seat capacity of between 8 and 12 with region wide services. The 8 Microbuses and 2 midibuses will help meet the target expansion fleet of 20 additional HandyDART vehicles required to implement an additional 38,000 trips per year by 2021 as outlined in the 2018 Investment Plan, on top of the 170,000 additional trips per year in the 2017 Investment Plan. This along with the 2019 expansion application will bring the total HandyDART bus fleet to 352 vehicles. This project is consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board.

TransLink strives to optimize its resources by matching service to passenger demand, including allocating vehicles of an appropriate size to serve the demand on a route. Optimization is achieved through continuous review and planning processes that allocate resources where they are most needed. Information on ridership data has been substantially enhanced with the deployment of Compass Card. TransLink has also undertaken recent work to determine optimal fleet propulsion technology on each route, which is interdependent with vehicle size.

The fleet propulsion technologies currently available to TransLink consist of only conventional gasoline engines, as hybrid gasoline or hybrid diesel propulsion are not available for these vehicles. Although diesel engines are available for the 8 microbuses being acquired, they are not considered due to the high maintenance costs. Based on current demand and optimization of resources, TransLink expects the 10 new vehicles to be gasoline powered. Vehicle size and propulsion type choices will continue to be optimized, as informed by ongoing monitoring of ridership and propulsion technologies.

Tangible Benefits and Outcomes

The new vehicles will allow TransLink to increase existing service across Metro Vancouver adding 38,000 trips annually. The target identified in the 2018 Investment Plan for additional trips is 76,000 per year by 2021; this application for 10 HandyDART expansion vehicles represents 50% of the total expansion trips. This expansion will result in reduced wait times through the availability of a greater number of vehicles.

Project Budget, Expenses, and GVRF Funding Request

The project budget is $1,610,000 with a Greater Vancouver Regional Fund (GVRF) request of $1,564,070. Expenses covered by this budget primarily include vehicle procurement, ancillary on-board equipment and labour, and other miscellaneous project costs. The funding requested in
this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement dated April 2014.

2. Project Name

2021 HandyDART Vehicle—Expansion (Ref# 202142)

3. Project Need

The objectives are to expand transit service across Metro Vancouver to increase system capacity, reduce reservation cancellations and introduce bus service to new areas. The criteria for achieving these objectives are reduction of wait times, fewer reservation cancellations, improved accessibility and improved service.

4. Project Eligibility (check one):

☐ Local Roads and Bridges, including active transportation
☒ Public Transit

5. Project Purpose (check one):

☒ Expansion: Expands the carrying capacity of people and/or goods movement.
☐ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☐ Refurbishment
☐ New
☐ Other (please specify :_______________)

6. Project Type (check one):

☒ Growth
☐ Upgrade
☐ Risk (Resilience)
☐ Maintenance
☐ Opportunity
7. Project Staging:

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>2021</td>
<td>2021</td>
<td>N/A</td>
<td>2028</td>
</tr>
</tbody>
</table>

8. Has the project previously received funding through GVRF? Please explain.

No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.

No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.

No. TransLink is planning to complete this project within budget.

11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
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<td>$0</td>
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11.b Project Funding

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<tr>
<th>Prior Approved GVRF Funding</th>
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<td>$0</td>
<td>$1,564,070</td>
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</table>

11.c Project Budget Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>2017</th>
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<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
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<tbody>
<tr>
<td>GVRF-funded</td>
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<td></td>
<td></td>
<td>$1,489,070</td>
<td>$75,000</td>
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</table>
12. Project Budget Rationale

*Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund*

a. **Explain how the project reflects the intent of the GVRF**

This project expands the regional public transportation system and ensures efficient and effective transit service to those who have accessibility challenges. In addition, it may provide a modest reduction in CAC and GHG emissions through the reduction of private vehicle trips.

b. **In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?**

No. TransLink relies on GVRF funding for expansion of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is the Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other sources of funding.

The Public Transit Infrastructure Fund (PTIF) is focused on early works for expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiated in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet expansion.

c. **Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.**

If funding is not received in time, TransLink will have to continue to rely on deferred retirement vehicles to deliver on its promise of expansion. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Further, use of deferred retirement vehicles could also result in higher GHG and CAC emissions than new vehicles. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency, as well as reduced GHG and CAC emissions. TransLink may lose credibility among the general public if service expansion is not reliable.
d. How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with sufficient contingency allowance to fund price and foreign exchange fluctuations.

e. How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?

Due to recent increases in senior government funding for public transit projects, many suppliers are experiencing larger demands to order vehicles. This may create a backlog with vendors, and if procurement is not initiated soon, could result in further delay in ordering and receiving vehicles.

f. How may foreseeable changes in technology affect the project?

This application is based on the new vehicles being powered by conventional gasoline engines. TransLink also has to consider that these vehicles are operated and maintained by contractors who may not be able to support fueling or maintenance requirements if there is a change in propulsion technology.

TransLink does not anticipate vendors providing in the immediate future alternative fuels for HandyDART vehicles that meet our needs to deliver reliable and cost-effectively service to customers. TransLink continues to monitor the vehicle technology industry very closely to identify options available in the market, and to evaluate their suitability for its fleet.

g. What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?

There are no foreseeable corporate or external factors that could alter the project need or scope. Project timelines may be affected by manufacturer capacity and schedules, availability of parts and/or time for vehicle delivery from the manufacturer. Budget may fluctuate due to parts pricing and/or foreign exchange.

In order to ensure that the vehicles received are up to the required standard and within expected timeframes, TransLink conducts regular factory audits and inspections of the manufacturers’ facilities.
D. EVALUATION CRITERIA

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCREENING CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible Project Category</td>
<td>☐ Local roads and bridges, including active transportation</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ Public transit</td>
<td></td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement (Schedule C)</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eligible Item</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vehicles (10)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On-board equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$^{1}$ Per Schedule C, Section 1.1, Part a)</td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ 10-Year Investment Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Mayors’ Council Transportation and Transit Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Metro 2040: Shaping our Future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☒ Regional Transportation Strategy</td>
<td></td>
</tr>
<tr>
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<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions and infrastructure</td>
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<td>☒ Environmental policy</td>
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</tr>
<tr>
<td></td>
<td>☒ Emissions policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ Infrastructure policy – n/a</td>
<td></td>
</tr>
</tbody>
</table>

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Metro Vancouver Regional District
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTEGRATED CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regional Growth Strategy</strong></td>
<td>The degree to which the project assists in achieving the five goals in Metro 2040. ☐ Create a Compact Urban Area ☐ Support a Sustainable Economy ☒ Protect Environment and Respond to Climate Change Impacts ☒ Develop Complete Communities ☒ Support Sustainable Transportation Choices</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Urban Centres and Frequent Transit Development Areas</strong></td>
<td>Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas. HandyDART buses provide a valuable service to disabled people within our community. The service promotes greater mobility for social connectivity, running errands, attending appointments and improving quality of life. The buses also connect people with disabilities to the current transit network of train stations and bus hubs.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Transportation Performance</strong></td>
<td>Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share. The project will increase the HandyDART fleet size. The entire 10-Year Vision is forecast to decrease annual private vehicle kilometers travelled per person to 5,422 kilometers by 2030 – a 15% decrease compared to 2011. The 2018 Investment Plan delivers the second phase of walking, cycling and transit infrastructure in the 10-Year Vision, and in doing so, makes it possible for more people in the region to choose alternatives to driving. This expansion of the bus fleet is an important step in delivering this investment. Additionally, the 2018 Investment Plan is forecast to increase ridership from 252 million annual transit journeys in 2018 to 316 million annual transit journeys by 2027. This fleet expansion is a critical step in providing the transit service necessary to reach this increase in transit trips.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Other Transportation Outcomes</strong></td>
<td>Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project. Because HandyDART service does not run on fixed routes and provides services on demand, the increase in number of vehicles will have a minimal impact on</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Criterion</td>
<td>Description</td>
<td>Assessment</td>
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<tr>
<td>-----------</td>
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<tr>
<td><strong>congestion.</strong> The additional capacity will increase existing service across Metro Vancouver adding 38,000 trips annually by 2020 and reduce wait times.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Project Type</strong></td>
<td><em>Demonstrated value of the project type (refer to section 6).</em> By growing the HandyDART fleet, we will be able to provide more trips by HandDART, and increase passenger comfort and reliability. Over time the project may result in a modest reduction in GHG and CAC emissions through the reduction of private vehicle trips.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Regional Environmental Objectives</strong></td>
<td><em>Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP).</em> The project may result in modest reductions of CAC and GHG emissions through the reduction of private vehicle trips. As such, this project supports IAQGGMP strategies 1.4 “Reduce air contaminant emissions from cars, trucks, and buses”, and 3.3 “Reduce the carbon footprint of the region’s transportation system.”</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Measurable Beneficial Effects</strong></td>
<td><em>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project.</em> By growing the reach and capacity of accessible public transport, we will provide more options for mobility while increasing passenger comfort and reliability. Over time the project may result in modest reductions in GHG and CAC emissions through the reduction of private vehicle trips.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td><strong>Economic Development</strong></td>
<td><em>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity.</em> Additional HandyDART vehicles will provide improved reliability to the regional transportation system, resulting in improved service reliability to people with disabilities. Passengers will have better access to conventional bus routes and hubs, train stations, healthcare providers, and social functions. Passengers will enjoy a better quality of life and benefit from greater independence.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Criterion</td>
<td>Description</td>
<td>Assessment</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td><strong>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</strong> Additional HandyDART vehicles will improve service and make transit a more reliable option by ensuring that service requests are not denied due to a lack of availability. The improved reliability of the transit network will help customers with disabilities be more independent and increase their contributions towards the economic success of the region.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
APPLICATION FOR FUNDING FROM THE GREATER VANCOUVER REGIONAL FUND FOR FEDERAL GAS TAX FUNDS

Project 4 2021 Community Shuttle Purchase – Replacement
(Ref# 202150)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

| ☒ | Maintain what is needed in a state of good repair |
| ☐ | Invest in the road network to improve safety, local access and goods movement |
| ☐ | Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods |
| ☐ | Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes |
| ☐ | Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management |
| ☐ | Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress |
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

Project Overview

TransLink’s Community Shuttle service began in 2001 and has expanded steadily. Currently, the shuttle fleet comprises approximately 13% of TransLink’s rubber-tired revenue vehicle fleet and totals 196 vehicles. Approximately 79% of the Community Shuttle fleet is operated by CMBC with the remaining 21% operated by private contractors. The addition of these nine (9) shuttles, along with expansion shuttle vehicles being added to the fleet in late 2018 will increase the Community shuttle fleet to a total of 222 vehicles.

This project will replace sixty-two (62) conventional gasoline powered community shuttles to the community shuttle fleet. These low floor shuttles would improve accessibility over the existing high floor shuttle fleet and would allow the retirement of shuttles that have reached the end of their useful life thereby maintaining transit system reliability. The new vehicles will have a person and seat capacity of 24 and 20 respectively. This project is consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board.

TransLink strives to optimize its resource allocation by matching service to passenger demand, including allocating vehicles of an appropriate size to serve the demand on a route. This allocation is optimized through continuous review and planning processes that allocates resources where they are most needed. This process is informed by ridership data, which has been substantially enhanced with the deployment of Compass Card. TransLink has also undertaken recent work to determine optimal fleet propulsion technology on each route, which is interdependent with vehicle size.

The fleet propulsion technologies currently available to TransLink consist of only conventional gasoline engines, as hybrid gasoline or hybrid diesel propulsion are not available for these vehicles. Choices of vehicle size and propulsion types will continue to be optimized, as informed by ongoing monitoring of ridership and propulsion technologies. This may result in the vehicle technology mix changing, if it is later determined that a different mix will better optimize our resource allocation.

Tangible Benefits and Outcomes

The new vehicles will allow CMBC to maintain existing service, reduce downtime, avoid incremental operating and maintenance costs, and reduce pollutants.

Project Budget, Expenses, and GVRF Funding Request

The project budget is $14,101,450 with a Greater Vancouver Regional Fund (GVRF) request of $13,687,990. Expenses covered by this budget primarily include vehicle procurement, ancillary on-board equipment and labour, and other miscellaneous project costs. The funding requested in this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement.

Metro Vancouver Regional District
2. **Project Name**

2021 Community Shuttle – Replacement (Ref# 202150)

3. **Project Need**

The objectives are to expand transit service across Metro Vancouver to increase system capacity and introduce bus service to new areas. The criteria for achieving these objectives are reduction of wait times and improved service.

4. **Project Eligibility (check one):**

☐ Local Roads and Bridges, including active transportation
☒ Public Transit

5. **Project Purpose (check one):**

☐ Expansion: Expands the carrying capacity of people and/or goods movement.
☒ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☐ Refurbishment
☐ New
☐ Other (please specify :_______________)

6. **Project Type (check one):**

☐ Growth
☐ Upgrade
☐ Risk (Resilience)
☒ Maintenance
☐ Opportunity

7. **Project Staging:**

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
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<tbody>
<tr>
<td>2021</td>
<td>2021</td>
<td>2021</td>
<td>N/A</td>
<td>2026</td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
8. Has the project previously received funding through GVRF? Please explain.

No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.

No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.

No. TransLink is planning to complete this project within budget.

11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
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</thead>
<tbody>
<tr>
<td>$14,101,450</td>
<td>$0</td>
<td>$14,101,450</td>
<td>$14,101,450</td>
<td>$0</td>
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</table>

11.b Project Funding

<table>
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<tr>
<th>Prior Approved GVRF Funding</th>
<th>Current Year GVRF Funding Request</th>
<th>Other Funding – Specify source and whether confirmed/pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$13,687,990</td>
<td>N/A</td>
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</table>

11.c Project Budget Schedule

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<tr>
<th>Item</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVRF-funded Project Budget</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$13,687,990</td>
<td></td>
</tr>
<tr>
<td>Total Project Budget</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$14,096,760</td>
<td>$4,690</td>
</tr>
</tbody>
</table>

12. Project Budget Rationale

Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund
a. **Explain how the project reflects the intent of the GVRF**

This project provides a reduction in GHG emissions and ensures TransLink’s assets are maintained in a State of Good Repair, so as to allow TransLink to efficiently and effectively provide transit service to the general public and those who have accessibility challenges. The purchase of vehicles with improved lifecycle GHG emissions and lower NOx emissions also aligns with Metro Vancouver’s IAQGGMP goals.

b. **In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?**

No. TransLink relies on GVRF funding for expansion of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is The Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other sources of funding, as summarized below:

Public Transit Infrastructure Fund (PTIF) is focused on expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiated in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet modernization.

c. **Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.**

TransLink requires these vehicles to be in service for 2021 in order to retire vehicles reaching the end of their useful service lives. Also, there is an approximate lead time of 12 to 18 months between TransLink ordering the vehicles and those vehicles entering service. As such, it is important to have the funding in place to ensure the timely retirement of vehicles before they reach the end of their useful service lives.

If funding is not received in time, TransLink will have to rely on deferred retirement vehicles to deliver transit service. Continued use of deferred retirement vehicles poses a risk to reliability, as well as incremental maintenance costs to keep them in service. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Further, use of deferred retirement vehicles could also result in higher CAC and GHG emissions than new vehicles as engines deteriorate. TransLink may lose credibility among the general public if service is not reliable.
d. **How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?**

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with a sufficient contingency allowance to fund price and foreign exchange fluctuations.

e. **How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?**

Due to recent increases in senior government funding for public transit projects, many suppliers are experiencing larger demands to order vehicles. This may create a backlog with vendors, and if procurement is not initiated soon, could result in further delay in ordering and receiving vehicles.

f. **How may foreseeable changes in technology affect the project?**

This application is based on the new vehicles being powered by conventional gasoline engines. TransLink also has to consider that a number of these vehicles are operated and maintained by contractors who may not be able to support fueling or maintenance for a change in propulsion technology. 

TransLink does not anticipate vendors coming out with alternative fuels for community shuttles that meet our needs to deliver reliable and cost-effectively service to customers in the immediate future. TransLink continues to monitor the vehicle technology industry very closely to identify what options are available in the market, and to evaluate their suitability for its fleet.

g. **What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?**

There are no foreseeable corporate or external factors that could alter the project need or scope of this project. Project timeline may be affected by manufacturer’s capacity and schedules, availability of parts and/or time for vehicle delivery from the manufacturer. Budget may fluctuate due to parts pricing and/or foreign exchange. 

In order to ensure that the vehicles received are up to the standards expected and delivered on time TransLink conducts regular factory audits and inspections of the manufacturers’ facilities.
D. EVALUATION CRITERIA

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

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<td>As set out in the 2014 Administrative Agreement</td>
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</tr>
<tr>
<td></td>
<td>(Schedule C)</td>
<td></td>
</tr>
<tr>
<td>Eligible Item</td>
<td>☐ Community Shuttles (62)</td>
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</tr>
<tr>
<td></td>
<td>☒ On-board equipment</td>
<td></td>
</tr>
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<td></td>
<td>☒ Total</td>
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</tr>
<tr>
<td></td>
<td>☐ $13,172,000</td>
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<td></td>
<td>☒ $515,990</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>☐ 1 Per Schedule C, Section 1.1, Part a)</td>
<td></td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☒ 10-Year Investment Plan</td>
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<td>☒ Mayors’ Council Transportation and Transit Plan</td>
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<tr>
<td></td>
<td>☒ Emissions policy</td>
<td></td>
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<tr>
<td></td>
<td>☐ Infrastructure policy – n/a</td>
<td></td>
</tr>
<tr>
<td>Criterion</td>
<td>Description</td>
<td>Assessment</td>
</tr>
<tr>
<td>-----------</td>
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</tr>
<tr>
<td>Support the Regional Growth Strategy</td>
<td>The degree to which the project assists in achieving the five goals in Metro 2040. ☐ Create a Compact Urban Area ☐ Support a Sustainable Economy ☒ Protect Environment and Respond to Climate Change Impacts ☒ Develop Complete Communities ☒ Support Sustainable Transportation Choices</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Urban Centres and Frequent Transit Development Areas</td>
<td>Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas. Community shuttles provide service to communities located outside of major bus routes and hubs and offer an environmentally responsible and sustainable transportation choice to single occupant vehicle travel. These vehicles transport passengers to urban centres and frequent transit networks (FTNs) to connect remote communities with populous destinations.</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Transportation Performance</td>
<td><strong>Headline Targets</strong> Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share. This is a like-for-like vehicle fleet replacement project with no change in service provided (i.e. incremental vehicle-kilometers travelled or shift to walk/cycle/transit mode share).</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Other Transportation Outcomes</td>
<td>Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project. This is a like-for-like vehicle fleet replacement project with no change in service provided. As such, there are no incremental benefits to vehicle congestion, transit passenger congestion, transit ridership and/or transportation safety.</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Project Type</td>
<td>Demonstrates value of the project type (refer to section 6). By maintaining TransLink’s assets in good repair, vehicles will have fewer breakdowns and service disruptions, operating costs will not increase, and pollutant emissions will be reduced.</td>
<td>Poor/Good/Excellent</td>
</tr>
<tr>
<td>Criterion</td>
<td>Description</td>
<td>Assessment</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
| Supports the Integrated Air Quality and Greenhouse Gas Management Plan   | *Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP).*  
No change in emissions as going from gasoline to gasoline vehicles. However, over time the project is expected to reduce GHG emissions and noise through the reduction of private vehicle trips. As such, this project supports IAQGGMP strategies 1.1 “Reduce emissions of and public exposure to diesel particulate matter”, 1.4 “Reduce air contaminant emissions from cars, trucks, and buses”, and 3.3 “Reduce the carbon footprint of the region’s transportation system”.
| Poor/Good/ Excellent                                                    |                                                                                |                                  |
| Measurable Beneficial Effects                                            | *Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project.*  
No change from old gasoline to new gasoline vehicles.  | Poor/Good/ Excellent          |                                  |
| Economic Development                                                     |                                                                              |                                  |
| Supports regional prosperity                                            | *Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity.*  
Replacement of community shuttles will provide improved reliability of the Community Shuttle fleet, resulting in improved reliability to the regional transportation system, by offering reliable service to more remote communities not close to conventional bus routes and/or hubs. Passengers will have better access to populous destinations for work and/or leisure activities, reducing the use of single occupant vehicle travel.  | Poor/Good/ Excellent          |                                  |
| Measurable Beneficial Effects                                            | *Tangible beneficial effects on the movement of people and/or goods for the duration of the project.*  
Replacement of community shuttles will provide improved reliability of the bus fleet, resulting in improved reliability to the transit network, and ultimately improving economic competitiveness. More reliable transit provides better access to jobs, workers, and markets, while reducing congestion and improving reliability for the movement of workers and goods.  | Poor/Good/ Excellent          |                                  |

Metro Vancouver Regional District
APPLICATION FOR FUNDING FROM THE
GREATER VANCOUVER REGIONAL FUND
FOR FEDERAL GAS TAX FUNDS

Project 5 2021 Community Shuttle Purchase – Expansion
(Ref# 202152)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

| ☐ | Maintain what is needed in a state of good repair |
| ☐ | Invest in the road network to improve safety, local access and goods movement |
| ☑ | Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods |
| ☐ | Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes |
| ☐ | Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management |
| ☐ | Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress |
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

Project Overview

TransLink’s Community Shuttle service began in 2001 and has expanded steadily. Currently, the shuttle fleet comprises approximately 13% of TransLink’s rubber tired revenue vehicle fleet and totals 196 vehicles. Approximately 79% of the Community Shuttle fleet is operated by CMBC with the remaining 21% operated by private contractors. The addition of these nine (9) shuttles, along with expansion shuttle vehicles being added to the fleet in late 2018 will increase the Community shuttle fleet to a total of 222 vehicles.

This project will add nine (9) conventional gasoline powered community shuttles to the community shuttle fleet. These shuttles would improve accessibility over the existing high floor shuttle fleet, and will have a person and seat capacity of 24 and 20 respectively servicing West Vancouver, Surrey and Langley. This project is consistent with the 2018 Investment Plan, approved in June 2018 by the Mayors’ Council and the TransLink Board.

TransLink strives to optimize its resource allocation by matching service to passenger demand, including allocating vehicles of an appropriate size to serve the demand on a route. This allocation is optimized through continuous review and planning processes that allocates resources where they are most needed. This process is informed by ridership data, which has been substantially enhanced with the deployment of Compass Card. TransLink has also undertaken recent work to determine optimal fleet propulsion technology on each route, which is interdependent with vehicle size.

The fleet propulsion technologies currently available to TransLink consist of only conventional gasoline engines, as hybrid gasoline or hybrid diesel propulsion are not available for these vehicles. Although diesel engines are available, they are not considered due to high maintenance costs. Choices of vehicle size and propulsion types will continue to be optimized, as informed by ongoing monitoring of ridership and propulsion technologies. This may result in the vehicle technology mix changing, if it is later determined that a different mix will better optimize our resource allocation.

Tangible Benefits and Outcomes

The new vehicles will allow CMBC to maintain existing service, reduce downtime, avoid incremental operating and maintenance costs, and reduce pollutants.

Project Budget, Expenses, and GVRF Funding Request

The project budget is $2,600,000 with a Greater Vancouver Regional Fund (GVRF) request of $2,442,700. Expenses covered by this budget primarily include vehicle procurement, ancillary on-board equipment and labour, and other miscellaneous project costs. The funding requested in
this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement.

2. Project Name

2021 Community Shuttle – Expansion (Ref# 202152)

3. Project Need

The objectives are to expand transit service across Metro Vancouver to increase system capacity and introduce bus service to new areas. The criteria for achieving these objectives are reduction of wait times and improved service.

4. Project Eligibility (check one):

☐ Local Roads and Bridges, including active transportation
☒ Public Transit

5. Project Purpose (check one):

☒ Expansion: Expands the carrying capacity of people and/or goods movement.
☐ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☐ Refurbishment
☐ New
☐ Other (please specify:________________)

6. Project Type (check one):

☒ Growth
☐ Upgrade
☐ Risk (Resilience)
☐ Maintenance
☐ Opportunity
7. Project Staging:

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
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<td>2026</td>
</tr>
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</table>

8. Has the project previously received funding through GVRF? Please explain.

No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.

No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.

No. TransLink is planning to complete this project within budget.

11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
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</thead>
<tbody>
<tr>
<td>$2,600,000</td>
<td>$0</td>
<td>$2,600,000</td>
<td>$2,600,000</td>
<td>$0</td>
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11.b Project Funding

<table>
<thead>
<tr>
<th>Prior Approved GVRF Funding</th>
<th>Current Year GVRF Funding Request</th>
<th>Other Funding – Specify source and whether confirmed/pending</th>
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</thead>
<tbody>
<tr>
<td>$0</td>
<td>$2,442,700</td>
<td>N/A</td>
</tr>
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</table>

11.c Project Budget Schedule

<table>
<thead>
<tr>
<th>Item</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>GVRF-funded</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$2,442,700</td>
<td></td>
</tr>
</tbody>
</table>
12. Project Budget Rationale

Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund

a. Explain how the project reflects the intent of the GVRF

This project ensures TransLink’s assets are available to implement the expansion service hours as identified in Phase 2 of the Mayor’s Vision. This project expands the regional public transportation system and ensures efficient and effective transit service.

b. In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?

No. TransLink relies on GVRF funding for expansion of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is The Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other sources of funding.

Public Transit Infrastructure Fund (PTIF) is focused on expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiated in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet expansion.

c. Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.

If funding is not received in time, TransLink will have to rely on deferred retirement vehicles to deliver on its promise of expansion. Continued use of deferred retirement vehicles poses a risk to reliability, as well as incremental maintenance costs to keep them in service. This may result in lost opportunities to realize goals of reduced congestion, improved peak hour service and frequency. Further, use of deferred retirement vehicles could also result in higher CAC and GHG emissions than new vehicles as engines deteriorate. TransLink may lose credibility among the general public if service expansion is not reliable.
d. How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with a sufficient contingency allowance to fund price and foreign exchange fluctuations.

e. How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?

Due to recent increases in senior government funding for public transit projects, many suppliers are experiencing larger demands to order vehicles. This may create a backlog with vendors, and if procurement is not initiated soon, could result in further delay in ordering and receiving vehicles.

f. How may foreseeable changes in technology affect the project?

This application is based on the new vehicles being powered by conventional gasoline engines. TransLink also has to consider that a number of these vehicles are operated and maintained by contractors who may not be able to support fueling or maintenance for a change in propulsion technology.

TransLink does not anticipate vendors coming out with alternative fuels for community shuttles that meet our needs to deliver reliable and cost-effectively service to customers in the immediate future. TransLink continues to monitor the vehicle technology industry very closely to identify what options are available in the market, and to evaluate their suitability for its fleet.

g. What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?

There are no foreseeable corporate or external factors that could alter the project need or scope of this project. Project timeline may be affected by manufacturer’s capacity and schedules, availability of parts and/or time for vehicle delivery from the manufacturer. Budget may fluctuate due to parts pricing and/or foreign exchange.

In order to ensure that the vehicles received are up to the standards expected and delivered on time TransLink conducts regular factory audits and inspections of the manufacturers’ facilities.
D. EVALUATION CRITERIA

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCREENING CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible Project Category</td>
<td>☐ Local roads and bridges, including active transportation</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ Public transit</td>
<td></td>
</tr>
<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement (Schedule C)</td>
<td>Required</td>
</tr>
<tr>
<td>Eligible Item</td>
<td>□ Community Shuttles (9)</td>
<td>1,946,700</td>
</tr>
<tr>
<td></td>
<td>☑ On-board equipment</td>
<td>496,000</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,442,700</td>
</tr>
<tr>
<td></td>
<td>¹ Per Schedule C, Section 1.1, Part a)</td>
<td></td>
</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ 10-Year Investment Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Mayors’ Council Transportation and Transit Plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Metro 2040: Shaping our Future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Regional Transportation Strategy</td>
<td></td>
</tr>
<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions and infrastructure</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ Sustainability policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Environmental policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☑ Emissions policy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ Infrastructure policy – n/a</td>
<td></td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTEGRATED CRITERIA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Regional Growth Strategy</strong></td>
<td>The degree to which the project assists in achieving the five goals in Metro 2040.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
| Supports the Regional Growth Strategy                                    | ☐ Create a Compact Urban Area  
☐ Support a Sustainable Economy  
☒ Protect Environment and Respond to Climate Change Impacts  
☒ Develop Complete Communities  
☒ Support Sustainable Transportation Choices                                                                                                                                                                                                                           |                                   |
<p>| <strong>Urban Centres and Frequent Transit Development Areas</strong>                 | Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas. Community shuttles provide service to communities located outside of major bus routes and hubs, and offer an environmentally responsible and sustainable transportation choice to single occupant vehicle travel. These vehicles transport passengers to urban centres and frequent transit networks (FTNs) to connect remote communities with populous destinations. | Poor/Good/ Excellent               |
| <strong>Transportation Performance</strong>                                           | Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share. The project will increase the community shuttle fleet size. The entire 10-Year Vision is forecast to decrease annual private vehicle kilometers travelled per person to 5,422 kilometers by 2030 – a 15% decrease compared to 2011. The 2018 Investment Plan delivers the second phase of walking, cycling and transit infrastructure in the 10-Year Vision, and in doing so, makes it possible for more people in the region to choose alternatives to driving. This expansion of the bus fleet is an important step in delivering this investment. Additionally, the 2018 Investment Plan is forecast to increase ridership from 247 million annual transit journeys in 2017 to 316 million annual transit journeys by 2027. This fleet expansion is a critical step in providing the transit service necessary to reach this increase in transit trips. | Poor/Good/ Excellent               |
| Other Transportation Outcomes                                           | Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project. The full 10-Year Vision is forecast to increase walking, cycling, and transit mode share to 31% by 2030, | Poor/Good/ Excellent               |</p>
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criterion</td>
<td>Supporting the RTS target of 50% mode share by 2045. This fleet expansion allows TransLink to expand transit services and continue to make progress toward these targets.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Project Type</td>
<td>Demonstrated value of the project type (refer to section 6). By growing the reach and capacity of public transport, we will provide more options for mobility and be able to reduce congestion on the roads, increase passenger comfort and reliability, and reduce pollutant emissions.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Regional Environmental Objectives</td>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Contributes to the achievement of one or more goals in the Integrated Air Quality and Greenhouse Gas Management Plan (IAQGGMP). The project may result in modest reductions of CAC and GHG emissions through the reduction of private vehicle trips. As such, this project supports IAQGGMP strategies 1.4 “Reduce air contaminant emissions from cars, trucks, and buses”, and 3.3 “Reduce the carbon footprint of the region’s transportation system.”</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project. By growing the reach and capacity of accessible public transport, we will provide more options for mobility while increasing passenger comfort and reliability. Over time the project may result in modest reductions in GHG and CAC emissions through the reduction of private vehicle trips.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Economic Development</td>
<td>Supports regional prosperity</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Supports regional prosperity</td>
<td>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity. Additional community shuttles will provide improved reliability to the regional transportation system by improving the consistency of arterial service to institutional, economic and other transit mode hubs. Passengers will have better access to work and/or leisure activities, reducing the use of single occupant vehicle travel.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>

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Metro Vancouver Regional District
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurable Beneficial Effects</td>
<td><em>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</em>&lt;br&gt;Additional community shuttles will improve service and make transit a more reliable option, and ultimately improving economic competitiveness within Metro Vancouver. More reliable transit provides better access to jobs, workers, goods, and markets, while reducing congestion. Many proposed service improvements address overcrowding and will reduce congestion for passengers.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
APPLICATION FOR FUNDING FROM THE GREATER VANCOUVER REGIONAL FUND FOR FEDERAL GAS TAX FUNDS

Project 6 2021 MK I (500 – 800) Refurbishment
(Ref# 203010)
B. MAYORS’ COUNCIL TRANSPORTATION AND TRANSIT PLAN

Please describe how the project fits within, and provides support to, the Mayors’ Council Transportation and Transit Plan.

