

NO: **R017**

COUNCIL DATE: **February 10, 2020**

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **February 6, 2020**

FROM: **General Manager, Engineering** FILE: **5260-07**  
**General Manager, Parks, Recreation & Culture** XC: **3150-01**  
**General Manager, Planning & Development**

SUBJECT: **10-Year (2020-2029) Servicing Plan and 2020 Development Cost Charge Bylaw**

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## RECOMMENDATION

The Engineering Department, Parks, Recreation & Culture Department, and Planning & Development Department recommend that Council:

1. Approve the proposed 10-Year (2020-2029) Servicing Plan (the “10-Year Servicing Plan”) that is attached as Appendix “I” to this report;
2. Authorize the City Clerk to bring forward for the required readings the Development Cost Charge Bylaw (the “Bylaw”) attached as Appendix “II” to this report, which if adopted will provide the necessary Development Cost Charge (“DCC”) rate adjustments to fund the growth-related projects in the 10-Year Servicing Plan and the Parkland Acquisition Program; and
3. Subject to the Bylaw being given the required readings, authorize staff to forward the Bylaw to the Provincial Inspector of Municipalities for approval prior to its final adoption by Council.

## INTENT

The purpose of this report is to obtain approval of an updated 10-Year Servicing Plan and to have the related Development Cost Charge Bylaw be given the required readings, so as to allow the Bylaw to be submitted to the Provincial Inspector of Municipalities for approval prior to its final adoption by Council.

## BACKGROUND

The 10-Year Servicing Plan establishes the City’s capital expenditure plan for the construction of engineering infrastructure that will service existing neighbourhoods and support new growth across the City. Together with the Parkland Acquisition Program, it also forms the basis for establishing the City’s DCC rates.

Each year since 2006, staff have undertaken a review of the 10-Year Servicing Plan and, when warranted, have recommended adjustments to the plan and the related DCC rates. In 2018, Council adopted the current 10-Year (2018-2027) Servicing Plan and related DCC rates. DCC rates were not adjusted in 2019.

## DISCUSSION

Engineering's 10-Year Servicing Plan and Parks, Recreation & Culture's Parkland Acquisition Program are structured to align with the City's Smart Development Principles. Specifically, both programs support: aligning development with essential infrastructure; offering a range of housing choices; creating compact, connected and walkable urban centres; expanding transit-oriented development; preserving sensitive ecosystems; and community engagement and responsiveness to housing and business demands.

The proposed 10-Year Servicing Plan represents a \$2.2 billion dollar investment into the City's infrastructure over the next 10 years to support achieving these Smart Development Principles.

### Engineering Department's 10-Year Servicing Plan

Since the last 10-Year Servicing Plan update in 2018, a number of planning and engineering studies have been completed that identified updated infrastructure needs in the City. These include:

- Cloverdale Town Centre Plan;
- Various sewer, water and drainage model updates;
- Traffic/transportation updates; and
- Advancement of Surrey-Langley SkyTrain and cancellation of Surrey-Newton-Guildford Light Rail Transit.

Many of the infrastructure elements identified as a result of these studies and plans have been incorporated into the proposed 10-Year Servicing Plan.

The proposed 10-Year Servicing Plan builds on the previous version of the plan. Completed projects have been removed and new projects have been added. All projects are selected using a combination of data driven decision tools, prioritization methods that support new development as well as infrastructure improvements for existing residents, and rehabilitation programs and initiatives anticipated over the next 10 years.

Project cost estimates have been updated to reflect current construction prices. The proposed 10-Year Servicing Plan is not a commitment to construct all the identified projects, but rather identifies projects that will be constructed on a year-to-year basis as funding becomes available.

The principle funding sources of the 10-Year Servicing Plan are generally categorized as follows:

- **Growth:** This funding source (apart from the City's contribution through the Municipal Assist Factor) comes from revenues generated through DCCs that are collected on new development and are required to support growth in the City.
- **Non-Growth:** This funding source comes from the City's annual operating budgets:
  - For Transportation, non-growth projects are funded by a combination of general revenue, the Roads and Traffic Safety Levy, and a portion of the revenues generated through the Secondary Suite Fee for transportation infrastructure; and
  - For Utilities, non-growth projects are funded through dedicated utility fees for sanitary sewer, water and drainage.
- **External:** These funding sources come from senior levels of government such as Federal and Provincial Ministries and Grants, and other sources.
- **Greater Vancouver Transportation Authority ("GVTA"):** GVTA funding is the contributions that TransLink makes through the various funding programs that are available, such as Major Road Network maintenance funding.

The estimated total cost of all the projects in the proposed 10-Year Servicing Plan are listed in the following table:

**Proposed 10-Year (2020-2029) Servicing Plan**

<b>Program</b>	<b>Growth (\$)</b>	<b>Non-Growth (\$)</b>	<b>External (\$)</b>	<b>GVTA (\$)</b>	<b>Total (\$)</b>
Transportation (Arterial)	411,840,730	126,678,000	50,038,210	185,762,100	858,360,640
Transportation (Non-Arterial)	84,041,600				
Water	68,016,560	116,406,713	0	0	184,423,273
Sewer	116,641,172	91,003,890	240,000	0	207,885,062
Drainage	80,654,652	138,049,418	122,676,349	0	341,380,419
Campbell Heights	138,733,100	0	17,173,750	24,587,500	180,494,350
Highway 99 Corridor	40,991,300	0	22,800,750	3,170,500	66,962,550
Anniedale-Tynehead	200,430,000	0	116,275,000	25,560,000	342,265,000
<b>Total</b>	<b>1,141,349,114</b>	<b>472,138,021</b>	<b>329,204,059</b>	<b>239,080,100</b>	<b>2,181,771,294</b>

**Parks, Recreation & Culture Department’s Parkland Acquisition Program**

The Parkland Acquisition Program is funded through several sources, including DCCs and cash-in-lieu of Park Dedication. Additional parkland is acquired through the Federal Eco-gift Program and other gifts of land to the City. The majority of new park acquisitions are funded from Parks DCCs.

The value of the growth component (DCC eligible) of the proposed Parkland Acquisition Program is \$339,411,351. Funding for the current Parkland Acquisition Program continues to be challenged due to increases in land costs. An adjustment to the Park DCC is required to fully fund the current program.

Staff are reviewing opportunities to adjust the Parkland Acquisition DCC rate in the future, with the goal of funding the acquisition of green infrastructure network (“GIN”) lands identified in the City’s Biodiversity Conservation Strategy. Parkland Acquisition DCC rate increases for acquisition of the GIN lands are proposed to be phased in over several years, beginning in 2021.

**Municipal Assist Factor**

The Municipal Assist Factor (“MAF”) represents the City’s financial contribution from “Non-Growth” sources of revenue to support growth, as required under the *Local Government Act*. The City has provided considerable support to the development community over the past 10 years through the MAF contribution, supporting a 10% MAF for Utilities and a 5% MAF for Transportation. The MAF for Parkland Acquisition was lowered from 5% to 1% over the course of a three-year period that completed in 2018.

Most municipalities in the Lower Mainland, including other high-growth communities such as the Township of Langley, City of Coquitlam and City of Richmond, have a 1% MAF for all assets. It is recommended that the MAF be adjusted to 1% for all assets to better align with the region and the City’s development-pay principles.

## **2020 Development Cost Charge Rates**

The proposed 2020 DCC rates for major land use categories, based on the “Growth” component of Transportation, Utilities and Parkland projects identified in the 10-Year Servicing Plan and Parkland Acquisition Program (with a 1% MAF for all assets), are summarized in Appendix “III”.

Overall, the proposed DCC rate changes represent modest increases over the 2018 rates. Taking into consideration that DCC rates were not increased in 2019, the City-Wide DCC rates represent an increase of 2.6% to 6.3% over two years. Similarly, Area-Specific DCC rate increases are generally in the range of 10% over two years. These increases are roughly in alignment with cost-of-living adjustments in the region.

### Anniedale-Tynehead NCP Area-Specific DCC Rates

While there are no increases proposed to the overall asset program values in Anniedale-Tynehead, the DCC rates are proposed to be adjusted to reflect the MAF reduction to 1%.

Staff will continue to review the servicing strategies in the Anniedale-Tynehead NCP area to seek opportunities to reduce some of the remaining proposed improvements in light of the recent servicing strategies for nearby growth areas (West Clayton NCP area and the Abbey Ridge Local Area Plan area), along with any potential proposed amendments to land uses in the NCP area. Although servicing costs have increased since the area-specific DCC rates for this NCP area were originally introduced, staff are hopeful that the review will mitigate the need for a significant change in DCC rates in the future for developments in this NCP area.

A complete listing of DCC rates for all land uses in the City is provided in Schedules B, C, D and E in the proposed DCC Bylaw attached to this report as Appendix “II”.

## **Public and Development Industry Consultation**

Staff presented the proposed DCC rates to the City’s Development Advisory Committee (“DAC”) on November 28, 2019. No concerns were expressed by the DAC members in attendance at the meeting.

Staff also hosted a Public Open House on January 8, 2020 that was advertised on the City’s website (via a dedicated event page), two direct email invitations to DAC members, promotion through four e-News and Update newsletters, social media postings through the City’s channels, and flyers posted at Engineering Front Counter at City Hall. Information on the proposed DCC rates was provided on the City’s website at [www.surrey.ca/DCCs](http://www.surrey.ca/DCCs).

The Public Open House was attended by approximately 35 individuals. 26 feedback forms/emails were received during the subsequent two-week feedback period. Overall, there was support for the proposed DCC rates, as many believe that the development community needs to pay its equitable share of the cost to support growth and protect natural areas that support biodiversity in the City. Concerns were expressed by some about the cumulative impacts of the various municipal and regional charges imposed on new development, such as the Community Amenity Contributions (“CAC”), Metro Vancouver DCCs and TransLink DCCs, along with increased construction costs to meet building and energy step code requirements, on project viability and affordability in the region.

A joint letter from the Urban Development Institute – Pacific Region (“UDI”) and the Home Builders Association Vancouver (“HAVAN”) was received on January 13, 2020. The letter states that:

*While we believe the City’s DCC proposal to be reasonable for long-term growth in Surrey, we are very concerned that accumulation of recent fee increases (including the unanticipated impact of the CAC & Density Bonus Policy) is substantial. Due to the significant amount of new fees and charges facing builders we recommend that the City defer the implementation of the new Development Cost Charges for one year to allow for the market and industry to adjust.*

In regard to the CAC and Density Bonus Program, Corporate Report (R224; 2019) endorsed by Council at the November 18, 2019 meeting states that:

*For applications which have received 3rd Reading of related Zoning Bylaw amendments are exempt from the proposed new Capital Projects CAC program. However, a sunset clause for completion of rezonings within one year of 3rd Reading is proposed.*

Therefore, a one-year grandfathering provision is in place for in-stream applications that have received 3<sup>rd</sup> Reading prior to January 1, 2020. Further, the proposed CACs rates will be phased in over two years, with the full rates in place as of January 1, 2022. Staff are of the opinion that the implementation of the CAC and Density Bonus Policy is reasonable and has provided the development community with sufficient notice and opportunity to plan for the new CAC rates. Staff have shared these comments with the UDI and HAVAN. The DCC rate adjustments proposed herein should be considered on their own merit and with the understanding that this is the first DCC rate increase in two years.

Staff also received feedback requesting that the City consider waiving DCCs for not-for-profit and below market rental housing. The Province’s DCC Best Practices Guide states that:

*....the intent of the legislation is that in cases where the DCC is waived or reduced, the amount waived is to be entirely supported by the existing development.*

In other words, the City is obligated to pay DCCs that are waived, through revenue generated from taxes and fees levied on existing residents and businesses. Given this, and consistent with the City’s approach to date, staff have advised applicants of projects that do not qualify for exemption under the City’s DCC Bylaw that the City is unable to waive DCCs.

### **Metro Vancouver and TransLink DCC Rates**

The Greater Vancouver Regional Sewerage & Drainage District (“Metro Vancouver”) and TransLink also charge DCCs on new development.

Metro Vancouver’s current DCC rates took effect on May 1, 2018. Metro Vancouver is not proposing to increase their DCC rates at this time. The development community has been aware of Metro Vancouver’s DCC rates since late 2017.

In December 2017, TransLink’s Mayors’ Council approved a framework to establish a new DCC to assist in funding the 10-Year Vision for the Metro Vancouver Transportation Plan (2017-2026). This DCC will be implemented in three phases. The Phase 1 DCC rates went into effect on January 15, 2019 with a 100% assist factor to allow for phasing the rates in. As such, no DCCs were collected in 2019. The Phase 2 DCC rates took effect on January 15, 2020 and Phase 3 will take effect on January 1, 2021. The development community has been aware of TransLink’s DCC rates and the phasing approach since early 2018.

## **Implementation**

The 10-Year Servicing Plan and the related DCC rates, as proposed, are to be implemented in accordance with the following schedule:

February 10, 2020:	Corporate Report to Council for approval of the 10-Year (2020-2029) Servicing Plan and initial readings of the related 2020 DCC Bylaw
February-April 2020:	Provincial Inspector of Municipalities review and approval of the 2020 DCC Bylaw
April 20, 2020:	Final Adoption of 2020 DCC Bylaw by Council
May 15, 2020:	2020 DCC Rates take effect for all applications not in-stream
May 15, 2021:	2020 DCC Rates take effect for all in-stream applications that have yet to be completed

## **Impact on the 5-Year (2020-2024) Financial Plan**

The 2020 5-Year (2020-2024) Financial Plan – Utilities and Other Self-Funded Programs, which was approved by the Finance Committee on December 16, 2019, reflects the proposed 10-Year Servicing Plan as documented in this report.

The 2020 5-Year (2020-2024) Capital Plan, which was approved by the Finance Committee on December 16, 2019, reflects the proposed 10-Year Servicing Plan and Parkland Acquisition Program as documented in this report.

The 2020 5-Year (2020-2024) General Operating Financial Plan, which was approved by the Finance Committee on December 16, 2019, reflects the proposed 10-Year Servicing Plan as documented in this report.

The 2020 budget is based on the assumption that the proposed 10-Year (2020-2029) Servicing Plan will be approved as documented in this report.

## **Legal Services and Finance Review**

This report has been reviewed by the Finance Department and the related Bylaw has been reviewed by the Legal Services Division and they have no concerns.

## **Next Steps**

Staff will continue to regularly review land values, construction costs and servicing requirements to determine when future adjustments to the 10-Year Servicing Plan, Parkland Acquisition Program and DCC rates are required to ensure that there is sufficient DCC revenue to fund the infrastructure works and parkland acquisition required to support planned and orderly development in the City.