☑ Maintain what is needed in a state of good repair
☐ Invest in the road network to improve safety, local access and goods movement
☐ Expand our transit system to increase ridership in high demand areas and provide basic coverage in low-demand neighbourhoods
☐ Develop safe and convenient walking connections to transit and pursue early investments to complete the bikeway network, making it possible for more people to travel by these healthy, low cost, and emission-free modes
☐ Manage our transportation system more effectively with safety and passenger comfort improvements, new personalized incentive programs, advanced technology and infrastructure management solutions, efficient and fair mobility pricing, and better parking management
☐ Partner to make it happen with explicit implementation agreements and processes that support concurrent decisions on land-use and transportation investments, stable and sufficient long-term funding solutions, and better monitoring of progress
C. PROJECT DESCRIPTION

Please complete the following for each project proposed for expenditure from the GVRF.

1. Executive Summary (not to exceed two pages)

Project Overview

The project would refurbish the thirty-six Mark I 500-800 series cars (similar to the nearly completed refurbishment of the Mark 1 100-400 series cars) in order to allow them to continue to provide safe and reliable SkyTrain service until their planned retirement in 2027/2028.

Tangible Benefits and Outcomes

The refurbishment is required in order to allow continued operation of 36 Mark I Skytrain cars which have a total capacity of 29,000 customers per day. If this refurbishment is not undertaken then cars will need to be removed from the system, resulting in approximately a 14% decrease in capacity on the Expo and Millennium Line SkyTrain lines. As these lines are currently operating at or near capacity during several hours of the day, refreshing the cars will allow avoidance of significant impacts to revenue, reputation and customer service.

Project Budget, Expenses, and GVRF Funding Request

The project budget is $17,700,000 with a Greater Vancouver Regional Fund (GVRF) request of $17,227,120. Expenses covered by this budget primarily include labour, material, and other miscellaneous project costs.

The funding requested in this application will be applied towards expenses considered eligible per the terms of the Administrative Agreement.

2. Project Name

2021 MK I (500 - 800) Refurbishment (Ref# 203010)

3. Project Need

The project would refurbish the thirty-six Mark I 500-800 series cars in order to allow them to continue to provide safe and reliable SkyTrain service until their planned retirement in 2027/2028.

4. Project Eligibility (check one):
   ☐ Local Roads and Bridges, including active transportation
   ☒ Public Transit
5. Project Purpose (check one):
☐ Expansion: Expands the carrying capacity of people and/or goods movement.
☐ State of Good Repair: Replaces or modernizes assets to keep the regional transportation system in a state of good repair.
☐ Operational Efficiency/Effectiveness: Improves the efficiency or effectiveness of the regional transportation system.
☒ Refurbishment
☐ New
☐ Other (please specify: ________________)

6. Project Type (check one):
☐ Growth
☐ Upgrade
☐ Risk (Resilience)
☒ Maintenance
☐ Opportunity

7. Project Staging:

<table>
<thead>
<tr>
<th>Year(s) of Acquisition or Start of Construction</th>
<th>Year of Completion of Construction</th>
<th>Year of Service Initialization</th>
<th>Year(s) of Renewal</th>
<th>Year(s) of End of Service</th>
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<tbody>
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<td>2021</td>
<td>2021</td>
<td>N/A</td>
<td>2027</td>
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</table>

8. Has the project previously received funding through GVRF? Please explain.

No. This is the first application for GVRF funding for this project.

9. Was GVRF funding previously declined for the project? Please explain.

No. This is the first application for GVRF funding for this project.

10. Is the project anticipated to require additional future GVRF funding? If so, please explain.

No. TransLink is planning to complete this project within budget.
11. Project Cost + Funding

11.a Budget & Expenditures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Expenditures to Date</th>
<th>Forecast to Complete</th>
<th>Final Forecasted Cost</th>
<th>Variance (budget – final forecasted cost)</th>
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<td>$0</td>
<td>$17,700,000</td>
<td>$17,700,000</td>
<td>$0</td>
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</table>

11.b Project Funding

<table>
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<tr>
<th>Prior Approved GVRF Funding</th>
<th>Current Year GVRF Funding Request</th>
<th>Other Funding – Specify source and whether confirmed/pending</th>
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<tbody>
<tr>
<td>$0</td>
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11.c Project Budget Schedule

<table>
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<tr>
<th>Item</th>
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<th>2018</th>
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<th>2020</th>
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<th>2022</th>
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<td>$10,386,000</td>
<td>$6,841,120</td>
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<td>Total Project Budget</td>
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<td></td>
<td>$</td>
<td>$10,722,050</td>
<td>$6,977,950</td>
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</table>

12. Project Budget Rationale

Describe the types of proposed project expenses to be funded by the Greater Vancouver Regional Fund

a. Explain how the project reflects the intent of the GVRF

This project ensures TransLink’s assets are maintained in a State of Good Repair, so as to allow TransLink to efficiently and effectively provide transit service to the general public.

The intent of this project is to maintain service levels and promote system reliability, in an effort to retain the same level or potentially increase ridership. Degraded service due to longer maintenance service periods and removal of failed trains may encourage riders to return to single occupant vehicle transportation, increasing GHG emissions and deteriorating air quality.

The project aligns with the Gas Tax funding criteria by preventing GHG emission increase and air quality degradation, and potentially improving both through increased ridership from the expectation of more reliable and consistent service.
b. In the absence of GVRF funding, can the project proceed with other funding sources? What risks do the other funding sources present to the project?

No. TransLink relies on GVRF funding for expansion of its revenue vehicle fleets and plans its annual budgets accordingly.

The other source of funding available to TransLink is The Public Transit Infrastructure Fund. The projects chosen by TransLink for GVRF funding are better suited to GVRF funding compared to the other sources of funding, as summarized below:

Public Transit Infrastructure Fund (PTIF) is focused on expansion of the Rapid Transit network such as - the Expo Millennium Upgrade Program and the Broadway Subway Project. Also, under this fund the maximum federal funding towards a project is limited to 50% of the total eligible expenditures; no such limits are identified in the GVRF. Lastly, projects to be funded under this program have already been submitted to the federal government.

In addition, PTIF funding is only available for a specified period of time for projects initiated in 2016-17 and 2017-18.

As such, there are no other viable funding sources available for fleet refurbishment.

c. Identify potential risks – corporate and regional – of this project that could result in this project not being completed or being unsuccessful. Describe possible mitigation strategies to address these risks.

If funding is not received in time, TransLink may lose credibility with the general public if Mark I (500 - 800) trains cannot be used, consequently decreasing SkyTrain capacity and reducing service.

d. How may the project cost vary as a result of changing external factors, such as interest rates and currency exchange rates?

Project costs may vary due to foreign exchange fluctuations (as parts are procured from the US) and vendor pricing. These uncertainties are mitigated with a sufficient contingency allowance to fund price and foreign exchange fluctuations.

e. How may foreseeable changes in investment, regulation, or policies from other orders of government affect the project?

As this project is for refurbishment of existing rail cars, we do not foresee and changes.

f. How may foreseeable changes in technology affect the project?

This application is based on the refurbished vehicles, new technology is not expected.
g. What other corporate or external factors could alter the project need, scope, budget, or timeline for project delivery?

There are no foreseeable corporate or external factors that could alter the project need or scope of this project. Project timeline may be affected by manufacturer’s capacity and schedules to produce parts. Budget may fluctuate due to parts pricing and/or foreign exchange.
**D. EVALUATION CRITERIA**

Please describe how project achieves or works towards each criterion by identifying and reporting on relevant performance measures. Where appropriate, present quantitative information. Please do not exceed 10 pages per project.

Two types of evaluation criteria are identified: Screening Criteria, which represent requirements that are mandatory for any project for which GVRF funding is requested; and Integrated Criteria, which allow for a qualitative assessment of proposed projects based on high priority objectives that reflect the intent of the Federal Gas Tax Fund, of Metro Vancouver goals, and of the Mayors’ Council Vision.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCREENING CRITERIA</strong></td>
<td></td>
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<tr>
<td>Eligible Project Category</td>
<td>☐ Local roads and bridges, including active transportation</td>
<td>Required</td>
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<tr>
<td></td>
<td>☑ Public transit</td>
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<tr>
<td>Eligible Expenses</td>
<td>As set out in the 2014 Administrative Agreement (Schedule C)</td>
<td>Required</td>
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<tr>
<td></td>
<td><strong>Eligible Item</strong></td>
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<td></td>
<td>Mark 1 500-800 (36)</td>
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<tr>
<td></td>
<td><strong>Expenditure</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td></td>
<td>$17,227,120</td>
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<tr>
<td></td>
<td>&lt;sup&gt;1 Per Schedule C, Section 1.1, Part a&lt;/sup&gt;</td>
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</tr>
<tr>
<td>Plan Consistency</td>
<td>Projects must be consistent with TransLink’s existing Capital Plan and future 10-Year Investment Plan, as well as the Mayors’ Council Transportation and Transit Plan, Metro 2040: Shaping our Future, and the Regional Transportation Strategy.</td>
<td>Required</td>
</tr>
<tr>
<td></td>
<td>☑ 10-Year Investment Plan</td>
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<td></td>
<td>☑ Mayors’ Council Transportation and Transit Plan</td>
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<td></td>
<td>☑ Metro 2040: Shaping our Future</td>
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<td></td>
<td>☑ Regional Transportation Strategy</td>
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<tr>
<td>Corporate Policies</td>
<td>Projects must be consistent with applicable TransLink policies such as sustainability, environmental responsibility, emissions and infrastructure</td>
<td>Required</td>
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<tr>
<td></td>
<td>☑ Sustainability policy</td>
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<td></td>
<td>☑ Environmental policy</td>
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<td>☑ Emissions policy</td>
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<td></td>
<td>☐ Infrastructure policy – n/a</td>
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<tr>
<td>Criterion</td>
<td>Description</td>
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<tr>
<td><strong>INTEGRATED CRITERIA</strong></td>
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<tr>
<td><strong>Regional Growth Strategy</strong></td>
<td></td>
<td></td>
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<tr>
<td>Supports the Regional Growth Strategy</td>
<td>The degree to which the project assists in achieving the five goals in Metro 2040.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td></td>
<td>☐ Create a Compact Urban Area</td>
<td></td>
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<tr>
<td></td>
<td>☐ Support a Sustainable Economy</td>
<td></td>
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<tr>
<td></td>
<td>☒ Protect Environment and Respond to Climate Change Impacts</td>
<td></td>
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<tr>
<td></td>
<td>☒ Develop Complete Communities</td>
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<td></td>
<td>☒ Support Sustainable Transportation Choices</td>
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<tr>
<td>Urban Centres and Frequent Transit Development Areas</td>
<td>Where applicable, the project is located in, or demonstrates tangible benefits to the overall performance of Urban Centres and Frequent Transit Development Areas.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td></td>
<td>The 36 Mark I Skytrain cars which have a total capacity of 29,000 customers per day and which offer an environmentally responsible and sustainable transportation choice to single occupant vehicle travel. These vehicles transport passengers to urban centres and frequent transit networks (FTNs) to connect remote communities with populous destinations.</td>
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<tr>
<td><strong>Transportation Performance</strong></td>
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<tr>
<td>Headline Targets</td>
<td>Demonstrates tangible beneficial effects on vehicle kilometres travelled and/or walk/cycle/transit mode share.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td></td>
<td>The refurbishment is required in order to allow continued operation of 36 Mark I Skytrain cars which have a total capacity of 29,000 customers per day. If this refurbishment is not undertaken then cars will need to be removed from the system, resulting in approximately a 14% decrease in capacity on the Expo and Millennium Line SkyTrain lines. As these lines are currently operating at our near capacity during several hours of the day, refreshing the cars will allow avoidance of significant impacts to revenue, reputation and customer service.</td>
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<tr>
<td>Other Transportation Outcomes</td>
<td>Demonstrates tangible beneficial effects on vehicle congestion, transit passenger congestion, transit ridership, and/or transportation safety for the duration of the project.</td>
<td>Poor/Good/ Excellent</td>
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<td></td>
<td>The full 10-Year Vision is forecast to increase walking, cycling, and transit mode share to 31% by 2030, supporting the RTS target of 50% mode share by 2045. The intent of this project is to maintain service levels and promote system reliability, in an effort to retain the</td>
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<td>Criterion</td>
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<td>Assessment</td>
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<tr>
<td>Project Type</td>
<td>Demonstrated value of the project type (refer to section 6). Maintain service levels and promote system reliability, in an effort to retain the same level or potentially increase ridership.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Regional Environmental Objectives</td>
<td>Supports the Integrated Air Quality and Greenhouse Gas Management Plan</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Measurable Beneficial Effects</td>
<td>Demonstrates tangible beneficial effects on greenhouse gas and common air contaminant emissions from on-road transportation sources for the duration of the project.</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Economic Development</td>
<td>Supports regional prosperity</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td></td>
<td>Contributes to a regional transportation system that moves people and goods and aligns with regional prosperity. Refurbishment of the Mark 1 500-800 series cars will provide improved reliability to the regional transportation system by improving the consistency of arterial service to institutional, economic and other transit mode hubs. Passengers will have better access to</td>
<td>Poor/Good/ Excellent</td>
</tr>
<tr>
<td>Criterion</td>
<td>Description</td>
<td>Assessment</td>
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<td>work and/or leisure activities, reducing the use of single occupant vehicle travel.</td>
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<tr>
<td>Measurable Beneficial Effects</td>
<td><em>Tangible beneficial effects on the movement of people and/or goods for the duration of the project.</em>&lt;br&gt;The intent of this project is to maintain service levels and promote system reliability, in an effort to retain the same level or potentially increase ridership.</td>
<td>Poor/Good/ Excellent</td>
</tr>
</tbody>
</table>
RECOMMENDATION
That the MVRD Board:

a) direct staff to proceed with engagement and consultation on the proposed approach to regulating air emissions from open-air burning activities, based on the discussion paper attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver” dated October 1, 2019; and

b) endorse the engagement plan attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver”, dated October 1, 2019.

PURPOSE
To seek Metro Vancouver Regional District (MVRD) Board authorization to proceed with consultation and engagement on the proposed approach to regulate air emissions from open-air burning of vegetative debris through a potential emission regulation, as an alternative to the current process of issuing short-term, site-specific approvals.

BACKGROUND
The MVRD Board endorsed the Integrated Air Quality and Greenhouse Gas Management Plan (“the Plan”), which includes an action for Metro Vancouver to investigate options and introduce mechanisms to reduce emissions from open-air burning. Since 2018, Metro Vancouver staff have conducted a strategic outreach campaign to promote compliance with the requirement to obtain authorization for the controlled discharge of emissions from open-air burning. This outreach has significantly increased the volume of applications for site-specific approvals. A more efficient, less resource-intensive regulatory mechanism such as an emission regulation for open-air burning of vegetative debris outdoors would be beneficial.

The development of a strategy to manage emissions from open-air burning activities is described as a key action in the Climate Action Committee’s 2019 work plan. This report brings forward a discussion paper reviewing options for the development of a new emission regulation and seeks Board approval to initiate consultation with stakeholders.
HEALTH AND ENVIRONMENTAL IMPACTS OF EMISSIONS FROM OPEN-AIR BURNING

For the purpose of the proposed regulatory initiative, open-air burning is the combustion of vegetative debris, such as branches or other pieces of vegetative matter with or without leaves and plant stalks, that is conducted outside a structure and does not vent to a chimney or stack. Open-air burning of vegetative debris is usually inefficient and produces smoke at a rate significantly higher than controlled combustion.

Several thousand planned fires of various sizes occur outdoors across the region each year, many involving the burning of vegetative debris such as land clearing waste, agricultural residues, and yard trimmings. Smoke emitted from open-air burning of vegetative debris is a complex mixture of contaminants which includes fine particulate matter, volatile organic compounds and nitrogen oxides that have the potential to contribute to the formation of harmful ground-level ozone and degraded visibility. Fine particles in smoke emissions are associated with respiratory and heart disease. Smoke emitted from open-air burning of vegetative debris also contains smaller quantities of toxic compounds such as benzene, acrolein, formaldehyde, and polycyclic aromatic hydrocarbons (PAHs). Emissions from open-air burning can also influence climate change due to their contribution to short-lived climate forcers such as black carbon (soot) particles and ground level ozone.

Smoke emissions from open-air burning of biomass can negatively affect residents’ use and enjoyment of their environment. Metro Vancouver and member municipalities have received complaints related to open-air burning smoke emissions from members of the public.

LEGISLATIVE FRAMEWORK FOR REGULATING EMISSIONS FROM OPEN-AIR BURNING

Provincial, regional and municipal governments have a role in regulating open-air burning of vegetative debris in the Metro Vancouver region, including on agricultural land.

The BC *Open Burning Smoke Control Regulation* places restrictions on open-air burning and makes allowances for certain exemptions. This provincial regulation was amended on September 15, 2019, and stipulates that only vegetative matter can be burned and sets requirements for open-air burning in three smoke sensitivity zones covering the entire province that are identified as high, medium and low smoke sensitivity zones. The Metro Vancouver region has been designated as a high smoke sensitivity zone. This regulation also identifies prohibited materials, stipulates setback requirements between open-air burning and sensitive receptors (neighboring residences, businesses, hospitals, schools, daycares and long-term care facilities), specifies weather conditions under which burning can take place (ventilation index requirements), and sets limitations on the frequency of burning. Furthermore, the regulation sets restrictions based on the size of materials designated to be burned. For instance, a full range of restrictions apply to open-air burning of vegetative debris if some or all the materials are 10 cm or greater in diameter. Limited restrictions apply to open air-burning of vegetative debris in the size range of 3 cm to less than 10 cm. The regulation does not apply to open-air burning of vegetative debris if all the material is less than 3 cm in diameter.

Under Section 31 of the BC *Environmental Management Act* (EMA), Metro Vancouver has the delegated authority for air pollution control and air quality management within the Metro Vancouver region, including industrial and agricultural land. Under *Greater Vancouver Regional District Air
Quality Management Bylaw No. 1082, 2008 (Bylaw 1082), Metro Vancouver exercises its air quality regulatory authority with a system of permits and short-term approvals that apply to individual facilities, and emission regulations that apply to types of operations and activities with similar characteristics. Bylaw 1082 prohibits the disposal of waste by burning or incineration unless the discharge is conducted strictly in accordance with a permit, approval, order, or an emission regulation, or unless the burning activity is exempted from the prohibition. In relation to the open-air burning of vegetative debris, Bylaw 1082 provides a number of exemptions for fires or burns conducted in compliance with the Weed Control Act, the Wildfire Act and Fire Services Act to control the spread of noxious weeds, to carry out fire hazard abatement activities, or for fire services training purposes. For other forms of open-air burning that are not exempted, Metro Vancouver currently authorizes such activities using the approvals process; the region does not have an emission regulation for open-air burning. Site-specific approvals are similar to permits, and are used in instances where discharges from a site are expected to be of short duration. Approvals for emissions from a particular site can only be issued for a cumulative period of up to 15 months as stipulated in the EMA and Bylaw 1082. Metro Vancouver can be more restrictive in implementing a regional emission regulation than what is required by provincial law, but cannot be less restrictive.

Metro Vancouver municipalities have bylaws that include conditions on open-air burning activities, but these are primarily focused on establishing fire control and safety within their jurisdictions.

PROPOSED REGULATORY APPROACH
Ensuring comprehensive regional compliance with requirements related to open-air burning activities is a significant demand on Metro Vancouver resources. It is resource-intensive to issue, administer and enforce site-specific approvals and to conduct sustained educational outreach about open-air burning approvals. As a result of the educational outreach campaign started in 2018, Metro Vancouver received a substantial increase in submissions of open-air burning approval applications. Initial feedback received from the applicants indicated they find the process of obtaining an approval to be complicated, time-consuming and costly. Efforts have been made to simplify the application process and reduce processing time; however, the cost of the application fee remains a barrier.

An emission regulation would aim to reduce regulatory burden by authorizing open-air burning activities that meet all specified requirements, without having to obtain site-specific approvals. In cases where the regulation requirements could not be met or relaxation of the requirements would be sought, the emissions from open-air burning activities would need to be authorized with certain conditions under a site-specific approval.

**Potential Emission Regulation**
Metro Vancouver is proposing to develop a regional emission regulation under Greater Vancouver Regional District (GVRD) Air Quality Management Bylaw No. 1082, 2008 (Bylaw 1082) to reduce smoke emissions from open-air burning of vegetative debris and support the promotion of alternatives to the use of open-air burning of vegetative debris as a disposal method. As stipulated in Bylaw 1082, exemptions would apply to emissions from open fires carried out for fire control purposes and resource management under the Wildfire Act, fires for training purposes as defined in

Metro Vancouver Regional District
Key features of a potential emission regulation could include the following requirements:

**Proposed Requirements Prior to Burning**
- Pursue alternatives to open-air burning, including reducing, reusing, or recycling vegetative debris;
- Register the site where open-air burning activities will be conducted;
- Burn only when Metro Vancouver reports the ventilation index to be favourable through its daily open burning phone message, or notify Metro Vancouver in advance if an air curtain incinerator that meets operating and performance standards will be used when the ventilation index is less favourable;
- Burn clean and seasoned materials that have been generated on-site only;
- Avoid the use of accelerants such as gasoline;
- Notify neighbours and, in certain cases, Metro Vancouver of pending burning activities;
- Respect minimum distances from sensitive receptors (such as residences, businesses, hospitals, schools, and care facilities) within which no burning can occur; and
- Avoid open-air burning activities during fire bans or periods of degraded air quality.

**Proposed Requirements When Burning**
- Burn only during limited times within a day, month, and year;
- Ensure the fire is attended at all times;
- Maintain descriptive records of open-air burning activities;
- Refrain from adding materials to a fire when smoke is impacting neighbours or the surrounding environment; and
- Refrain from impacting visibility and causing a navigation hazard at nearby airports or roadways.

The requirements above are described in further detail in the discussion paper in Attachment 1. Attachment 1 provides the content that would be included in a discussion paper. With Board direction for staff to proceed with engagement and consultation, the draft discussion paper would be finalized and prepared in a format consistent with other regulatory discussion papers.

**Policy Options for Requirements in Smoke Sensitivity Zones**
An emission regulation would align with OBSCR’s establishment of a “high smoke sensitivity zone” throughout the region and could establish specific areas with more stringent requirements to further protect the environment, based on factors such as population density and topography. These more stringent requirements could include requiring the use of emission control equipment and setting more restrictive limits on the frequency and duration of open-air burning activities. This proposal will be refined in the first phase of consultation, and proposed areas with more stringent requirements will be depicted on a map of the region for a second phase of consultation.

**CONSULTATION PROCESS AND TIMELINES**
Staff propose to lead a two-phase consultation and engagement process on the potential emission regulation as outlined in the engagement plan in Attachment 2. The objective of the consultation is
to inform stakeholders of the proposed requirements to be included in an emission regulation, as described in the discussion paper, and to obtain feedback.

For the first phase of engagement, Metro Vancouver will invite the public, Indigenous communities, businesses, member jurisdictions, provincial government and other interested parties to provide feedback between November 2019 and February 2020. Metro Vancouver will consider all input received and refine the regulatory proposals. Metro Vancouver then anticipates initiating a second consultation phase on the refined proposals during the months of May to July 2020. All feedback received will be considered until the MVRD Board makes a decision on an emission regulation for managing emissions from open-air burning of vegetative debris.

The two-phase consultation process will include targeted engagement methods to ensure that information about the potential regulation reaches key audiences. Suggestions for in-person engagement methods from the September 27, 2019 meeting of Metro Vancouver’s Agricultural Advisory Committee have been incorporated into the engagement plan. Information and a feedback questionnaire will be made available online and in hard copy. A website will be created for the engagement process on this regulatory initiative, and pamphlets will be distributed to member jurisdictions for information and display in public areas.

ALTERNATIVES
1. That the MVRD Board:
   a) direct staff to proceed with engagement and consultation on the proposed approach to regulating air emissions from open-air burning activities, based on the discussion paper attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver” dated October 1, 2019; and
   b) endorse the engagement plan attached to the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver”, dated October 1, 2019.

2. That the MVRD Board receive for information the report titled “Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver”, dated October 1, 2019 and provide alternate direction to staff.

FINANCIAL IMPLICATIONS
Under Alternative 1, staff will proceed with consultation on a potential bylaw to regulate emissions from open-air burning of vegetative debris. The resources needed for the first phase of consultation, including staff time and consulting amounts of up to $35,000, will be covered through approved program budgets for 2019. Resources for engagement on regulatory development in 2020 have been considered in the 5-year financial plans, and resources for a second phase of engagement have been requested as part of the 2020 budget.

Under Alternative 2, the Committee and Board may wish to provide alternate direction to staff on how to address emissions from open-air burning activities. As noted earlier, in the absence of an
emission regulation, open-air burning of vegetative debris would need to be authorized under site-specific approvals, which would be more resource-intensive for Metro Vancouver and for persons seeking to burn vegetative debris outdoors.

**SUMMARY / CONCLUSION**

Several thousand open-air burning events of vegetative debris occur in various sizes across the region each year. Open-air burning of vegetative debris is usually inefficient and produces smoke at a rate significantly higher than controlled combustion. Smoke emitted from open-air burning of vegetative debris contains fine particles, volatile organic compounds and nitrogen oxides that are associated with health and environmental impacts, including impacts from the formation of harmful ground-level ozone and from short-lived climate forcers.

Metro Vancouver currently uses the approvals process to authorize the open-air burning of vegetative debris such as land clearing waste, agricultural residues, and yard care debris. As a result of an educational outreach campaign in 2018 and 2019 to build awareness and promote compliance with Bylaw 1082, Metro Vancouver received a substantial increase in submissions of open-air burning approval applications. Some applicants have stated they find the process of obtaining an approval to be complicated, time-consuming and costly. It is labour-intensive for Metro Vancouver to issue, administer and enforce approvals. The region currently does not have an emission regulation for open-air burning, but it is thought that introducing an emission regulation would reduce regulatory burden by providing ongoing authorization of open-air burning of vegetative debris in cases where specified requirements are met, more simply and efficiently than through site-specific approvals.

Staff recommend Alternative 1, to proceed on the proposed alternative approach to regulating air emissions from open-air burning of vegetative debris through an emission regulation as described in the attached discussion paper titled, “Proposals for an Alternative Approach to Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver”. A two-phase consultation with the public, Indigenous communities, businesses, member jurisdictions, provincial government and other interested parties is intended to provide any person who may be affected by a potential emission regulation with sufficient opportunity to learn about the proposals and provide feedback.

**Attachments (33122179)**

2. Engagement Plan for an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver
Consultation on an Alternative Approach for Regulating Emissions from Open-Air Burning of Vegetative Debris In Metro Vancouver

October 2019
INTRODUCTION

The Metro Vancouver Regional District (MVRD, operating as Metro Vancouver) consists of 21 municipalities, one electoral Area and one Treaty First Nation. The regional area extends from the Village of Lions Bay to the Township of Langley and to the City of Maple Ridge. Metro Vancouver is responsible for managing air quality in the region and regulating the discharge of air contaminants under authority delegated from the provincial government in the British Columbia Environmental Management Act (EMA). Metro Vancouver protects public health and the environment through a tiered approach to managing the discharge of air contaminants that applies the use of site-specific permits, sectoral emission regulations, and provisions in the Greater Vancouver Regional District (GVRD) Air Quality Management Bylaw No. 1082, 2008 (Bylaw 1082). Bylaw 1082 prohibits businesses, industries and trades from discharging air contaminants unless authorized through a permit or emission regulation or if the discharge is conditionally exempted under the bylaw. Permits are required for activities and complex facilities with significant levels of emissions that may have the potential for high impacts on the environment and public health. Regulations apply air emissions control requirements to a group of facilities or activities that share similar characteristics. Additionally, Bylaw 1082 prohibits any person from discharging air contaminants so as to cause pollution.

Currently, Metro Vancouver authorizes emissions from open-air burning of vegetative debris through the issuance of an approval under Bylaw 1082. Approvals are similar to permits, but are used in instances where discharges from a site are expected to be of short duration. Approvals for emissions from a particular site can only be issued for a cumulative period of up to 15 months (including any renewals) as stipulated in the EMA and Bylaw 1082.

PURPOSE

The purpose of this discussion paper is to:

• Provide information about the environmental and health impacts of smoke emissions from open-air burning in Metro Vancouver;
• Describe options to reduce emissions from open-air burning of vegetative debris through a potential emission regulation; and
• Support consultation and encourage feedback from affected and interested parties on options for regulating air emissions from open-air burning.

For the purpose of this regulatory initiative, open-air burning is defined as the combustion of vegetative debris, such as branches, other pieces of vegetative matter with or without leaves and plant stalks, that is conducted outside a structure and does not vent to a chimney or stack.
If an emission regulation is adopted by the MVRD Board, anyone conducting an open-air burn would have the option to seek authorization of emissions through an emission regulation if the requirements in the regulation can be met or through an approval issued under Bylaw 1082. An emission regulation would offer a simpler alternative to the approvals process, which is currently the only option for authorizing emissions from open-air burning of vegetative debris.