## SUSTAINABILITY CONSIDERATIONS

A properly developed and adequately funded 10-Year Servicing Plan and Parkland Acquisition Program helps to ensure continued planned and orderly development in Surrey, which supports the objectives of the City's Sustainability Charter 2.0. In particular, the Plan supports the Sustainability Charter 2.0 themes of Infrastructure, Built Environment and Neighbourhoods, Ecosystems, and Public Safety. Specifically, a properly developed and adequately funded 10-Year Servicing Plan and Parkland Acquisition Program supports the following Desired Outcomes ("DO") and Strategic Direction ("SD"):

- All Infrastructure DO1: City facilities and infrastructure systems are well managed, adaptable and long lasting, and are effectively integrated into regional systems;
- All Infrastructure SD1: Proactively manage community assets to maintain them over the long-term in a state of good repair;
- Energy and Climate DO6: The City anticipates changing weather patterns and sea level rise as a result of climate change, and implements appropriate infrastructure, land use planning and emergency response solutions that will be resilient over the long-term; and
- Green Infrastructure DO12: Include natural capital and ecosystem services in in all City projects at the planning phase, as well as in the City's infrastructure services program and climate adaptation planning.

## CONCLUSION

Based on the above discussion, Council's approval of the proposed 10-Year Servicing Plan and bringing forward of the DCC Bylaw will establish the City's capital expenditure plan for the construction of engineering infrastructure and parkland acquisition that will service existing neighbourhoods and support new growth across the City, in alignment with the City's Smart Development Principles.

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General Manager,  
Parks, Recreation & Culture

Jean Lamontagne  
General Manager, Planning & Development

SW/cc

Appendix "I" - 10-Year (2020-2029) Servicing Plan  
Appendix "II" - Proposed Surrey Development Cost Charge Bylaw, 2020, No. 20019  
Appendix "III" - Proposed 2020 Development Cost Charge Rates

# 10-YEAR SERVICING PLAN

## Engineering Department





**City of Surrey  
Engineering Department**

**10-YEAR SERVICING PLAN (2020-2029)**

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**TABLE OF CONTENTS**

<b>1.</b>	<b>OVERVIEW OF THE PLAN.....</b>	<b>1</b>
<b>2.</b>	<b>TRANSPORTATION .....</b>	<b>6</b>
<b>3.</b>	<b>WATER.....</b>	<b>23</b>
<b>4.</b>	<b>SANITARY SEWER.....</b>	<b>31</b>
<b>5.</b>	<b>STORMWATER .....</b>	<b>42</b>
<b>6.</b>	<b>CAMPBELL HEIGHTS.....</b>	<b>54</b>
<b>7.</b>	<b>HIGHWAY 99 CORRIDOR .....</b>	<b>57</b>
<b>8.</b>	<b>ANNIEDALE-TYNEHEAD .....</b>	<b>59</b>

## 1. OVERVIEW OF THE PLAN

The objective of the 10-Year Servicing Plan (the “Servicing Plan”) is to establish a program of municipal engineering infrastructure works and services that are required to meet the needs identified under the Official Community Plan and Neighbourhood Concept Plans approved by Council.

The Servicing Plan identifies the costs to provide transportation, stormwater, water and sanitary sewer services for both the existing population and the projected growth in population over the next 10-years (2020-2029).

The Servicing Plan is developed based on the following plans and documents:

- Official Community Plan (“OCP”);
- Neighbourhood Concept Plans (“NCPs”);
- Sustainability Charter;
- Previous 10-Year Servicing Plan (2018-2027);
- Biodiversity Conservation Strategy;
- Transportation Strategic Plan;
- Walking and Cycling Plans;
- Integrated Stormwater Management Plans;
- Serpentine/Nicomekl Strategic Plan for Lowlands Flood Control;
- Coastal Flood Adaptation Strategy (“CFAS”);
- Metro Vancouver’s Integrated Liquid Waste Resource Management Plan; and
- Metro Vancouver’s Drinking Water Management Plan.

The needs identified in the Servicing Plan are used by the Finance Department to prepare future 5-Year Capital and Operating budget plans. The identified growth-related components in the Servicing Plan are used to determine the Development Cost Charges (“DCCs”) for engineering infrastructure.

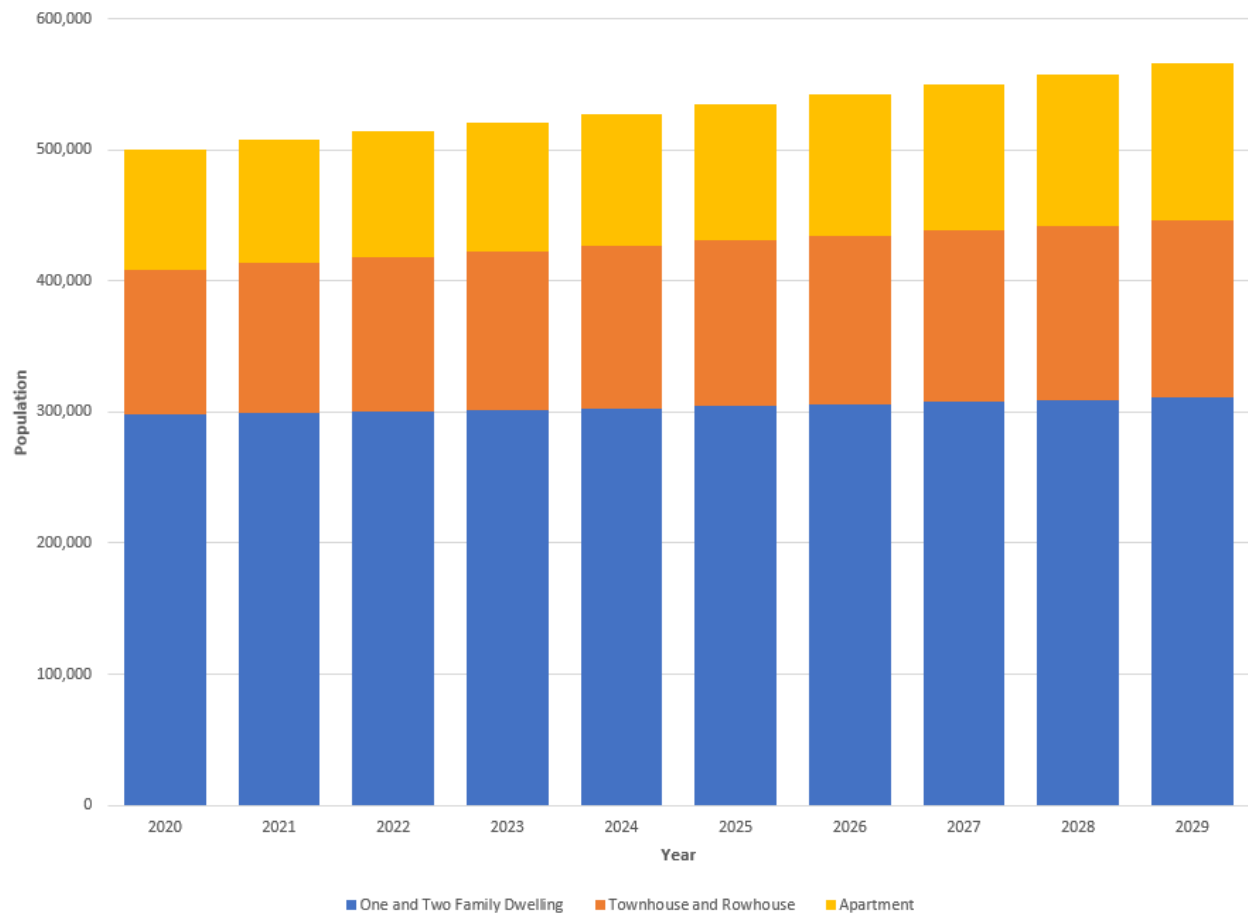
### 1.1 Servicing Plan Programs

The needs included in the Servicing Plan are divided by the type of asset: transportation; sanitary sewer; water; and stormwater. They are then further divided into programs under each asset type. Programs seek to associate projects of similar works and services.

The Engineering Department revised its Capital and Operating program structure in 2009 to differentiate operation/maintenance programs and capital programs as part of its Public Sector Accounting Board PS3150 reporting requirements; therefore, some projects included in the Servicing Plan under specific programs may be contained in different programs as compared to previous Servicing Plan editions. Although projects may have changed programs, the activity and funding requirements of the projects generally will remain the same.

### 1.2 Population Projections

Growth related needs are primarily driven by the increase in population. The Servicing Plan is developed based on the population projections estimated by the City’s Planning & Development Department. The City’s population, for the purposes of engineering services, is estimated to increase by approximately 72,650 residents over the next 10 years.

**Figure 1.1 - Population Projections**

The principles behind the methodologies used in the development of this Plan are classified under three categories:

- Infrastructure required to support the existing population (non-growth);
- Infrastructure required to support future development (growth); and
- Infrastructure required to support both the existing population and future development.

### 1.3 Infrastructure Required to Support the Existing Population (Non-Growth)

A portion of the servicing requirements included in the Servicing Plan are to support the City's existing population (non-growth). In addition to maintaining the serviceability of the existing infrastructure, this category of requirements includes works to overcome deficiencies within already developed areas. These servicing requirements are funded by the existing residents and businesses through their utility rates.

Examples of non-growth related works included in the Servicing Plan are:

- Repaving of roads;
- New sidewalks and streetlights for developed areas;
- Local improvements in developed areas;
- Resolutions to existing drainage problems;
- Drainage main, water main and sanitary sewer main replacements; and
- Climate change adaptation.

#### **1.4 Infrastructure Required to Support Future Development (Growth)**

A portion of the servicing requirements included in the Servicing Plan are to support future development (growth).

To ensure that growth related projects are cost-effective, the following were considered in the sizing of infrastructure and the timing of works:

- Life cycle of mains, pipes and other materials used in the construction of municipal services (typically spans 50 to 100 years);
- Incremental costs for upsizing trunk sewers or feeder mains that are relatively small compared to the total construction cost or to the cost of further relief work at a future date;
- Extent and effect of disruptions caused by phased and/or sectional improvement works; and
- Strategy of interim upgrading of roads to reach full urban standards over, or even beyond, the life of the Servicing Plan.

#### **1.5 Infrastructure Required to Support the Existing Population (Non-Growth) and Future Development (Growth)**

Some projects support the existing population, as well as future development. An example of this type of project is replacement of a water main that is also upsized to provide additional capacity. In this case, the replacement cost would be assigned to non-growth needs and the upsizing cost to growth needs.

#### **1.6 Cost Estimates**

All costs quoted in the Servicing Plan are in 2020 dollars. The majority of these costs are indicative (Class D) level estimates. More detailed cost estimates have been used where available.

For annual projects, the total cost of the project over 10 years is provided.

#### **1.7 Financing Infrastructure to Support Future Development (Growth)**

There are a number of financial strategies available for front-ending developers or property owners to recover an appropriate share of costs to service growth. Examples of these are:

- DCC Front-Enders Agreements;
- Developments Works Agreements; and
- Latecomer Charges Agreements.

Financing strategies for major servicing elements included in the Servicing Plan allow for a cooperative approach between the City and developers to use DCCs generated in respective developing areas.

### **1.8 Financing Strategies for Servicing Industrial Areas**

The Servicing Plan includes major servicing requirements for industrial lands in South Westminister, East Bridgeview, South Cloverdale, Highway 99 Corridor, East Newton and Campbell Heights. The City's ability to directly provide, or facilitate developers to provide, for servicing these requirements supports the City's goal to increase economic development activity.

The Highway 99 Corridor, Campbell Heights and Anniedale-Tynehead areas have been treated as specific areas from the overall City-wide DCC-funded Servicing Plan due to the higher costs of providing services to these areas. This has allowed greater flexibility in the financing of services through the use of specified area charges and public-private partnerships. Servicing requirements and associated growth projections for these areas are included in separate sections.

### **1.9 Projects Constructed Under DCC Front-Enders Agreement**

Some projects identified in the previous 10-Year Servicing Plan (2018-2027) have been constructed and financed by developers through DCC Front-Enders Agreements. These agreements allow DCCs collected in the benefiting catchments to be refunded to the respective front-ending developer, to the limit of the cost of the project as development occurs.

### **1.10 Timing of Projects**

The tables of works are based on the anticipated pace and expected locations of future growth. Should development and growth occur differently, then the timing of individual projects may have to change as well; therefore, the projects, and in particular their timelines and extents of work shown, should be regarded as conceptual and subject to change.

The estimated project timeline ranges within the Servicing Plan are classified as follows:

<b>A</b>	-	<b>Annual</b>	<b>Every year</b>
<b>S</b>	-	Short Term	1 - 5 years
<b>L</b>	-	Long Term	6 - 10 years
<b>N</b>	-	NCP Driven	Timing depends on development within NCP area
<b>U</b>	-	Upsizing Contribution	No fixed time, project carried out as required

### **1.11 Public Consultation**

The majority of studies and plans that identify the various infrastructure requirements included in the Servicing Plan have received considerable public input. This input ranges from public opinion surveys, public open houses, citizen advisory committees and the various Committees of Council, such as the Environmental Sustainability Advisory Committee, the Development Advisory Committee, and the Agricultural and Food Policy Advisory Committee.

### 1.12 Summary of Funding Requirements

Based on the activities detailed under each City-wide program and area specific programs on Highway 99, Campbell Heights and Anniedale-Tynehead servicing, the Servicing Plan funding requirements are as follows:

**Table 1.1 - 2020-2029 10-Year Servicing Plan Cost Summary**

<b>Program</b>	<b>Growth (\$)</b>	<b>Non-Growth (\$)</b>	<b>External (\$)</b>	<b>GVTA (\$)</b>	<b>Total (\$)</b>
Transportation (Arterial)	411,840,730	126,678,000	50,038,210	185,762,100	858,360,640
Transportation (Non-Arterial)	84,041,600				
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## 2. TRANSPORTATION

To meet the transportation needs of current and future residents, Surrey is building a transportation system that is efficient, equitable, safe and sustainable. One that offers increased choice and better access, supports compact and complete communities, improves the way all users travel within Surrey.

The transportation network improvements outlined in the 10-Year Servicing Plan are, in principle, guided by Surrey's *Transportation Strategic Plan*. The *Transportation Strategic Plan* is the overarching framework which seeks to develop a balanced transportation system that supports all mobility needs including: pedestrians; cyclists; transit users; car drivers; and the movement of goods and services.

The principles of the *Transportation Strategic Plan* are grouped into the following six themes:

1. Effective and efficient network management;
2. More travel choices;
3. Safer and healthier communities;
4. Successful local economies;
5. Protection of our built and natural environment; and
6. Transportation integration.

The City is using a “complete streets” approach for the design of roadways, as it considers the needs of all road users, such as pedestrians, transit users, and cyclists. This allows a city to be built with a well-functioning street network which sustains and supports quality of life.

Surrey has adopted Vision Zero, an approach to road safety that focuses efforts on eliminating collisions that result in death or serious injuries. Vision Zero recognizes that people make mistakes; however, these mistakes should not result in death or serious injuries. By assessing our infrastructure with a road safety lens and taking actions, such as making infrastructure improvements in collision hotspots, slowing speeds - the fundamental factor in collision severity - and separating road users in time and space, lives can be saved.

Based on these key themes, the City allocates resources to transportation servicing programs essential to the planning, expansion, operation and maintenance of the City.

### 2.1 Funding Sources for Transportation Infrastructure

There are two primary sources of City funding for the continuous planning, design, delivery and maintenance of new and existing transportation infrastructure: General Revenue (including the Roads and Traffic Levy); and DCCs. The City also receives funding from the Greater Vancouver Transportation Authority (“GVTA”) and other external agencies, including: the Ministry of Transportation and Infrastructure; the Federal Government; and the Insurance Corporation of British Columbia (“ICBC”).