This discussion paper may be of interest to:
- Persons who conduct agricultural activities;
- Residential property owners;
- Businesses involved in land clearing, land development, construction and landscaping;
- Businesses providing services of collection, recycling, and processing of vegetative debris;
- Consultants, manufacturers and distributors of equipment that provide services for open-air burning activities, such as air emission control;
- Manufacturers and distributors of equipment used to reduce the size of vegetative debris;
- Indigenous communities;
- Provincial ministries;
- Metro Vancouver’s member jurisdictions;
- Agricultural advisory committees;
- Municipal fire departments;
- Public health experts;
- Members of the public affected by emissions from open-air burning; and
- Other interested parties affected by potential regulatory proposals related to open-air burning activities or by air quality in the Metro Vancouver region.

A consultation program will allow Metro Vancouver to inform interested parties and the public of the proposals for regulating emissions from open-air burning activities described in this discussion paper and to receive feedback. Representatives of interested parties and the public will be invited to provide feedback in person and online in an initial phase of consultation between November and early December, 2019. A second phase of consultation is anticipated to take place in the spring of 2020.

DEFINING THE PROBLEM
Smoke Emissions and their Effects
Smoke is emitted when wood or other organic matter burns inefficiently. Open-air burning of vegetative debris is usually inefficient and produces smoke at a rate significantly higher than controlled combustion.

Smoke is a complex mixture of harmful fine particles (PM$_{2.5}$) and many gases such as carbon monoxide (CO), nitrogen oxides (NO$_x$), and volatile organic compounds (VOCs). In addition, smoke contains smaller quantities of other harmful compounds such as benzene, acrolein, formaldehyde, and polycyclic aromatic hydrocarbons (PAHs). Fine particles are associated with health issues that
include bronchitis, asthma, emphysema, pneumonia and heart disease. Infants, children, pregnant women, the elderly, and people who already have respiratory illnesses, heart problems or other chronic diseases are most at risk, and healthy adults can also be affected. Research has shown there is no threshold below which the fine particles in smoke have no health effects. This means it is important to minimize the amount of smoke produced and reduce exposure to it.

In addition to its effects on health, smoke emissions also impact the environment. At the local level, emissions of PM$_{2.5}$, NO$_x$ and VOCs in smoke can contribute to visibility degradation, which can range from the formation of a regional haze that obscures distant views to dense smoke that can cause immediate safety concerns. At the global level, emissions from open-air burning contribute to climate change due to the release of short-lived climate forcers such as black carbon (soot) particles and ground-level ozone formed from VOCs in smoke.

**Regional Sources of Smoke**
Sources of smoke in the region include open-air burning of vegetative debris, indoor residential wood burning, industrial combustion sources, campfires, special event fires and wildfires. Several thousand open-air burning events occur in various sizes across the region each year.

**Open-Air Burning of Vegetative Debris**
Open-air burning is used as a waste management tool to dispose of vegetative debris generated by land clearing activities, agricultural land management, residential property maintenance and forestry practices. Due to Metro Vancouver’s population density, smoke emissions from open-air burning tend to impact a greater number of people than in more rural areas of the province. Furthermore, open-air burning events for disposing of vegetative debris are generally authorized to occur during limited windows of time, which can create the potential for high, short-term exposure to smoke. In addition to health impacts, smoke has a distinctive odour and can irritate the eyes and respiratory pathways, which can negatively affect residents’ use and enjoyment of their environment. Metro Vancouver has received complaints and requests for help from the public in respect of the need to address smoke emissions from open-air burning.

Metro Vancouver has also received feedback from the agricultural community about barriers to complying with the current requirement for open-air burning to be authorized under an approval. The agricultural community has indicated that the approval application fees are onerous. There is also a lack of awareness that approvals can be sought before the open-air burning season and can be valid for several months, which has caused some late applicants for approvals to miss the window for open-air burning. Individual, longer approvals or multiple, shorter approvals of open-air burning emissions at a particular site can be issued for a cumulative period of up to 15 months, after which Bylaw 1082 would require authorization under a permit or an emission regulation. At this time, Metro Vancouver is contemplating authorizing emissions from open-air burning through a potential emission regulation, in addition to the approvals process that is already used to authorize controlled emissions.
Best Management Practices
Best management practices can be employed to either avoid burning vegetative debris, or to reduce the amount of smoke generated by open-air burning.

Alternatives to Open-Air Burning of Vegetative Debris
Several options exist for recycling and reusing vegetative debris rather than burning this material. For instance, depending on the size and type of woody biomass, the material can be used for various purposes including: lumber production, pulp for paper, feedstock for engineered woods, specialty crafts, soil conditioner, soil erosion prevention, weed growth reduction, root protection of plants, water conservation, landscaping applications, dust suppressant, animal bedding and compost production. Waste crop foliage and culled plants, fruits, and vegetables can be composted to produce a soil amendment.

Preparation of Vegetative Debris Prior to Burning
Smoke can be reduced with proper preparation of the vegetative debris prior to burning. Wet or dirt-covered materials will smolder and create more smoke. Preparation methods can include removing excessive soil and rocks and loosely stacking materials to promote drying of vegetative debris. The size of the waste pile is also an important factor, as material in smaller piles will burn more efficiently reducing the time required to achieve complete burning of the debris.

Consideration of Weather Conditions
Open-air burning conducted during good atmospheric dispersion conditions will result in reduced concentrations of smoke at ground level. Good atmospheric conditions are defined by the ventilation index produced by Environment Canada, which identifies how quickly and effectively the smoke will clear out of an area. The BC Ministry of Environment and Climate Change Strategy makes the ventilation index available each day as well as a forecast for the next day. Additionally, Metro Vancouver’s open burning advisory phone line provides callers with a message indicating whether or not ventilation conditions are favourable for conducting open-air burning activities.

Available Emission Control Technologies
A number of emission control technologies can also reduce smoke.

Air Curtain Technology
Air curtain technology burns vegetative debris in a partially-enclosed space with an open top over which a high-speed flow (or ‘curtain’) of air is directed. The partially-enclosed space can be an above-ground, self-contained unit or an excavated trench. The curtain of air has the effect of providing additional oxygen to the fire, raising the burning temperature and also trapping the smoke. The result is almost a smokeless burning activity, with a nearly complete combustion of all emissions.
Forced Air Assistance
 Forced air assistance devices, such as a blower fans, improve air flow and increase burning temperatures, resulting in more complete combustion and thereby reducing smoke emissions.

GUIDING PRINCIPLES
 A regulatory strategy to address smoke emissions from open-air burning in Metro Vancouver would aim to:

- Reduce regulatory burden by simplifying the process for obtaining authorization of emissions from appropriate types of open-air burning;
- Minimize the risk to public health, the local environment, and the global climate from emissions of smoke;
- Promote alternatives to the use of open-air burning as a disposal method;
- Require the use of best management practices so that smoke emissions are reduced in circumstances where open-air burning activities are authorized; and
- Recover regulatory program costs in an effective, fair, and efficient manner.

WORKING WITHIN THE LEGISLATION
 Provisonal Regulation
 The BC Open Burning Smoke Control Regulation (OBSCR), a regulation under the Environmental Management Act, places restrictions on open-air burning and makes allowances for certain exemptions. OBSCR uses the term “vegetative debris” to refer to vegetative waste. This provincial regulation was recently updated and the amendments, effective September 15, 2019, now stipulate the following:

- only vegetative debris can be burned;
- vegetative debris targeted for disposal must be open burned within a 5 km radius of where it originated;
- the amount of vegetative debris to be open-burned must be minimized by reducing, reusing or recycling waste materials targeted for disposal;
- specific conditions are outlined for open-air burning in three smoke sensitivity zones that are identified as high, medium and low smoke sensitivity zones;
- the entire Metro Vancouver region has been designated as a high smoke sensitivity zone;
- a list of prohibited materials is included;
- minimum distances are required between open-air burning and sensitive receptors (such as neighboring residences and businesses, hospitals, schools, daycares and long-term care facilities;
- smoke emissions from open-air burning must not cause a navigation hazard at nearby airports or highways by significantly reducing visibility;
- weather conditions under which burning can take place are specified through ventilation index requirements;
the frequency of burning on a site within a high smoke sensitivity zone is limited;
• special allowances are included for the burning of diseased vegetative debris and open-air burning for community wildfire risk reduction;
• the only requirements that apply when burning vegetative debris smaller than 10 centimeters in diameter and greater than 3 centimeters in diameter are the restriction against burning prohibited materials and the restriction to conduct open burning of material within a 5 km radius of where it originated; and
• the burning of vegetative debris is exempted from the regulation’s requirements if all the branches or other pieces of vegetative debris are less than 3 centimeters in diameter; and
• the open burning of vegetative debris is prohibited during periods of degraded air quality or during imposed burn bans.

Metro Vancouver regulatory requirements in any bylaw concerning open-air burning of vegetative debris would be additional to provincial OBSCR regulatory requirements.

**Metro Vancouver’s Regulatory Jurisdiction and Approval Process for Open-Air Burning**

Under Section 31 of the Environmental Management Act (EMA), Metro Vancouver has the delegated authority for air pollution control and air quality management within the Metro Vancouver region, including industrial and agricultural land. EMA states that the Metro Vancouver Board “may, by bylaw, prohibit, regulate and otherwise control and prevent the discharge of air contaminants.”

Under Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 (Bylaw 1082), Metro Vancouver exercises its air quality regulatory authority with a system of permits and approvals that apply to individual facilities and emission regulations that apply to types of operations and activities with similar characteristics. Metro Vancouver can be more restrictive in implementing a regional emission regulation than what is required by provincial law, but cannot be less restrictive. Currently, Metro Vancouver does not have an open-air burning emission regulation but authorizes such activities using the approval process under Bylaw 1082.

Bylaw 1082 prohibits the disposal of waste by burning or incineration unless the discharge is conducted strictly in accordance with a permit, approval, order, or an emission regulation issued or adopted by Metro Vancouver, or unless the burning activity is exempted from the prohibition. In relation to the open-air burning of vegetative debris, Bylaw 1082 provides a number of exemptions for fires or burns conducted in compliance with the Weed Control Act, the Wildfire Act and Fire Services Act to control the spread of noxious weeds, to carry out fire hazard abatement activities, or for fire services training purposes. Discharges of smoke from non-exempt open-air burning activities are required to be authorized beforehand, and the current mechanism for authorization is via the issuance of an approval.

Ensuring comprehensive regional compliance with Bylaw 1082 requirements with respect to open-air burning activities is a significant demand on Metro Vancouver resources. It is labour-intensive to issue, administer and enforce site-specific approvals. Additionally, significant resources are allocated
to support programs that provide for education and outreach on open-air burning requirements. For example, Metro Vancouver staff met with agricultural advisory committees and member municipalities in 2018 and 2019 to build awareness and promote compliance with Bylaw 1082 open-air burning requirements. As a result of this educational outreach campaign, Metro Vancouver has received a substantial increase in submissions of open-air burning approval applications.

Feedback received from some applicants indicate they find the process of obtaining an approval to be complicated, time-consuming and costly. Efforts have been made to simplify the application process and reduce processing times in response to this feedback. An emission regulation would aim to reduce regulatory burden by authorizing open-air burning activities that meet all specified requirements, so these activities would not need to obtain a site-specific approval. In cases where the regulation requirements cannot be met or relaxation of certain requirements is sought, such as the relaxation of ventilation index requirements, the emissions from open-air burning events would need to be authorized under an approval.

Municipal Bylaws
Metro Vancouver municipalities have bylaws that include conditions on open-air burning activities, but these are primarily focused on establishing fire control and safety within their jurisdictions, rather than on health or air quality effects. Variations among the municipal bylaws throughout the region have resulted in a lack of consistency in open-air burning practices and reporting.

Path Forward
All the above listed regulatory tools from various levels of government support Metro Vancouver’s regional management of smoke emissions from open-air burning. However, gaps exist, because these regulatory measures include variations in restrictions and exemptions. This paper contemplates an alternative regulatory mechanism to reduce smoke emissions from open-air burning in Metro Vancouver in order to minimize impacts on air quality, health, and the environment.

PROPOSED REGULATORY APPROACHES
Metro Vancouver is seeking preliminary input from stakeholders representing different perspectives to inform the development of policies to manage smoke emissions from open-air burning of vegetative debris. At this time, Metro Vancouver seeks input on the following potential policy options to establish general requirements for open-air burns by means of an emission regulation:

**Policy Options for General Requirements in an Emission Regulation for Open-Air Burning of Vegetative Debris:**

Preparing to Burn
- Requiring that every reasonable alternative for reducing, reusing or recycling vegetative debris has been pursued to minimize the amount of material to be open-burned;
• Requiring any person who is planning an open-air burning activity of vegetative debris to register their name and property address with Metro Vancouver. An initial registration and annual registration are envisioned, and registration will entail a fee for recovery of regulatory costs;
• Requiring any person who is planning an open-air burning activity of vegetative debris to do so only when Metro Vancouver reports the ventilation index to be favourable through its daily open burning phone message;
• Allowing for the relaxation of certain requirements related to open-air burning, such as ventilation index conditions, in cases where an air curtain incinerator that meets certain operating and performance conditions is used to control emissions, Metro Vancouver is notified at least two weeks in advance, and all other requirements of the bylaw are met;
• Restricting materials that can be burned to only vegetative matter generated on the site of the open-air burning activity;
• Prohibiting the use of accelerants such as diesel, gasoline or kerosene;
• Requiring that vegetative debris is prepared using measures to help clean and season the material to be burned;
• Requiring any person who will be conducting an open-air burning activity of vegetative debris to notify neighbours of pending burning activities;
• Requiring any person who will be conducting an open-air burning activity of vegetative debris greater than a certain defined size to notify Metro Vancouver in writing of pending burning activities; and
• Prohibiting open-air burning activities during periods of degraded air quality or when local or provincial fire bans have been declared.

Conducting Burns
• Restricting the timing, frequency, size, and duration of open-air burning activities that can occur on legally identified properties, such as restricting the start and end times of open-air burning activities to certain times of the day;
• Requiring a minimum distance of at least 500 m between the discharge of open-air burning emissions and neighboring residences and businesses;
• Requiring a minimum distance of at least 1000 m between the discharge of open-air burning emissions and hospitals, schools, daycares and long-term care facilities (sensitive receptors);
• Allowing for a reduction in the minimum distances between the discharge of open-air burning and neighboring residences and businesses and specified sensitive receptors if certain conditions are met such as limiting the size and number of piles of vegetative debris targeted for disposal, the maximum size of individual pieces of vegetative debris that can be open-air burned, and the maximum duration of the open-air burn;
• Requiring any person conducting an open-air burning activity to ensure the smoke emitted does not cause a navigation hazard at nearby airports or roadways by significantly reducing visibility;
• Requiring any person conducting an open-air burning activity to ensure the fire is attended at all times;
• Restricting the addition of vegetative debris to the fire in cases where smoke emissions are impacting neighbours or the surrounding environment; and
• Allowing for the continued exemption of discharges from open-air burning activities carried out under section 9 of the Wildfire Act for fire control purposes, resource management open fires conducted in accordance with the Wildfire Act, fires for training purposes as defined in the Fire Services Act or fires for weed control conducted in compliance with the Weed Control Act.

Record Keeping
• Requiring any person conducting an open-air burning activity that is required to be authorized through Metro Vancouver to keep records of information such as number and size of piles burned, estimated volume of debris, approximate drying time, venting conditions at ignition, date and time that burns were conducted, and burn registration number, if the person has a burn registration number issued under the Wildfire Regulation;
• Requiring any person conducting an open-air burning activity to ensure all compulsory records are kept on site and readily available for inspection during the duration of the burning event and are retained for a period of one year; and
• Requiring submission of records maintained by any person conducting open-air burning activities, if directed to do so by Metro Vancouver.

Policy Options for Requirements in Smoke Sensitivity Zones
High Smoke Sensitivity Zones
• Establishing “high smoke sensitivity zones” within the region that will align with the “high smoke sensitivity zones” and requirements established under OBSCR.

Areas with More Stringent Requirements
• Based on factors such as population density and topography, establishing areas with additional, more stringent requirements, such as:
  o Requiring the use of emission control equipment such as forced air assistance or air curtain technology; and
  o Setting more restrictive limits on the frequency and duration of open-air burning activities.
• This proposal will be refined in the first phase of consultation, and proposed zones will be depicted on a map of the region for the second phase of consultation.

PROPOSED ADMINISTRATION OF EMISSION AUTHORIZATIONS
The development of an emission regulation is intended to offer an alternative mechanism for authorizing emissions that is less resource-intensive for Metro Vancouver and easier for the regulated community than the current approvals process. Metro Vancouver’s objective is to recover program regulatory costs in a manner that is both fiscally responsible and fair to the regulated community.
Metro Vancouver is considering a potential fee structure under an emission regulation that could include an initial registration fee and annual registration fees. Metro Vancouver will also review the current approval application fee of $200 for open-air burning, with consideration to the potential harm of emissions.

PROVIDING FEEDBACK AND COMMENTS
Metro Vancouver is seeking feedback on the proposals outlined in this discussion paper to manage air emissions from open-air burning of vegetative debris, and will consider all input in the development of a potential emission regulation. The MVRD Board will receive a summary of the input received.

Metro Vancouver staff and contractors will treat comments received with confidentiality; however, please note that comments you provide and information that identifies you as the source of those comments may be publicly available if a freedom of information (FOI) request is made under the Freedom of Information and Protection of Privacy Act. If you have any questions or comments regarding the consultation process, please call 604-432-6200.

Metro Vancouver intends to hold a two-phase consultation process. For the first phase, Metro Vancouver invites you to provide feedback by December 9, 2019 by email to AQBylaw@metrovancouver.org or through consultation opportunities featured on Metro Vancouver’s website (search for “open-air burning consultation”). Following the initial consultation process, Metro Vancouver will consider options to address concerns and suggestions raised. Metro Vancouver then anticipates initiating a second phase of consultation to obtain feedback on refined proposals. All feedback received will be considered until the MVRD Board makes a decision on an emission regulation bylaw for managing emissions from open-air burning of vegetative debris.

Thank you for taking the time to provide input on potential regulatory proposals for managing emissions from open-air burning of vegetative debris.
STAKEHOLDERS, AUTHORITIES AND THE PUBLIC

Staff expect to engage with the public and the following stakeholders and authorities on a potential emission regulation for open-air burning of vegetative debris in Metro Vancouver:

- The public;
- Member jurisdictions;
- Local Indigenous communities;
- Agricultural producers;
- Agricultural advisory committees;
- Businesses involved in land development, construction and landscaping;
- Industry and industry associations;
- Professional organizations;
- Provincial, federal and other government agencies;
- Neighbouring jurisdictions; and
- Health agencies.

ENGAGEMENT PLAN

As with all Metro Vancouver outreach, engagement on a potential emission regulation for open-air burning of vegetative debris will be responsive. Based on feedback received, the engagement timeline may be extended or additional engagement activities may be identified to better reach target audiences.

The preliminary timeline for the engagement process is described below.

PHASE 1: Engagement on Discussion Paper: Proposals for Regulating Emissions from Open-Air Burning of Vegetative Debris in Metro Vancouver
November 2019 – February 2020

- **Workshops and webinars** structured as informational presentations and feedback sessions with:
  - agricultural producers in the region (approximately 4)
  - staff from Indigenous communities, member jurisdictions, neighboring jurisdictions and senior orders of government (approximately 4)
  - health agencies in the region (approximately 2)
  - industry associations and interested service associations (approximately 3)
• **Presentations and feedback sessions** at municipal agricultural advisory meetings in the region and agricultural association events (approximately 8)
• **Information booths at business and community events** (approximately 3)
• **Online feedback form**
• **Webinars** for the public (2)
• **Informational brochures** made available at public access points

**Compile Consultation Summary and Draft Refined Proposals for a Potential Emission Regulation for Open-Air Burning of Vegetative Debris in Metro Vancouver**

**March – April 2020**

**PHASE 2: Engagement on Refined Proposals for a Potential Emission Regulation for Open-Air Burning of Vegetative Debris in Metro Vancouver**

**May – July 2020**

Phase 2 engagement activities will be shaped by what is heard in Phase 1. Please note, most activities from Phase 1 are repeated in Phase 2 to ensure that all interested parties receive the refined proposals for a potential emission regulation for open-air burning of vegetative debris in Metro Vancouver and a summary of how Phase 1 feedback was considered.

• **Workshops and webinars** structured as informational presentation and feedback session with:
  - o agricultural producers in the region (approximately 4)
  - o staff from Indigenous communities, member jurisdictions, neighboring jurisdictions and senior orders of government (approximately 4)
  - o health agencies in the region (approximately 2)
  - o industry associations and interested service associations (approximately 3)
• **Presentations and feedback sessions** at municipal agricultural advisory meetings in the region and agricultural association events (approximately 8)
• **Information booths at business and community events** (approximately 4)
• **Online feedback form**
• **Webinars** for the public (3)
• **Informational brochures** made available at public access points
To: Climate Action Committee

From: Erik Blair, Air Quality Planner
Planning and Environment Department

Date: September 19, 2019

Meeting Date: October 18, 2019

Subject: Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings

RECOMMENDATION
That the MVRD Board write a letter to the Community Energy Association offering in-kind staff support to develop strategies to accelerate low-carbon building retrofits, as outlined in the report dated September 19, 2019, titled “Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings”.

PURPOSE
To provide the Climate Action Committee and MVRD Board with an update on the proposed building retrofit and decarbonization project described by the Community Energy Association to the Climate Action Committee at its May 17, 2019 meeting, and a recommended response to their request for funding and in-kind support.

BACKGROUND
At its May 17, 2019 meeting, the Climate Action Committee received a delegation from Patricia Bell, Head of Planning/Director of Education, Community Energy Association (CEA) titled “Emerging Climate and Energy Issues, and Strategies to Accelerate Building Retrofits in Metro Vancouver”. Ms. Bell described strategies to accelerate building retrofits in Metro Vancouver, and requested in-kind support (e.g., providing meeting space, participating in meetings) and funding for a new business model for decarbonization of existing homes, in the amount of $37,000 in 2020. The funding was requested to contribute to a multi-partner project seeking to increase the uptake of air source heat pumps in existing buildings in Metro Vancouver.

At its May 17, 2019 meeting, the Climate Action Committee adopted the following resolution:

That the Climate Action Committee direct staff to review the request from the delegation received at the May 17, 2019 meeting titled “Emerging Climate and Energy Issues, and Strategies to Accelerate Building Retrofits in Metro Vancouver”, and report back with an analysis and recommendation for consideration by the Climate Action Committee and MVRD Board.

In response to this direction, this report presents an assessment of the proposed building retrofit and decarbonization project, describes funding secured by CEA from external parties, and confirms the value of providing in-kind support.
DECARBONIZATION OF EXISTING BUILDINGS USING HEAT PUMPS

The CEA’s delegation summary (Attachment 1) and Ms. Bell’s presentation outlined the challenge that local governments are facing to reduce greenhouse gas (GHG) emissions from existing buildings. The delegation highlighted why the development of policies and programs to accelerate the uptake of air source heat pumps should be a priority action to reduce emissions from existing low-rise residential buildings (not exceeding 3 storeys and 600 m²):

- Existing residential buildings account for 20% of the region’s GHG emissions and low-rise homes represent 83% of all structures in Metro Vancouver.
- Homes heated by fossil fuels need to ‘fuel-switch’ to zero carbon alternatives at a rate of approximately 3% annually to meet Metro Vancouver’s climate targets.
- Hotter summers are already increasing the demand for air conditioning units in BC.
- An air-source heat pump provides an efficient, low-carbon option to heat and cool buildings, and can significantly reduce the total GHG emissions for a home heated with fossil fuel.
- Despite their benefits, heat pumps made up just over 3% of all heating systems in BC in 2015.

The delegation also described how current business models for increasing the uptake of heat pumps are complex and inconvenient for the consumer, which suppresses uptake. The main objective of CEA’s proposed project is to develop a new stakeholder-supported model that reduces the complexity and inconvenience for consumers, industry, utilities and government.

FUNDING SUPPORT FOR CEA

At the time of the delegation, Ms. Bell noted that CEA had received preliminary/conditional approval of funding from the Real Estate Foundation of British Columbia (REFBC) in the amount of $150,000 over 2019-2020, a commitment to provide in-kind support from five Metro Vancouver member municipalities (City of New Westminster, City of Richmond, City of Surrey, City of Vancouver and District of West Vancouver), and a UBC Sustainability Scholar. The delegation noted that additional partner funding was required in order to release the REFBC funding, and that they had applied for a grant from the Bullitt Foundation.

The CEA recently informed staff that they have received a Bullitt Foundation grant of $50,000, which would release the REFBC funding. The total funding secured for this project is now $210,000 in 2019-2020. Staff understand that this funding is sufficient to cover the costs of the first phase of the project, and that there is a possibility for renewed funding from both REFBC and Bullitt Foundation in subsequent years.

HEAT PUMP PROJECTS AND PROGRAMS IN METRO VANCOUVER

Metro Vancouver is among a group of local governments currently providing in-kind support to a BC Hydro-funded project led by the Township of Langley that aims to further understand the key barriers to the uptake of low-carbon retrofits for low-rise existing homes. The Township of Langley has retained a consultant to lead this work, which aims to better understand industry’s involvement in the home retrofit process, the resources required, and how to design a self-sustaining market for low-carbon retrofits. Due to the central importance of fuel switching for residential heating, the next phase of this project will be the development of a pilot program that packages one or more retrofit bundles for homeowners. It is highly likely that heat pumps will feature in these bundles.
Additionally, many local governments and other organizations, including CEA, are currently participating in a Heat Pump Coalition whose purpose is to identify specific challenges, opportunities and solutions to accelerate heat pump adoption. The Coalition aims to tackle specific barriers to the adoption of heat pumps and other low-carbon retrofits in existing buildings, and there is good coordination amongst participants to ensure that resources are being used effectively towards common goals. Staff will evaluate the early outcomes of Coalition members’ projects and potential implications for the CEA project.

Staff feel that there is good alignment between these heat pump initiatives and the CEA project, and the potential for mutual learning. Given that the CEA has received additional funding since their request through the Climate Action Committee in May 2019, staff are recommending that Metro Vancouver provide in-kind support for the proposed CEA project in the form of meeting space and expertise, but decline the request for direct funding in 2020.

**LINKS TO CLIMATE 2050 BUILDINGS ROADMAP**

The conversion of heating systems in buildings from fossil fuel to low or zero carbon alternatives has been identified as a critical focus in the *Climate 2050-Clean Air Plan* Buildings Discussion Paper. Heat pumps are a market-ready solution for buildings to reduce greenhouse gases. Staff will work with CEA and other stakeholders to determine how the initiatives that have been described in this report will support the implementation of the *Climate 2050 Buildings Roadmap*.

**ALTERNATIVES**

1. That the MVRD Board write a letter to the Community Energy Association offering in-kind staff support to develop strategies to accelerate low-carbon building retrofits, as outlined in the report dated September 19, 2019, titled “Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings”.

2. That the MVRD Board receive for information the report dated September 19, 2019, titled “Community Energy Association Funding Request to Accelerate Air Source Heat Pump Uptake for Existing Buildings”, and provide alternate direction to staff.

**FINANCIAL IMPLICATIONS**

The Community Energy Association has requested that Metro Vancouver provide $37,000 in 2020 and in-kind support in 2019 and 2020 to support this initiative. If Alternative 1 is approved, funding would not be provided to CEA for the proposed project, as the CEA has secured sufficient funding to proceed with the proposed project. However, staff would provide in-kind support including meeting space and staff resources to support the project in an advisory capacity during 2019 and 2020. The in-kind support has an estimated value of $4,500 and can be accommodated with existing staff resources.

Under Alternative 2, the Committee may wish to provide alternate direction to staff on the level of involvement Metro Vancouver has in the CEA initiative. The funding requested by the CEA for 2020 has not been included in the 2020 Air Quality budget.
SUMMARY / CONCLUSION
In May of 2019, the Climate Action Committee received a delegation from the Community Energy Association (CEA) outlining the importance of increasing heat pump retrofits to decarbonize existing buildings to meet local, regional and provincial greenhouse gas reduction targets. CEA requested that Metro Vancouver contribute funding to a multi-partner project seeking to increase the uptake of heat pumps in homes in the region. Since their delegation, CEA has confirmed that they have received sufficient funding from REFBC and Bullitt Foundation to proceed with the project, as well as a UBC Sustainability Scholar and in-kind support from five Metro Vancouver member jurisdictions.

Staff recommend Alternative 1, to direct staff to continue to provide in-kind support to this project, but decline the request for funding. Staff are already involved in work to support innovative solutions for low-carbon building retrofit programs, which support near-term GHG reductions, while also informing the development of the *Climate 2050 Buildings Roadmap*. Under Alternative 1, staff would continue to work with CEA in an advisory capacity, provide meeting space for this project, and coordinate amongst other project leaders who are focused on low-carbon retrofit policy and program development for existing buildings.

Attachment
Introducing Community Energy Association

Community Energy Association (CEA) was founded in 1995 by the Province and UBCM as a committee to help BC local governments prepare energy plans for their community. CEA became a non-profit society with charitable status in 2004. Since beginning operation, our services have grown to help local governments with implementing both corporate and community plans, including helping implement new energy efficient building standards, measuring progress on existing energy and emission plans, designing and delivering rural electric vehicle charging networks and preparing energy-related studies. We have worked with around 60% of all municipalities in BC. In recent years, our work has taken us to the Yukon and Alberta, as well as working with cross-Canada organizations like Quality Urban Energy Systems for Tomorrow (QUEST) on national level projects like Getting to Implementation. We also:

- support local government leadership through our BC Municipal Climate Leadership Council,
- recognize achievement through the Climate & Energy Action Awards,
- have designed and currently deliver the Certificate in Community Energy Management courses offered through BCIT,
- are Federation of Canadian Municipalities’ Regional Climate Facilitator for BC and the Yukon, and
- are beginning to work with aboriginal communities in BC on energy planning and efficiency projects.