#### 2.1.1 General Revenue, Roads and Traffic Levy

General Revenue is collected by the City annually through property taxes and includes the Roads and Traffic Levy. This funding source is used for non-growth projects that are for day-to-day City operations, maintaining existing infrastructure, rehabilitating infrastructure for a state-of-good repair, and completing infrastructure in established neighbourhoods.

Examples of non-growth projects in the 10-Year Servicing Plan include:

- Repaving of roads;
- Traffic signal rehabilitation;
- Sidewalk installation in developed areas;
- Bus stop infrastructure;
- Cycling infrastructure in developed areas; and
- Traffic Management Centre operations and planning.

General Revenue and the Roads and Traffic Levy are also used for other operational programs not identified in the 10-Year Servicing Plan. This includes:

- Streetlight maintenance (approximately \$3.5 million per year);
- Hydro Utility (approximately \$4.1 million per year); and
- General Street Operations (including potholes, sweeping, and general repair at approximately \$14.1 million per year).

#### 2.1.2 Development Cost Charges

DCCs are collected from developments to fund the cost of Arterial and Collector (non-arterial) road infrastructure improvements required to service new development areas. Examples of growth-related projects funded by DCCs in the 10-Year Servicing Plan include:

- Arterial widening of roads in, or connecting to, high growth areas;
- Collector roads improvements to accommodate traffic and provide complete streets for all modes;
- New sidewalks on arterial and collector roads;
- New cycling infrastructure on arterial and collector roads;
- Strategic property acquisition for future arterial and collector road improvements;
- Intersection improvements for safety, capacity, and operations, such as roundabouts;
- New and widened bridges and overpasses;
- New and improved highway interchanges; and
- New traffic signal installations.

#### 2.1.3 Greater Vancouver Transportation Authority – TransLink

The GVTA, or TransLink, is the City's largest sustained cost-sharing agency. TransLink provides a significant source of funding through six major funding programs:

##### *Operations, Maintenance and Rehabilitation Funding*

In April of 1999, the Province declassified Provincial Highways across Metro Vancouver, including three within Surrey: King George Highway; Fraser Highway; and Scott Road. In conjunction with the creation of TransLink and highway downloading, TransLink established the Major Road Network ("MRN") to support the safe and efficient movement of people and goods across the region.



TransLink provides annual Operations, Maintenance and Rehabilitation (“OMR”) funding to Surrey for the MRN, based on the number of lane kilometres of MRN in the City. There is currently 593km of MRN, for which the City receives approximately \$5.0 million for pavement rehabilitation (“R”) and \$7.3 million for operations and maintenance (“O&M”). A small portion of the O&M funding is included in the 10-Year Servicing Plan for Traffic Signal Rehabilitation and the remainder goes to other operational programs not shown within the 10-Year Servicing Plan.

### *Annual Capital Funding Programs*

TransLink has a variety of annual capital cost-sharing programs that support projects both on the MRN and within other areas that meet supportive criteria. These programs have an allotment of annual funding based on population and employment, and/or a competitive component. With the funding from Phase 1 and 2 of the Mayor’s Council 10-Year Investment Plan, these programs have been either reinstated or increased, allowing Surrey to maximize growth and non-growth revenue sources.

The programs are as follows:

- Major Road Network and Bike (“MRNB”) (\$5.5 million allocated)
  - The MRNB program supports widening and improvements on the MRN, as well as bike projects that meet supportive criteria.
- Bicycle Infrastructure Capital Cost Sharing (“BICCS”) (\$1.8 million allocated, up to \$600,000 competitive)
  - The BICCS program supports the implementation of All Ages and Abilities cycling infrastructure on both the Major Bike Network (“MBN”), Town Centres, Frequent Transit Development Areas, and areas identified with High Cycling Potential.
- Walking Infrastructure to Transit (“WITT”) (\$637,000 allocated, up to \$400,000 competitive)
  - The WITT program supports new and improved walking infrastructure improvements to connect transit users to the SkyTrain, Rapid Bus, and Bus network.
- MRN Structures (“MRNS”) (up to \$5 million competitive)
  - The MRNS supports the rehabilitation of bridges, retaining walls, culverts, and other larger scale structures on the MRN.
- Transit Related Road Infrastructure Program (“TRRIP”) (approximately \$250,000 competitive)
  - TRRIP supports the construction of new and improved bus stops (typically converting to fully accessible) and bus operational improvements.

The total amount of funding anticipated from the OMR and capital cost-sharing programs is represented as GVTA in the 10-Year Servicing Plan.

#### 2.1.4 External Funding

The City also applies for various grants available from the Provincial and Federal governments, such as the Community Works Fund, and ICBC's Roads Improvement Program for projects outlined in the 10-Year Servicing Plan that have broader Provincial or Federal implications and safety benefits for the transportation of goods and/or people. Additionally, the City partners with the Ministry of Transportation and Infrastructure for cost-sharing on new or enhanced infrastructure wanted by the City on Provincial Highways. This strategic application for funding is vital for optimizing the City's budget and ensuring funding received from Surrey taxpayers is leveraged to the highest extent in the delivery of key regional and local transportation infrastructure.

### 2.2 Road Classifications and Transportation Inventory

Surrey classifies the road network into four categories based on traffic volumes, design standards and multi-modal amenities. These classifications reflect the role a road has within the network, from providing capacity on the highest volume corridors to providing access to local properties and businesses. A road classification map illustrating arterial and collector roads, along with their corresponding road widths, are shown in the *Surrey Subdivision and Development By-law, 1986, No. 8830, as amended*.

Roads are classified into the following four categories:

- Provincial Highways: Provincial Highways are those roads in Surrey that are owned and maintained by the Ministry of Transportation and Infrastructure. The Province typically funds capital works on Provincial Highways; however, the City may cost-share on specific improvements that have a significant benefit for Surrey (such as sidewalks, new and improved interchanges, bridges and/or intersections).
- Arterial Roads: Arterial roads are the main transportation corridors for the movement of all vehicle classes, both through and within the City. Arterials carry the highest traffic volumes and provide important corridors for transit services and goods movement. Arterials are protected for a standard of five lanes (four lanes for general purpose traffic with a dual left-turn centre lane), cycling facilities, sidewalks, boulevards, street trees, and lighting. Heavy truck travel<sup>1</sup> is generally restricted to Provincial highways and arterial roads.
- Collector Roads: Collector roads are primarily intended to collect and distribute traffic between local and arterial roads. Traffic using a collector is usually going to or coming from somewhere nearby. Collector Roads typically include, Cycling facilities, sidewalks, boulevard trees and parking.

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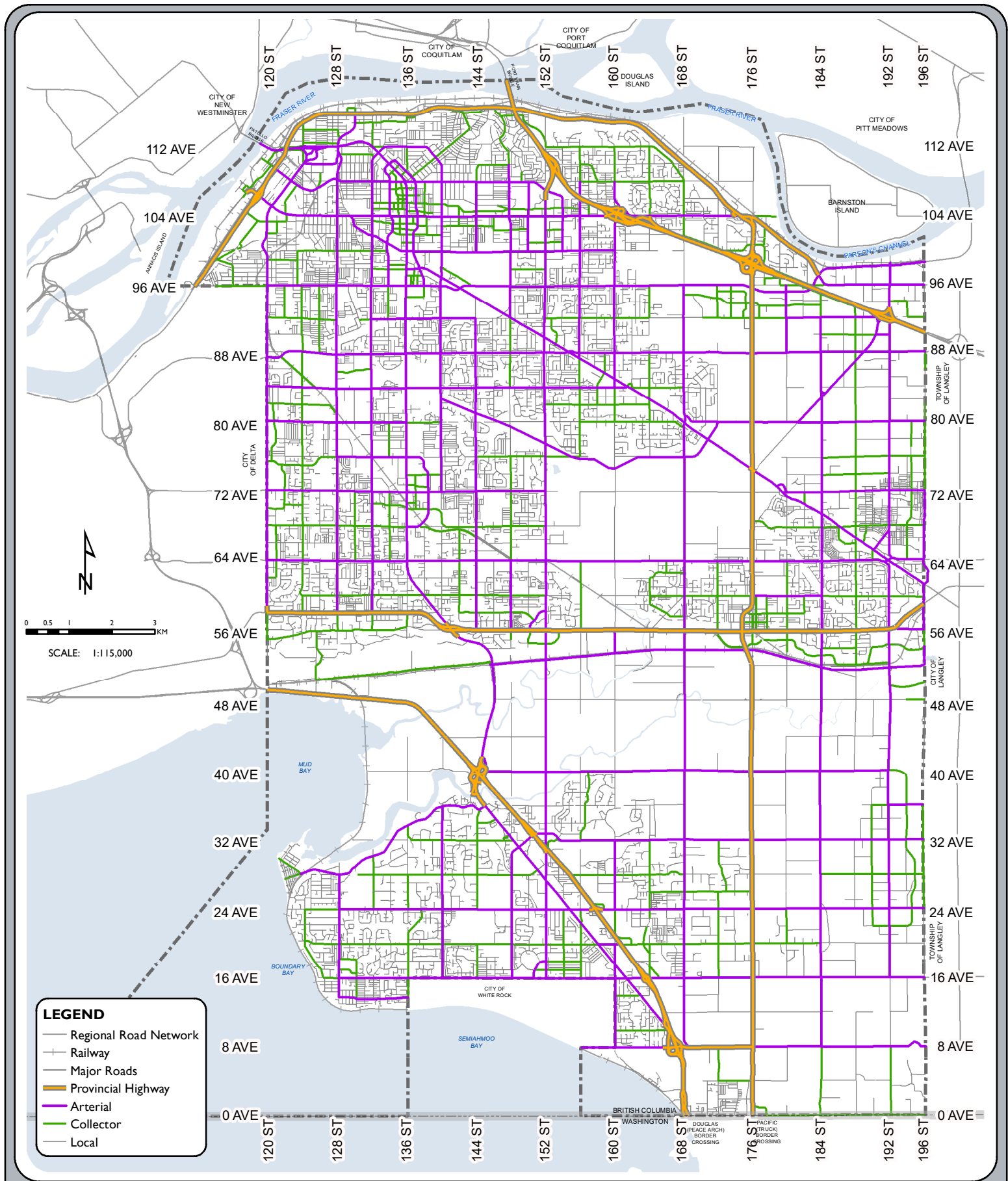
<sup>1</sup> Heavy trucks refer to vehicles required to limit their travel to designated truck routes and truck areas based on the Licensed Gross Vehicle Weight of a vehicle or combination of vehicles. Heavy trucks may use all municipal roads within industrial areas. For destinations not on a truck route, the most direct route to/from a destination and the closest truck route must be used.

- **Local Roads:** The primary function of local roads is to provide access to residences, neighbourhood schools, recreational facilities and local businesses rather than traffic movement. Parking is usually available on both sides of the road except for a few local conditions.

The City's current inventory of roads and a sample of supporting infrastructure are summarized below in **Table 2.1**. A map illustrating all the Provincial Highways, arterial (both MRN and non-MRN), along with Collector roads is shown on **Figure 2.1**. The width and classification of the City's Arterial and Collector road networks are identified in the Major Road Allowance Map and the Road Classification Map (R-91), both contained within Surrey's Subdivision and Development Bylaw.

**Table 2.1 – Current Transportation Asset Inventory**

<b>Roads - Centreline Length</b>	
Arterial Roads (including MRN roads)	384 km
Collector Roads	265 km
Local Roads	1,313 km
<u>Lanes</u>	<u>203 km</u>
Total Surrey Roads	2,165 km
Provincial Highways	117 km
Total Surrey & Provincial Roads	2,282 km
<b>Lane Kilometer Length</b>	
Major Road Network	593 km
City Arterials	1,024 km
Collectors	531 km
<b>Supporting Infrastructure</b>	
Multi-use Pathways	129 km
Bridges and Structures	50
Streetlights	30,358
Traffic Signals	482
Traffic Signs	48,024



**FIGURE 2.1 - ROAD NETWORK**

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

Date Printed: 30-Jan-2020 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yrCCP\_Plan\10yrServicingPlan2019-28\Figure2\_1\_RoadNetwork.mxd

Some highlights for the above table include an increase in the length of MRN roads compared to previous years. With funding from the 10-Year Investment Plan, TransLink recently completed a comprehensive review of the MRN, which included a 10% addition to the entire regional network. The analysis concluded that Surrey would receive a significant addition of roads to the MRN. As more development takes place across the City, the amount of supporting infrastructure increases, such as streetlights and traffic signals, along with the addition of new road connections.

### 2.3 Capital Planning

The planning process for major capital works begins in advance of when the projects begin construction. The City uses a data driven, evidence-based approach to identify projects for inclusion in the 10-Year Servicing Plan. This process also uses a multiple account evaluation methodology to ensure projects meet the goals and objectives outlined in the *Transportation Strategic Plan*.

The process of project evaluation and prioritization includes analysing average annualized daily traffic counts (“AADT”) to determine corridors that chronically experience high traffic volumes, as well collision data to identify locations with safety issues. The City also works with stakeholders, like TransLink, the Province and local community groups to determine the areas which would benefit most from improved facilities for walking, cycling and transit. Projects are then prioritized using the evidence-based, multiple-account process for inclusion in the 10-Year Servicing Plan and are identified as short-term (1-5 year) or long-term (6-10 year).

For major projects chosen to be delivered in the short-term, terms of reference, detailed design and construction are typically completed in phases over three years. with detailed design being in the first year, property acquisition within the second year, and finally construction starting in the third year.

The various projects and initiatives within the 10-Year Servicing Plan together result in a comprehensive approach to managing Surrey’s transportation network, focused on achieving the following goals:

1. **Making targeted corridor improvements** to complete widening on key north-south and east-west corridors to increase capacity and reduce or maintain travel times.
2. **Enhancing regional connections** to ensure Surrey is properly connected to the regional road network for economic growth and prosperity.
3. **Investing in high-growth areas** like City Centre, Newton, Grandview Heights and Clayton to support trips by all modes of transportation as we build our network.
4. **Growing active transportation options** like walking, cycling and transit to increase trips made by alternate modes of transportation which frees up road space for existing users and increases capacity for growth.
5. **Innovating with Intelligent Transportation Systems and Big Data** to enhance evidence-based decision-making, effectively manage the transportation network and improve communications with transportation network users throughout the City.
6. **Committing to road safety** to reduce or eliminate serious injuries and fatalities.

## 2.4 Project Delivery

Based on the funding source, the City delivers transportation infrastructure through either development or capital works.

### 2.4.1 Development

For developments fronting Local or Collector roadways, the developer is responsible constructing all the road works. The developer directly funds road improvements to the Local road standard and receives DCC funding for the incremental cost to meet the Collector road standard. Servicing agreements are established to ensure these works meet design standards and specifications. For developments on arterial roadways, the City collects DCC from developers and uses this funding to deliver strategic corridor-wide improvements allowing the City to prioritize and manage the delivery of large comprehensive improvements to communities.

### 2.4.2 Capital Works

Most of the major capital construction, along with minor construction improvements, are led by the City. They are subject to regular review and prioritized based on demands. Typically, the City obtains a contractor for these works; however, the City's Operations Division is responsible for daily repairs and minor maintenance on the road system.

## 2.5 Transportation Programs

To accommodate the existing and future demands on the transportation network, funding is allocated to 24 transportation network servicing programs, which are categorized into capital, maintenance and operational work.

### Program 1000 – New Arterial Improvements

The New Arterial Improvements program is based on completing strategic and planned Arterial connections in the City's road network that are identified as part of concept plans and are included in the City's road classification map. These important connections facilitate improved distribution of traffic to help relieve congested intersections and corridors, and improve cycling, walking and transit movement through the City. The City uses DCC funds to complete the work in this program.

### Program 1002 – Arterial Improvements – Five-Lane

Growth related improvements are determined from a process that includes using traffic model projections, growth trends due to development in NCP areas, and where vehicle volumes exceed capacity. Prioritization of projects is based on factors that include improving the operational safety of the corridor and introducing new or enhanced multi-modal facilities for pedestrians, cyclists and transit users. The typical five-lane road configuration consists of two travel lanes in either direction, with left-turn bays at intersections, cycling infrastructure, sidewalks, bus stops, street tree boulevards and streetlighting.

### Program 1004 – Arterial Improvements – Three-Lane

The three-lane arterial widening program uses the same approach and principles as detailed in Program 1002 for determining subject locations. This program encompasses two types of widening projects: one for interim operational improvements; and the other for completing an arterial corridor to an identified unique standard.

The first widening type of project is focused on providing interim operational improvements to provide capacity and safety benefits on existing two-lane corridors that are ultimately to be widened to five lanes under Program 1002. This type of three-lane project will provide a centre two-way left-turn lane, and/or a median, as well as shoulders/bike lanes with one travel lane in each direction.

The other type of three-lane project is the completion of an arterial to an identified unique standard. The classification as a unique arterial standard is typically on the basis for access management and is not required to be widened to five lanes. Growth-related improvements provide operational capacity, safety benefits and new or enhanced multi-modal facilities for pedestrians, cyclists and transit users.

### Program 1006 – Strategic Property Acquisition

This program funds advanced property acquisition for arterial, collector and local road projects prior to detailed design and/or construction being identified. Properties that are anticipated to be significantly impacted through new arterial roads or from arterial road widening have been identified through concept plans or as part of the City's road classification and allowance maps.

The majority of collector and strategic local road construction projects are completed within existing road allowances, but there are a few instances where they can only be achieved through property acquisition. This program also allocates funds to several collector and "strategic" local roads that have little or no opportunity for construction by adjacent related traffic impacts. These local roads are normally found within the City's NCPs and other development that have a value in supporting the growth objectives of the particular NCP or Town Centre Plan area.

### Program 1008 – Development Coordinated Improvements

The Development Coordinated Improvements Program includes both Development Coordinated Works ("DCW") and collector upsizing, which uses funds collected for DCCs to complete the work.

DCW accommodates the construction of works that are not identified in the 10-Year Servicing Plan in conjunction with the development of adjacent properties. The intent is to construct required works that will improve the transportation system and are unlikely to occur through subsequent development or until a future iteration of the 10-Year Servicing Plan. It is often cost-effective to construct certain works adjacent to development sites that are not expected to be completed through future development projects. This includes road widening/completion, sidewalks and other works completed through active development projects. As these works are in response to development activity, it is not possible to predict a detailed program of works.

Most collector road widening projects are constructed in conjunction with development with DCC upsizing funds. Developers are responsible for construction of the applicable local road standard (based on zoning) plus curb and gutter, drainage works, sidewalk, streetlights and landscaping. The City will complete it to the ultimate standard by funding the additional pavement to the ultimate 14m width, plus the incremental cost to upgrade to collector standard pavement structure and streetlighting.

#### Program 1012 – Intersection Improvements

The Intersection Improvements program is a warrant-based system that focuses on projects that increase capacity or mitigate the impact of traffic growth on roadways with respect to safety. Most of the works include construction of roundabouts, additional travel lanes at the intersection, and/or extensions and improvements of left-turn bays.

#### Program 1016 – Arterial Road Paving

The City uses a sophisticated pavement management system which integrates raw road data, such as pavement condition and surface distress, into a centralized database which analyses corridors under current and future traffic loading, and then generates a pavement deterioration curve. This is a vital asset management tool for optimizing the schedule of repaving and repairs to achieve least cost for maintenance and capital repaving over the life cycle.

Due to the rapid growth of Surrey, the paving program is separated into the different road classifications: arterial, collector and local. General revenue is allocated for repaving on arterial roads work, as it pertains to the overall maintenance and operation of the City. The exception is that repaving on the MRN is funded through TransLink's OMR Paving Rehabilitation program.

#### Program 1018 – Bridges and Overpasses

This program includes growth related new, widening and improvements to transportation crossings. This includes new growth-related bridges and overpasses and non-growth crossings in established areas with a focus on pedestrian/cycling bridges. Costs have been assigned between growth and non-growth based on the rationale for improvements. Significant external funding contributions from the Province (through cost-sharing), the Federal government (through the Community Works Fund) and TransLink (through MRNS funding) are anticipated for the new overpasses and pedestrian bridges.

In addition, the program identifies major non-growth replacement and rehabilitation of existing crossings. The City undertakes a bridge condition assessment annually, which identifies the bridges for replacement or major deck rehabilitation due to their condition.

#### Program 1020 – Highways and Railroad Projects

Typical projects within this program are for specific grade separation and interchange ramp cost-sharing and include safety improvements to existing at-grade rail crossings. Funding from this program is primarily arterial growth related. Specific projects within this program pertain to highway grade separation, interchange ramps and at-grade railway crossing improvements. The costs are typically based on the City's share of works.



### Program 1026 – City Centre Property Acquisition

This is an area-specific program that is funded through an additional DCC rate applicable in the City Centre only. This program funding is for the acquisition of key properties that are unlikely to be dedicated to the City through redevelopment but are critical to achieve the finer grained road network. The finer grained road network is critical to the success of Surrey City Centre becoming a vibrant successful downtown core with smaller blocks that encourage multi-modal travel.

### Program 1030 – Non-Arterial Improvements

Collector roads serve a wider community need both in terms of vehicular and pedestrian/cycle traffic. Most collector roads are completed as an upsizing project through the DCW Program 1008. However, many collector roads remain incomplete and are required at locations that are not expected to be achieved through the redevelopment process. Unlike arterial roads, the need for collector widening is not strictly driven by capacity, but rather provides improved pedestrian, cyclist and traffic mobility and on street parking, as well as a finished streetscape that enhances liveability for residents and businesses. This growth program funds all new and widening of collector roads, as well as select local roads as non-growth projects.

### Program 1046 - Collector Road Paving

Similar to Program 1016 for arterial roads, pavement studies are used to indicate when resurfacing of collector roads is required in order to provide the most cost-effective approach to reduce rehabilitation costs. This program allocates non-growth related funding to collector and local roads for pavement resurfacing. Additionally, this program allocates funds to finish the final paving lift (i.e., final overlay on roads where this was delayed due to redevelopment and to avoid servicing pavement cuts of new asphalt).

### Program 1070 – Local Road Paving

Please refer to Programs 1016 and 1046 for details about the City's paving programs.

### Program 1074 – Local Area Service

Areas of Surrey that developed before the current servicing standards usually lack roads that are completed to final standard; missing components can include sidewalks, curbs, streetlights, etc. For local roads, upgrades can be carried out under the Local Area Service (“LAS”) program. The LAS program provides residents, who have the support of their neighbours, to petition for the upgrading of works, and share the cost of upgrading between fronting property owners and the City. The LAS program funding is from non-growth sources and used to cost-share in projects that are considered eligible based on the City's LAS criteria.

### Program 1078 – Lane Construction

This non-growth program allocates a modest amount of funding for the construction and completion of lanes as part of arterial road access management needs.

### Program 1102 – Traffic Signals

This program includes all intersection control projects and is focused on growth-related installations of traffic signals and pedestrian signals, as well as non-growth signal rebuild projects. The installation of intersection controls is based on whether the appropriate industry standard warrants are met, with an emphasis on reducing collisions and improving pedestrian crossing opportunities.

### Program 1104 - Street Lighting and Ancillary Signal Infrastructure

This non-growth program addresses the maintenance and operational functions of streetlights and signal support infrastructure. This includes replacement of aging streetlight poles and fixtures, controller cabinets, as well as emergency vehicle pre-emption (“Opticom”) and intelligent transportation system (“ITS”) improvements.

### Program 1108 - Crosswalks and Traffic Control Infrastructure

This is an annual program which consists of implementing crosswalks, traffic circles and other traffic calming measures throughout the City. The types of projects within this program are speed humps, speed tables, traffic circles, Rapid Rectangular Flashing Beacon (“RRFB”) crosswalks, and pavement narrowing through curb extensions (bulges).

### Program 1112 – Pavement Repair

This non-growth program addresses the needs for pavement repair that are not identified in the paving rehabilitation programs and is beyond the scope of the regular operational and maintenance needs, such as pothole repair and crack sealing. Projects are typically short sections of repaired pavement caused typically by seasonal distress and bridge the gap until the section is included in the rehabilitation program.

### Program 1120 – Bicycle Infrastructure

As cycling facilities are a standard part of the arterial and collector cross sections, a significant portion of bicycle infrastructure is completed through new or widening projects, with funding being included within the respective road widening programs. Therefore, this program focuses on improving, expanding, and connecting the growing network of raised, separated bike lanes (commonly known as cycle tracks) for All Ages and Abilities cycling outside of existing road improvement projects. Funding for tactical intervention projects allows some interim protection of existing on-street bike lanes and continued expansion of the protected cycling network.

Other projects include the funding of pavement markings, signing and traffic signal modifications on existing arterial and collector roads that do not have bike lanes. In addition, local street bikeways and multi-use pathways are included in cooperation with the Parks, Recreation & Culture Department.

Funding for bicycle improvement projects is largely from DCC's as increased protected cycling infrastructure has proven to increase mode share and the number of cycling trips. This accommodates growth through the increased number of trips, frees up road space for existing users and increases capacity for growth. The City regularly applies for annual TransLink funding under the Bicycle Infrastructure Capital Cost Sharing (BICCS) program, as well as Provincial (Bike BC) government funding programs.

#### Program 1142 – Transit Infrastructure

The Transit Infrastructure improvements program provides non-growth funding for infrastructure projects to assist in the transit services provided by TransLink and Coast Mountain Bus Company. Projects include enhanced transit facilities, such as new bus stops and making bus stops wheelchair accessible. Additionally, improvements, such as transit pre-emption and “queue jump” lanes are included to enhance the reliability and reduce travel times for transit users. The City regularly applies for annual TransLink funding under the Transit Related Infrastructure Improvements Program and the new Bus Speed and Reliability Program.

#### Program 1154 – Walking Infrastructure

This is primarily a non-growth program that targets providing sidewalks and other infrastructure such as curb, boulevard and streetlights in locations that have the greatest likelihood of pedestrian activity, but without plans for road widening or development. The growth-related funding in this program targets pedestrian improvements on arterial and collector roads in higher growth areas that will help complete the street and increase walking mode share and walking to transit. The City applies for annual TransLink funding under the Walking Infrastructure program helps the City to meet the objectives of the City's Walking Plan.

#### Program 1505 – Transportation Planning - Design and Studies

This program allocates funding for future works project planning, studies, policy development and resources that are required to support the Transportation Strategic Plan objectives as well as other growth and non-growth plans identified throughout the duration of the 10-Year Servicing Plan.

#### Program 1515 – Traffic Signals – Minor Maintenance and Operations

This non-growth program is an operating program that is not allocated to specific projects but is made available in order to respond to smaller improvements. These projects can include minor road works, streetlights, sidewalks and cycling projects on arterial, collector and local roads. Some funding is allocated to minor repairs and other similar items that are outside the scope of typical operations-based funding contracts.

#### Program 1520 – Transportation Management – Design and Studies

This operations program covers overall management of the transportation network. This includes management of the signals program, as well as street signs and pavement markings. Also included is the administration support, staff salaries and operational studies required to manage and improve the network.

## 2.4 Transportation Cost Summary

No.	Program	Program Type	Growth Arterial (\$)	Growth (\$ Non-Arterial)	Non-Growth (\$)	External (\$)	GVTA (\$)	Total (\$)
1000	New Arterial Improvements	Capital	5,779,000	0	0	652,000	1,001,000	7,432,000
1002	Arterial Improvements - 5 Lane	Capital	148,010,250	0	0	6,085,250	64,248,500	218,344,000
1004	Arterial Improvements - 3 Lane	Capital	25,480,000	0	0	0	1,366,000	26,846,000
1006	Strategic Property Acquisition	Capital	12,500,000	0	0	0	0	12,500,000
1008	Development Coordinated Improvements	Capital	5,000,000	11,000,000	0	0	0	16,000,000
1012	Intersection Improvements	Capital	45,134,900	8,831,600	0	274,500	0	54,241,000
1016	Arterial Road Paving	Capital	0	0	10,500,000	0	50,000,000	60,500,000
1018	Bridges and Overpasses	Capital	21,952,000	0	2,760,850	29,300,000	15,525,600	69,538,450
1020	Highway and Railroad Projects	Capital	20,392,500	0	0	11,817,500	5,280,000	37,490,000
1026	City Centre Property Acquisition	Capital	57,900,000	0	0	0	0	57,900,000
1030	Non-Arterial Improvements	Capital	0	48,918,000	0	0	0	48,918,000
1046	Collector Road Paving	Capital	0	0	6,000,000	0	0	6,000,000
1070	Local Road Paving	Capital	0	0	3,000,000	0	0	3,000,000
1074	Local Area Service	Capital	0	0	3,500,000	0	0	3,500,000
1078	Lane Construction	Capital	0	0	1,000,000	0	0	1,000,000
1102	Traffic Signals	Capital	29,212,000	2,400,000	4,936,000	240,000	12,352,000	49,140,000
1104	Street Lighting & Ancillary Signal Infrastructure	Capital	0	0	15,000,000	0	0	15,000,000
1108	Crosswalks & Traffic Control Infrastructure	Capital	1,000,000	1,000,000	15,000,000	0	0	17,000,000
1112	Operations Pavement Repair	Operating	0	0	6,401,150			6,401,150
1120	Bicycle Infrastructure	Capital	22,480,080	4,892,000	0	1,668,960	20,489,000	49,530,040
1142	Transit Infrastructure	Capital	5,000,000	0	2,500,000	0	7,500,000	15,000,000
1154	Walking Infrastructure	Capital	6,000,000	7,000,000	5,330,000	0	8,000,000	26,330,000

No.	Program	Program Type	Growth Arterial (\$)	Growth (\$) Non-Arterial	Non-Growth (\$)	External (\$)	GVTA (\$)	Total (\$)
1505	Transportation Planning - Design & Studies	Non-Capital	6,000,000	0	9,000,000	0	0	15,000,000
1515	Traffic Signals - Minor Maintenance & Operations	Operating	0	0	6,750,000	0	0	6,750,000
1520	Transportation Management - Design & Studies	Operating	0	0	35,000,000	0	0	35,000,000
<b>Total</b>			<b>411,840,730</b>	<b>84,041,600</b>	<b>126,678,000</b>	<b>50,038,210</b>	<b>185,762,100</b>	<b>858,360,640</b>