Thank-you for Metro Vancouver’s Support

CEA is in part supported by a membership base which includes over 30 BC municipalities (including several within Metro Vancouver), Union of BC Municipalities, Federation of Canadian Municipalities, BC energy utilities and transportation agencies, related institutes and foundations and private sector entities that share our goals. Metro Vancouver has been a member since 2013. Your support is important for achieving our mission and is much appreciated. We support our members through quarterly membership meetings where members share progress, ask questions and receive presentations on pertinent subjects.

The Problem

BC local governments are still struggling to reduce GHG emissions from existing buildings. Air source heat pumps are a viable solution in Metro Vancouver, yet uptake is inappropriately low. There are a number of compelling reasons to accelerate the uptake of heat pumps in Metro Vancouver:

- Existing residential buildings account for 20% of the regions GHG emissions and existing Part 9 buildings (including single-family homes, attached dwellings, townhouses and low-rise (fewer than five storeys) apartments) account for 83% of all structures (around 800,000 in total) in Metro Vancouver.
- Achieving climate targets require a fuel-switching rate of approximately 3% annually for all existing buildings heated by fossil fuels (most buildings in Metro Vancouver).
- Annual energy demand to heat buildings in BC is decreasing while cooling requirements are increasing. The greatest increase in cooling requirements has been in the southern part of BC, which has experienced an increase of 25 cooling degree-days in the last 100 years. Warmers summers have led to increased demand for air conditioning units.
- An air-source heat pump provides an efficient and renewable way to heat and cool buildings. Using a heat pump can reduce a typical home’s GHGs by up to 6 tonnes per year while providing significant financial savings.
Heat pumps are ideally suited to the mild Metro Vancouver climate. Yet, according to Natural Resources Canada, in 2015, heat pumps made up just over 3% of heating systems in BC. This is despite the fact that heat pumps provide significant benefits over natural gas heat.

**The current “model” for achieving heat pump retrofits is consumer driven.** Even with incentives in place, consumers must:

- Research the benefits of heat pumps and develop an understanding of how they work and what level of performance is expected
- Identify the requirements and process to qualify for any available utility, provincial or municipal incentives
- Ensure availability of personal funds to support the retrofit (savings or loan)
- Consult with private sector service providers on available equipment and costs
- Occasionally debate the value of a heat pump with service providers who are unknowledgeable or not interested in selling, installing and servicing equipment they are unfamiliar with
- Purchase equipment and arrange for appropriate permits and installation
- Be available in the home on installation day
- Complete any related pre and post energy audits or other requirements associated with receiving an incentive
- Finalize incentive application processes

Short-term provincial and federal retrofit incentives and the existing consumer driven business model have not delivered the sustained level of activity needed to reduce emissions from existing buildings. How can we make this process easier?

**Seeking a Solution**

We have planned a two-year process (2019-2020) to research, consult and test a new approach to supporting an on-going heat pump retrofit rate that will have the necessary impact on GHG emission reductions from existing buildings. We will consult with local governments, utilities, heating system retailers and installers, the Province of BC, professional organizations and other stakeholders to identify a solution. The consultation will be open to all ideas, based on research on successful initiatives elsewhere in Canada and the US, with an intention to create a viable and stakeholder-supported model that can be tested in Metro Vancouver, then expanded to the rest of the Province. When a new approach is agreed upon, it will be tested with participating municipalities. We will measure results and make recommendations to scale the project to the provincial level.

We currently have support from the Real Estate Foundation of BC ($150k), in-kind support from five Metro Vancouver municipalities, and a UBC sustainability scholar beginning research. We have a grant application in process with Bullitt Foundation ($200k).

**We are asking Metro Vancouver to support the project through in-kind contributions (providing meeting space, participating in meetings) in 2019 and through project funding of approximately 18% of total project costs ($37,000) in 2020. Metro Vancouver will receive quarterly project reports to help inform climate action in the region and will have the opportunity to use any materials generated by the project in your own programs.**
To: Climate Action Committee

From: Marcin Pachcinski, Division Manager, Electoral Area and Environment Planning and Environment Department

Date: October 7, 2019

Meeting Date: October 18, 2019

Subject: Atl’ka7tsem/Howe Sound Biosphere Region – UNESCO Nomination

RECOMMENDATION
That the MVRD Board:
a) endorse the nomination of Atl’ka7tsem/Howe Sound as a UNESCO biosphere region; and
b) authorize the Corporate Officer to sign the nomination form on behalf of Metro Vancouver.

PURPOSE
To seek consideration and endorsement of the nomination of Atl’ka7tsem/Howe Sound as a United Nations Educational, Scientific and Cultural Organization (UNESCO) biosphere region by the Climate Action Committee and MVRD Board.

BACKGROUND
At its July 28, 2017 regular meeting, the MVRD Board adopted the following resolution:

That the MVRD Board support, in principle, the ongoing initiative to nominate Howe Sound/Atl’kitsem as a UNESCO biosphere region.

The Howe Sound Biosphere Region Initiative Society is nearing completion of the nomination document for the Atl’ka7tsem/Howe Sound biosphere region and for this reason is now seeking local government support, including from Metro Vancouver, which acts as the local government for lands in Howe Sound that are within Electoral Area A.

The three Metro Vancouver local governments with lands in Howe Sound (Bowen Island, Village of Lions Bay, and the District of West Vancouver) have recently confirmed their support for this nomination, as have the Island Trust, the Sunshine Coast Regional District, and the Squamish Lillooet Regional District.

UNESCO BIOSPHERE RESERVES
United Nations Educational, Scientific and Cultural Organization (UNESCO) biosphere reserves are areas comprising terrestrial, marine and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use. There are 701 biospheres worldwide, including 18 in Canada, and two in BC: Clayoquot Sound Biosphere Reserve and Mount Arrowsmith Biosphere Reserve, both on Vancouver Island. Additional information on UNESCO biosphere reserves is provided in Reference 1.
ATL’KA7TSEM/HOWE SOUND BIOSPHERE REGION
The Howe Sound Biosphere Region Initiative Society has provided the vision, mission, objectives, and proposed governance and funding information below in support of this nomination request. Additional information on the initiative is provided in Reference 2.

Vision
To see all communities within the Atl’ka7tsem/Howe Sound Biosphere Region living sustainably within a healthy ecosystem that has a diversified economy and vibrant cultures as well as ongoing advantages associated with UNESCO designation.

Mission
To work collaboratively toward the Vision by providing logistic support for research, education and training that not only promotes biodiversity conservation within both water-based and land-based environments but also promotes sustainable development of the economy with high priority on social and cultural values as well as environmental values.

Objectives
1. To advance biodiversity conservation in the region’s marine and terrestrial ecosystems.
2. To advance sustainable development in line with the UNESCO’s Man and the Biosphere Program priorities and the UN’s Sustainable Development Goals.
3. To advance reconciliation in recognition of UNDRIP, the UN Declaration on the Rights of Indigenous Peoples that enshrines the rights of the world’s indigenous peoples in terms of their survival, dignity and well-being.

Proposed Governance Structure
Atl’ka7tsem/Howe Sound Biosphere Region Initiative Society will be a registered charitable organization committed to creating and operating in a culture of “Ethical Space” as defined by the Canadian Biosphere Reserves Association:

> It is the natural confluence of Indigenous and non-Indigenous worldviews and cultures. It is created through relationship building and shared governance. At a societal level, it is a vision of a future where these worldviews come together, and where both are valued equally.

Board of Directors
An eight to ten member Board will be accountable to the UNESCO Man and the Biosphere Program, the Canadian Biosphere Reserve Network, and for strategic planning and direction of the Atl’ka7tsem/Howe Sound biosphere region. The Board will be Co-Chaired by one being elected by members, the other reserved for a Squamish Nation member. Board members have a deep understanding and commitment to the Man and the Biosphere Program and UNESCO. Members represent First Nations, academia, industry, science, NGOs, civil society, and business. Board members are spokespersons for the Society, contributing time and resources.
Roundtable Group
Ten to fifteen participants from the Region representing local government, Squamish Nation, Provincial government, Fisheries and Oceans Canada, industries, Social services, Science, Conservation organizations, Tourism association. Meeting a minimum of twice a year, the Roundtable group act as advisors and build consensus in the region towards the objectives and will be guided by the Terms of Reference.

Staff and Volunteers
The Executive Director reports to the Board of Directors. The Executive Director holds the strategic and operational responsibilities required to achieve Atl’ka7tsem/Howe Sound biosphere region’s mission. Additional staff will be hired as projects and funding allows. Volunteers will be a critical part of the AHSRBR’s day-to-day functioning and overall success.

Proposed Funding
Long term sustainable funding for staffing and overheads will be derived from a Howe Sound Biosphere Region Endowment Fund. Other funding will be sourced from consulting fees, crowd source funding for specific projects, and grants from various sources.

IMPLICATIONS FOR METRO VANCOUVER
Support from Metro Vancouver for this initiative would aid the effort to obtain the necessary federal nomination for this designation. Biosphere reserves are nominated by national governments and their status is internationally recognized. No changes to local government responsibilities or governance are introduced with the designation.

According to the UNESCO website (Reference 1), biosphere regions have three interrelated zones that aim to fulfil three complementary and mutually reinforcing functions: core areas that protect ecosystems, buffer zones that allow for uses compatible with the core areas, and transition areas that allow for a variety of activities. The proposed biosphere designation is not anticipated to impact Metro Vancouver core functions or work programs.

ALTERNATIVES
1. That the MVRD Board:
   a) endorse the nomination of Atl’ka7tsem/Howe Sound as a UNESCO biosphere region; and
   b) authorize the Corporate Officer to sign the nomination form on behalf of Metro Vancouver.

2. That the MVRD Board receive for information the report dated October 7, 2019, titled “Atl’ka7tsem/Howe Sound Biosphere Region – UNESCO Nomination” and provide alternate direction to staff.

FINANCIAL IMPlications
No financial implications are associated with the recommendation to endorse the nomination of Atl’ka7tsem/Howe Sound as a UNESCO biosphere region. If the biosphere region nomination is successful, it is possible that a request for short- or long-term funding will be made of Howe Sound local governments, including Metro Vancouver.
SUMMARY / CONCLUSION

Biosphere regions/reserves are areas of terrestrial and coastal/marine ecosystems that are internationally recognized within the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) Man and the Biosphere Program.

The Howe Sound Biosphere Region Initiative Society is nearing completion of the nomination document for the Alt’ka7tsem/Howe Sound biosphere region and is therefore seeking support from area local governments, which includes Metro Vancouver. The three Metro Vancouver member jurisdictions with lands in Howe Sound (Bowen Island, Village of Lions Bay, and the District of West Vancouver) have recently confirmed their support for this nomination.

The key objectives of the Alt’ka7tsem/Howe Sound biosphere region are to advance biodiversity conservation, sustainable development, and reconciliation. No changes to local government responsibilities or governance are introduced with a biosphere region designation, and there are no financial implications associated with the nomination, but it is possible that a future request for short- or long-term funding will be made if the biosphere region nomination is successful. Staff recommend Alternative 1.

References
1. UNESCO Biosphere Reserves/Regions
2. Atl’ka7tsem/ Howe Sound Biosphere Region

33048617
To: MVRD Board of Directors

From: Chris Plagnol, Corporate Officer, Board and Information Services

Date: October 18, 2019

Meeting Date: November 1, 2019

Subject: Metro Vancouver External Agency Activities Status Report - November 2019

RECOMMENDATION
That the MVRD Board receive for information the following reports from Metro Vancouver representatives to external organizations:

a) Municipal Finance Authority;
b) Sasamat Volunteer Fire Department Board of Trustees;
c) Delta Heritage Airpark Management Committee;
d) Pacific Parklands Foundation;
e) Union of British Columbian Municipalities; and
f) Fraser Basin Council Society,
as presented in the report dated October 18, 2019, titled “Metro Vancouver External Agency Activities Status Report - November 2019”.

PURPOSE
To update the Board on the recent activities of external agencies to which representatives have been appointed.

BACKGROUND
Each year the Board appoints representatives to various external organizations. In accordance with the Board’s External Agency Appointee Reporting Requirements policy, appointees are required to provide the Board semi-annually (May and October) with written summaries of key current and planned activities of the external agency to which they have been appointed.

Reports outlining the recent activities of the various external agencies are attached for the board’s information.

Attachments:
A. External Agency Status Report for Municipal Finance Authority of BC, dated October 3, 2019
B. External Agency Status Report for Sasamat Volunteer Fire Department Board of Trustees, dated October 13, 2019
C. Delta Heritage Airpark Management Committee Status Report, dated September 4, 2019
D. Pacific Parklands Foundation Update from May 1, 2019 to September 30, 2019, dated September 19, 2019
E. External Agency Status Report for UBCM, dated October 16, 2019
F. External Agency Status Report for Fraser Basin Council Society, dated October 17, 2019
To: MVRD Board of Directors

From: Malcolm Brodie, Linda Buchanan, Jonathan Coté, Jack Froese, George Harvie, Mike Hurley, Doug McCallum, Kennedy Stewart, Richard Stewart, Brad West

Date: October 3, 2019

Subject: External Agency Status Report for Municipal Finance Authority of BC

RECOMMENDATION
That the MVRD Board receive for information the report dated October 3, 2019, titled “External Agency Status Report for Municipal Finance Authority of BC”.

PURPOSE
To report to the Board of Directors on the activities of the Municipal Finance Authority of British Columbia (“MFA”).

BACKGROUND
The following is a summary of activities of the MFA for the period of May 2019 to September 2019.

Governance
Representation from every community in British Columbia is provided through our 39 Members from 28 regional districts and our 10-member Board of Trustees.

Since our Annual General Meeting on March 28, 2019, the Board of Trustees has met three times.

The Investment Advisory Committee, comprised of all Trustees, has also met two times. The purpose of these meetings was to receive reports from our pooled investment fund manager, Phillips, Hager & North, and to update investment guidelines and program offerings. PH&N reports to the Committee on fund positioning and performance, investment management processes, and portfolio compliance.

A newsletter was sent out to all members in May 2019, providing an update on MFA activity and financial results from the Chair and Vice-Chair.

Results from Operations – Six Months 2019 vs Budget
The annual budget was reviewed by the Board of Trustees on March 12th, 2019, and approved by the Members at the Annual General Meeting on March 28th, 2019. The annual budgeted operating revenue is $6.49 million and expenditures $3.51 million for a projected profit of $2.98 million. The results for the 1st half of 2019 show a net profit of $1,141,185 and is negative to budget by $9,945. Revenues are down $265,772, which is attributed to lower overall participation levels in pooled investment funds than expected. Expenditures are favorable by $255,827.

The retention fund for the first half of the year is favorable to budget by $543,819 and has a balance of $77.0 million at June 30, 2019.
Financing
Since our spring issuance in April of 2019, we issued two new debentures in the marketplace.

On May 21 2019, we issued a new 5-year debenture (2.15% due June 2024) to refinance $800 million which funded the maturity of two debentures; June 2, 2019 2.05% & June 3, 2019 4.875%. The issue was oversubscribed and well diversified between 60 investors of which 20 were new buyers. This transaction was the largest ever single-tranche municipal offering.

The day following our Semi-Annual Meeting on September 24, 2018, we launched our fall issue. $235 million was raised through the re-opening of our existing October 2029 debenture at a yield of 2.116% to fund new loans requests approved at the meeting. The issue was 1.8x oversubscribed and well diversified between 33 investors and attracted 10 new buyers to the 10-year borrowing program.

More generally, the MFA continues to achieve lower interest rates when compared to all other municipal participants in the bond market across Canada. This reflects our triple A credit ratings and the strength of local government throughout BC. We are able to lend to all our members at the same low rate, regardless of the size of each community we serve in BC.

The short-term borrowing program currently has $600 million in commercial paper outstanding (vs. a $700 million limit) and remains highly sought out by investors. Notwithstanding the strong investor demand for MFA commercial paper, management has indicated that it will look to reduce the outstanding commercial paper balance by $100 million prior to the end of Q1 2020, bringing the outstanding amount down to $500 million. Given lower than expected short-term loan utilization by its Members, MFA management views the reduction in outstanding commercial paper as a prudent step in reducing the Authority’s overall financial risk profile.

Monies raised through the issuance of commercial paper are used to fund loans under our short-term and equipment finance programs. The current lending rate is 2.46%. As of September 30, 2019, we had 109 outstanding short-term loans totaling $260.67 million and 288 Equipment Financing loans totaling $34.76 million.
Pooled Investment Funds

<table>
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<th>Change</th>
<th>1 Year Returns at August 31, 2019</th>
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<td></td>
<td>$ millions</td>
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<td>Funds</td>
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<tr>
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<td>-67</td>
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<tr>
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<td>871</td>
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<td>2,771</td>
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</table>

** Current Rate on CIBC and NBC PHISA’s are 2.46% and 2.47%, respectively.

We would note that the recent (over last few months) quick reversal of rates (back to all-time lows in interest rates) which reflects global market uncertainty about future growth prospects, has made cash management challenging for local government reserves managers.

**Pooled Mortgage Fund**

We are moving ahead with the launching of our fourth pooled fund product in October – the MFA Pooled Mortgage Fund. The fund would offer a pickup in yield to the MFA Bond Fund with historically very little incremental credit risk. The trade-off is relative lack of liquidity, so it would only be suitable for investors who understand that only a portion of “long term” reserves should be invested in the product.

**Pooled Investment Fund Advisory Committee to Management**

In an effort to continuously improve our pooled fund investment offerings, MFA has recently created a Pooled Fund Advisory Committee comprised of ten local government clients. The Committee will meet four times per year and provide management with ideas, feedback and advice on our pooled funds. More specifically, the mandate of the Committee includes:

- Reviewing performance of existing pooled funds;
- Advising on operational improvements on our pooled funds;
- Advising on the creation of new funds;
- Exchanging ideas and leveraging our cooperative structure to get more from investment service providers; and
- Reporting on relevant recommendations/findings from the group to the Investment Advisory Committee of the Board or the Board of Trustees.

Committee members were chosen for two-year terms through an application process over the summer and comprise the following members:

**Stephen Banmen**, General Manager, Finance, Regional District of North Okanagan

**Rob Clark**, Strategic Financial Analyst, City of Prince George
Investor Relations
Management continues to actively promote our credit story to institutional investors around the world. Investor development meetings are done in various formats, including one-on-one teleconference calls, one-on-one meetings, and group presentations. Investor development is a critical component in differentiating MFA and achieving continuous access to the markets and the lowest cost of funds from among our peers.

We have outlined our most important investor development events for 2019 below.

**BMO Annual Government Finance Conference**
We presented to a large group of institutional investors at the BMO Annual Government Finance Conference in Toronto and Montreal in May.

**National Bank Financial BF Municipal Investor Conference**
We have participated in a presentation to a group of Canadian fixed income investors in Toronto in September.

**CIBC Government Finance Conference**
We will be participating in a presentation to a group of Canadian fixed income investors in Vancouver in December.
Bloomberg Canadian Fixed Income Conference
We will be making multiple presentations to investors in New York and Washington, DC in October of this year.

Credit Ratings
Annual credit rating presentations were held in Richmond in April 2019.

Our AAA credit ratings with stable outlooks were since reaffirmed by all three ratings agencies – Standard and Poor’s, Moody’s, and Fitch. Our Commercial Paper program was also reaffirmed at the highest ratings available.

MFABC Adopts Capital Adequacy Policy
In September of this year, MFABC Trustees approved a newly developed capital adequacy policy. This policy and associated framework will formally guide management on how to manage its capital in the future.

As we have discussed over the last few years, in their efforts to bring consistency to their credit rating models post the 2007/8 financial crisis, the rating agencies have been increasingly viewing MFABC as a financial institution providing financial services to the local government sector. Historically, they have focused more on our “government-like” characteristics including our taxation ability as a basis for our strong AAA credit ratings. Viewed as a financial institution, MFABC’s “on-balance-sheet” capital position becomes a critical component supporting our ratings.

On-balance sheet capital for financial institutions is a formal requirement of financial regulatory bodies around the world. Capital is needed to absorb credit or other losses at the financial institution and therefore provide protections to retail customers and more broadly to the financial system. Capital requirements have been significantly strengthened by regulators post the 2007/8 crisis as they want to avoid the possibility of financial contagion in the future and another government-led bailout of the financial system.

While MFABC is not a regulated entity, most of the local government funding agencies that exist around the world (about 10 of them) are subject to those regulatory requirements. As a result, and given that rating agencies must apply standardized models to assess the relative risks between institutions, management and the Trustees viewed it prudent to self-impose similar requirements to MFABC’s operations. A number of years ago Trustees halted distributions of the Strategic Retention Fund to Members in anticipation of approving a Capital Policy. This was an important signal to the rating agencies and the market. In effect, we indicated to our capital market participants (investors, banks, dealers, rating agencies) that MFABC’s Strategic Retention Fund is an important and (possibly) permanent component of our risk capital held for the benefit of the organization and bondholders, and is to be used in the event of unexpected credit or operational losses.

On September 10, the Trustees formally adopted our capital adequacy policy and framework (collectively “the model”). The model was structured on the same principals as OSFI (Office of the Superintendent of Financial Institutions) guidelines for Canadian Chartered banks and is comparable to the approaches taken by MFABC’s international peers. The model calls for MFABC to target a Leverage Ratio of Total Capital to Total Assets of 2% (versus 3% for a Canadian Chartered Bank) and
a Capital Adequacy Ratio (Total Capital / Risk Weighted Assets) of between 9% and 11% (versus 14% to 16% for large global banks) and a Liquidity Ratio of 1.0 x (maintain enough liquidity to service a full year of interest expense). The model is quite complex and has a lot of moving parts, but it effectively looks at all the major risks faced by MFABC (credit, operational, market, liquidity, investment and refinancing risk) and assigns capital to defray those risks.

Based on the policy, MFABC is targeting a minimum on-balance sheet capital of $185 million while it currently holds $181 million of capital. As MFABC continues to be profitable from operations, that target should be achievable over the coming few fiscal years.

**Annual General Meeting**
The Annual General Meeting and Financial Forum event is set to take place in Victoria on March 25 and 26, 2020. As MFABC will be celebrating its 50th year in 2020, the Board of Trustees have approved an increased budget for the AGM/Financial Forum event to showcase and celebrate our successes over the past 50 years and look to the future of the organization. We will be hosting a formal gala dinner on March 25 to replace our traditional reception and will organize special conference sessions to commemorate our milestone anniversary.

**ALTERNATIVES**
This is an information report. No alternatives are presented.

**FINANCIAL IMPLICATIONS**
There are no financial implications.

**SUMMARY / CONCLUSION**
The MFA Annual Meeting of members will be held on the afternoon of Thursday, March 26, 2019 in Victoria.
To: MVRD Board of Directors
From: Darrell Penner, Alternate Director
Date: October 13, 2019  Meeting Date: September 19, 2019
Subject: External Agency Status Report for Sasamat Volunteer Fire Department Board of Trustees

RECOMMENDATION
That the MVRD Board receive for information the report dated October 13, 2019, titled “External Agency Status Report for Sasamat Volunteer Fire Department”.

PURPOSE
To report to the Board of Directors on the activities of the Sasamat Volunteer Fire Department.

BACKGROUND
Board policy requires the reporting of activities twice annually in May and October.

KEY ACTIVITIES
A report dated September 12, 2019 from Greg Smith, Chief Technology Officer, Corporate Services, Metro Vancouver, presenting the 2020–2024 Financial Plan to the Sasamat Fire Protection Service for consideration by the Sasamat Volunteer Fire Department Board of Trustees.

Trustees were provided with a briefing of the 2020-2024 Financial Plan highlighting the annual budgets, the performance indicators contained in the 2020 work plan and the 2022-2024 “What’s Happening” report.

In the 2020 budget, $600,000.00 was added for apparatus acquisition being funded by reserves. Also noted, was the increase to the budget in 2023 forward for the addition of a salaried Fire Chief. Noted was a working group is being struck separate from the Board of Trustees for both the review of the Fire Halls and the full time Fire Chief.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no unplanned/unbudgeted financial implications associated with these activities to-date.

SUMMARY / CONCLUSION
The Sasamat Fire Department Board of Trustees continues to oversee the planning, budgeting, and operation of the fire department through regular meetings and ongoing communication with the Fire Chief and Metro Vancouver SSEM staff.
To: MVRD Board of Directors

From: Director Lois E. Jackson

Date: September 4, 2019

Meeting Date: October 23, 2019

Subject: Delta Heritage Airpark Management Committee Status Report

RECOMMENDATION
That the MVRD Board receive for information the report dated September 4, 2019, titled “Delta Heritage Airpark Management Committee Status Report”.

PURPOSE
To provide the MRVD Board with an update on the activities of the Delta Heritage Airpark Management Committee.

BACKGROUND
Delta Heritage Airpark (DHAP) is owned by Metro Vancouver and operated by Recreational Aircraft Association Chapter 85 by way of a License Agreement. The License Agreement defines a Management Committee membership comprising representatives from Airpark neighbours, Province of British Columbia, nonprofit organizations, Recreational Aircraft Association, Metro Vancouver staff, and staff from the City of Delta. The Management Committee formulates operating rules governing the airpark and advises Metro Vancouver on policy matters. The Committee meets a minimum of two times per-year.

Highlights
The first Delta Heritage Airpark Committee meeting of 2019 was held on Wednesday, April 24. Highlights of the Delta Heritage Airpark meeting are:

- the DHAP 2020 proposed operating budget including the reserve statement, and 2020 – 2030 proposed 10-year capital plan were approved unanimously;
- the Flight Monitoring group reported there were no reported incidents related to flight safety issues in the last six months;
- members of Recreational Aircraft Association Chapter 85 completed the construction of an amateur built aircraft – a Zenith 750 Cruzer. The project attracted several new chapter members and provided educational outreach opportunities for local youth; and
- new drone fly regulations we discussed by the Committee.

The next meeting of the Delta Heritage Airpark Committee is scheduled for October 17, 2019.
The DHAP Operations Committee activities include:

- a pancake breakfast is held on the second Sunday of every month;
- a Spring clean-up of the airfield including mowing and trimming of grass areas, aligning runway and taxiway markers and replacing flags and wind socks;
- an annual Awards Banquet is held in March to acknowledge the accomplishments of its’ members and present “Most Valuable Member” and the “Ira Jamieson” awards;
- an annual “Fly-in” is held during the July long weekend. The public is invited to see the aircraft and vintage automobiles displays and information sessions. A pancake breakfast and bar-b-que lunch is provided;
- an annual “Show and Shine” event is held in September where members are invited to show their aircraft and to discuss various aviation related topics;
- an annual Remembrance Day ceremony is held on November 11, at 11:00 am followed by a lunch. The public is welcome to attend; and
- an annual Christmas Party is held at the Clubhouse where members of other organizations are invited to attend.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications.

SUMMARY / CONCLUSION
This report provides information on the activities of the Delta Heritage Airpark Management Committee. The Committee meets a minimum of two times per year. The first Delta Heritage Airpark Committee meeting of 2019 was held on Wednesday, April 24 where the financial reserve statement, 2020 proposed operating budget and the 10-year Capital Plan was approved, and regular business items were reviewed.

The next meeting of the Delta Heritage Airpark Committee is scheduled for October 17, 2019.
To: MVRD Board of Directors

From: Director John McEwen and Director Ron McLaughlin

Date: September 19, 2019

Meeting Date: October 23, 2019

Subject: Pacific Parklands Foundation Update from May 1, 2019 to September 30, 2019

RECOMMENDATION
That MVRD Board receive for information the report dated September 19, 2019 titled “Pacific Parklands Foundation Update from May 1, 2019 to September 30, 2019”.

PURPOSE
To provide the MVRD Board with an update on the Pacific Parklands Foundation activities and highlights for the period May 1, 2019 to September 30, 2019.

BACKGROUND
Formed in 2000, Pacific Parklands Foundation is a registered charity with a mission to support Metro Vancouver Regional Parks with a goal to conserve, preserve and enhance Metro Vancouver’s Regional Parks system. The Foundation raises funds to help augment government funding for special projects and programs in Metro Vancouver’s Regional Parks.

An independent board of volunteer directors meets four times per year to oversee the management and operation of the Foundation. Since 2007, the Pacific Parklands Foundation has received annual contribution funding of $175,000, from Metro Vancouver. These funds are used to hire two full-time staff persons and one to two contractors annually.

In addition, the Foundation ensures that it remains both a society and a registered charity in good standing. Its fiscal year runs from October 1 to September 30, and each year its financial statements are audited. Pacific Parklands Foundation strives to provide a strong return on investment to Metro Vancouver and through its contribution funding is able to ensure that 100 percent of all donations received are directed to the projects and programs it supports.

HIGHLIGHTS
• On June 18, 2019, a regular meeting of the Pacific Parklands Foundation Board was held and updates were provided to Directors McEwen and McLaughlin. A discussion about the renewal of the 5-year agreement between Metro Vancouver and the Pacific Parklands Foundation was held.
• $20,000 received from the Vancouver Airport Authority for Bus Grants.
• $40,000 received from the RBC Foundation for Catching the Spirit.
• $7,500 received from the Sitka Foundation for the Aldergrove Regional Park Discovery Trail and Wetlands project.
• Pacific Parklands Foundation continued to promote a legacy giving program.
• Pacific Parklands Foundation further developed its Bus Grant Program by continuing to raise funds to provide for up to 50 people to take the Pacific Parklands Foundation Bus to a regional park of their choosing. The program is a partnership with YVR and SkyLinx.

• Pacific Parklands Foundation continued to successfully administer the Regional Parks Commemorative Gift program for Metro Vancouver Regional Parks.

In August, 2019, Joe Hargitt, Executive Director officially retired from his position at Pacific Parklands Foundation. The Board of Directors will be conducting an executive search this Fall for Mr. Hargitt’s successor. On August 20, 2019, a special meeting of the Pacific Parklands Foundation Board took place to discuss the posting for a new Executive Director.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications.

SUMMARY / CONCLUSION
Pacific Parklands Foundation continues to deliver on their mission under the direction of its volunteer Board. In collaboration with Regional Parks staff and park partners and volunteers, the Foundation remains active in its commitment in fundraising for Regional Parks programs and projects.

Further information on the activities of the Pacific Parklands Foundation can be found at www.pacificparklands.com
To: MVRD Board of Directors  
From: Director Craig Hodge  
Date: October 16, 2019  
Meeting Date: November 1, 2019  
Subject: External Agency Status Report for UBCM

RECOMMENDATION
That the MVRD Board receive for information the report dated October 16, 2019, titled “External Agency Status Report for UBCM”.