## 2.5 Transportation Projects by Program

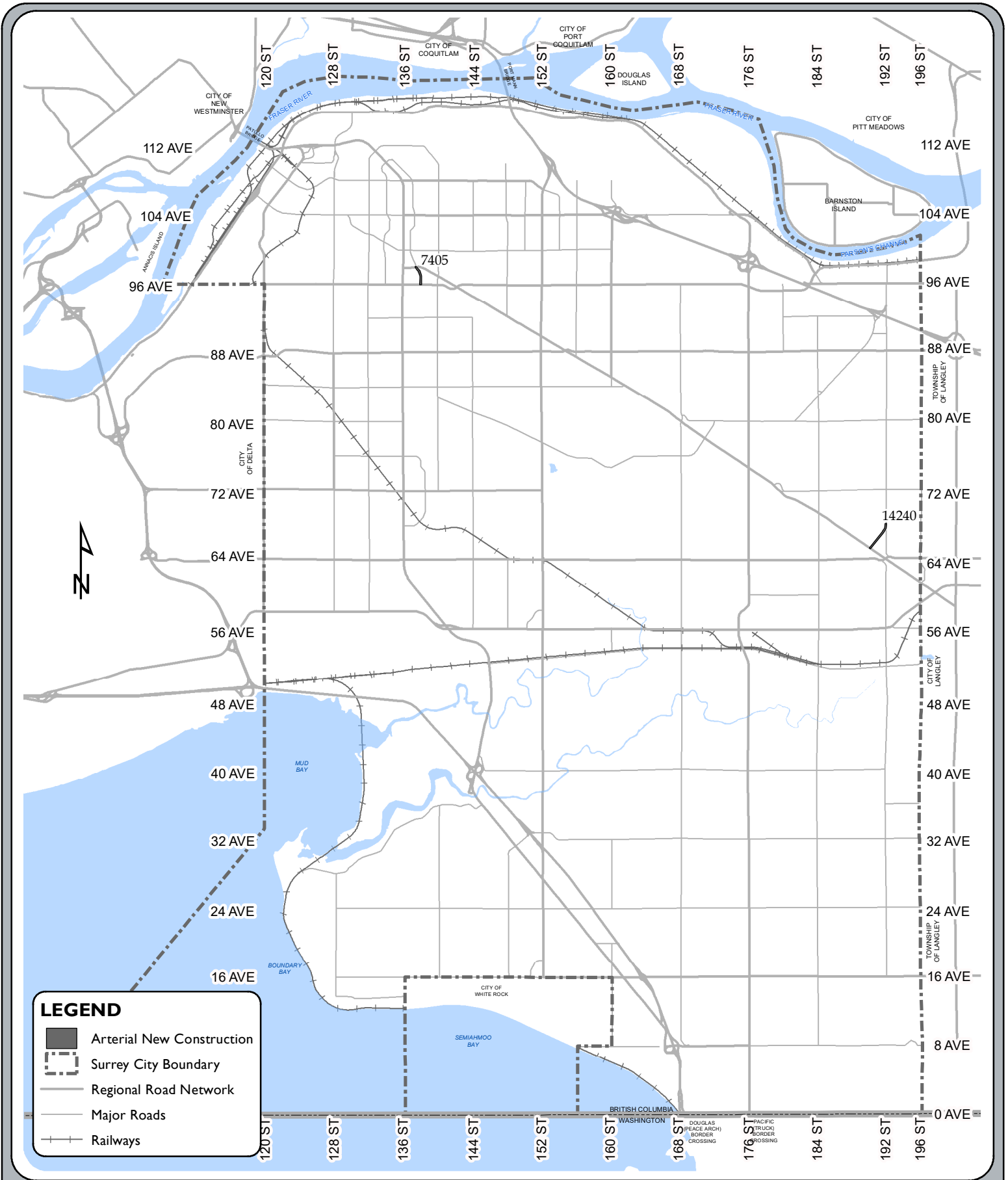
This section contains tables and figures that identify the projects under the transportation programs.

The tables provide the following information:

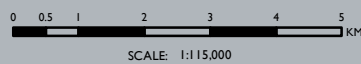
- a) Project ID - the unique identifier of the project
- b) Project name - the specific name or generic name that depicts the type of work
- c) Project location - the geographic extent of the works
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change)
- e) Costs – the high-level estimates in 2019 dollars (subject to change at the actual time of construction)

The costs are comprised of growth, non-growth, external and GVTA funding components. External funding may include sources such as the Provincial government, the Federal government and developers' contributions through their projects.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations throughout Surrey may not be shown on the maps.



**FIGURE 2.2 - Transportation  
New Arterial Improvements (Program 1000)**



The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office. Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey Source: G:\MAPPING\GIS\Maps\Recurring\M\_CCP10yrCCP\_Plan10yrServicingPlan2019-28\Figure2-2-Transportation.mxd

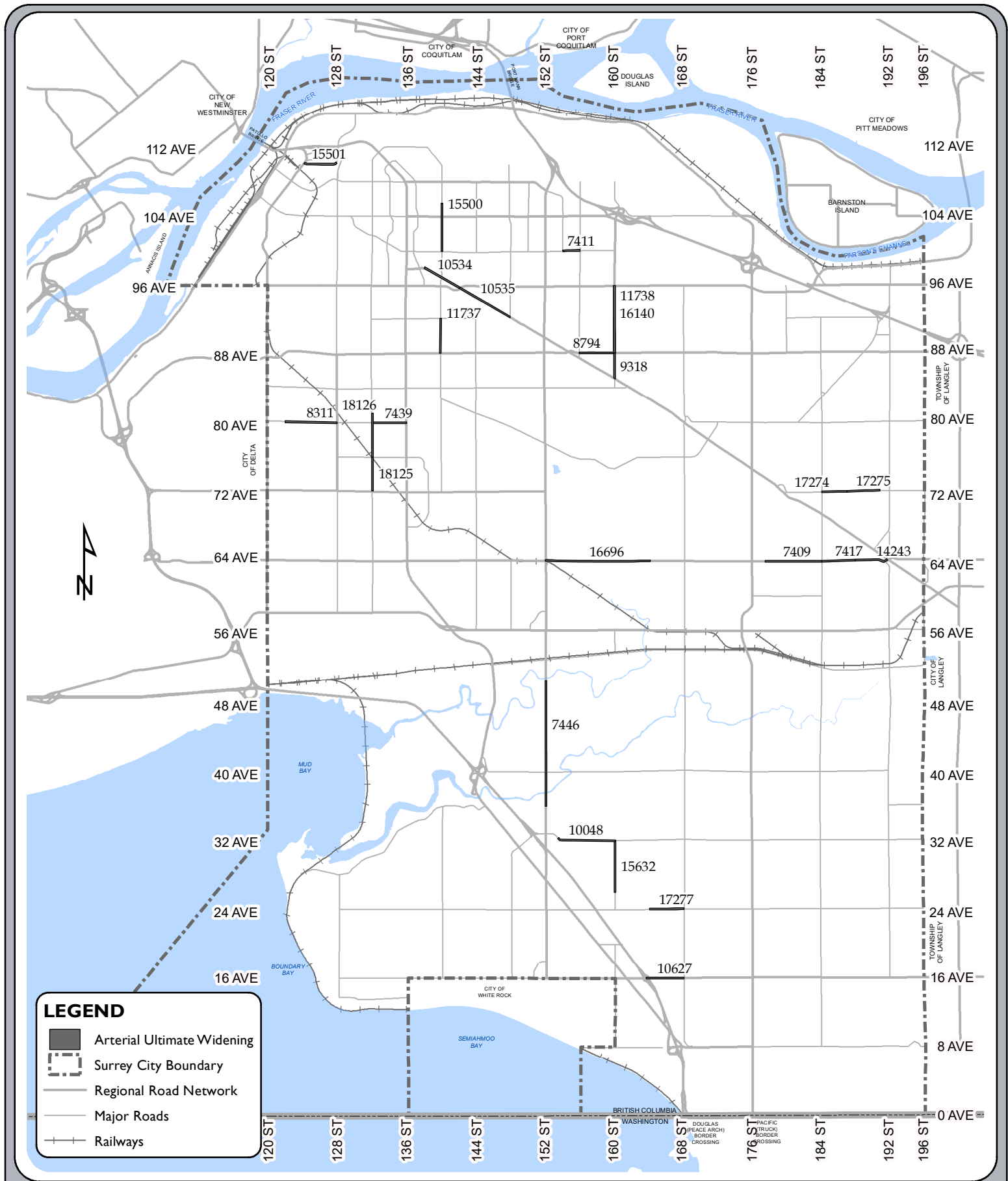
## ROADS

### Program 1000 - T - New Arterial Improvements

<b>Program Total</b>	<b>7,432,000</b>	<b>5,779,000</b>	<b>-</b>	<b>652,000</b>	<b>1,001,000</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
14240	Arterial New Construction	192 St: Fraser Hwy - 68 Ave	Short Term (1 - 5 Yrs)	3,172,000	3,172,000	-	-	0
7405	Arterial New Construction	Whalley Blvd: 96 Ave - Fraser Hwy	Short Term (1 - 5 Yrs)	4,260,000	2,607,000	-	652,000	1,001,000





**FIGURE 2.3 - Transportation Arterial Improvements – 5 Lanes (Program 1002)**

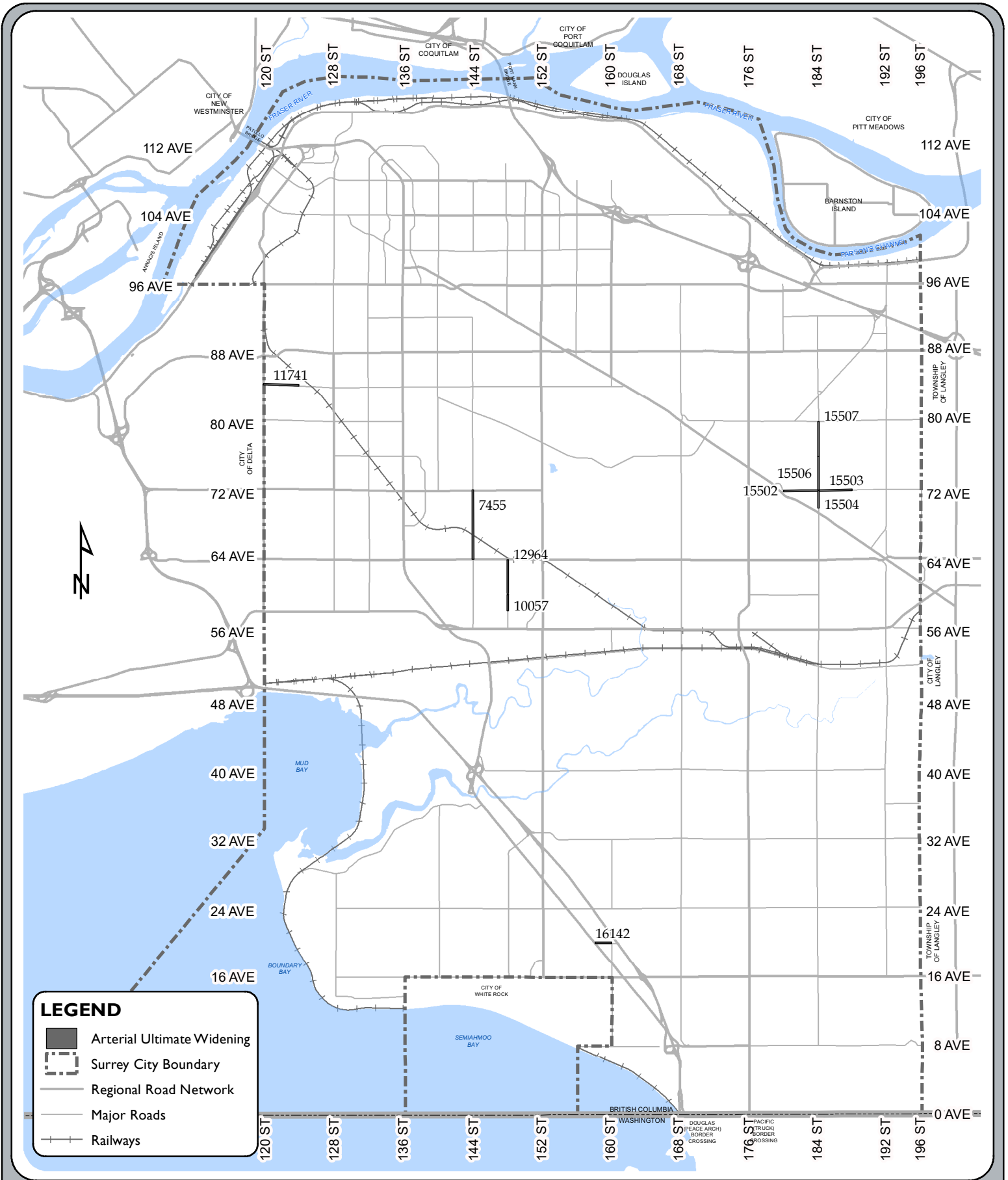
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## ROADS

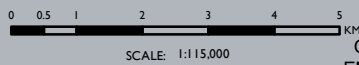
### Program 1002 - T - Arterial Improvements - 5 Lane

<b>Program Total</b>	<b>218,344,000</b>	<b>148,010,250</b>	<b>-</b>	<b>6,085,250</b>	<b>64,248,500</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18126	Arterial Widening - 5 Lane	132 St: 076 Ave - 081 Ave	Short Term (1 - 5 Yrs)	7,249,000	7,249,000	-	-	0
18125	Arterial Widening - 5 Lane	132 St: 072 Ave - 076 Ave	Short Term (1 - 5 Yrs)	5,368,000	5,368,000	-	-	0
17277	Arterial Widening - 3 to 5 Lane	024 Ave: 164 St - 168 St	Long Term (6 - 10 Yrs)	4,392,000	4,392,000	-	-	0
17275	Arterial Widening - 5 Lane	072 Ave: 187 St - 191 St	Long Term (6 - 10 Yrs)	6,088,000	6,088,000	-	-	0
17274	Arterial Widening - 5 Lane	072 Ave: 184 St - 187 St	Long Term (6 - 10 Yrs)	3,834,000	3,834,000	-	-	0
16696	Arterial Widening - 5 Lane	064 Ave: 152 St - 164 St	Long Term (6 - 10 Yrs)	20,900,000	10,450,000	-	-	10,450,000
16140	Arterial Widening - 5 Lane	160 St: 88 Ave - 92 Ave	Long Term (6 - 10 Yrs)	7,528,000	3,764,000	-	-	3,764,000
15632	Arterial Widening	160 St: 26 Ave - 32 Ave	Short Term (1 - 5 Yrs)	9,500,000	9,500,000	-	-	0
15501	Arterial Widening - 3 to 5 Lane	110 Ave: Scott Rd - 128 St	Long Term (6 - 10 Yrs)	5,112,000	5,112,000	-	-	0
15500	Arterial Widening - 5 Lane	140 St: 100 Ave - 105A Ave	Short Term (1 - 5 Yrs)	11,820,000	11,820,000	-	-	0
14243	Arterial Widening - 5 Lane	064 Ave: 188 St - Fraser Hwy	Short Term (1 - 5 Yrs)	7,000,000	3,500,000	-	-	3,500,000
12327	Arterial Widening & Interchange Improvements	032 Ave: 152 St - Hwy 99 Interchange	Short Term (1 - 5 Yrs)	7,500,000	3,000,000	-	4,500,000	0
11738	Arterial Widening - 5 Lane	160 St: 092 Ave - 096 Ave	Long Term (6 - 10 Yrs)	7,528,000	3,764,000	-	-	3,764,000
11737	Arterial Widening - 5 Lane	140 St: 088 Ave - 092 Ave	Short Term (1 - 5 Yrs)	7,528,000	7,528,000	-	-	0
10627	Arterial Interim Widening - 50% w/10636	016 Ave: Hwy 99 - 168 St	Long Term (6 - 10 Yrs)	6,341,000	1,585,250	-	1,585,250	3,170,500
10535	Arterial Widening - 5 Lane	Fraser Hwy: 140 St - 148 St	Short Term (1 - 5 Yrs)	10,000,000	5,000,000	-	-	5,000,000
10534	Arterial Widening - 5 Lane	Fraser Hwy: 138 St - 140 St	Short Term (1 - 5 Yrs)	6,030,000	3,015,000	-	-	3,015,000
10048	Arterial Widening - 5 Lane	032 Ave: 154 St - 160 St	Short Term (1 - 5 Yrs)	8,340,000	4,170,000	-	-	4,170,000
9318	Ultimate Arterial Widening	160 St: Fraser Hwy - 88 Ave	Short Term (1 - 5 Yrs)	6,808,000	3,404,000	-	-	3,404,000
8794	Ultimate Arterial Widening	088 Ave: 156 St - 160 St	Long Term (6 - 10 Yrs)	8,248,000	4,124,000	-	-	4,124,000
8311	Arterial Widening - 5 Lane	080 Ave: 122 St - 128 St	Long Term (6 - 10 Yrs)	11,292,000	11,292,000	-	-	0
7446	DMAF: Ultimate Arterial Widening - 5 Lane	152 St: 040 Ave - 5000 Blk	Short Term (1 - 5 Yrs)	19,600,000	9,800,000	-	-	9,800,000
7439	Arterial Widening - 5 Lane	080 Ave: 132 St - King George Blvd.	Short Term (1 - 5 Yrs)	7,000,000	7,000,000	-	-	0
7417	Arterial Widening - 5 Lane	064 Ave: 184 St - 188 St	Short Term (1 - 5 Yrs)	7,000,000	3,500,000	-	-	3,500,000
7411	Arterial Widening - 5 Lane	100 Ave: 154 St - 156 St	Long Term (6 - 10 Yrs)	3,164,000	3,164,000	-	-	0
7409	Arterial Widening - 5 Lane	064 Ave: 177 St - 184 St	Long Term (6 - 10 Yrs)	13,174,000	6,587,000	-	-	6,587,000



**FIGURE 2.4 - Transportation Arterial Improvements – 3 Lanes (Program 1004)**

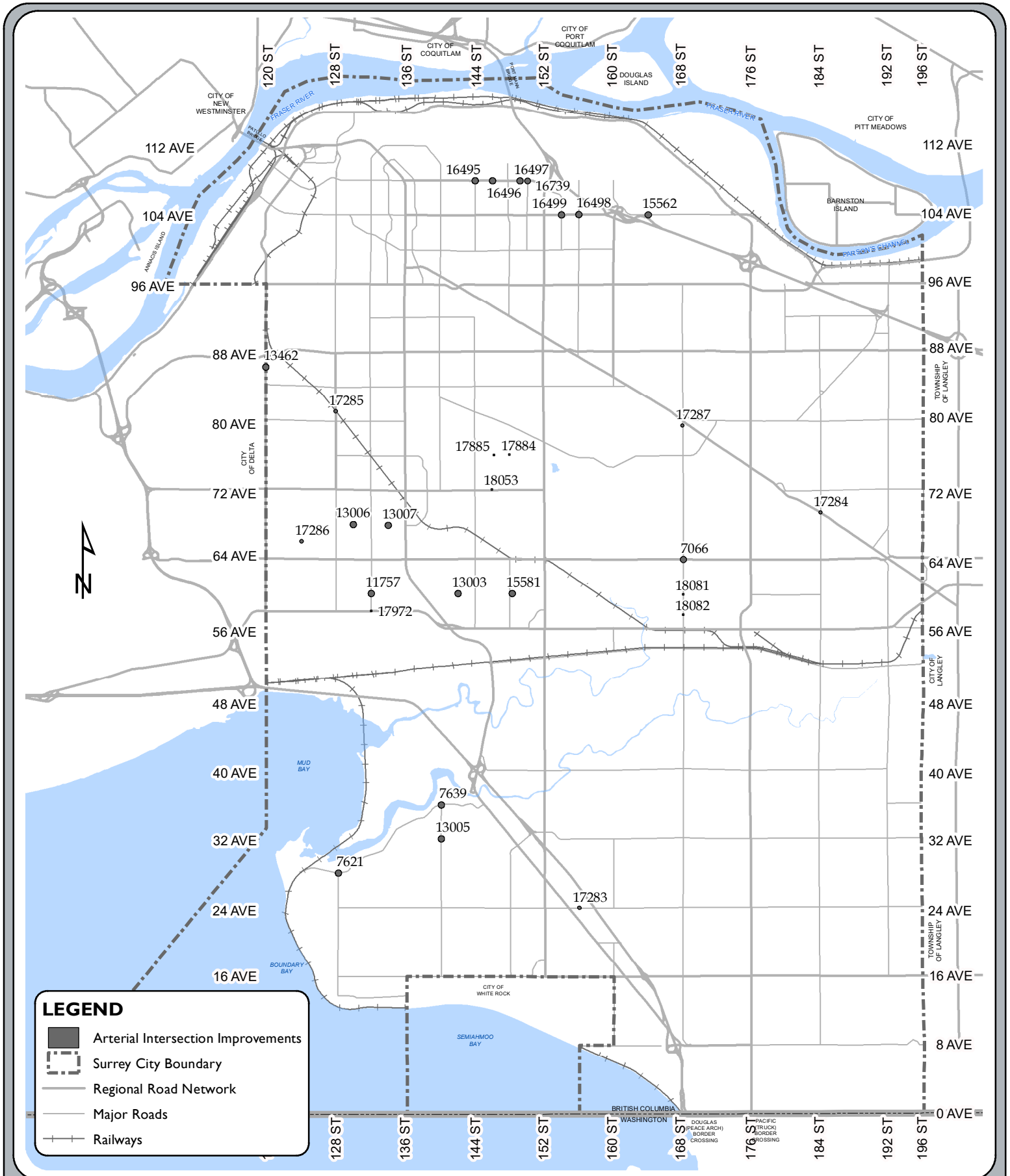


## ROADS

### Program 1004 - T - Arterial Improvements- 3 Lane

<b>Program Total</b>	<b>26,846,000</b>	<b>25,480,000</b>	<b>-</b>	<b>-</b>	<b>1,366,000</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
16142	Arterial Widening - 3 Lane	020 Ave: King George Blvd - 160 St	Short Term (1 - 5 Yrs)	1,708,000	1,708,000	-	-	0
15507	Arterial Widening - DCW Blvd	184 St: 076 Ave - 080 Ave	Long Term (6 - 10 Yrs)	1,366,000	1,366,000	-	-	0
15506	Arterial Widening - DCW Blvd	184 St: 072 Ave - 076 Ave	Short Term (1 - 5 Yrs)	1,366,000	1,366,000	-	-	0
15504	Arterial Widening - DCW Blvd	184 St: 070 Ave - 072 Ave	Short Term (1 - 5 Yrs)	683,000	683,000	-	-	0
15503	Arterial Widening - DCW Blvd	072 Ave: 184 St - 187 St	Short Term (1 - 5 Yrs)	1,025,000	1,025,000	-	-	0
15502	Arterial Widening - DCW Blvd	072 Ave: 180 St - 184 St	Short Term (1 - 5 Yrs)	1,366,000	1,366,000	-	-	0
12964	Arterial Widening - 2 Lane + Parking	148 St: 060 Ave - 064 Ave	Short Term (1 - 5 Yrs)	4,136,000	4,136,000	-	-	0
11741	Arterial Interim Widening	084 Ave: Scott Rd - 124 St	Short Term (1 - 5 Yrs)	3,416,000	2,050,000	-	-	1,366,000
10057	Arterial Widening - 2 Lane + Parking	148 St: 058 Ave - 060 Ave	Short Term (1 - 5 Yrs)	2,068,000	2,068,000	-	-	0
7455	Arterial Widening	144 St: 064 Ave - 072 Ave	Short Term (1 - 5 Yrs)	9,712,000	9,712,000	-	-	0



**FIGURE 2.5 - Transportation Intersection Improvements (Program 1012)**

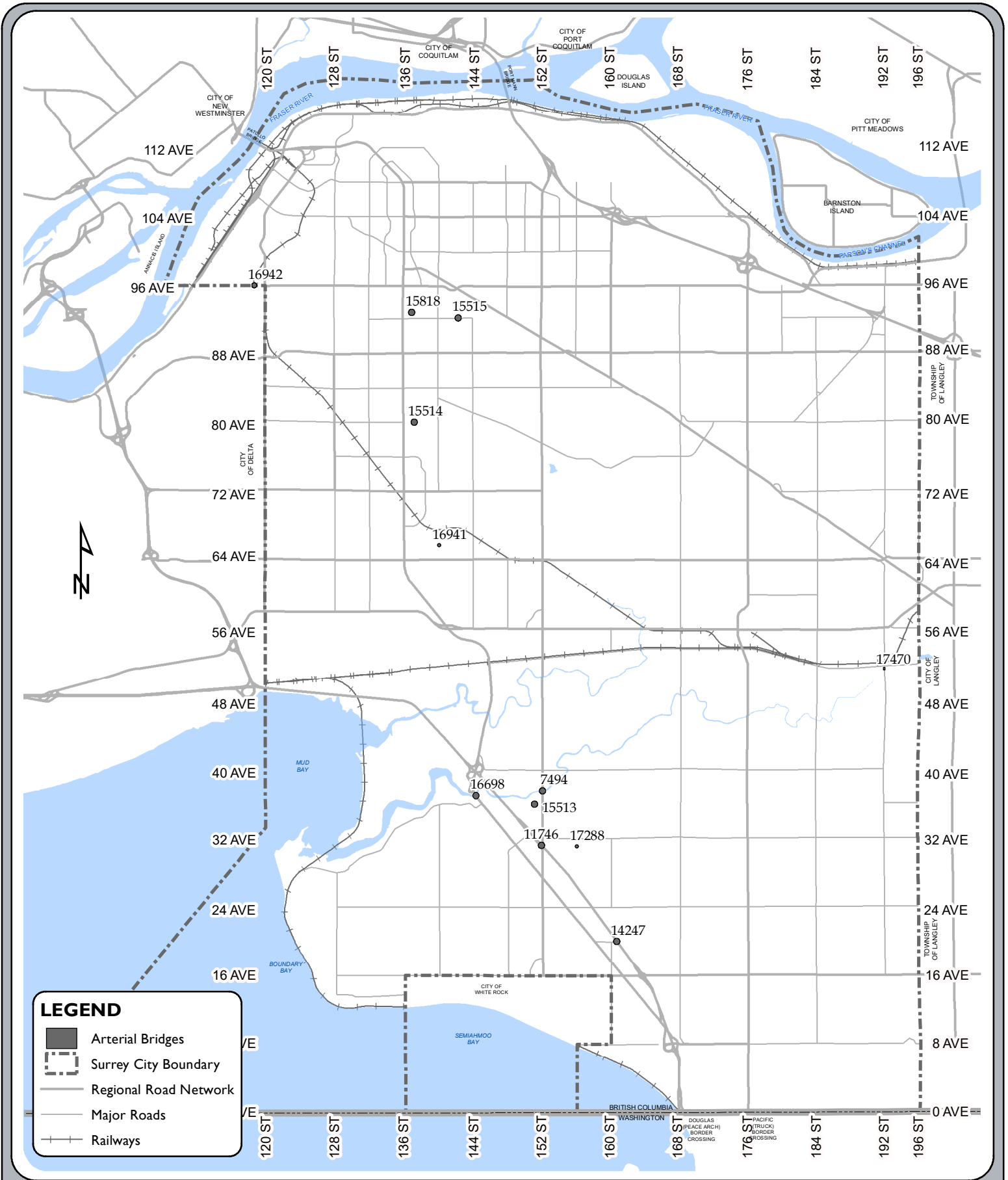
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## ROADS