PURPOSE
To report to the Board of Directors on the activities of the Union of BC Municipalities (“UBCM”).

BACKGROUND
The Union of B.C. Municipalities (UBCM) represents the common interests of local governments in dealings with the provincial and federal governments. UBCM is a non-partisan, members-based organization. The policy basis for the organization is developed through resolutions endorsed at its annual meeting, complemented by direct consultation and a range of working groups and committees. The Executive of UBCM, to which the GVRD provides a direct appointment, meets quarterly.

UBCM’s Recent Activities
- UBCM released a best practice guide on the development of remuneration policies for Councils and Boards, titled Council & Board Remuneration Guide (September 2019). The guide responds to a resolution from the City of Coquitlam that was endorsed at the 2018 UBCM Convention.

- In September, the President and First Vice President met with the Finance Minister to build awareness of the incremental cost to local government as a result of cannabis legalization. UBCM urged the Finance Minister to work with UBCM to develop a revenue sharing agreement that would flow a portion of excise tax for cannabis to local government.

- UBCM’s annual Convention was held in Vancouver September 23-27. The disposition of the resolutions endorsed during the meeting are available on UBCM’s website. UBCM was pleased to support an initiative by the Mayor’s Council and FCM to highlight the need for increased, long-term investment by the federal government in public transit – in support of the Metro region’s current transit plan.

- UBCM has also launched two new policy development initiatives.
  - The Special Committee on Climate Action has been asked to explore opportunities for voluntary local government climate action and to identify avenues for further work with other levels of government in mitigating, and adapting to, the effects of climate change.

  - UBCM Executive has also approved the re-establishment of the Select Committee on Local Government Finance to undertake a comprehensive review of the local government finance
system. Through the review, the Select Committee will analyse the options captured within UBCM’s *Strong Fiscal Futures* (2013) report against current issues and challenges facing local governments, identify a concise list of options, include additional documentation and rationale for their support and table them in a report to UBCM Executive.

**ALTERNATIVES**

This is an information report. No alternatives are presented.
To: MVRD Board of Directors  
From: Director van den Broek  
Date: October 17, 2019  
Subject: External Agency Status Report for Fraser Basin Council Society

RECOMMENDATION
That the MVRD Board receive for information the report dated October 17, 2019, titled “External Agency Status Report for Fraser Basin Council Society”.

PURPOSE
This report provides the MVRD Board with information on several of the activities of the FBC that are supported in part by MVRD’s contribution to the organization.

BACKGROUND.
MVRD contributes $300K per year to FBC under the terms of a three-year renewable agreement. FBC provides updates on its activities to the MVRD Board as requested. Detailed information is provided in Attachment "A".

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications of this information report.

SUMMARY / CONCLUSION
That the MVRD Board accept this report as information.

Attachments

1. Report on the Activities of the Fraser Basin Council (FBC) dated October 17, 2019
Fraser Basin Council (FBC)
Fall 2019 Update

The following sections provide a selection of highlights of the FBC’s work that is of particular relevance to Metro Vancouver, organized under the relevant strategic priorities articulated in the FBC’s 2019-2021 Strategic Plan. Please visit www.fraserbasin.bc.ca for more extensive information on FBC’s sustainability initiatives.

I TAKING ACTION ON CLIMATE CHANGE & AIR QUALITY

The Emotive Program
- Supported 46 emotive events and participated in many partner-led events
- Disseminated $112,440.00 through the Community Outreach Incentive Program to support engagement by community partners

Specialty Use Vehicle Program
- Applications to this program have been steady, leaving less than $500k left in the incentive budget, meaning that all funds will likely be allocated in the next 2-3 months.
- FBC seeking provincial government support to top up the fund

Charging Solutions and Incentive Program
- Applications have been closed to workplace and multi-unit residential projects.
- FBC continuing to provide EV Advisory services for stratas, multi-unit family housing and workplaces.

BC Hydro Condo Pilot
- BC Hydro has engaged FBC to administer their EV charging station pilot. This innovative technology helps to overcome barriers related to BC Hydro metering in condos. The program is fully subscribed with 30 stations being supported. Installation occurring this fall

West Coast Electric Fleets Symposium
- FBC is hosting this even on December 5th, building on the success of last November’s workshop.

BC Regional Adaptation Collaborative
- FBC supporting development of content related to indigenous perspectives on climate change in the National Assessment.

Remote Communities
- FBC is working on securing $12M in support for low carbon projects, with an anticipated launch for expressions of interest from remote communities later this year.

First Nations Home EnergySave
- FBC has secured $225k over three years from the Real Estate Foundation of BC to support training and engagement with First Nations on energy efficiency and low carbon solutions.

Adaptation Canada 2020 Conference in Vancouver (Feb 19-21)
- Early bird registration is now open and the conference website has launched at: www.adaptationcanada2020.ca. Over 280 submissions to the Call for Abstracts were received. The Conference will attract up to 600 adaptation practitioners from across Canada and beyond.

Metro Vancouver Regional District
Web Resources

- Climate Action Toolkit and Retooling websites are being refreshed.

II SUPPORTING HEALTHY WATERSHEDS & WATER RESOURCES

Lower Mainland Flood Management Strategy (LMFMS)

- Focus is on substantial completion of Phase II of the Flood Strategy
- Extensive outreach is being undertaken.
- A highly productive Flood Forum was held on October 8th and 9th; Chair Dhaliwal's remarks were very well-received.
- Several technical studies and tools development underway - see www.fraserbasin.bc.ca for more information.

Salmon-Safe BC

- The MEC Flagship store was officially certified in September.
- On-site assessment was completed for the Southlands development by Century Group in late July.
- Pre-assessments have been completed for Marcon Development’s Port Moody site and Nature’s Path.
- DIALOG Design has become the first Salmon-Safe accredited design firm in BC.
- Several other opportunities too numerous to list here for Salmon Safe certification are being pursued throughout Metro Vancouver and beyond. Strong MV and member municipality interest in Salmon Safe as a robust and integrated site-level water management standard.

III BUILDING SUSTAINABLE & RESILIENT COMMUNITIES AND REGIONS

Vancouver Fraser Port Authority ECHO Program

- FBC continues to act as Independent Facilitator for the Enhancing Cetacean Habitat and Observation (ECHO) Program, a Vancouver Fraser Port Authority-led initiative to better understand and manage the impact of shipping activities on at-risk whales throughout the Salish Sea.
- A voluntary commercial vessel slowdown in Haro Strait and a transboundary lateral displacement initiative in the Strait of Juan de Fuca over the summer and fall of 2019 reduced underwater noise levels affecting Southern Resident Killer Whales.

Howe Sound / Sea to Sky Corridor Regional Projects

- Working with the provincial government to assist with engagement of multiple interests regarding unsustainable recreational demand in the Sea to Sky Corridor.
- Continuing to engage the Howe Sound Community Forum.
- Completed a needs analysis for the Sea to Sky Clean Air Society and local governments in the corridor.
To: Regional Planning Committee  
From: Sean Tynan, Acting Senior Planner, Regional Planning  
Date: October 31, 2019  
Meeting Date: October 11, 2019  
Subject: Amending Metro Vancouver 2040: Shaping our Future to Align with the IPCC Special Report on Global Warming of 1.5°C – Bylaw 1295, 2019

RECOMMENDATION
That the MVRD Board:

a) initiate a Type 3 minor amendment to Metro Vancouver 2040: Shaping our Future to reflect a commitment to a carbon neutral region by 2050, and an interim target of reducing greenhouse gas emissions by 45% from 2010 levels by 2030;

b) give first, second, and third readings to “Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1295, 2019”; and

c) direct staff to notify affected local governments and agencies as per Section 6.4.2 of Metro Vancouver 2040: Shaping our Future.

PURPOSE
This report recommends a Type 3 minor amendment to Metro Vancouver 2040: Shaping our Future (Metro 2040), the regional growth strategy, for consideration by the Regional Planning Committee and MVRD Board.

BACKGROUND
Per Subsection 429 (d) of the Local Government Act, Metro 2040 includes the region’s greenhouse gas emissions reduction target. The current reduction target in Metro 2040 is 33% by 2020 and 80% by 2050 as compared to 2007 levels.

Climate 2050 is Metro Vancouver’s overarching long-term strategy guiding the region’s policies and collective actions to transition to a carbon neutral and climate resilient region over the next 30 years. As part of Climate 2050, at its meeting on July 26, 2019, the MVRD Board adopted the following resolution:

That the MVRD Board:

a) endorse the proposed amendments to the Climate 2050 Strategic Framework to reflect a commitment to a carbon neutral region by 2050, and an interim target of reducing greenhouse gas emissions by 45% from 2010 levels by 2030;

b) direct staff to bring forward a proposed amendment to Metro 2040, the regional growth strategy, to the Metro Vancouver Board for consideration, to incorporate revised greenhouse gas reduction targets (including interim targets).
In addition, the Metro Vancouver Board Strategic Plan (2019-2022) direction for Regional Planning contains the following statement on climate change:

1.2 *Undertake a comprehensive update to Metro 2040 to prioritize climate change, align with the update to the Regional Transportation Strategy, and extend the timeframe to 2050.*

This report responds to the direction of the MVRD Board and the Metro Vancouver Board Strategic Plan by bringing forward a proposed amendment to *Metro 2040* to update the region’s greenhouse gas emissions reduction target to align with the October 2018 Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C above pre-industrial levels.

**METRO 2040 GREENHOUSE GAS EMISSIONS REDUCTION TARGETS**

**Current Greenhouse Gas Emissions Reduction Targets and Policies in Metro 2040**

*Metro 2040* is the region’s collective vision for managing growth in the region. Under Section 3.3.1 of *Metro 2040*, Metro Vancouver commits to:

> Implement the strategies and actions of the Regional Growth Strategy which contribute to regional targets to reduce greenhouse gas emissions by 33 percent below 2007 levels by 2020 and 80 percent below 2007 levels by 2050...

Under Section 3.3.4, the role of municipalities is to:

> *Adopt Regional Context Statements which:*
> 
> a) *identify how municipalities will use their land development and transportation strategies to meet their greenhouse gas reduction targets and consider how these targets will contribute to the regional targets;*
> 
> b) *identify policies and/or programs that reduce energy consumption and greenhouse gas emissions, and improve air quality from land use and transportation infrastructure, such as:*
>   - *existing building retrofits and construction of new buildings to green performance guidelines or standards, district energy systems, and energy recovery and renewable energy generation technologies, such as solar panels and geoexchange systems, and electric vehicle charging infrastructure;*
>   - *community design and facility provision that encourages transit, cycling and walking (e.g. direct and safe pedestrian and cycling linkages to the transit system);*
>   - *focus infrastructure and amenity investments in Urban Centres and Frequent Transit Development Areas, and at appropriate locations along TransLink’s Frequent Transit Network;*

In addition, there are other actions to reduce greenhouse gas emissions included in other sections of *Metro 2040*.

**Proposed Amendment to Metro 2040 and Implications for Member Jurisdictions**
The proposed change would replace the existing greenhouse gas emission reduction target in Metro 2040 in accordance with the table below.

<table>
<thead>
<tr>
<th>Current Greenhouse Gas Emissions Reduction Target in Metro 2040</th>
<th>Proposed Greenhouse Gas Emissions Reduction Target (Reflected in Climate 2050 Strategic Framework and aligned with the IPCC Special Report)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 33% below 2007 levels by 2020</td>
<td>• 45% reduction from 2010 levels by 2030</td>
</tr>
<tr>
<td>• 80% below 2007 levels by 2050</td>
<td>• Carbon neutral by 2050</td>
</tr>
</tbody>
</table>

The proposed amendment would not require a need for immediate updates to regional context statements. However, municipalities that are currently developing or updating their respective Official Community Plans, Community Energy and Emissions Plans or other strategic planning documents should consider aligning their greenhouse gas emissions reduction targets and actions with the regional targets. The next time regional context statements are developed or updated, each member jurisdiction will need to identify how the respective Official Community Plans are consistent with, or are working towards, the greenhouse gas emissions reduction targets in Metro 2040.

Section 6.3.4 of Metro 2040 allows for some amendments to the regional growth strategy to be undertaken through a Type 3 Minor Amendment. A Type 3 amendment requires the adoption of an amendment bylaw passed by an affirmative 50%+1 weighted vote of the MVRD Board, and does not require a public hearing. Once initiated, affected local governments would receive written notice and be provided a minimum of 30 days to respond. Type 3 minor amendments have been used in the past as a means to amend Metro 2040. The proposed amendment bylaw is attached.

The proposed amendment was presented on September 20, 2019, to the Regional Planning Advisory Committee for comment. No comments were received.

ALTERNATIVES
1. That the MVRD Board:
   a) initiate a Type 3 minor amendment to Metro Vancouver 2040: Shaping our Future to reflect a commitment to a carbon neutral region by 2050, and an interim target of reducing greenhouse gas emissions by 45% from 2010 levels by 2030;
   b) give first, second, and third readings to “Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1295, 2019”; and
   c) direct staff to notify affected local governments and agencies as per Section 6.4.2 of Metro Vancouver 2040: Shaping our Future.

2. That the MVRD Board receive for information the report dated September 16, 2019, titled “Amending Metro Vancouver 2040: Shaping our Future to Align with the IPCC Special Report on Global Warming of 1.5°C – Bylaw 1295, 2019” and direct staff to explore updating the regional growth strategy greenhouse gas emission reduction targets as part of the comprehensive update to Metro 2040.
FINANCIAL IMPLICATIONS
If the MVRD Board chooses Alternative 1, the proposed amendment bylaw will be initiated and given first, second, and third readings, and staff will notify affected local governments and agencies to provide an opportunity to offer comment. The proposed amendment bylaw would then be brought back to the MVRD Board with any comments from the notification period for consideration of final reading. The notification period will be a minimum of 30 days and the amendment notice will be posted on the Metro Vancouver website.

If the MVRD Board chooses Alternative 2, the process for updating the greenhouse gas emission reduction target in Metro 2040 will not be initiated at this time. Metro 2040 would not be aligned with the recent IPCC Special Report and will be inconsistent with MVRD Board direction to update the Climate 2050 Strategic Framework. Staff would then consider the updated greenhouse gas reduction target as part of the development of Metro 2050. This would delay updating the target until mid-2022.

SUMMARY / CONCLUSION
This report brings forward a recommendation to update the greenhouse gas emission reduction targets contained in Metro 2040 to pursue a carbon neutral region by 2050, with an interim target of 45% reduction by 2030. Including this target in Metro 2040 at this time is consistent with recent MVRD Board direction as well as the 2019-2022 Board Strategic Plan and the Climate 2050 Strategic Framework. Alternatively, with the update to Metro 2040 underway, updating the greenhouse gas emissions target in the regional growth strategy can also be implemented as part of the development of Metro 2050, the updated growth strategy, which is anticipated to be finalized and adopted in mid-2022.

Metro Vancouver can set the path towards carbon neutrality for the region, but it will not be able to achieve the targets on its own. To obtain the necessary reductions in regional emissions, significant cooperation, collaboration, and commitment will be required from member jurisdictions, other orders of government, partner organizations, stakeholders, and the public. The new greenhouse gas emissions reduction target would need to be considered by member jurisdictions the next time their respective regional context statements are updated. In the interim, municipalities currently updating their Official Community Plans, Community Energy and Emissions Plans or other strategic planning documents may wish to consider aligning their greenhouse gas emissions reduction targets with Metro Vancouver and the IPCC Special Report. Staff recommend Alternative 1.

Attachment
Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1295, 2019

References
1. IPCC Special Report on Global Warming of 1.5°C
2. Aligning Climate 2050 with the IPCC Special Report on Global Warming of 1.5°C
WHEREAS:

A. Metro Vancouver Regional District’s board of directors (the “Board”) adopted the “Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010” on July 29, 2011 (the “Regional Growth Strategy”);

B. The Board wishes to revise the greenhouse gas emissions reduction targets included in the Regional Growth Strategy;

C. In accordance with Regional Growth Strategy Section 6.3.4(j), all amendments to the Regional Growth Strategy that are not identified in Sections 6.3.1 or 6.3.3 are considered Type 3 minor amendments; and

D. Metro Vancouver Regional District wishes to amend “Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010”.

NOW THEREFORE the Board of Metro Vancouver Regional District enacts as follows:

1. “Greater Vancouver Regional District Regional Growth Strategy Bylaw Number 1136, 2010” is hereby amended as follows:

   Regional Growth Strategy Section 3.3.1 is deleted and the following is substituted in its place:

   3.3.1 Implement the strategies and actions of the Regional Growth Strategy that contribute to regional targets to reduce greenhouse gas emissions by 45 percent below 2010 levels by 2030 and to achieve a carbon neutral region by 2050. Figure 3 identifies examples of strategies and actions contained in the Regional Growth Strategy to address climate change.

2. The official citation of this bylaw is “Metro Vancouver Regional District Regional Growth Strategy Amendment Bylaw No. 1295, 2019”. This bylaw may be cited as “Regional Growth Strategy Amendment Bylaw No. 1295, 2019”.

   Read a first time this _______ day of __________________, ______.

   Read a second time this _______ day of __________________, ______.

   Read a third time this _______ day of __________________, ______.
Passed and finally adopted this _________ day of ____________________, _____.

__________________________________________________________

Sav Dhaliwal, Chair

__________________________________________________________

Chris Plagnol, Corporate Officer
To: MVRD Board of Directors

From: Carol Mason, Chief Administrative Officer
Chris Plagnol, Corporate Officer

Date: October 22, 2019
Meeting Date: November 1, 2019

Subject: Regional Parks Service Amendment Bylaw No. 1290

RECOMMENDATION
That the MVRD Board:
a) give first, second and third reading to Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019; and
b) direct staff to seek consent of at least 2/3 of the participants to amend the service area to add an extraterritorial area to the regional park function, and following that, forward the Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019 to the Inspector of Municipalities for approval.

PURPOSE
To consider first, second and third reading of the Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019 that will initiate the inclusion of an extraterritorial area for a portion of Aldergrove Park located in the City of Abbotsford, and to direct staff to seek consent of at least 2/3 of the participants in the regional parks function in relation to the amendment.

BACKGROUND
The Province of British Columbia is expected to enact a Regulation to specifically authorize Metro Vancouver Regional District to establish and operate the regional parks service outside its boundaries for the portion of Aldergrove Park located in the City of Abbotsford. In anticipation of that Regulation and to facilitate the process in a timely fashion, it is advisable to amend the Regional Parks Service Bylaw to include this extraterritorial area in the defined boundaries of the parks service area.

This report brings forward the proposed bylaw amendment for the Board’s consideration.

ABBOTSFORD PARTICIPATION IN REGIONAL PARKS
The City of Abbotsford was a long-standing participant in the MVRD Regional Parks function, but after a parks service review, discussions were initiated between Metro Vancouver and the City of Abbotsford that examined the boundaries of the service area and explored consideration of the potential withdrawal of the City of Abbotsford from the MVRD regional parks function. In 2018 the City withdrew from the parks service.
Parkland Transfer to Abbotsford
As part of the agreement for the City of Abbotsford to withdraw from the MVRD regional parks service, in May 2018, Metro Vancouver transferred all interests in parkland within the boundaries of the City of Abbotsford to the City of Abbotsford, including the Aldergrove Regional Park. However, since that regional park straddles the border of the Township of Langley and the City of Abbotsford, it was agreed that a single local government to own and operate it. Given the majority of visitors to the Aldergrove Regional Park originate from Metro Vancouver, Metro Vancouver agreed that it was the appropriate jurisdiction to continue to own and operate this park.

Extraterritorial Area – Aldergrove Regional Park East
This ownership model posed a problem because the portion of Aldergrove Regional Park located in Abbotsford was outside the boundaries of the Metro Vancouver Regional District. Section 333(4) of the Local Government Act requires that a service provided outside of regional district boundaries must be identified as a separate participating area for the service “as if it were located in the regional district”. Given the unique history and circumstances associated with Aldergrove Regional Park, Metro Vancouver requested a remedy from the Province to authorize an exemption to the statutory requirement.

The Province proposed a Regulation to the Local Government Act that would provide the requested exemption, as described below.

MVRD ALDERGROVE REGIONAL PARK REGULATION
Staff have been advised that the Province is preparing a new Regulation that will make an exception to section 333(4) of the Local Government Act, and authorize Metro Vancouver Regional District to establish and operate the portion of Aldergrove Regional Park in Abbotsford as an “extraterritorial area”. This extraterritorial area must be included in the defined boundaries of the parks service area, as set out in the Regional Parks Service Bylaw.

Land Transfer to Metro Vancouver
In anticipation of the provincial Regulation, the MVRD Board, at its meeting held May 24, 2019, approved the Abbotsford Disposition of Eastern Portion of Aldergrove Park Land Agreement between the Metro Vancouver Regional District and the City of Abbotsford for the sale and transfer of the eastern portion of the Aldergrove Regional Park lands within the municipal boundary of Abbotsford back to Metro Vancouver Regional District.

Once the conditions in this agreement are satisfied - a Regulation is in place allowing Metro Vancouver to own and operate the eastern portion of Aldergrove Regional Park without requiring the City of Abbotsford to be a member of the MVRD for regional park purposes - Metro Vancouver will be returned ownership and will continue operation of both the western and eastern portions of the Aldergrove Regional Park, with the eastern portion being an ‘extraterritorial area’.

MVRD REGIONAL PARKS AMENDING BYLAW
The adoption of a bylaw to amend the Greater Vancouver Regional District Regional Parks Service Conversion and Amendment Bylaw No. 1024, 2005 (proposed in this report) is required to bring effect to the aforementioned Regulation. The required amendment to the Regional Parks Service Bylaw is to include the extraterritorial area in the defined boundaries of the parks service area.
In addition, two minor housekeeping amendments are proposed: two section references to the Local Government Act that appear in the Amending Bylaw were outdated, and have been updated to reflect the current numbering in the Act.

The Amending Bylaw is before the Board for first, second and third reading. Once third reading is given, the Amending Bylaw will be circulated to all service area participants to obtain their consent to the adoption of the Bylaw. Two-thirds consent of participants is required before the Amending Bylaw can be considered for adoption by the Board. Once consent is obtained, the Amending Bylaw will be forwarded to the Inspector of Municipalities for approval. If approved by the Inspector, the Amending Bylaw will be presented to the Board for consideration of final adoption.

ALTERNATIVES
1. That the MVRD Board:
   a) give first, second and third reading to Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019; and
   b) direct staff to seek consent of at least 2/3 of the participants to amend the service area to add an extraterritorial area to the regional park function, and following that, forward the Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019 to the Inspector of Municipalities for approval.

2. That the MVRD Board receive for information the report dated October 22, 2019, titled “Regional Parks Service Amendment Bylaw No. 1290”, and provide alternate direction.

FINANCIAL IMPLICATIONS
If the Board approves alternative one, there will be no additional financial impacts as staff previously anticipated approval of the provincial regulation when preparing the 2020 budget. Under an existing agreement between the MVRD and the City of Abbotsford that has been in place while awaiting Provincial regulatory approval, Metro Vancouver Regional Parks has operated and maintained both the Langley (West) and Abbotsford (East) portions of Aldergrove Regional Park. The operating costs for Aldergrove Park East are included in the 5-year financial plan.

SUMMARY / CONCLUSION
The Province of British Columbia is expected to enact a Regulation to authorize Metro Vancouver Regional District to operate the regional parks service outside its boundaries for the portion of Aldergrove Park located in the City of Abbotsford, without the City being a participant in the parks service. To bring effect to that Regulation, the Greater Vancouver Regional District Regional Parks Service Conversion and Amendment Bylaw No. 1024, 2005 must be amended to include this extraterritorial area in the defined boundaries of the parks service area. This report brings forward the associated Amending Bylaw for consideration by the Board. Staff recommend Alternative One.

Attachments
1. Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019

33135580
METRO VANCOUVER REGIONAL DISTRICT
BYLAW NO. 1290, 2019

A Bylaw to Amend Greater Vancouver Regional District
Regional Parks Service Conversion and Amendment Bylaw No. 1024, 2005

WHEREAS:

A. By Division V of Letters Patent issued January 13, 1972, as amended by further Supplementary
Letters Patent, Metro Vancouver Regional District (formerly Greater Vancouver Regional District)
was granted the function of operating regional parks (the “Regional Parks Service”), and the
participating areas for the Regional Parks Service were deemed to include not only Metro
Vancouver Regional District member municipalities, but also member municipalities of the former
Vancouver-Fraser Park District;

B. On July 25, 2005, the Board of Directors of the Metro Vancouver Regional District adopted
“Greater Vancouver Regional District Regional Parks Service Conversion and Amendment Bylaw
No. 1024, 2005”, a bylaw to convert the Regional Parks Service and to amend the participating
areas;

C. On April 27, 2018, the Board of Directors of the Metro Vancouver Regional District adopted
“Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1260, 2018”, a
bylaw to amend the participating areas to remove the City of Abbotsford as a municipal
participating area for the Regional Parks Service;

D. The Board of Directors of the Metro Vancouver Regional District has obtained approval from the
Province of British Columbia to establish and operate the regional parks service in an
extraterritorial area comprising that portion of Aldergrove Regional Park located within the
boundaries of the City of Abbotsford;

E. The Board of Directors of the Metro Vancouver Regional District wishes to amend “Greater
Vancouver Regional District Regional Parks Service Conversion and Amendment Bylaw No. 1024,
2005”;

NOW THEREFORE the Board of the Metro Vancouver Regional District enacts as follows:

1. The “Greater Vancouver Regional District Regional Parks Service Conversion and Amendment
Bylaw No. 1024, 2005” (the “Bylaw”) is hereby amended as follows:

   a) In the preamble of the Bylaw, add new paragraphs G and H respectively, at the end of this
      section, as follows:

      “G. On April 27, 2018, the Board of Directors of the Metro Vancouver Regional District
     adopted “Metro Vancouver Regional District Regional Parks Service Amending Bylaw
     No. 1260, 2018”, a bylaw to amend the participating areas to remove the City of
     Abbotsford as a municipal participating area for the Regional Parks Service;
H. Consent from at least two-thirds of the Service participants to add an extraterritorial area comprising that portion of Aldergrove Regional Park located within the boundaries of the City of Abbotsford was received;”

b) In section 4 of the Bylaw, titled “Service Area”, delete and replace the section in its entirety with the following:

“4. The service area for the Service consists of:

(a) all that land within the boundaries of the Participating Areas; and

(b) all that land in the eastern portion of Aldergrove Regional Park, identified as Extraterritorial Area, as shown on the map in Schedule A, hereto affixed and forming part of the Bylaw.”

c) In section 5 of the Bylaw, titled “Cost Recovery”, sub section (b), delete the words “Division 4.3” and replace them with the words “Part 11, Division 3”.

d) In section 6 of the Bylaw, titled “Cost Apportionment,” delete the words “section 804(2)(a)” and replace them with “section 380(2)(a)”.

2. This bylaw may be cited as “Metro Vancouver Regional District Regional Parks Service Amending Bylaw No. 1290, 2019”.

Read a first time this ______ day of __________________, ______.

Read a second time this ______ day of __________________, ______.

Read a third time this ______ day of __________________, ______.

Approved by the <Inspector of Municipalities this ______ day of __________________, ______.

Passed and finally adopted this __________ day of ____________________, ______.

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer
Aldergrove Regional Park Extraterritorial Area to be Added to Regional Parks Service

Legend
- Extraterritorial Area
- Regional Parks
- Municipal Boundary
- International Boundary

Metro Vancouver Regional District
Regional Parks Service
Amending Bylaw No. 1290, 2019
To: MVRD Board of Directors

From: Chris Plagnol, Corporate Officer

Date: October 3, 2019

Meeting Date: November 1, 2019

Subject: Election of the MVRD Representative on the 2019-2020 Union of British Columbia Municipalities Executive

PURPOSE
To elect a member of the Metro Vancouver Regional District (MVRD) Board of Directors to serve as the MVRD representative on the Union of British Columbia Municipalities (UBCM) Executive Board for 2019-2020.

BACKGROUND
The UBCM Bylaws require the MVRD to annually elect a representative to serve on the UBCM Executive. This report is being brought forward for the purposes of electing such a representative.

UBCM EXECUTIVE BOARD
The UBCM was established to provide a common voice for local government in British Columbia. Its annual convention continues to be the main forum for UBCM policy-making. It provides an opportunity for local governments of all sizes and from all areas of the province to come together, share their experiences and take a united position. The ongoing administration and policy determination of the UBCM is governed by an Executive Board of 21 members that meets 6 times per year.

Metro Vancouver Elected Representative
The MVRD representative is elected annually by the MVRD Board through a nomination/election process. The representative must be a member of the MVRD Board.

The term of office takes effect at the end of the Annual Convention in September, with the representative invited to attend the first Executive Board meeting on November 21, 2019. Director Craig Hodge is currently the MVRD Board’s elected representative for the 2018-2019 term, which has just expired.

ALTERNATIVES
This report is a call for nominations; no alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications to Metro Vancouver for the expenses of the Executive Board incurred on authorized business of the UBCM, as the UBCM pays such expenses. However, the UBCM does not cover the expenses for attendance at the annual autumn convention. Funding for the attendance of the Board’s representative at the convention is included in the budget.
SUMMARY / CONCLUSION
As the UBCM Bylaws require the MVRD Board to elect a member to serve on its Executive, it is recommended that the Board call for nominations from among its members for the purposes of electing an MVRD representative to serve on the UBCM Executive for 2019-2020. If more than one candidate is nominated, an election by voting will be held and voting will be conducted by secret ballot. No other alternative is presented.

References
RECOMMENDATION
That the MVRD Board receive for information the report dated October 28, 2019, titled “2019 Year End Review”.

PURPOSE
To provide the MVRD Board with an update on the key activities achieved in 2019 in support of the Board’s goals articulated in the Board Strategic Plan and Standing Committee work plans.

BACKGROUND
Initiated in 2013, as part of the annual planning and budget process, each year work plans are prepared for Metro Vancouver’s business areas that guide the activities of the organization. Departmental work plans flow from the Board Strategic Plan and include high level performance indicators that have been developed across the organization to evaluate trends, determine key actions for the coming year, and assist in long-term planning. The departmental work plans are then refined and incorporated into the individual work plans of the Board Standing Committees which provide political oversight to these activities.

This report presents an overview of Metro Vancouver’s progress in achieving the goals of the Board Strategic Plan through the activities and accomplishments of the Standing Committees and respective Boards in 2019.

2019 STANDING COMMITTEE WORK PLANS
Highlights are presented below which provide a high level summary of Metro Vancouver’s accomplishments in 2019 and are organized by functional area in the same order as they appear in the Board Strategic Plan.

Regional Federation
• Approved the 2019-2022 Board Strategic Plan setting out the priorities of the Board of Directors over its four-year term.
• Implemented a technology solution to expedite and automate the Board voting process.
• Worked with the Province to identify a preferred crossing option for the George Massey Tunnel Replacement Project to respond to the Province of BC’s request for guidance as the Province launches its public engagement process to examine crossing options in more detail.
• Approved and implemented the recommendations of the Board Remuneration Independent Review Panel in support of fair, reasonable and fiscally responsible elected official remuneration.
Established the Regional Economic Prosperity Service in support of regional collaboration to advance shared economic, livability and sustainability goals in Canada’s Pacific Gateway.

Approved amendments to the GVS&DD Cost Apportionment Bylaw to implement adjustments to the Liquid Waste financial model to ensure equity in the collection of growth charges for non-members.

Completed Asset Management policies for all areas of the organization to balance asset performance, risk and the cost to support the long term provision of regional services.

Completed the disposition of former head office property at 4330 Kingsway in Burnaby.

Co-hosted the Community-to-Community Forum with Musqueam Indian Band to foster positive relationships between communities.

Worked with local First Nations on new opportunities that will enhance relationships and partnerships within Metro Vancouver.

**Water Services**

- Endorsed the *Residential Water Metering in Metro Vancouver: Best Practices Guide for Local Governments* to provide tools and information to assist GVWD members in considering the implementation of residential water metering as a best management practice.
- Continued to advance work on the *Comprehensive Regional Water System Study* to update the region’s long term water supply plan to meet the region’s needs over the next 100 years.
- Substantively completed discussions to secure additional water allocation from the Coquitlam Reservoir under the *Coquitlam-Buntzen Water Use Plan* and continued to advance project definition for the Coquitlam Intake No. 2 project.
- Approved requests from agencies to transport adult salmon and steelhead trout upstream of Seymour Falls Dam to assist in conservation efforts and improve fish populations.
- Continued to advance design and construction of the Annacis and Second Narrows water supply tunnel, respectively, to increase resilience of supply and provide for long-term growth.
- Awarded contracts for seismic upgrades to Sunnyside Reservoir, installation of Whalley Main, and construction of Kennedy Newton Main to increase system resilience and meet growth demands.

**Liquid Waste Services**

- Approved proceeding with tertiary treatment for the North Shore Wastewater Treatment Plant.
- Endorsed biosolids drying as a viable and cost-effective option for recovering energy from biosolids.
- Supported the exploration of a new Tier III cost apportionment model to regionally share in the cost of Liquid Waste projects that incorporate tertiary filtration treatment.
- Supported the exploration of a revised cost apportionment model to support the Village of Anmore’s request for membership in the Greater Vancouver Sewerage and Drainage District while ensuring financial equity within the system.
- Awarded contracts for the Annacis Island Wastewater Treatment Plant Outfall System Project to provide additional capacity to meet growth demands and to improve dispersion in the Fraser River.
- Awarded contract for the Lulu Island Wastewater Treatment Plant Biogas Cleanup Project in support of reducing flaring of excess digester gas and corresponding greenhouse gas emissions.
• Launched various liquid waste campaigns including the Unflushables and ‘Wipe It, Green Bin It’ campaigns.

Solid Waste Services
• Commenced construction of a replacement Coquitlam Transfer Station and procurement for the construction of a new Surrey Recycling and Waste drop-off.
• Initiated business cases for a recyclables and alternative fuel recovery centre at the Coquitlam Landfill, and a district energy system at the Waste-to-Energy Facility.
• Approved a funding and service model for organics and paid recyclables at Metro Vancouver transfer stations to incentivize recycling and support regional organics goals.
• Initiated a procurement process for the beneficial use of bottom ash.
• Commissioned a non-ferrous metal recovery system at the Waste-to-Energy Facility.
• Launched various waste reductions campaigns including an award winning Textile Waste campaign.

Regional Parks Services
• Implemented the Land Acquisition Strategy 2050 by acquiring land and initiating the Metro Vancouver Regional Greenways Plan to guide collaborative planning and development of regional greenways.
• Protected over 13,500 of natural areas and connected nearly 12 million visitors with nature.
• Approved five park association contribution agreements in support of capacity-building to provide community benefits through volunteer programs and services.
• Reinforced the commitment to support regional parks and greenways by increasing the Regional Parks Land Acquisition Fund for the purpose of advancing park land and greenway acquisition and development.
• Initiated the development of the Regional Recreational Greenways Strategy with member municipalities and external organizations.
• Completed the Widgeon Marsh Regional Park Management Planning process.

Housing Services
• Released the Metro Vancouver Housing – 2018 Report highlighting Metro Vancouver Housing’s strategic objectives, operational activities, community engagement programs, financial performance and achievements.
• Reinforced the commitment to expand affordable housing in the region by increasing the Affordable Housing requisition for the purpose of creating a dedicated fund for new MVHC affordable housing development projects on lands owned by MVRD member jurisdictions.
• Prepared the Metro Vancouver 10-Year Housing Plan that will guide Metro Vancouver in its commitment to expanding affordable housing across the region.
• Continued the redevelopment of MVHC housing projects including Heather Place (Vancouver) and Kingston Gardens (Surrey).
• Approved a new MVHC housing development project (Welcher Avenue) and provided land at a nominal fee (Prairie Avenue) to a non-profit organization to provide affordable housing in Port Coquitlam.
Regional Planning

- Initiated the comprehensive review of *Metro Vancouver 2040: Shaping our Future* and approved the Engagement Plan to provide opportunities for plan signatories, non-signatory stakeholders, First Nations and the public to provide input into the development of *Metro 2050*.
- Shared the findings from the Long Range Growth and Transportation Scenarios to support long range planning throughout the region to better understand and navigate significant uncertainties such as climate change, automation and technological disruptors and macro economic forces.
- Initiated the draft *Regional Industrial Lands Strategy* as a first step in addressing the regional pressures on industrial land.
- Communicated the key findings of the *Transit-Oriented Affordable Housing Study Phase 2* to encourage continued efforts to support increased affordable rental housing near transit and equitable transit-oriented communities.
- Shared the findings of the *2018 Regional Parking Study and Technical Report* to provide key information for consideration in member jurisdiction updates to parking bylaws, rezoning and development reviews, developing area and neighbourhood plans, and street parking management efforts.
- Awarded Agriculture Awareness Grants to thirteen non-profit organizations to support the continuation of successful educational programs and community agriculture-related events.

Air Quality & Climate Change

- Updated the *Climate 2050 Strategic Framework* to reflect the commitment to a carbon neutral region by 2050, and an interim target of reducing greenhouse gas emissions by 45% from 2010 levels by 2030.
- Approved eight Sustainability Innovation Fund projects in support of projects that contribute to the region’s sustainability in innovative ways.
- Endorsed the *Odour Management Community and Engagement Strategy* aimed at increasing awareness of Metro Vancouver’s enhanced framework for managing emissions of odorous air contaminants.
- Endorsed a comprehensive engagement plan to consult with community members and key stakeholders on the potential implications of emissions related to cannabis production and residential wood burning.
- Released the *Climate 2050-Clean Air Plan* issue area discussion papers on Buildings, Industry and Transportation to support engagement on these two initiatives through a single, efficient consultation process.
- Launched a new *Climate 2050* website to track progress towards climate targets, share best practices, and engage the public on climate action.

**ALTERNATIVES**
This is an information report. No alternatives are presented.

**FINANCIAL IMPLICATIONS**
The actions contained within this report were carried out as part of the work plans and budgets endorsed by the Metro Vancouver Boards during the 2019 budget process.
SUMMARY / CONCLUSION

As part of the annual planning and budget process, work plans are prepared each year for Metro Vancouver’s business areas that guide the activities of the organization. These work plans are then refined and incorporated into the individual work plans of the Board Standing Committees who provide political oversight to these activities.

This report presents a summary of Metro Vancouver’s achievements in 2019 accomplished through the guidance of Metro Vancouver’s Standing Committees as the Metro Vancouver Board nears the end of its first year in its four-year term. The work plan accomplishments achieved in 2019 will provide a strong foundation for the Metro Vancouver Board as it works towards the completion of its long term goals, as articulated in the Board Strategic Plan, over the next three years.
To: MVRD Board of Directors

From: Dean Rear, Acting General Manager of Financial Services/CFO

Date: October 24, 2019          Meeting Date: November 1, 2019

Subject: MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291

RECOMMENDATION

1. That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”, in the following schedules:
   - Revenue and Expenditure Summary
   - Affordable Housing
   - Air Quality
   - E911 Emergency Telephone Service
   - Electoral Area Service
   - General Government Administration
   - General Government Zero Waste Collaboration Initiatives
   - Labour Relations
   - Regional Economic Prosperity
   - Regional Emergency Management
   - Regional Global Positioning System
   - Regional Parks
   - Capital Programs & Project Totals - Regional Parks
   - Regional Planning

2. That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 as presented for the Sasamat Fire Protection Service, and shown in the following schedules:
   - Revenue and Expenditure Summary
   - Sasamat Fire Protection Service
   *(Only Anmore and Belcarra may vote)*

3. That the MVRD Board approve the 2020 Reserve Applications as shown in Attachment 2 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”.

4. That the MVRD Board:
   a) give first, second and third reading to *Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019*; and
   b) pass and finally adopt *Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019*. 

Metro Vancouver Regional District
PURPOSE
To consider and approve the 2020 MVRD Annual Budget for Regional District Services, endorse the MVRD 2020 – 2024 Financial Plan and adopt Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019.

BACKGROUND
In October the 2020 budgets and five year financial plans for the individual functions of Metro Vancouver Regional District were presented to Metro Vancouver Standing Committees for consideration and endorsement and are included in Attachment 1. On October 23, 2019 these budgets were also presented at the Board Budget Workshop and are summarized in the report titled “2020 - 2024 Financial Plan – Metro Vancouver Districts and Housing Corporation” (Attachment 4).

The MVRD 2020 Annual Budget and 2020 – 2024 Financial Plan is now being brought forward to the Board for consideration and approval. Also being brought forward is a request to authorize the application of 2020 reserve funds which requires the approval of the MVRD Board pursuant to the Board’s Operating, Discretionary, and Statutory Reserves Policy (Attachment 2). Approval of the budget requires the adoption of Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019 which is now being presented to the Board for consideration (Attachment 3).

BOARD BUDGET APPROVAL REQUIREMENTS
In accordance with s.374 of the Local Government Act, regional districts are required to adopt a five year financial plan by bylaw annually by March 31. In addition, a process of public consultation must be undertaken regarding the financial plan prior to its adoption.

The 2020 Annual Budgets and 2020 – 2024 Financial Plans for regional district functions were presented through the month of October to applicable Board standing committees, various regional advisory committees, a Council of Councils meeting, and the Board Budget Workshop on October 23, 2019. The Board Budget Workshop also included an invitation to the public to attend and provide comments.

The 2020 to 2024 Financial Plan Bylaw No. 1291, has now been prepared for Board consideration and formalizes the approval of the 2020 Annual Budget and 2020-2024 Financial Plan. The 2020 – 2024 Financial Plan has been summarized in the format prescribed by s.374 of the Local Government Act and forms part of this bylaw.

In alignment with Metro Vancouver’s policies that adhere to long term financial planning principles, the financial plan has been developed based on a detailed budgeting process that is designed to predict anticipated future revenue requirements to cover operating expenditures, capital expenditures and debt servicing costs over the next five years. This information is essential in supporting Metro Vancouver’s overall budgeting process, but also provides critical information to member jurisdictions that is used in preparing individual member jurisdiction financial plans.

ALTERNATIVES
1. (a) That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”, in the following schedules:
• Revenue and Expenditure Summary
• Affordable Housing
• Air Quality
• E911 Emergency Telephone Service
• Electoral Area Service
• General Government Administration
• General Government Zero Waste Collaboration Initiatives
• Labour Relations
• Regional Economic Prosperity
• Regional Emergency Management
• Regional Global Positioning System
• Regional Parks
• Capital Programs & Project Totals - Regional Parks
• Regional Planning

(b) That the MVRD Board approve the 2020 Annual Budget and endorse the 2020 – 2024 Financial Plan as shown in Attachment 1 as presented for the Sasamat Fire Protection Service, and shown in the following schedules:
• Revenue and Expenditure Summary
• Sasamat Fire Protection Service
(Only Anmore and Belcarra may vote)

(c) That the MVRD Board approve the 2020 Reserve Applications as shown in Attachment 2 of the report dated October 24, 2019, titled “MVRD 2020 Budget and 2020 – 2024 Financial Plan and Five Year Bylaw 1291”.

(d) That the MVRD Board:
   i. give first, second and third reading to Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019; and
   ii. pass and finally adopt Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019.

2. That the Board provide alternative direction as appropriate.

FINANCIAL IMPLICATIONS
If the Board approves alternative one, the 2020 Annual Budget will be approved as presented through the adoption of Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019 and authority will be provided to undertake the Regional District Service Area work plans presented in the budget reports. The 2020 to 2024 Financial Plan for Regional District Services will also be endorsed and will provide greater certainty for budget planning in future years, as well as improved information to the public and to member jurisdictions on anticipated budgets and future rate impacts.

Under alternative two, the Board may wish to amend the 2020 budget and adopt Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019 as amended. If Bylaw No. 1291 is not adopted, 2019 to 2023 Financial Plan Bylaw No. 1280, 2018 will remain in place until a new bylaw has been adopted.
SUMMARY / CONCLUSION
The 2020 Revenue and Expenditure Budgets and the 2020 Reserve Applications require Board approval. Endorsing the MVRD 2020 – 2024 Financial Plan and adoption of Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019 provides the authority for the 2020 operations of the individual MVRD functions and aligns with Metro Vancouver’s financial planning practices and concludes the administrative process of the 2020 budget development cycle. Staff recommend approving the MVRD 2020 Annual Budget and 2020-2024 Financial Plan and adopting Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019 as presented in alternative one.

Attachments
1. MVRD 2020 – 2024 Financial Plan
2. 2020 Reserve Applications
3. Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019
ATTACHMENT 1

METRO VANCOUVER DISTRICTS
REVENUE AND EXPENDITURE SUMMARY
2020-2024 FINANCIAL PLAN

2019
BUDGET

2020
BUDGET

%
CHANGE

2021
FORECAST

%
CHANGE

2022
FORECAST

%
CHANGE

2023
FORECAST

%
CHANGE

2024
FORECAST

%
CHANGE

REVENUES
Water Sales
Liquid Waste Services Levy
Solid Waste Tipping Fees
Metro Vancouver Regional District Requisitions
Compensation Services Revenue
Collective Bargaining Services Revenue
Housing Rents
Liquid Waste Industrial Charges
Energy Sales
Transfer from DCC Reserves
User Fees
Housing Mortgage Subsidies
Non-Road Diesel Permit Fees
Regional Global Positioning System User Fees
Electoral Area Requisition
Love Food Hate Waste
Zero Waste Conference
Other External Revenues
Transfer from Sustainability Innovation Fund Reserve
Transfer from Reserves
TOTAL REVENUES

$

286,908,565
255,810,755
98,362,329
61,188,452
478,280
867,558
39,309,579
11,022,967
5,927,304
31,665,173
5,257,010
1,088,554
2,450,000
314,180
366,510
556,000
180,000
9,311,422
3,249,082
22,068,080

$

307,175,053
274,237,112
105,822,892
71,779,890
483,893
887,536
40,392,325
11,201,217
5,681,540
34,172,083
5,288,054
2,103,014
1,760,000
292,221
376,943
406,800
230,000
9,213,671
895,000
17,650,939

7.1%
7.2%
7.6%
17.3%
1.2%
2.3%
2.8%
1.6%
(4.1%)
7.9%
0.6%
93.2%
(28.2%)
(7.0%)
2.8%
(26.8%)
27.8%
(1.0%)
(72.5%)
(20.0%)

$

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112,531,210
79,456,410
502,980
922,506
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2,099,058
1,710,000
294,175
398,979
499,500
325,000
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265,000
15,691,594

6.4%
11.9%
6.3%
10.7%
3.9%
3.9%
2.9%
2.0%
9.8%
30.6%
0.8%
(0.2%)
(2.8%)
0.7%
5.8%
22.8%
41.3%
9.9%
(70.4%)
(11.1%)

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86,572,835
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924,552
45,130,135
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1,615,000
299,252
425,310
547,200
337,000
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155,000
13,255,576

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13.3%
4.7%
9.0%
0.1%
0.2%
8.6%
2.0%
2.6%
33.0%
1.1%
2.6%
(5.6%)
1.7%
6.6%
9.5%
3.7%
(0.1%)
(41.5%)
(15.5%)

$

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11.2%
6.9%
7.9%
1.2%
1.3%
2.7%
2.0%
2.6%
20.6%
1.2%
(11.7%)
(3.1%)
1.5%
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0.8%
(100.0%)
(7.0%)

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502,200
366,200
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9,755,579

$

836,381,800

$

890,050,183

6.4%

$

967,471,127

8.7%

$

1,067,573,897

10.3%

$

$

290,674,105

$

309,148,765

6.4%

$

328,462,949

6.2%

$

358,973,462

9.3%

$

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6.5%

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7.2%

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53,477,886

2.3%

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1,445,409
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484,500
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549,880
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3,656,687
338,928
76,410,939

5,833,504
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4,521,227
808,417
5,879,900
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1,020,000
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328,849
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1.0%
2.5%
(34.3%)
6.0%
16.2%
11.0%
110.0%
4.3%
(40.2%)
9.7%
2.9%
180.0%
12.9%

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2,860,674
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91,994,195

0.2%
(3.3%)
2.7%
(16.1%)
0.8%
12.9%
(9.6%)
50.0%
(6.3%)
16.1%
12.8%
5.0%
(63.1%)
6.6%

890,050,183

6.4%

967,471,127

8.7%

10.9%
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8.0%
2.0%
2.6%
21.1%
1.0%
2.6%
(6.4%)
1.8%
3.6%
0.0%
4.5%
1.0%
0.0%
(20.9%)

1,171,281,469

9.7%

$

1,272,631,871

8.7%

396,181,015

10.4%

$

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10.8%

14.6%
4.5%

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11.9%
6.6%

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9.0%
3.8%

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6.7%

58,008,008

1.7%

61,767,011

6.5%

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4,774,193
732,784
6,019,674
1,975,718
2,872,976
2,040,000
198,745
337,885
58,513,760
3,842,497
353,697
98,481,649

0.2%
0.7%
2.8%
8.0%
1.6%
4.1%
0.4%
33.3%
(10.9%)
(11.5%)
10.8%
(2.8%)
1.4%
7.1%

5,870,428
11,100,594
4,927,854
648,693
6,066,192
1,904,399
2,912,142
2,550,000
189,162
343,522
64,229,903
3,895,795
501,804
105,140,488

0.2%
1.3%
3.2%
(11.5%)
0.8%
(3.6%)
1.4%
25.0%
(4.8%)
1.7%
9.8%
1.4%
41.9%
6.8%

5,870,445
11,394,762
5,074,228
652,466
6,138,863
1,913,618
2,959,956
2,550,000
178,579
350,057
70,529,644
3,907,212
510,013
112,029,843

0.0%
2.7%
3.0%
0.6%
1.2%
0.5%
1.6%
0.0%
(5.6%)
1.9%
9.8%
0.3%
1.6%
6.6%

EXPENDITURES
Operating Programs:
Greater Vancouver Water District
Greater Vancouver Sewerage & Drainage District:
Liquid Waste
Solid Waste
Metro Vancouver Housing Corporation
Metro Vancouver Regional District
Affordable Housing
Air Quality
E911 Emergency Telephone Service
Electoral Area Service
General Government Administration
General Government Zero Waste Collaboration Initiatives
Labour Relations
Regional Economic Prosperity
Regional Emergency Management
Regional Global Positioning System
Regional Parks
Regional Planning
Sasamat Fire Protection Service

TOTAL EXPENDITURES

$

836,381,800

$

$

$

Metro Vancouver
Regional District
Page 1

1,067,573,897

10.3%

$

1,171,281,469

9.7%

$

1,272,631,871

8.7%


# REVENUES

<table>
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<tr>
<th></th>
<th>2019 BUDGET</th>
<th>2020 BUDGET</th>
<th>% CHANGE</th>
<th>2021 FORECAST</th>
<th>% CHANGE</th>
<th>2022 FORECAST</th>
<th>% CHANGE</th>
<th>2023 FORECAST</th>
<th>% CHANGE</th>
<th>2024 FORECAST</th>
<th>% CHANGE</th>
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<td>$5,833,504</td>
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<td>$5,847,990</td>
<td>0.2%</td>
<td>$5,859,978</td>
<td>0.2%</td>
<td>$5,870,428</td>
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<td>$5,833,504</td>
<td>217.1%</td>
<td>$5,847,990</td>
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<td>$5,870,428</td>
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<td>$5,870,445</td>
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# EXPENDITURES

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<td>Housing Policy and Planning</td>
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<td>$757,915</td>
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<td>Contribution to Affordable Housing Development Reserve</td>
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<td>61,961</td>
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<td>56,975</td>
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<td>54,220</td>
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<td>217.1%</td>
<td>$5,847,990</td>
<td>0.2%</td>
<td>$5,859,978</td>
<td>0.2%</td>
<td>$5,870,428</td>
<td>0.2%</td>
<td>$5,870,445</td>
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</tbody>
</table>
### Metro Vancouver Regional District
#### AIR QUALITY
#### 2020-2024 FINANCIAL PLAN

#### REVENUES

<table>
<thead>
<tr>
<th></th>
<th>2019 BUDGET</th>
<th>2020 BUDGET</th>
<th>2021 FORECAST</th>
<th>2022 FORECAST</th>
<th>2023 FORECAST</th>
<th>2024 FORECAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Vancouver Regional District Requisitions</td>
<td>4,878,970 $</td>
<td>5,567,235 $</td>
<td>6,187,551 $</td>
<td>6,475,804 $</td>
<td>6,638,767 $</td>
<td>7,033,009 $</td>
</tr>
<tr>
<td>User Fees</td>
<td>1,800,000 $</td>
<td>1,900,000 $</td>
<td>1,900,000 $</td>
<td>1,900,000 $</td>
<td>1,900,000 $</td>
<td>1,900,000 $</td>
</tr>
<tr>
<td>Non-Road Diesel Permit Fees</td>
<td>2,450,000 $</td>
<td>1,760,000 $</td>
<td>1,710,000 $</td>
<td>1,615,000 $</td>
<td>1,565,000 $</td>
<td>1,465,000 $</td>
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<tr>
<td>Other External Revenues</td>
<td>517,400</td>
<td>649,271</td>
<td>656,086</td>
<td>602,938</td>
<td>604,827</td>
<td>601,753</td>
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<tr>
<td>Transfer from Sustainability Innovation Fund Reserve</td>
<td>469,550</td>
<td>110,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Transfer from Reserves</td>
<td>1,031,947</td>
<td>1,271,986</td>
<td>435,000</td>
<td>366,000</td>
<td>392,000</td>
<td>395,000</td>
</tr>
<tr>
<td><strong>TOTAL REVENUE</strong></td>
<td><strong>$ 11,147,867</strong></td>
<td><strong>$ 11,258,492</strong></td>
<td><strong>$ 10,888,637</strong></td>
<td><strong>$ 10,959,742</strong></td>
<td><strong>$ 11,100,594</strong></td>
<td><strong>$ 11,394,762</strong></td>
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</table>

#### EXPENDITURES

**Operating Programs:**

<table>
<thead>
<tr>
<th>Program</th>
<th>2019 BUDGET</th>
<th>2020 BUDGET</th>
<th>2021 FORECAST</th>
<th>2022 FORECAST</th>
<th>2023 FORECAST</th>
<th>2024 FORECAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Air Quality Monitoring</td>
<td>2,186,844 $</td>
<td>2,209,366 $</td>
<td>2,103,425 $</td>
<td>2,141,084 $</td>
<td>2,179,520 $</td>
<td>2,220,743 $</td>
</tr>
<tr>
<td>Air Quality and Climate Change Policy</td>
<td>1,637,057</td>
<td>2,359,552</td>
<td>2,307,897</td>
<td>2,317,934</td>
<td>2,328,893</td>
<td>2,418,861</td>
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<tr>
<td>Air Quality Bylaw and Regulation Development</td>
<td>1,786,193</td>
<td>1,185,863</td>
<td>1,136,054</td>
<td>1,161,524</td>
<td>1,182,439</td>
<td>1,203,884</td>
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<tr>
<td>Engineers in Training</td>
<td>-</td>
<td>34,602</td>
<td>35,300</td>
<td>36,009</td>
<td>36,733</td>
<td>37,473</td>
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<td>Regional Sustainability Initiatives</td>
<td>469,550</td>
<td>110,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration and Department Support</td>
<td>425,330</td>
<td>618,228</td>
<td>630,528</td>
<td>643,037</td>
<td>665,820</td>
<td>668,880</td>
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<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td><strong>$ 6,505,074</strong></td>
<td><strong>$ 6,517,631</strong></td>
<td><strong>$ 6,213,204</strong></td>
<td><strong>$ 6,299,588</strong></td>
<td><strong>$ 6,437,405</strong></td>
<td><strong>$ 6,549,841</strong></td>
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**Communications Program**

<table>
<thead>
<tr>
<th>Program</th>
<th>2019 BUDGET</th>
<th>2020 BUDGET</th>
<th>2021 FORECAST</th>
<th>2022 FORECAST</th>
<th>2023 FORECAST</th>
<th>2024 FORECAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Regulation and Enforcement</td>
<td>3,033,392</td>
<td>3,525,618</td>
<td>3,423,088</td>
<td>3,498,605</td>
<td>3,565,791</td>
<td>3,750,963</td>
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<tr>
<td>Contribution to Non-Road Diesel Reserve</td>
<td>625,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td><strong>$ 3,658,392</strong></td>
<td><strong>$ 3,775,618</strong></td>
<td><strong>$ 3,673,088</strong></td>
<td><strong>$ 3,748,605</strong></td>
<td><strong>$ 3,815,791</strong></td>
<td><strong>$ 4,000,963</strong></td>
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</tbody>
</table>

**Allocation of Centralized Support Costs**

<table>
<thead>
<tr>
<th>Program</th>
<th>2019 BUDGET</th>
<th>2020 BUDGET</th>
<th>2021 FORECAST</th>
<th>2022 FORECAST</th>
<th>2023 FORECAST</th>
<th>2024 FORECAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation of Centralized Support Costs</td>
<td>878,401</td>
<td>807,243</td>
<td>864,345</td>
<td>773,549</td>
<td>709,398</td>
<td>675,958</td>
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<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td><strong>$ 4,536,793</strong></td>
<td><strong>$ 4,582,851</strong></td>
<td><strong>$ 4,537,433</strong></td>
<td><strong>$ 4,522,054</strong></td>
<td><strong>$ 4,525,189</strong></td>
<td><strong>$ 4,676,921</strong></td>
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</table>

**TOTAL REVENUES**

<table>
<thead>
<tr>
<th>Forecast Year</th>
<th>Revenues Forecast</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$ 11,147,867</td>
<td>1.0%</td>
</tr>
<tr>
<td>2021</td>
<td>$ 11,258,492</td>
<td>(3.3%)</td>
</tr>
<tr>
<td>2022</td>
<td>$ 10,888,637</td>
<td>0.7%</td>
</tr>
<tr>
<td>2023</td>
<td>$ 10,959,742</td>
<td>1.3%</td>
</tr>
<tr>
<td>2024</td>
<td>$ 11,100,594</td>
<td>2.7%</td>
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</table>

**TOTAL EXPENDITURES**

<table>
<thead>
<tr>
<th>Forecast Year</th>
<th>Expenditures Forecast</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$ 11,147,867</td>
<td>1.0%</td>
</tr>
<tr>
<td>2021</td>
<td>$ 11,258,492</td>
<td>(3.3%)</td>
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<td>$ 10,888,637</td>
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</tr>
<tr>
<td>2023</td>
<td>$ 10,959,742</td>
<td>1.3%</td>
</tr>
<tr>
<td>2024</td>
<td>$ 11,100,594</td>
<td>2.7%</td>
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</tbody>
</table>
## Metro Vancouver Regional District
### E911 Emergency Telephone Service
#### 2020-2024 Financial Plan

<table>
<thead>
<tr>
<th></th>
<th>2019 Budget</th>
<th>2020 Budget</th>
<th>% Change</th>
<th>2021 Forecast</th>
<th>% Change</th>
<th>2022 Forecast</th>
<th>% Change</th>
<th>2023 Forecast</th>
<th>% Change</th>
<th>2024 Forecast</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro Vancouver Regional District Requisitions</td>
<td>$4,344,017</td>
<td>$4,446,846</td>
<td>2.4%</td>
<td>$4,567,390</td>
<td>2.7%</td>
<td>$4,695,565</td>
<td>2.8%</td>
<td>$4,847,491</td>
<td>3.2%</td>
<td>$4,991,943</td>
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<tr>
<td>Other External Revenues</td>
<td></td>
<td>67,568</td>
<td>74,381</td>
<td>78,628</td>
<td>80,363</td>
<td>82,285</td>
<td></td>
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</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$4,411,585</td>
<td>$4,521,227</td>
<td>2.5%</td>
<td>$4,643,773</td>
<td>2.7%</td>
<td>$4,774,193</td>
<td>2.8%</td>
<td>$4,927,854</td>
<td>3.2%</td>
<td>$5,074,228</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2019 Budget</th>
<th>2020 Budget</th>
<th>% Change</th>
<th>2021 Forecast</th>
<th>% Change</th>
<th>2022 Forecast</th>
<th>% Change</th>
<th>2023 Forecast</th>
<th>% Change</th>
<th>2024 Forecast</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expenditures</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Operating Programs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Telephone Service</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
<td>$4,325,083</td>
</tr>
<tr>
<td>Allocation of Centralized Support Costs</td>
<td>86,502</td>
<td>88,652</td>
<td>91,054</td>
<td>93,612</td>
<td>96,625</td>
<td>99,495</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td>$4,411,585</td>
<td>$4,521,227</td>
<td>2.5%</td>
<td>$4,643,773</td>
<td>2.7%</td>
<td>$4,774,193</td>
<td>2.8%</td>
<td>$4,927,854</td>
<td>3.2%</td>
<td>$5,074,228</td>
<td>3.0%</td>
</tr>
</tbody>
</table>
### Revenues