### Program 1012 - T - Intersection Improvements

<b>Program Total</b>	<b>54,241,000</b>	<b>53,966,500</b>	<b>-</b>	<b>274,500</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18135	Roundabout	070 Ave & 137 St	Long Term (6 - 10 Yrs)	915,000	915,000	-	-	0
18082	Intersection Improvement	168 St @ 57A Ave	Long Term (6 - 10 Yrs)	600,000	600,000	-	-	0
18081	Intersection Improvements	168 St @ 60 Ave	Long Term (6 - 10 Yrs)	600,000	600,000	-	-	0
18053	Arterial Intersection Improvements	72 Avenue and 146 Street	Short Term (1 - 5 Yrs)	1,616,000	1,616,000	-	-	0
17972	Intersection Improvements @ 58 Ave & 132 St	Intersection Improvements 58 Ave & 132 St	Short Term (1 - 5 Yrs)	1,000,000	1,000,000	-	-	0
17971	Arterial Intersection Improvements Short Term Allocation	Various	Short Term (1 - 5 Yrs)	3,000,000	3,000,000	-	-	0
17885	Roundabout	076 Ave - 146 St	Short Term (1 - 5 Yrs)	390,400	390,400	-	-	0
17884	Roundabout	076 Ave - 148 St	Short Term (1 - 5 Yrs)	915,000	915,000	-	-	0
17725	Art Intersection Improvements Long Term Annual Allocation	Various	Long Term (6 - 10 Yrs)	13,364,400	13,364,400	-	-	0
17723	Left Turn Bay Extensions Long Term Annual Allocation	Various	Long Term (6 - 10 Yrs)	1,000,000	1,000,000	-	-	0
17287	Intersection Improvements	Fraser Hwy & 80 Ave & 168 St	Short Term (1 - 5 Yrs)	2,440,000	2,440,000	-	-	0
17286	Roundabout	066 Ave / 124 St	Short Term (1 - 5 Yrs)	390,400	390,400	-	-	0
17285	Intersection Improvements	082 Ave / 128 St	Short Term (1 - 5 Yrs)	915,000	915,000	-	-	0
17284	Intersection Improvements	Fraser Highway / 184 St	Long Term (6 - 10 Yrs)	1,830,000	1,830,000	-	-	0
17283	Intersection Improvements	024 Ave / 156 St	Short Term (1 - 5 Yrs)	1,220,000	1,220,000	-	-	0
16739	Arterial Intersection Improvements	108 Ave & 150 Street	Short Term (1 - 5 Yrs)	1,000,000	1,000,000	-	-	0
16499	Arterial Intersection Improvements	104 Ave & 154 St	Short Term (1 - 5 Yrs)	1,100,000	1,100,000	-	-	0
16498	Arterial Intersection Improvements	104 Ave & 156 St	Short Term (1 - 5 Yrs)	1,100,000	1,100,000	-	-	0
16497	Arterial Intersection Improvements	108 Ave & Oriole Dr	Short Term (1 - 5 Yrs)	1,100,000	1,100,000	-	-	0
16496	Arterial Intersection Improvements	108 Ave & 146 St	Short Term (1 - 5 Yrs)	1,100,000	1,100,000	-	-	0
16495	Arterial Intersection Improvements	108 Ave & 144 Street	Short Term (1 - 5 Yrs)	1,100,000	1,100,000	-	-	0
15581	Roundabout	060 Ave / 148 St	Short Term (1 - 5 Yrs)	915,000	915,000	-	-	0
15562	Roundabout	104 Ave / 164 St	Short Term (1 - 5 Yrs)	1,110,000	1,110,000	-	-	0
15520	Collector Roundabouts Long Term Annual Allocation	Various locations	Long Term (6 - 10 Yrs)	4,830,000	4,830,000	-	-	0
13462	Arterial Intersection Improvements	086 Ave / Scott Rd	Short Term (1 - 5 Yrs)	549,000	274,500	-	274,500	0
13007	Roundabout	068 Ave / 134 St	Short Term (1 - 5 Yrs)	390,400	390,400	-	-	0
13006	Roundabout	068 Ave / 130 St	Short Term (1 - 5 Yrs)	390,400	390,400	-	-	0
13005	Roundabout	032 Ave / 140 St Round-about	Short Term (1 - 5 Yrs)	915,000	915,000	-	-	0
13003	Roundabout	060 Ave / 142 St	Short Term (1 - 5 Yrs)	610,000	610,000	-	-	0
11757	Rounabout	060 Ave / 132 St	Short Term (1 - 5 Yrs)	1,260,000	1,260,000	-	-	0
7639	Roundabout	Crescent Rd / 140 St	Long Term (6 - 10 Yrs)	1,830,000	1,830,000	-	-	0
7621	Roundabout	Crescent Rd / 128 St	Long Term (6 - 10 Yrs)	915,000	915,000	-	-	0
7441	Left Turn Bay Extensions Short Term Annual Allocation	Various	Short Term (1 - 5 Yrs)	2,000,000	2,000,000	-	-	0
7066	Intersection Improvement	064 Ave / 168 St	Long Term (6 - 10 Yrs)	1,830,000	1,830,000	-	-	0



**FIGURE 2.6 - Transportation Bridges & Overpasses (Program 1018)**

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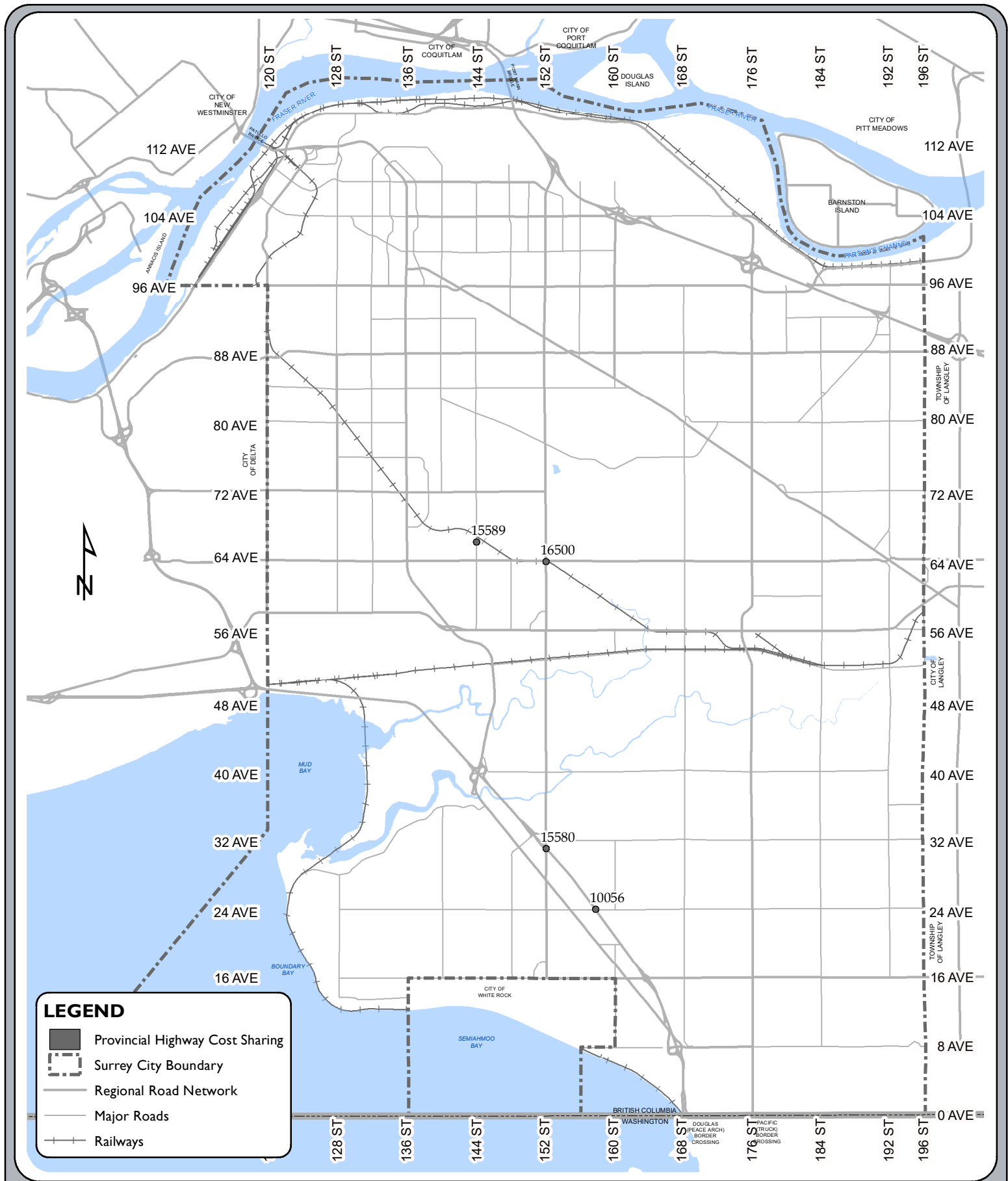
## ROADS

### Program 1018 - T - Bridges & Overpasses

<b>Program Total</b>	<b>69,538,450</b>	<b>21,952,000</b>	<b>2,760,850</b>	<b>29,300,000</b>	<b>15,525,600</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18119	MRN Bridge Replace/Repair Crossing Short-Term Allocation	Various	Short Term (1 - 5 Yrs)	3,531,200	-	1,765,600	-	1,765,600
17470	Replace/Repair Crossing	192 St at Nicomekl River	Short Term (1 - 5 Yrs)	209,900	-	209,900	-	-
17288	Pedestrian - Cycle Bridge	156 St @ Titman Creek	Long Term (6 - 10 Yrs)	3,000,000	-	-	3,000,000	-
16942	Replace/Repair Crossing	96 Ave and 118 St	Short Term (1 - 5 Yrs)	353,500	-	353,500	-	-
16941	Replace/Repair pedestrian bridge	140 St and Hyland Creek	Short Term (1 - 5 Yrs)	431,850	-	431,850	-	-
16698	Replace Crossing	King George Boulevard @ Nicomekl River	Short Term (1 - 5 Yrs)	15,000,000	3,000,000	-	9,000,000	3,000,000
15818	Quibble Cr Pathway Bridge	Quibble Cr Bridge: 9200 blk / 13700 blk	Short Term (1 - 5 Yrs)	1,092,000	612,000	-	-	480,000
15515	Pedestrian - Cycle Bridge	092 Ave / Bear Creek (14200 Blk)	Short Term (1 - 5 Yrs)	1,670,000	-	-	1,670,000	-
15514	Pedestrian - Cycle Bridge	080 Ave / Hunt Brook (13800 Blk)	Short Term (1 - 5 Yrs)	1,600,000	-	-	1,600,000	-
15513	Pedestrian - Cycle Bridge	036 Ave / Barbara Creek (15100 Blk)	Short Term (1 - 5 Yrs)	1,750,000	-	-	1,750,000	-
14247	New Crossing (50% share w/Hwy 99 ID 14341)	020 Ave Overpass of Hwy 99	Short Term (1 - 5 Yrs)	14,900,000	7,900,000	-	7,000,000	-
11746	Replace Crossing	152 St / Hwy 99	Long Term (6 - 10 Yrs)	16,000,000	5,440,000	-	5,280,000	5,280,000
7494	New Crossing	152 St / Nicomekl	Long Term (6 - 10 Yrs)	10,000,000	5,000,000	-	-	5,000,000





**FIGURE 2.7 - Transportation Highway & Railroad Projects (Program 1020)**

0 0.5 1 2 3 4 5 KM  
SCALE: 1:115,000



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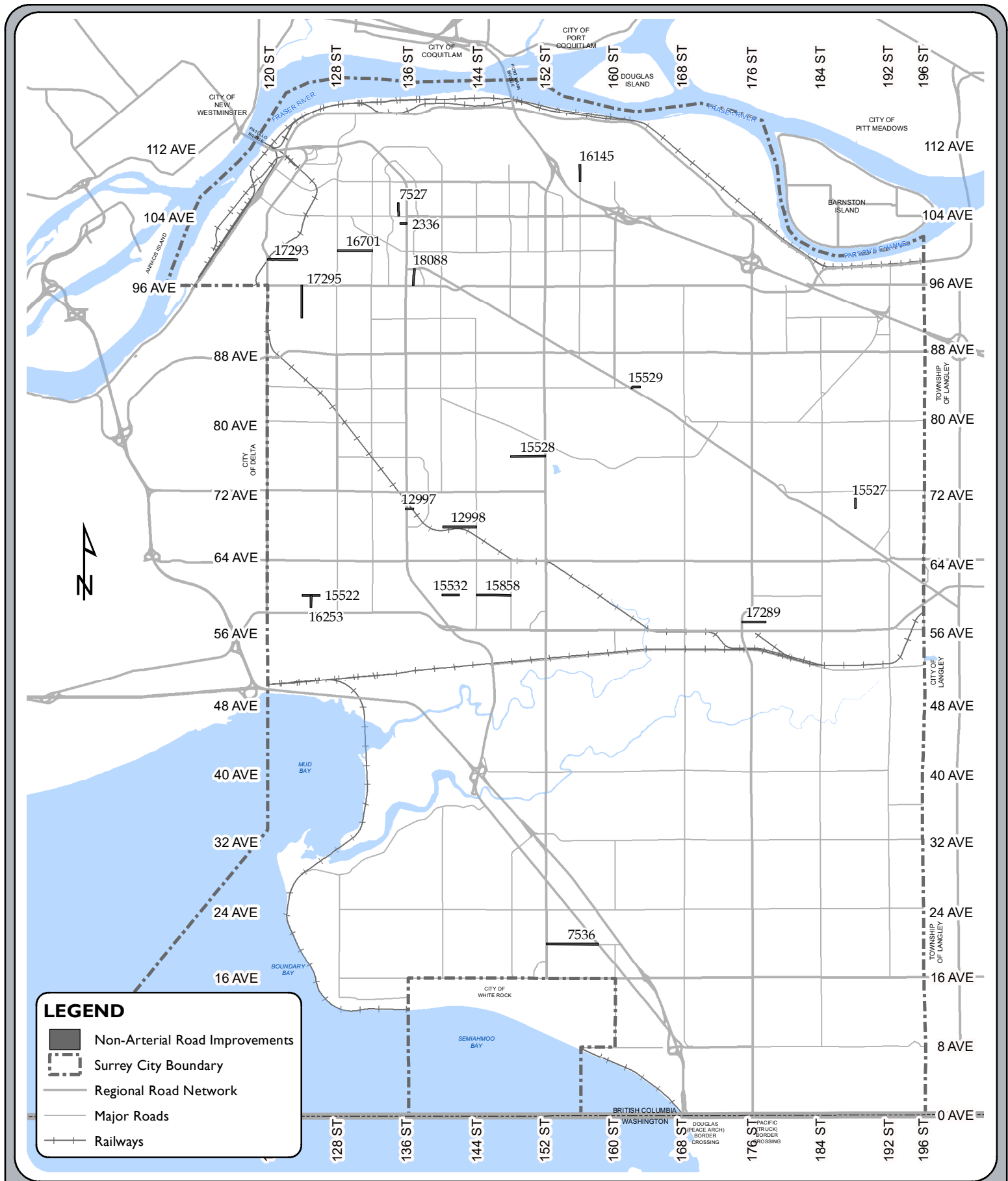
Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\M\_CCP10yrCCP\_Plan10yrServicingPlan2019-28\Figure2-7-Transportation.mxd

## ROADS

### Program 1020 - T - Highway & Railroad Projects

<b>Program Total</b>	<b>37,490,000</b>	<b>20,392,500</b>	<b>-</b>	<b>11,817,500</b>	<b>5,280,000</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18120	Railway Improvements Long Term	Various	Long Term (6 - 10 Yrs)	5,000,000	3,000,000	-	2,000,000	-
16500	Railway & Arterial Intersection Improvements	064 Ave & 152 St (Southern Railway)	Short Term (1 - 5 Yrs)	1,200,000	1,200,000	-	-	-
15589	New Gate & Intersection Upgrades 66 Ave (Hyland) / 144 St	New Gate & Intersection Upgrades 66 Ave (Hyland) / 144 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15580	Interchange Ramp	152 St / Hwy 99	Long Term (6 - 10 Yrs)	15,840,000	5,280,000	-	5,280,000	5,280,000
15519	Railway Improvements	Railway Improvements	Short Term (1 - 5 Yrs)	5,000,000	3,000,000	-	2,000,000	-
10056	Interchange Ramps (75% share w/Hwy 99 ID 14339)	024 Ave / Hwy 99	Long Term (6 - 10 Yrs)	10,150,000	7,612,500	-	2,537,500	-