<table>
<thead>
<tr>
<th></th>
<th>2019 Budget</th>
<th>2020 Budget</th>
<th>% Change</th>
<th>2021 Forecast</th>
<th>2022 Forecast</th>
<th>% Change</th>
<th>2023 Forecast</th>
<th>2024 Forecast</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electoral Area Requisition</td>
<td>$366,510</td>
<td>$376,943</td>
<td>2.8%</td>
<td>$398,979</td>
<td>$425,310</td>
<td>6.6%</td>
<td>$443,219</td>
<td>$458,992</td>
<td>3.6%</td>
</tr>
<tr>
<td>User Fees</td>
<td>10,000</td>
<td>10,000</td>
<td></td>
<td>10,000</td>
<td>10,000</td>
<td></td>
<td>10,000</td>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>Other External Revenues</td>
<td>171,474</td>
<td>171,474</td>
<td></td>
<td>171,474</td>
<td>171,474</td>
<td></td>
<td>171,474</td>
<td>171,474</td>
<td></td>
</tr>
<tr>
<td>Transfer from Reserves</td>
<td>682,500</td>
<td>250,000</td>
<td>-45.3%</td>
<td>98,000</td>
<td>126,000</td>
<td>29.3%</td>
<td>24,000</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$1,230,484</td>
<td>$808,417</td>
<td>(34.3%)</td>
<td>$678,453</td>
<td>$732,784</td>
<td>8.0%</td>
<td>$648,693</td>
<td>$652,466</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

### Expenditures

**Operating Programs:**

<table>
<thead>
<tr>
<th></th>
<th>2019 Budget</th>
<th>2020 Budget</th>
<th>% Change</th>
<th>2021 Forecast</th>
<th>2022 Forecast</th>
<th>% Change</th>
<th>2023 Forecast</th>
<th>2024 Forecast</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Planning</td>
<td>$295,634</td>
<td>$339,443</td>
<td>14.2%</td>
<td>$346,098</td>
<td>$353,006</td>
<td>2.0%</td>
<td>$360,492</td>
<td>$367,599</td>
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<tr>
<td>Electoral Area Projects and Studies</td>
<td>637,500</td>
<td>190,000</td>
<td>-65.0%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Building Inspection</td>
<td>20,966</td>
<td>22,104</td>
<td>6.7%</td>
<td>22,863</td>
<td>23,241</td>
<td>1.6%</td>
<td>24,000</td>
<td>23,611</td>
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<tr>
<td>Local Government Election</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Fraser Valley Library Services</td>
<td>2,000</td>
<td>2,067</td>
<td>3.4%</td>
<td>2,067</td>
<td>2,067</td>
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<td>2,067</td>
<td>2,067</td>
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</tr>
<tr>
<td>Emergency Planning</td>
<td>12,000</td>
<td>18,000</td>
<td>50.0%</td>
<td>24,000</td>
<td>30,000</td>
<td>25.0%</td>
<td>30,000</td>
<td>30,000</td>
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</tr>
<tr>
<td><strong>Total Operating Programs</strong></td>
<td>$1,013,100</td>
<td>$571,614</td>
<td>(43.6%)</td>
<td>$444,645</td>
<td>$530,077</td>
<td>19.2%</td>
<td>$415,800</td>
<td>$423,277</td>
<td>1.8%</td>
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<tr>
<td>Contribution to Election Reserve</td>
<td>-</td>
<td>30,000</td>
<td>-100.0%</td>
<td>30,000</td>
<td>-</td>
<td>-</td>
<td>30,000</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Contribution to Reserve</td>
<td>171,474</td>
<td>171,474</td>
<td></td>
<td>171,474</td>
<td>171,474</td>
<td></td>
<td>171,474</td>
<td>171,474</td>
<td></td>
</tr>
<tr>
<td>Allocation of Centralized Support Costs</td>
<td>35,910</td>
<td>35,910</td>
<td></td>
<td>32,334</td>
<td>31,233</td>
<td>3.4%</td>
<td>31,419</td>
<td>27,715</td>
<td>11.8%</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td>$1,230,484</td>
<td>$808,417</td>
<td>(34.3%)</td>
<td>$678,453</td>
<td>$732,784</td>
<td>8.0%</td>
<td>$648,693</td>
<td>$652,466</td>
<td>0.6%</td>
</tr>
<tr>
<td></td>
<td>2019</td>
<td>2020</td>
<td>% CHANGE</td>
<td>2021</td>
<td>2022</td>
<td>% CHANGE</td>
<td>2023</td>
<td>2024</td>
<td>% CHANGE</td>
</tr>
<tr>
<td>---------------------</td>
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<td>---------------</td>
<td>----------</td>
<td>---------------</td>
<td>---------------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>REVENUES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro Vancouver Regional District Requisitions</td>
<td>$4,233,594</td>
<td>$4,440,990</td>
<td>4.9%</td>
<td>$4,659,693</td>
<td>$4,786,799</td>
<td>2.7%</td>
<td>$4,865,759</td>
<td>$4,950,822</td>
<td>1.7%</td>
</tr>
<tr>
<td>Other External Revenues</td>
<td>1,010,000</td>
<td>972,910</td>
<td></td>
<td>975,368</td>
<td>977,875</td>
<td></td>
<td>980,433</td>
<td>1,003,041</td>
<td></td>
</tr>
<tr>
<td>Transfer from Reserves</td>
<td>305,000</td>
<td>466,000</td>
<td></td>
<td>290,000</td>
<td>255,000</td>
<td></td>
<td>220,000</td>
<td>185,000</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>$5,548,594</td>
<td>$5,879,900</td>
<td>6.0%</td>
<td>$5,925,061</td>
<td>$6,019,674</td>
<td>0.8%</td>
<td>$6,066,192</td>
<td>$6,138,863</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

| **EXPENDITURES**    |               |               |          |               |               |          |               |               |          |
| Operating Programs: |               |               |          |               |               |          |               |               |          |
| Audit and Insurance | $110,929      | $69,680       |          | $70,670       | $77,098       |          | $72,760       | $73,680       |          |
| Board Administrative Services | 2,524,121 | 2,828,319 |          | 2,771,556 | 2,842,354 |          | 2,914,931 | 2,989,314 |          |
| External Contributions | 435,000 | 445,000 |          | 455,000 | 455,000 |          | 455,000 | 455,000 |          |
| Leadership and Engagement | 488,440 | 502,498 |          | 520,134 | 533,401 |          | 539,772 | 553,568 |          |
| Mosquito Control Contract | 135,000 | 117,810 |          | 120,166 | 122,569 |          | 125,021 | 127,519 |          |
| Regional Culture | 36,077 | 36,825 |          | 37,484 | 38,111 |          | 38,773 | 39,449 |          |
| Contribution to Sustainability Innovation Fund Reserve | 347,000 | 347,000 |          | 347,000 | 347,000 |          | 347,000 | 347,000 |          |
| Communications Program | 1,032,000 | 1,117,000 | 8.2% | 1,169,500 | 1,197,000 | 2.4% | 1,197,000 | 1,197,000 | 0.0% |
| Allocation of Centralized Support Costs | 440,027 | 415,768 | 5.5% | 433,571 | 407,141 | 6.1% | 375,935 | 356,153 | 5.3% |
| **TOTAL EXPENDITURES** | $5,548,594 | $5,879,900 | 6.0% | $5,925,061 | $6,019,674 | 0.8% | $6,066,192 | $6,138,863 | 1.2% |
## Metro Vancouver Regional District
### General Government Zero Waste Collaboration Initiatives
#### 2020-2024 Financial Plan

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### Metro Vancouver Regional District

#### Regional Emergency Management

#### 2020-2024 Financial Plan

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<td>(6.3%)</td>
<td>$198,745</td>
<td>(10.9%)</td>
<td>$189,162</td>
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## REVENUES

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<tr>
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<td><strong>$549,880</strong></td>
<td><strong>$328,849</strong></td>
<td>(40.2%)</td>
<td><strong>$381,792</strong></td>
<td>16.1%</td>
<td><strong>$337,885</strong></td>
<td>(11.5%)</td>
<td><strong>$343,522</strong></td>
<td>1.7%</td>
<td><strong>$350,057</strong></td>
<td>1.9%</td>
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## EXPENDITURES

### Operating Programs:

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<th>% CHANGE</th>
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<th>% CHANGE</th>
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<td><strong>$549,880</strong></td>
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<td>(40.2%)</td>
<td><strong>$381,792</strong></td>
<td>16.1%</td>
<td><strong>$337,885</strong></td>
<td>(11.5%)</td>
<td><strong>$343,522</strong></td>
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### REVENUES

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<th>2021 Forecast</th>
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<th>2023 Forecast</th>
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<td>Metro Vancouver Regional District Requisitions</td>
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### EXPENDITURES

#### Operating Programs:

**Systems Planning and Engineering Services**
- Engineering Services: $1,303,096 (2019), $1,354,867 (2020), $1,379,758 (2021), $1,402,149 (2022), $1,433,878 (2023)

**Systems Visitor and Operations Services**
- Visitor Services: $1,752,235 (2019), $1,503,354 (2020), $1,541,559 (2021), $1,558,144 (2022), $1,575,030 (2023)

**Central Area Services**

**East Area Services**

**West Area Services**
- Contribution to Reserve: $23,000 (2019), $23,000 (2020), $23,000 (2021), $23,000 (2022), $23,000 (2023)

**Administration and Department Support**

**Total Operating Programs**

**Debt Service**
- Debt Service: $53,907 (2019), $0 (2020), $0 (2021), $0 (2022), $0 (2023)

**Contribution to Capital Infrastructure Reserve**
- Contribution to Capital Infrastructure Reserve: $4,482,000 (2019), $4,622,000 (2020), $4,582,000 (2021), $4,582,000 (2022), $4,582,000 (2023)

**Contribution to Parkland Acquisition Reserve**
- Contribution to Parkland Acquisition Reserve: $7,570,000 (2019), $16,262,000 (2020), $21,552,000 (2021), $26,881,000 (2022), $32,219,000 (2023)

**TOTAL EXPENDITURES**
## CAPITAL EXPENDITURES

### Parks-Capital Replacement and Development

<table>
<thead>
<tr>
<th>Project Description</th>
<th>2020 CAPITAL BUDGET</th>
<th>2021 CAPITAL PLAN</th>
<th>2022 CAPITAL PLAN</th>
<th>2023 CAPITAL PLAN</th>
<th>2024 CAPITAL PLAN</th>
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<th>PROJECT COSTS</th>
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<td>Crippen - New Service yard</td>
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<tr>
<td>Pacific Spirit - Service Yard Replacement</td>
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<td>Grouse - BCMC Realignment + Improvement</td>
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## Capital Programs and Project Details

**Regional Parks**

### 2020-2024 Financial Plan

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### Capital Funding

**Reserve Funding**

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<th>2023 FORECAST</th>
<th>% CHANGE</th>
<th>2024 FORECAST</th>
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<td>2019 BUDGET</td>
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<td>% CHANGE</td>
<td>2021 FORECAST</td>
<td>% CHANGE</td>
<td>2022 FORECAST</td>
<td>% CHANGE</td>
<td>2023 FORECAST</td>
<td>% CHANGE</td>
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<td>$333,789</td>
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<td>$338,694</td>
<td>1.5%</td>
<td>$343,697</td>
<td>1.5%</td>
<td>$491,804</td>
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<td>178.5%</td>
<td>$348,694</td>
<td>(63.1%)</td>
<td>$353,697</td>
<td>1.4%</td>
<td>$501,804</td>
<td>41.9%</td>
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<td>329,915</td>
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<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>$338,928</td>
<td>$943,789</td>
<td>178.5%</td>
<td>$348,694</td>
<td>(63.1%)</td>
<td>$353,697</td>
<td>1.4%</td>
<td>$501,804</td>
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## PROPOSED APPLICATIONS

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<td>Air Quality</td>
<td>Fund SIP Projects</td>
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<td>Fund Air Quality Projects, Initiatives and Equipment Purchases</td>
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<td>Electoral Area Service</td>
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<td>General Government</td>
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<td>Grants Reserve Fund</td>
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<td>Fund General Government Initiatives</td>
<td>General Government General Reserve</td>
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<td>Regional Emergency Management</td>
<td>Fund Integrated Partnership Regional Emergency Management (IPREM) program initiatives</td>
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<td>Fund Regional Parks Capital Replacement, Maintenance and Initiatives</td>
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<td>Fund Pacific/Parks Foundation Stewardship Programmes</td>
<td>Regional Parks Legacy Fund</td>
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<td>Corporate Services</td>
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<td></td>
<td>Fund Fleet Vehicles and Equipment Purchases and Initiatives</td>
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<td>Human Resources</td>
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METRO VANCOUVER REGIONAL DISTRICT
BYLAW NO. 1291, 2019
A Bylaw to Adopt the Financial Plan for the Years 2020 to 2024

The Metro Vancouver Regional District (the “MVRD”) Board of Directors, enacts as follows:

1. This bylaw may be cited as the “Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019”.

2. The Five-Year Financial Plan for the Metro Vancouver Regional District attached hereto as Schedule 1, is hereby made part of this bylaw and adopted for the period 2020 to 2024 inclusive.

3. “2019 to 2023 Financial Plan Bylaw No. 1280, 2018” is hereby repealed.

4. This bylaw is effective January 1st, 2020.

Read a first, second and third time this ______ day of ____________________, ______.

Passed and finally adopted this ______ day of ____________________, ______.

______________________________
Sav Dhaliwal, Chair

______________________________
Chris Plagnol, Corporate Officer
### Schedule 1

#### Metro Vancouver Regional District Revenue and Expenditure Summary

**2020-2024 Financial Plan**

<table>
<thead>
<tr>
<th></th>
<th>2020 Budget</th>
<th>2021 Forecast</th>
<th>2022 Forecast</th>
<th>2023 Forecast</th>
<th>2024 Forecast</th>
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</thead>
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<td><strong>Revenues</strong></td>
<td></td>
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<td>Non-Road Diesel Permit Fees</td>
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<td>1,615,000</td>
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<td>Love Food Hate Waste</td>
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<td>Transfer from Sustainability Innovation Fund Reserves</td>
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<tr>
<td>Transfer from Reserves</td>
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<tr>
<td><strong>Total Revenues</strong></td>
<td>$86,260,228</td>
<td>$91,994,195</td>
<td>$98,481,649</td>
<td>$105,140,488</td>
<td>$112,029,843</td>
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<th>2022 Forecast</th>
<th>2023 Forecast</th>
<th>2024 Forecast</th>
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<tbody>
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<td><strong>Expenditures</strong></td>
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<td></td>
<td></td>
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<tr>
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<td>E911 Emergency Telephone Service</td>
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<td>General Government Administration</td>
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<td>General Government Zero Waste Collaboration Initiatives</td>
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<td>Labour Relations</td>
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<td>1,530,000</td>
<td>2,040,000</td>
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<td>2,500,000</td>
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<td>Regional Economic Prosperity</td>
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<tr>
<td><strong>Total Expenditures</strong></td>
<td>$86,260,228</td>
<td>$91,994,195</td>
<td>$98,481,649</td>
<td>$105,140,488</td>
<td>$112,029,843</td>
</tr>
</tbody>
</table>

**Capital Funding**

- Reserves - Regional Parks: $19,870,000

**Capital Expenditures**

- Capital Expenditures - Regional Parks: $19,870,000

**Household Impact**

- Household Impact: $64

Metro Vancouver Regional District 2020 to 2024 Financial Plan Bylaw No. 1291, 2019

Page 2 of 2

33244851
To: Board of Directors

From: Carol Mason, Commissioner/Chief Administrative Officer
      Dean Rear, Acting General Manager, Financial Services/Chief Financial Officer

Date: October 18, 2019

Subject: 2020 – 2024 Financial Plan – Metro Vancouver Districts and Housing Corporation

RECOMMENDATION
That the Board endorse the 2020 Budget and 2020 -2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation, as presented, and direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Districts and Housing Corporation Board meetings for consideration.

PURPOSE
To present the 2020 Budget and 2020 - 2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation for consideration.

BACKGROUND
The 2020 – 2024 Financial Plan for the Metro Vancouver Regional District (MVRD), Greater Vancouver Water District (GVWD), Greater Vancouver Sewerage and Drainage District (GVS&DD) and Metro Vancouver Housing Corporation (MVHC) has been guided by the direction provided in the Board Strategic Plan and prepared in accordance with Board policy. The 2020 – 2024 Financial Plan is a continued step forward towards ensuring financial sustainability for the region. The details of the Financial Plan are included in Attachment 1.

During the month of October, the 2020 – 2024 Financial Plans for Metro Vancouver’s four legal entities were presented to the following ten Board Standing Committees for the individual functions that fall under the oversight of those Committees:

- Indigenous Relations
- Climate Action
- Electoral Area
- Finance and Intergovernment
- Housing
- Regional Parks
- Regional Planning
- Water
- Liquid Waste
- Zero Waste

The Metro Vancouver Standing Committees were presented with individual reports covering the 2020 Budget and 2020 - 2024 Financial Plans for each function including program highlights and financial plan highlights (see Item 3.1). The reports included financial information for multiple years as well as a “What’s Happening” summary page that described the key activities projected over the five year period of the financial plan. Each Committee has reviewed and endorsed their individual financial plans and provided comments and direction where appropriate for consideration by the Board at the October 23, 2019 Board Budget Workshop.
The 2020 Budget and 2020 – 2024 Financial Plans reflect consistency and alignment with the legislative authority of the individual Districts and functions and support the vision and mission as articulated in the Board Strategic Plan and corresponding Regional Management Plans. The plan is also in accordance with applicable Board policies. Upon Board endorsement of the overall Five Year Financial Plan, this document will guide the direction of future annual budgets and long-term financial plans as well as provide key information to member local governments on future capital projects, anticipated expenditures and funding projections.

This report is being brought forward to present the overall 2020 – 2024 Financial Plan for Metro Vancouver Districts and Housing Corporation (representing the four legal entities: MVRD, GVWD, GVS&DD, MVHC) for consideration and to forward to the Board meeting on November 1, 2019 for approval.

2020 BUDGET AND FIVE YEAR FINANCIAL PLAN

The budget for this cycle and the five year financial plans are built upon five central themes that guide the development of Metro Vancouver’s long term plans and budgets:

- Regional Growth
- Environmental Sustainability
- Financial Sustainability
- System Stewardship
- Regulatory and Legislative Environment

Annual Work Plans are developed for most Metro Vancouver functions. The 2020 Annual Work Plans for each functional area are included with the reports that were presented to individual standing committees.

The Metro Vancouver Proposed 2020 - 2024 Financial Plan (Attachment 1) provides the financial details of the 2020 Budget and 2020 - 2024 Financial Plan including financial information by sub-region for the GVS&DD sewerage areas. The attachment also shows the impact of the plan on the cost to the average regional household by those sub-regions to assist member local governments in anticipating the financial impact of Metro Vancouver services to their communities.

FINANCIAL PLAN OVERVIEW

The completion of the 2020 Budget and the 2020 - 2024 Financial Plan is the culmination of a significant planning exercise with guidance framed by a number of Board policies including:

- the Financial Management Policy
- the Corporate Allocation Policy
- the Operating, Statutory and Discretionary Reserves Policy
- the Asset Management policies for individual functions

As proposed, the 2020 - 2024 Financial Plan has total operating expenditures for 2020 of $890.1 million (prior projected: $907.4 million) with projected capital expenditures of just over $1,414.6 million as summarized in the tables below:
Over the five years of the plan, most of the changes and increases in funding are associated with infrastructure investments in Water, Liquid Waste and Solid Waste, through changes to debt servicing and contributions to capital.

For 2020, the plan represents a $33 increase to the cost of the average regional household ($1.255 million assessed value) for a total cost of $568. Over the five year period, the cost to the average regional household will increase an average of $46. The cost to the average household is projected to increase from $535 to $768 over the next five years.

CONSISTENCY WITH THE 2019 -2023 FINANCIAL PLAN
For the purposes of providing predictability and stability for costs to our member municipalities, the financial plan was prepared to result in financial impacts that met or were better than what was
projected in the 2019 – 2023 Metro Vancouver Financial Plan for all four legal entities. In 2020 the impact on the average regional household is estimated to be $8 less than the prior year projection for an average regional household cost of $568 (Prior projection: $576).

This change is driven by reductions in Water Services (-$11) and Liquid Waste Services (-$7) through adjustments to contribution to capital and direct application of DCC’s to Liquid Waste growth projects, but is offset by increase reserve contributions for both Affordable Housing and Regional Parks in the Regional District (+$8) and increased estimated household tonnage in Solid Waste Services (+$2).

For the years 2021, 2022 and 2023 the household impact is estimated to be a total of $34 less than the previous five year projection.

The total household impact compared to that projected in the previous financial plan is set out in the table below.

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<th>BY 2020 VS BY 2019 HOUSEHOLD IMPACT COMPARISON</th>
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<th>2022</th>
<th>2023</th>
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<td>$62</td>
<td>$65</td>
<td>$68</td>
<td>$70</td>
<td>$73</td>
</tr>
<tr>
<td>Prior Year Forecast</td>
<td>$58</td>
<td>$60</td>
<td>$62</td>
<td>$64</td>
<td>$67</td>
<td>$ -</td>
</tr>
<tr>
<td>MVRD Services</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Current Year Forecast</td>
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<td>$64</td>
<td>$69</td>
<td>$74</td>
<td>$79</td>
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<tr>
<td>Prior Year Forecast</td>
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<td>$56</td>
<td>$58</td>
<td>$59</td>
<td>$60</td>
<td>$ -</td>
</tr>
<tr>
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<td></td>
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</tr>
<tr>
<td>Current Year Forecast</td>
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<td>$568</td>
<td>$610</td>
<td>$665</td>
<td>$719</td>
<td>$768</td>
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<tr>
<td>Prior Year Forecast</td>
<td>$535</td>
<td>$576</td>
<td>$625</td>
<td>$680</td>
<td>$723</td>
<td>$ -</td>
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</tbody>
</table>

FINANCIAL PLAN HIGHLIGHTS

GVWD - WATER
The GVWD comprises 18 member municipalities, one electoral area and one treaty First Nation within Metro Vancouver, serving a population of approximately 2.5 million. Drinking water is collected from three protected mountain watersheds covering an area of approximately 60,000 hectares. The system itself comprises six mountain storage lakes, five dams, two major water treatment facilities, over 500 km of large diameter transmission mains, 26 storage reservoirs, 19 pump stations and 8 rechlorination stations. The system treats and distributes an average of 1.0 billion litres of water per day.
The GVWD 2020 – 2024 Financial Plan for the next five years is summarized below:

<table>
<thead>
<tr>
<th>WATER SERVICES FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ Millions</td>
</tr>
<tr>
<td>Water Sales</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Expenditures</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Blended Water Rate (m3)</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Capital Expenditures</td>
</tr>
<tr>
<td>Household Impact ($)</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Household Impact Change from Prior Cycle ($)</td>
</tr>
</tbody>
</table>

Operating Budget Highlights
The Water Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital). It is proposed to increase by $18.4 million in 2020 for a total budget of $309.1 million (Attachment 1). This increase can essentially be attributed to contribution to capital, to support infrastructure investments required to meet service requirements, growth demands and resilience upgrades.

The 2020 operating budget includes the following key actions:

- Continue to collaborate with GVWD members to implement the new Region-wide Guide for Enforcement of Metro Vancouver's Drinking Water Conservation Plan.
- Secure water licence(s) for the additional water allocation from the Coquitlam source, as per the Coquitlam Water Use Plan, following execution of the new BC Hydro/GVWD Water Use Agreement
- Continue development of a Facility Master Plan that aligns with Metro Vancouver’s Water Supply Outlook 2120.
- Continue development of an updated Drinking Water Management Plan.
- Continue to develop Asset Management Program for Water Services including Asset Assessment Plans and individual facility Asset Management Plans.
- Continue implementation of the Water Services Environmental Management System in addressing prioritized regulatory compliance and environmental risks.
- Complete fish stranding study downstream of Seymour Falls Dam in accordance with the approved Joint Water Use Plan.
- Complete Level 2 asset condition assessments for select water main marine crossings and critical line valve chambers in accordance with the Water Services Asset Management Plan.
- Develop an energy use dashboard for the Capilano Raw Water Pump Station to track and manage energy use and optimize operation.
• Conduct a screening level business case for the phased installation of in-line chlorine meters in the water transmission system.
• Coordinate interagency work for Pattullo Bridge Replacement project, Broadway Subway project and the Surrey/Langley Skytrain project.

In 2020, Water Services is proposing to add 5 new full-time staff positions. These include 2 Senior Project Engineers dedicated to completing key tasks supporting Water Services’ Asset Management Program, 1 Utility System Operator II supporting field operations along with condition assessments of water transmission infrastructure assets as part of Water Services’ Asset Management Program, 1 Engineering Technician II supporting environmental compliance reporting requirements, and 1 Senior Project Engineer supporting backup power related project works. As well, 1 Trades Foreman supporting ongoing maintenance work at the Seymour Capilano Filtration Plant is proposed to be added to the shared services provided by Liquid Waste.

Over the next five years, the Water Services budget is expected to increase an average of $29.7 million or 8.6% per year. Of this overall increase, funding related to the expanding capital program (debt servicing and contribution to the capital) is increasing $26.8 million on average over the next five years leaving the operating programs which are increasing, on average, by $2.9 million per year, roughly at the rate of inflation.

Capital Budget Highlights
The Water Services capital budget for 2020 is $397.5 million (Attachment 2). The capital program is funded by a combination of long-term debt, contributions from the operating budget, and external (interagency) contributions.

Highlights of capital projects planned or ongoing for 2020 include the following:
- Commence Coquitlam Intake No. 2 Project Preliminary Design
- Continue design of Coquitlam Main No. 4
- Continue construction of Second Narrows Water Supply Tunnel
- Complete detailed design of Annacis Water Supply Tunnel and begin construction phase
- Complete construction of Mackay Creek Debris Flow Mitigation project
- Continue construction of Kennedy-Newton Main (Phase 1)
- Complete design of Annacis Main No. 5 (South)
- Complete construction of South Delta Main No. 1 Replacement (Phase 3)
- Commence construction of Capilano Raw Water Pump Station Backup Power
- Continue design of Capilano Main No. 5 (Stanley Park Section)
- Commence construction of Fleetwood Reservoir
- Complete construction of Jericho Reservoir
- Continue construction of Port Mann Main No. 2 (South)
- Continue construction of Whalley Main
- Commence construction of Douglas Road Main No. 2 (Still Creek Section)
- Complete construction of Central Park Main No. 2 (Phase 1) and
- Continue conceptual design of Cambie-Richmond Main No. 3 (Marine Crossing).

The capital expenditure budget for 2020 – 2024 totals $2.41 billion, an average of $481 million per year. The largest 10 projects ($150 million and greater) make up approximately 57% of the capital expenditure budget.
spending over the next five years. These ten projects also represent the majority of expenditures planned for the 2025 – 2029 period (67%). There are an additional 118 projects on the plan.

Capital program expenditures over the next five years are largely driven by system expansion to meet the needs of a growing population, upgrades to improve system resiliency and maintenance of aging infrastructure. The following ten projects are the largest projects included in the five year plan:

- Coquitlam Intake No. 2, Tunnel and Treatment - $2.3B
- Annacis Main No. 5 (Marine Crossing) - $488M
- Second Narrows Crossing (Tunnel) - $469M
- Cambie-Richmond Main No.3 (Marine Crossing) - $405M
- Lulu Island-Delta Main No.2 (Marine Crossing) - $370M
- Coquitlam Main No. 4 (Central Section) - $297M
- Capilano Main No. 5 (South Shaft to Lost Lagoon) - $249M
- Seymour Main No. 5 III (North) - $237M
- Coquitlam Main No. 4 (South Section) - $228M, and
- Kennedy-Newton Main - $164M.

**GVS&DD – LIQUID WASTE**

The Liquid waste function of the GVS&DD comprises 17 member municipalities and one electoral area within Metro Vancouver, serving a population of approximately 2.5 million. The wastewater collection and treatment system consists of over 530 kilometers of trunk sewers, 33 pump stations and 5 treatment plants that convey and treat an average of 1.2 billion litres of wastewater per day. The urban drainage function comprises the Still Creek/Brunette, Port Moody/Coquitlam and UBC Drainage Areas.

The Liquid Waste 2020 – 2024 Financial Plan for the next five years is summarized below:

<table>
<thead>
<tr>
<th>LIQUID WASTE SERVICES FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$ Millions</strong></td>
</tr>
<tr>
<td>Sewer Levy</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Expenditures</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Capital Expenditures</td>
</tr>
<tr>
<td>Household Impact ($)</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Household Impact Change from Prior Cycle ($)</td>
</tr>
</tbody>
</table>
The Sewer Levy and household impact by sewerage areas (SA) are as follows:

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>5 Year Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancouver SA</td>
<td>$79.6</td>
<td>$85.5</td>
<td>$92.6</td>
<td>$99.8</td>
<td>$106.5</td>
<td>$111.4</td>
<td>7.0%</td>
</tr>
<tr>
<td>Household Impact ($)</td>
<td>$293</td>
<td>$310</td>
<td>$331</td>
<td>$353</td>
<td>$371</td>
<td>$384</td>
<td>5.6%</td>
</tr>
<tr>
<td>North Shore SA</td>
<td>$23.0</td>
<td>$26.0</td>
<td>$29.2</td>
<td>$34.5</td>
<td>$39.1</td>
<td>$44.6</td>
<td>14.1%</td>
</tr>
<tr>
<td>Household Impact ($)</td>
<td>$304</td>
<td>$340</td>
<td>$376</td>
<td>$440</td>
<td>$493</td>
<td>$558</td>
<td>12.9%</td>
</tr>
<tr>
<td>Lulu Island SA</td>
<td>$21.5</td>
<td>$24.7</td>
<td>$28.1</td>
<td>$32.2</td>
<td>$35.8</td>
<td>$38.7</td>
<td>12.6%</td>
</tr>
<tr>
<td>Household Impact ($)</td>
<td>$214</td>
<td>$239</td>
<td>$269</td>
<td>$300</td>
<td>$329</td>
<td>$347</td>
<td>10.2%</td>
</tr>
<tr>
<td>Fraser SA</td>
<td>$129.5</td>
<td>$135.9</td>
<td>$154.8</td>
<td>$179.0</td>
<td>$203.0</td>
<td>$219.4</td>
<td>11.2%</td>
</tr>
<tr>
<td>Household Impact ($)</td>
<td>$226</td>
<td>$234</td>
<td>$260</td>
<td>$294</td>
<td>$326</td>
<td>$344</td>
<td>8.8%</td>
</tr>
<tr>
<td>Drainage Areas – Levy (**)</td>
<td>$2.2</td>
<td>$2.1</td>
<td>$2.1</td>
<td>$2.1</td>
<td>$2.1</td>
<td>$2.2</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

(**) Household impact is not calculated for drainage areas

In 2019, an amendment to the Cost Apportionment Bylaw allowed for the direct application of DCCs for growth capital expenditure. For each sewerage area, the direct application of DCCs has resulted in savings in debt service costs through reduced projected borrowing. This contributes directly to the primary objectives of the Financial Management Policy by reducing overall debt servicing both currently and in the future. Capacity has also been created to allow additional contribution to capital over the next five years which reduce long term borrowing within individual sewerage areas.

Operating Budget Highlights

The Liquid Waste Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital). It is proposed to increase by $17.4 million in 2020 for a total budget of $328.3 million (Attachment 1). This increase can essentially be attributed to increasing operating costs, debt service and contribution to capital. A significant portion of the increase can be attributed to increased contributions to capital of $8.2 million to support infrastructure investments required to meet service requirements and growth demands and increased debt service costs of $2.9 million due to accelerating capital program.

The 2020 operating budget includes the following key actions:

- Complete the Project Definition Report for the Iona Island Wastewater Treatment Plant Secondary and advanced treatment options upgrade, including development of the indicative design for the new plant.
- Continue to decommission the Iona Island Wastewater Treatment Plant biosolids stockpile. Acceleration of the grit dump decommissioning, increased disposal volumes due to weed seed contamination and delays in the decommissioning of the sludge lagoons are driving cost increases for 2020.
- Continue development of Asset Management program in alignment with the Board Asset Management for Liquid Waste Policy, including O&M asset condition assessment plans, facility level risk assessments and asset management plans. This work will include developing
strategies and implementing pilot work on technologies for full pipe condition inspections/assessments.

- Update the Biosolids Management Plan Framework, identifying an action plan to manage future increases in biosolids generation resulting from growth and the treatment plant upgrades.
- Complete Maintenance Service Enhancement Initiatives to review maintenance practices, efficiency, transparency/accuracy of data and level of customer service with the intent to optimize resources, procedures and practices.
- Continue Source Control regulatory initiatives including a review of the Food Sector Grease Interceptor Bylaw and the Sewer Use Bylaw (with respect to the trucked liquid waste sector) Identification and pursuit of unauthorized discharges will reduce system maintenance and treatment costs and reduce risks to workers, biosolids quality and the environment.

In 2020, Liquid Waste Services is proposing to add 7 new full-time staff positions. These include 2 Project Engineers dedicated to required engineering support at North Shore and Northwest Langley wastewater treatment plants, 1 Clerk Stenographer III providing required administrative support for large infrastructure projects such as the North Shore wastewater plant upgrade, 1 Project Engineer dedicated to complete key tasks supporting Liquid Waste Service’s Asset Management Program, 1 Engineering Technician I to provide technical resources supporting numerous asset management and condition asset programs, 1 Project Engineer providing mechanical engineering technical support for select utilities assets as well as technical maintenance related start-up and commissioning services for new assets and 1 Senior Project Engineer in Wastewater Engineering providing operational engineering technical support for all phases of wastewater capital projects underway including project definition, detailed design, construction and start-up and commissioning. As well, 1 Trades Foreman supporting ongoing maintenance work at Seymour Capilano Filtration Plant for Water Services is proposed to be added to the shared services provided by Liquid Waste Services Operations and Maintenance.

Over the next five years, the Liquid Waste Services budget is expected to increase an average of $41.5 million or 10.8% per year. Of this overall increase, funding related to the expanding capital program (debt servicing and contribution to the capital) is increasing $36.2 million on average over the next five years. The operating programs are increasing, on average, by $5.3 million per year, roughly at the rate of inflation.

**Capital Budget Highlights**

The Liquid Waste Services capital budget for 2020 is $883.4 million (Attachment 2). The capital program is funded by long-term debt, contributions from the operating budget, and external (interagency and senior level government grant) contributions.

Highlights of capital projects planned or ongoing for 2020 include the following:

- Remove all preload from North Shore Wastewater Treatment Plant site, complete 90% of excavation and commence foundation pouring;
- Substantially complete construction of 5 primary sedimentation tanks, 2 solids contact tanks and 6 secondary clarifiers for the Annacis Island WWTP Stage 5 expansion;
- Complete construction of 2 vertical launch/receiving shafts and commence tunneling of chlorine contact tank effluent section for the Annacis Island WWTP Outfall project;
• Substantially complete the Sapperton Pump Station;
• Complete the Northwest Langley Wastewater Treatment Plant Phase 2 ground improvements;
• Start construction of the open cut and tunneled sections of the Burnaby Lake North Interceptor – Winston section;
• Achieve total completion of the two South Surrey Interceptor Odour Control Facilities (King George and Highway 10);
• Start construction of the last section of the twinning of the South Surrey Interceptor; and
• Complete the Hastings Sanitary Trunk Sewer, North Road Trunk Sewer (Phase 1), Albert Street Sanitary Trunk Sewer (Phase 1) and Highbury Interceptor Air Management Facility.

The capital expenditure budget for 2020 - 2024 totals $3.42 billion, an average of $685 million per year. The largest 5 projects ($175 million and greater) make up 60% of the capital spending over the next 5 years. These five projects also represent the majority of the expenditures planned for the following 10 years (61%). In addition, there are a further 130 projects on the plan.

Capital program increases over the next five years are largely driven by system expansion to meet the needs of a growing population, upgrades to improve wastewater discharge quality and meet regulations along with maintenance of aging infrastructure. The following capital projects are the largest projects included in the five year plan:

• North Shore Wastewater Treatment Plant Secondary - $882M;
• Annacis Stage 5 Expansion - $686M;
• Annacis Outfall System - $378M;
• Northwest Langley Wastewater Plant Stage 1 - $889M; and
• Iona Secondary Treatment Indicative Design and Ground Improvements - $335M from 2020 to 2024.

**GVS&DD – SOLID WASTE**

The Solid Waste function comprises 17 member municipalities and one electoral area within Metro Vancouver, serving a population of approximately 2.5 million under the Greater Vancouver Sewerage and Drainage District. Metro Vancouver services provided to the region include regional solid waste planning, facilities for waste transfer, waste-to-energy and disposal and the regional coordination of public recycling services and education.

The Solid Waste 2020 – 2024 Financial Plan for the next five years is summarized below:

<table>
<thead>
<tr>
<th>SOLID WASTE SERVICES FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
<th>$ Millions</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>5 Year Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tipping Fee Revenue</td>
<td>$98.4</td>
<td>$105.8</td>
<td>$112.5</td>
<td>$117.8</td>
<td>$125.9</td>
<td>$130.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Change</td>
<td>7.6%</td>
<td>6.3%</td>
<td>4.7%</td>
<td>6.9%</td>
<td>4.0%</td>
<td>5.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$107.2</td>
<td>$114.1</td>
<td>$122.3</td>
<td>$127.8</td>
<td>$136.1</td>
<td>$141.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Change</td>
<td>6.5%</td>
<td>7.2%</td>
<td>4.5%</td>
<td>6.6%</td>
<td>3.8%</td>
<td>5.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Capital Expenditures</td>
<td>$89.2</td>
<td>$88.5</td>
<td>$81.6</td>
<td>$52.4</td>
<td>$18.9</td>
<td>$41.6</td>
<td>$56.6</td>
<td></td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
### Operating Budget Highlights

The Solid Waste Services operating budget is separated into operating programs and funding required to support the expanding capital program (debt service and contribution to capital). It is proposed to increase by $6.9 million in 2020 for a total budget of $114.1 million (Attachment 1). This increase can essentially be attributed to increasing transfer station and Waste-to-Energy Facility operating costs based on volume, additional resources in support of the work to update the *Integrated Solid Waste and Resource Management Plan* beginning in 2020 (through 2022) along with debt service and contribution to capital. With respect to contributions to capital, there was an increase of $1.7 million to support infrastructure investments required to meet service requirements and growth demands and an increase of debt service costs of $2.3 million due to the capital program primarily related to transfer station development work.

The 2020 operating budget includes the following key actions:

- Implementation of the Asset Management Program, including facility condition assessments;
- Complete Waste-to-Energy Facility biosolids processing preliminary design and district energy preliminary design and business case;
- Bottom ash beneficial use procurement;
- Autoscale software replacement plan;
- Initiate review of the *Integrated Solid Waste and Resource Management Plan*;
- Evaluate the transfer station network and potential improvements;
- Monitor implementation of the Disposal Ban Program;
- Evaluate the feasibility of an alternative fuel and recyclable recovery facility;
- Support programs for textiles, single-use items, seasonal wastes, food wastes, illegal dumping, and the Zero Waste Conference;
- Support the National Zero Waste Council including work on implementing the Circular Economy and Zero Plastics Waste;
- Support national solid waste benchmarking and applied waste research;
- Update regional waste composition monitoring;
- Track and manage waste flows;
- Update transfer stations customer service survey;
- Complete replacement Coquitlam Transfer Station construction and prepare for operations;
- Continue Surrey Recycling and Waste Drop-Off Facility development including beginning construction; and
- Inform, educate and engage the public in decision making on applicable solid waste initiatives.

<table>
<thead>
<tr>
<th>$ Millions</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>5 Year Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Impact ($)</td>
<td>$58</td>
<td>$62</td>
<td>$65</td>
<td>$68</td>
<td>$70</td>
<td>$73</td>
<td></td>
</tr>
<tr>
<td>% Change</td>
<td>6.6%</td>
<td>5.3%</td>
<td>3.7%</td>
<td>3.5%</td>
<td>4.1%</td>
<td>4.6%</td>
<td></td>
</tr>
<tr>
<td>Household Impact Change from Prior Cycle ($)</td>
<td>$2</td>
<td>$3</td>
<td>$4</td>
<td>$3</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tipping Fees:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 1 tonne</td>
<td>$142</td>
<td>$147</td>
<td>$154</td>
<td>$161</td>
<td>$168</td>
<td>$175</td>
<td></td>
</tr>
<tr>
<td>1 to 9 tonnes</td>
<td>$120</td>
<td>$125</td>
<td>$132</td>
<td>$139</td>
<td>$146</td>
<td>$153</td>
<td></td>
</tr>
<tr>
<td>Over 9 tonnes</td>
<td>$90</td>
<td>$99</td>
<td>$106</td>
<td>$113</td>
<td>$120</td>
<td>$127</td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td>$108</td>
<td>$113</td>
<td>$120</td>
<td>$127</td>
<td>$134</td>
<td>$141</td>
<td></td>
</tr>
</tbody>
</table>

Metro Vancouver Regional District
Highlights of contracts and consulting projects anticipated to be undertaken in 2020 to respond to work plan requirements within the operating budget include the following:

- Transfer station scale projects, customer survey, asset condition assessments ($504,000);
- Waste-to-Energy Facility projects ($675,000);
- Integrated Solid Waste and Resource Management Plan review and update ($1,000,000); and
- Ashcroft Ranch McLean Lake Dam spillway ($150,000).

There are no new full-time staff positions proposed for 2020. The Solid Waste Services organization chart is included as Attachment 6.

Over the next five years, the Solid Waste Services budget is expected to increase an average of $6.8 million or 5.7% per year. Of this overall increase, funding related to the expanding capital program (debt servicing and contribution to the capital) is increasing $5.0 million on average over the next five years leaving the operating programs which are increasing, on average, by $1.8 million per year, roughly at the rate of inflation.

**Capital Budget Highlights**

The proposed Solid Waste Services capital budget for 2020 is $88.5 million (Attachment 2). The capital program is funded by long-term debt and contribution to capital from the annual operating budget as available.

Highlights of capital projects planned or ongoing for 2020 include the following:

- Coquitlam Transfer Station replacement and Coquitlam Landfill Closure;
- Surrey Recycling and Waste Drop-off Facility; and
- Refuse crane at the Waste-to-Energy Facility.

The capital expenditure budget for 2020 - 2024 totals $282.9 million, an average of $56.6 million per year. The largest five projects (each over $10 million) make up approximately 74% of the capital spending over the next five years, with an additional 25 projects on the plan making up the balance.

The capital program over the next five years is largely driven by the need to replace aging transfer stations and increase transfer station capacity through addition and expansion. Upgrades to the existing Waste-to-Energy Facility will ensure it continues to meet regulatory requirements and the addition of biosolids management at the Waste-to-Energy Facility and the Alternative Fuel and Recyclables Recovery project is expected to increase beneficial use of waste within the region. The following five key projects are the largest on the five year plan:

- Alternative Fuel and Recyclables Recovery Centre - $60.0M
- Coquitlam Transfer Station replacement - $77.6M
- Surrey Recycling and Waste Drop-off Facility - $62.3M
- Waste-to-Energy Facility Acid Gas Reduction - $41.0M
- Waste-to-Energy Facility Biosolids Processing - $20.5M

The proposed budgets for the Coquitlam Transfer Station replacement and Surrey Recycling and Waste Drop-Off have increased by $7.4 and $8.0 million respectively due to increased building and

Metro Vancouver Regional District
subdivision costs along with site specific issues related to developing the transfer station on a closed landfill for the Coquitlam Transfer Station, and updated costs estimates with the completion of detailed design for Surrey Recycling and Waste Drop-Off. Contingencies for both projects have been replenished with the proposed budget increases.

Business cases for the development of the Alternative Fuel and Recyclables Recovery Centre and biosolids management at the Waste-to-Energy Facility will be provided to the Zero Waste Committee and Board for consideration and specific approval of the projects.

MVHC – HOUSING
The MVHC owns and operates 49 housing sites that provide 3,400 units of affordable rental housing for low to moderate income households across the region. MVHC maintains existing assets, redevelops housing complexes, manages tenants and builds communities within the housing portfolio and surrounding neighborhoods. The Housing Corporation is supported by revenues generated from unit rentals and does not form part of the overall MVRD tax requisition.

The MVHC 2020 – 2024 Financial Plan for the next five years is summarized below:

<table>
<thead>
<tr>
<th>MVHC FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ Millions</td>
</tr>
<tr>
<td>Housing Rents</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Expenditures</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Capital Replacement</td>
</tr>
<tr>
<td>Housing Development</td>
</tr>
</tbody>
</table>

Operating Budget Highlights
MVHC 2020 operating budget is proposed to increase by $1,020,291 for a total budget of $52,289,752 (Attachment 1). This increase is primarily due to the increase rental revenue and operating subsidies to meet service requirements and growth demands.

The 2020 operating budget includes the following key actions:
- Rent-up and normalization of operations at Heather Place Building A
- Begin the implementation of the Metro Vancouver Housing 10-Year Plan actions
- Begin the implementation of the Redevelopment Plan and Asset Management Plan
- Begin construction on Kelly Court and Strathearn Court building envelope renewals and energy improvements
- Create new standardized signage for housing sites
- Enhance the online housing application process for tenants

There is one new full-time Community Development Coordinator position proposed for 2020 to support the Tenant Associations as well as enhancing tenant programs.
Over the next five years, the MVHC budget is expected to increase an average of $2.1 million or 3.8% per year. Of this overall increase, funding related to the expanding capital program (debt servicing and contribution to the capital) is increasing on average $1.2 million over the next five years and the operating programs and asset maintenance and replacement are increasing, on average, by $928,388 or 2.6% per year, in line with inflation.

**Capital Budget Highlights**
The MVHC capital budget for 2020 is $25.3 million (Attachment 2). The capital program is funded by mortgage financing, reserve funding, and contributions from external agencies. The capital projects planned and ongoing for 2020 are the redevelopment of Heather Place - Building A and B, Kingston Gardens - Phase I and Welcher Avenue. The capital expenditure budget for 2020 - 2024 totals $82.5 million with Heather Place – Building A slated for completion in 2020 and Kingston Gardens - Phase I and Welcher Avenue are estimated to be completed in 2021. Heather Place – Building B is estimated to be completed in 2023.

**MVRD – REGIONAL DISTRICT**
The MVRD budget and financial plan presented includes thirteen regional district functions of which eleven services are apportioned to all MVRD members through the tax requisition and two services which are apportioned to either a single jurisdiction (Electoral Area A) or to two municipalities (Belcarra and Anmore – Sasamat Fire Protection Service). The MVRD functions are also funded through a variety of other sources including permit revenues and user fees. The thirteen regional district functions are as follows:

- Affordable Housing
- Air Quality
- E911 Emergency Telephone Service
- Electoral Area Service
- General Government Administration
- General Government Zero Waste Collaboration
- Initiatives
- Regional Emergency Management
- Regional Global Positioning System
- Regional Parks
- Regional Planning
- Regional Economic Prosperity
- Sasamat Fire Protection Service
- Labour Relations

The MVRD 2020 – 2024 Financial Plan for the next five years is summarized below:

<table>
<thead>
<tr>
<th>REGIONAL DISTRICT SERVICES FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$ Millions</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Tax requisition</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Expenditures</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Total Capital Expenditures</td>
</tr>
<tr>
<td>Household Impact ($)</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Household Impact Change from Prior Cycle ($)</td>
</tr>
</tbody>
</table>
Operating Budget Highlights
In 2020, total expenditures for the Regional District Service Areas are proposed to increase $9.8 million for total expenditures of $86.3 million (Attachment 1). The increase is primarily due to the following:

- An additional annual provision to a reserve of $4 million for the development of affordable housing.
- An increase in the annual provision to the Parkland Acquisition Reserve Fund of $4 million for the acquisition of new park land
- The planned increase in the budget for Regional Economic Prosperity totaling $535,500.

The 2020 Regional District Service Area operating budgets includes the following key actions:

- Complete the Regional Greenways Plan
- Complete the Regional Parks Asset Management Plan
- Undertake an analysis of the Park Partnership Program
- Open the Sheep Paddocks Trail at Colony Farm Regional Park
- Seek Board adoption the Campbell Valley Regional Park Management Plan Update
- Continue to implement the Climate 2050 Strategy;
- Complete development of the next regional air quality management plan, the Clean Air Plan;
- Improve public understanding of air quality and climate change, including outreach and progress reporting on Climate 2050, the Clean Air Plan, and the preparation of the annual Caring for the Air report.
- Update Metro 2040 – Phase I Completion - Policy reviews and draft policy actions
- Complete the Urban Centres and FTDAs, Industrial and Mixed Employment, Agricultural, Environment, Transportation, Housing, and Climate Change Policy Review
- Completion of the 2020 Regional Industrial Land Inventory
- Frequent Transit Corridor Study
- Access to Homeownership Opportunities and development of Housing Agreement Templates
- Advance a Transit Oriented Affordable Housing Fund; update the Housing and Transportation Cost Burden analysis
- Climate Change Impacts on Invasive Species
- Urban forestry – Best Practices
- Complete pre-planning and concept development for select housing sites
- Build awareness and support for the Metro Vancouver Housing 10-year Plan
- Finalize and start the implementation of the Redevelopment Plan to support the increase in MVVHC affordable housing units
- Support Metro Vancouver Regional Planning policies related to housing in the 2050 Regional Growth Strategy

Over the next five years, the key driver for the Regional District is the annual increase in the Regional Parks budget for the contribution to the Regional Parks Land Acquisition Reserve in 2020 to 2024. The impact of this increase on the Regional District budget and the Household impact is illustrated in the table below which compares the prior year projections for Household Impact with that for the current year:
### REGIONAL DISTRICT HOUSEHOLD IMPACTS

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVRD Household Impact – Existing Services</td>
<td>$55</td>
<td>$56</td>
<td>$57</td>
<td>$58</td>
<td>$59</td>
<td>$60</td>
</tr>
<tr>
<td>Impact - Affordable Housing Development Reserve</td>
<td>$-</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
<td>$4</td>
</tr>
<tr>
<td>Impact - Regional Parkland Acquisition Reserve</td>
<td>$-</td>
<td>$4</td>
<td>$8</td>
<td>$12</td>
<td>$16</td>
<td>$20</td>
</tr>
<tr>
<td>Total Proposed MVRD Household Impact</td>
<td>$55</td>
<td>$64</td>
<td>$69</td>
<td>$74</td>
<td>$79</td>
<td>$84</td>
</tr>
<tr>
<td>Prior Cycle MVRD Household Impact</td>
<td>$55</td>
<td>$56</td>
<td>$58</td>
<td>$59</td>
<td>$60</td>
<td>$-</td>
</tr>
<tr>
<td>$ Change in Household Impact from Prior Cycle</td>
<td>$-</td>
<td>$8</td>
<td>$11</td>
<td>$15</td>
<td>$19</td>
<td>$-</td>
</tr>
</tbody>
</table>

There are two new full-time staff positions proposed for 2020 from the Regional District:

- A Policy Coordinator in Regional Planning to coordinate Metro Vancouver comments, and ensure a consistent approach when addressing external agency projects that have impacts on Metro Vancouver assets, operation, interests and legislated responsibilities (external agencies such as Translink, Port of Vancouver, Ministry of Transportation and Infrastructure).
- A Legislative Services Analyst in General Government Administration intended to manage the legislative requirements under the Freedom of Information and Protection of Privacy Act. The position is in response to FOI requests increasing in both number and complexity as well as privacy requirements becoming more stringent.

Over the five year plan, the projected expenditures for Regional District services collectively is projecting to increase from $76.4 million in 2019 to $112.0 million in 2024, an average increase of $7.1 million. Over the five year plan, the cost to the average regional household, for all Regional District Service is increasing $28 to a cost of $84 representing an average increase of $6 per year.

### Capital Budget Highlights

For Regional District Services, only the Regional Parks has a capital program, which has a capital budget for 2020 is $19.9 million (Attachment 2). The capital program is funded by reserve funds.

Highlights of capital projects planned or ongoing in 2020 include the following:

- Complete advanced design of Widgeon Marsh Regional Park
- Develop new service yard facilities at Capilano, Crippen, and Pacific Spirit Regional Parks
- Continued implementation of Grouse Mountain Regional Park Management Plan with upgrades to the BCMC and Grouse Grind Trails
- Pursue land acquisitions in support of Regional Parks Land Acquisition 2050
- Capital maintenance projects

The capital expenditure budget for 2020 - 2024 totals $142.7 million and is largely driven by new regional park developments, land acquisition and required infrastructure replacements. These include:

- Construction and opening of Widgeon Marsh Regional Park
- Construction of Crippen Regional Park- Davies Orchard Day Use Area
- Construction of the Belcarra South Picnic Area
- Development of Burns Bog Ecological Conservancy Area - Delta Nature Reserve
• Trail developments at Aldergrove, Tynehead, Campbell Valley and Pacific Spirit Regional Parks
• Pursue land acquisitions in support of Regional Parks Land Acquisition 2050
• Capital maintenance projects

CENTRALIZED SUPPORT PROGRAM

The Centralized Support Program includes the following support services: Corporate Services, External Relations, Financial Services, Human Resources Indigenous Relations and Legislative Services. These departments support all activities within the Metro Vancouver Districts and the Housing Corporation and costs are allocated to the various Districts and functions according to the Board’s Corporate Allocation Policy.

The 2020 – 2024 Financial Plan for the Centralized Support Program for the next five years is summarized below:

<table>
<thead>
<tr>
<th>CENTRALIZED SUPPORT PROGRAM FIVE YEAR FINANCIAL PLAN OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$ Millions</strong></td>
</tr>
<tr>
<td>Allocated to Functions</td>
</tr>
<tr>
<td>% Change</td>
</tr>
<tr>
<td>Corporate Services</td>
</tr>
<tr>
<td>External Relations</td>
</tr>
<tr>
<td>Financial Services</td>
</tr>
<tr>
<td>Human Resources</td>
</tr>
<tr>
<td>Indigenous Relations</td>
</tr>
<tr>
<td>Legislative Services</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>% Change</td>
</tr>
</tbody>
</table>

Operating Budget Highlights

In 2020, the Centralized Support Program expenditures are increasing $2.37 million for total expenditures of $76.3 million (Attachment 1). The allocation of Centralized Support Program costs, the true impact on the revenue requirements of the plan, is the total expenditures adjusted for external recoveries and reserve applications. In 2020, the allocation of centralized support program costs is increasing by $1.56 million (2.6%). This increase is largely inflationary, but is also impacted by reduced estimates for third-party lease returns at head office and partially offset by increased reserve funding for projects meeting the criteria for funding in accordance with the Operating, Statutory and Discretionary Reserves Policy.

Financial Services is proposing the addition of one Financial Systems Analyst to provide additional client support for the Unit 4 financial management system and the Questica financial planning system.

Centralized Support Services support the organization and focus on processes, systems and procedures which enhance the business activities of all Metro Vancouver service areas. Some of those enhancements include the following:
• Upgrade the Financial Planning System including an enhanced capital planning module
• Implementation of the Digital Strategy setting out a coordinated direction for IT corporately.
• Completion of the initial Metro Vancouver 30 Year Financial Plan
• Reviewing and revising Corporate Safety Management System Standards
• Continue the development of asset management programs building on the Board approved policies
• Review and update job classifications and generate job descriptions for the Teamsters positions
• Implementation of a Talent Management System and Learning Management System

Over the five years of the plan, the Centralized Support Program expenditures are increasing from $73.4 million in 2019 to $77.9 million in 2024, an average increase of $796,000 per year.

ALTERNATIVES
1. That the Board endorse the 2020 Budget and 2020 -2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation, as presented, and direct staff to prepare the necessary budget information to be presented at the November 1, 2019 Metro Vancouver Districts and Housing Corporation Board meetings for consideration.

2. That the Board make recommendations to amend the 2020 Budget and 2020 -2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation, as presented, and endorse the 2020 Budget and 2020 -2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation as amended.

FINANCIAL IMPLICATIONS
If the Board endorses the 2020 Budget and 2020 – 2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation as presented under alternative one, the cost to the average regional household ($1.255 million assessed value) will increase by $33 in 2020 for a total impact of $568 for all Metro Vancouver services. Over the next five years of the financial plan, the cost to the average regional household will increase from $535 in 2019 to $768 in 2024, an average annual increase of $46.

Under alternative two, the Board may wish to consider recommending amendments to the financial plan to reflect program priorities. Any proposed changes could require an update to the revenues required to fund the priorities in the plan.

SUMMARY / CONCLUSION
During the first two weeks of October, the 2020 Budget and 2020 – 2024 Financial Plans for Metro Vancouver’s legal entities and functions were presented to the following ten Board Standing Committees for the individual functions that fall under the oversight of those Committees:

• Indigenous Relations
• Climate Action
• Electoral Area
• Finance and Intergovernment
• Housing
• Regional Parks
• Regional Planning
• Water
• Liquid Waste
• Zero Waste
The Metro Vancouver Standing Committees were presented with individual reports covering the 2020 Budget and 2020 - 2024 Financial Plans for each function including program highlights, financial plan highlights, financial information for multiple years as well as a “What’s Happening” summary page that described the key activities projected over the five year period of the financial plan. Each Committee reviewed and endorsed their individual financial plans and provided comments and direction where appropriate for consideration by the Board at the October 23, 2019 Board Budget Workshop.

Within this report, the 2020 Budget and 2020 – 2024 Financial Plan for the Metro Vancouver Districts and Housing Corporation have been consolidated for Board consideration and present the overall financial forecast for Metro Vancouver over the next five years. The proposed Financial Plan includes significant capital investment that will be required if Metro Vancouver and its member jurisdictions are to meet the growing demands of the Metro Vancouver region over the coming years. For 2020, the plan represents a $33 increase to the cost of the average regional household ($1.255 million assessed value) for a total cost of $568. Over the five year period, the cost to the average regional household will increase an average of $46. Household impact is also presented by sub-region (using GVS&DD sewer areas as sub-regions) to assist member local governments in anticipating the financial impact of Metro Vancouver services to their individual communities. The cost to the average household is projected to increase from $535 to $768 over the next five years.

With Board endorsement, the 2020 – 2024 Metro Vancouver Financial Plan will form part of a 30 Year Financial Plan, currently under development, to ensure a sustainable financial foundation in the years ahead.

Staff recommend endorsing the 2020 Budget and 2020 – 2024 Financial Plan as presented under alternative one.

Attachments:
1. Proposed 2020—2024 Financial Plan
COMMITTEE INFORMATION ITEMS AND DELEGATION SUMMARIES
Metro Vancouver Regional District
Board Meeting Date – Friday, November 1, 2019

This information item, listing recent information received by committee, is provided for the MVRD Board’s information. Please access a complete PDF package here.

George Massey Crossing Task Force – October 2, 2019
Delegation Summaries:
3.1 Roderick V. Louis

Information Items:
No items presented

Performance and Audit Committee – October 10, 2019
Delegation Summaries:
No delegations presented

Information Items:
5.1 Interim Financial Performance Report – August 2019
5.2 Capital Program Expenditure Update as at August 31, 2019
5.3 Semi-Annual Report on GVS&DD Development Cost Charges
5.4 Investment Position and Returns – May 1 to August 31, 2019
5.5 Request for Proposal Competition Process for Appointing an External Auditor
5.6 Tender/Contract Award Information – June 2019 to August 2019

Indigenous Relations Committee – October 10, 2019
Delegation Summaries:
No delegations presented

Information Items:
5.2 A Review of Red Women Rising: Indigenous Women Survivors in Vancouver’s Downtown Eastside

Regional Planning Committee – October 11, 2019
Delegation Summaries:
No delegations presented

Information Items:
5.3 Ecological Health – Tree Canopy Cover and Impervious Surfaces
5.4 Study on Applications to the Agricultural Land Commission
Climate Action Committee – October 18, 2019

*Delegation Summaries:*
No delegations presented

*Information Items:*
5.4 Clean Air Plan and Climate 2050 Discussion Papers on Transportation and Industry
5.6 Results of Consultation on Proposed Amendments to Metro Vancouver’s Automotive Refinishing Emission Regulation Bylaw