**FIGURE 2.8 - Transportation  
Collector Road Completion (Program 1030)**

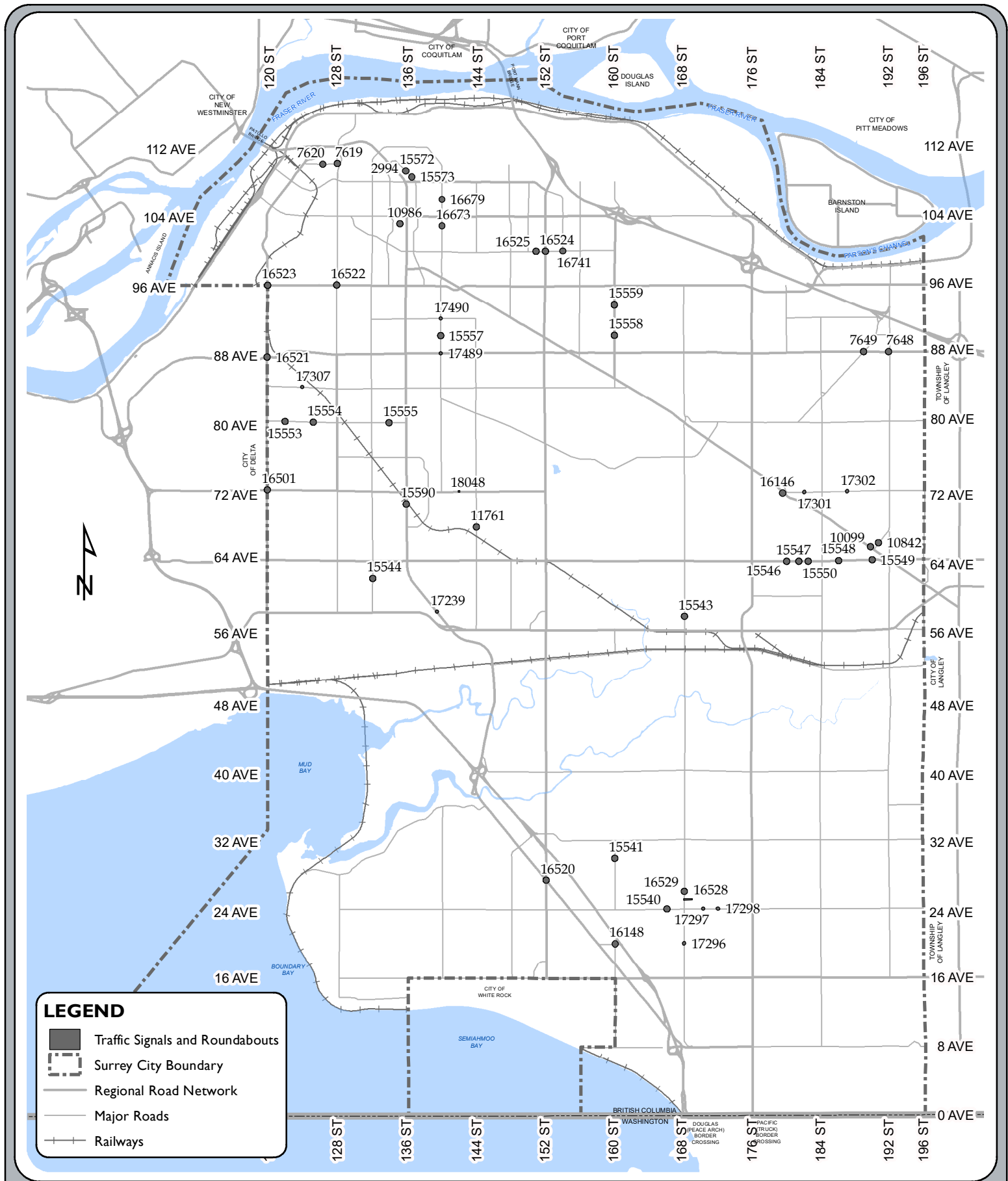
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## ROADS

### Program 1030 - T - Non-Arterial Improvements

<b>Program Total</b>	<b>48,918,000</b>	<b>48,918,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18123	Parks Road Frontage Improvements Short Term Allocation	Parks Road Frontages	Short Term (1 - 5 Yrs)	5,000,000	5,000,000	-	-	-
18088	Collector Widening	137 St: 096 Ave - Fraser Hwy	Short Term (1 - 5 Yrs)	3,416,000	3,416,000	-	-	-
17888	Parks Road Frontage Improvements Long Term Allocation	Various	Long Term (6 - 10 Yrs)	5,000,000	5,000,000	-	-	-
17295	Collector Widening	124 St: 092 Ave - 096 Ave	Long Term (6 - 10 Yrs)	1,464,000	1,464,000	-	-	-
17293	Collector Widening	099 Ave: 120 St - 123A St	Long Term (6 - 10 Yrs)	2,135,000	2,135,000	-	-	-
17289	Collector Widening	057 Ave: 175 St - 177 St	Long Term (6 - 10 Yrs)	1,220,000	1,220,000	-	-	-
16701	Collector Widening	100 Ave: 128 St - 132 St	Short Term (1 - 5 Yrs)	3,416,000	3,416,000	-	-	-
16253	125 Street Local Rd improvement	125 Street (east side): 58B Ave to 60 Ave	Short Term (1 - 5 Yrs)	915,000	915,000	-	-	-
16145	Collector Widening	156 St: 108 Ave - 110 Ave	Short Term (1 - 5 Yrs)	1,708,000	1,708,000	-	-	-
15858	Non-Arterial Paving	060 Ave: 144 St - 148 St	Short Term (1 - 5 Yrs)	3,416,000	3,416,000	-	-	-
15532	Collector Widening	060 Ave: 140 St - 142 St (S Side)	Short Term (1 - 5 Yrs)	854,000	854,000	-	-	-
15529	New Collector	084 Ave : Fraser Hwy - 162 St	Long Term (6 - 10 Yrs)	1,098,000	1,098,000	-	-	-
15528	Collector Widening	076 Ave: 148 St - 152 St	Long Term (6 - 10 Yrs)	3,416,000	3,416,000	-	-	-
15527	Collector Widening	188 St: 070 Ave - 071 Ave (W.Side)	Long Term (6 - 10 Yrs)	1,830,000	1,830,000	-	-	-
15522	Collector Widening	060 Ave: 124 St - 126 St	Short Term (1 - 5 Yrs)	1,220,000	1,220,000	-	-	-
12998	Collector Widening	68 Ave: 140 St - 144 St	Long Term (6 - 10 Yrs)	2,440,000	2,440,000	-	-	-
12997	New Collector Road	070 Ave: King George Blvd - 137A St	Long Term (6 - 10 Yrs)	2,806,000	2,806,000	-	-	-
7536	Collector Widening	020 Ave: 152 St - King George Blvd.	Short Term (1 - 5 Yrs)	5,124,000	5,124,000	-	-	-
7527	Collector Widening	City Pkwy: 104 Ave - 105 Ave	Short Term (1 - 5 Yrs)	1,220,000	1,220,000	-	-	-
2336	Collector Widening	Central Ave: (103 Ave): City Parkway -KGB+ skytrain frontage	Short Term (1 - 5 Yrs)	1,220,000	1,220,000	-	-	-



**FIGURE 2.9 - Transportation Traffic Signals (Program 1102)**

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office. Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey Source: G:\MAPPING\GIS\Maps\Recurring\M\_CCP10yrCCP\_Plan10yrServicingPlan2019-28\Figure2-9-Transportation.mxd

## ROADS

### Program 1102 - T - Traffic Signals

<b>Program Total</b>	<b>49,140,000</b>	<b>31,612,000</b>	<b>4,936,000</b>	<b>240,000</b>	<b>12,352,000</b>
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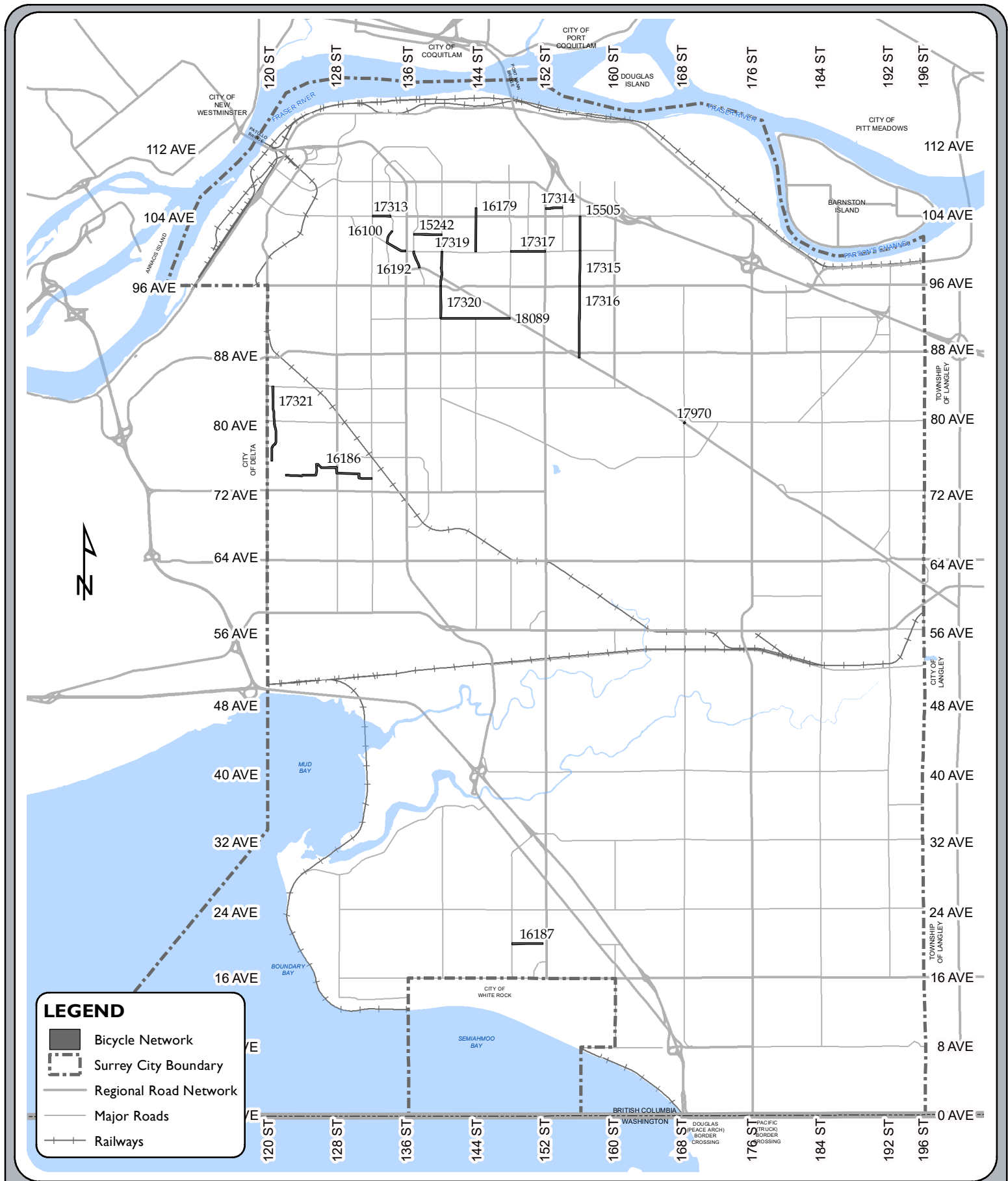
Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18122	Traffic Signals: Pedestrian Long-Term Allocation	Various	Long Term (6 - 10 Yrs)	5,000,000	5,000,000	-	-	-
18121	Traffic Signals: Long-Term Allocation	Various	Long Term (6 - 10 Yrs)	1,200,000	1,200,000	-	-	-
18104	Traffic Signals: Rebuild Long Term Allocation	Various	Long Term (6 - 10 Yrs)	6,625,000	-	1,625,000	-	5,000,000
18103	Traffic Signals: Rebuild Short Term Allocation	Various	Short Term (1 - 5 Yrs)	8,311,000	-	3,311,000	-	5,000,000
18048	Ped Signal 72 Ave / 142 St	72 Ave & 142 St	Short Term (1 - 5 Yrs)	200,000	200,000	-	-	-
17490	Traffic Signals: Rebuild with Widening	92 Ave and 140 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
17489	Traffic Signals: Rebuild with Widening	88 Ave and 140 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
17307	Traffic Signals: New with widening	084 Ave / 124 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
17302	Traffic Signals: New with widening	072 Ave / 187 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
17301	Traffic Signals: New with widening	072 Ave / 182 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
17298	Traffic Signals: New with widening	024 Ave / 172 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
17297	Traffic Signals: New with widening	024 Ave / 170 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
17296	Traffic Signals: New	020 Ave / 168 St	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
17239	Traffic Signal: Pedestrian	58 Ave and King George Blvd	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
16741	Traffic Signal Rebuild	100 Ave & 154 St	Long Term (6 - 10 Yrs)	200,000	200,000	-	-	-
16679	New Pedestrian Signal	106 Ave & 140 St	Short Term (1 - 5 Yrs)	240,000	240,000	-	-	-
16673	New Traffic Signal	103 Ave & 140 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
16529	New Traffic Signal	26 Ave & 168 St	Short Term (1 - 5 Yrs)	600,000	600,000	-	-	-
16528	New Traffic Signal	25 Ave & 168 St	Short Term (1 - 5 Yrs)	600,000	600,000	-	-	-
16525	Traffic Signal Conversion	100 Ave & 151 St	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
16524	Traffic Signal Rebuild (MRN)	100 Ave and 152 St	Short Term (1 - 5 Yrs)	384,000	-	-	-	384,000
16523	Traffic Signal Rebuild (MRN)	96 Ave and 120 St	Short Term (1 - 5 Yrs)	384,000	-	-	-	384,000
16522	Traffic Signal Rebuild (MRN)	96 Ave & 128 St	Short Term (1 - 5 Yrs)	384,000	-	-	-	384,000
16521	Traffic Signal Rebuild (MRN)	Nordel Way & 120 St	Short Term (1 - 5 Yrs)	480,000	-	-	-	480,000
16520	Traffic Signal Rebuild (MRN)	152 St & King George Blvd	Short Term (1 - 5 Yrs)	480,000	-	-	-	480,000
16501	Traffic Signal Rebuild	072 Ave & 120 St	Short Term (1 - 5 Yrs)	480,000	-	-	240,000	240,000
16148	Traffic Signal: New	020 Ave / 160 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
16146	Traffic Signal: New	072 Ave / Fraser Hwy	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15590	Traffic Signals: New	070 Ave / King George Blvd.	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15573	Traffic Signals: New with widening	Whalley Blvd / Grosvenor	Long Term (6 - 10 Yrs)	384,000	384,000	-	-	-
15572	Traffic Signals: New with widening	Whalley Blvd / Bentley	Long Term (6 - 10 Yrs)	384,000	384,000	-	-	-
15559	Traffic Signals: New with widening	094 Ave / 160 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15558	Traffic Signals: New with widening	090 Ave / 160 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15557	Traffic Signals: New with widening	090 Ave / 140 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15555	Traffic Signals: New with widening	080 Ave / 134 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15554	Traffic Signals: New with widening	080 Ave / 125 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15553	Traffic Signals: New with widening	080 Ave / 122 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15550	Traffic Signals: New with widening	064 Ave / Clayton Wood	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15549	Traffic Signals: New with widening	064 Ave / 190 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15548	Traffic Signals: New with widening	064 Ave / 186 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15547	Traffic Signals: New with widening	064 Ave / 181A St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15546	Traffic Signals: Conversion	064 Ave / 180 St	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
15544	Traffic Signals: Ped	062 Ave / 132 St	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
15543	Traffic Signals: New with widening	058 Ave / 168 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15541	Traffic Signals: New	030 Ave / 160 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
15540	Traffic Signals: New	024 Ave / 166 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
15537	Traffic Signals Long Term Annual Allocation	Various locations	Long Term (6 - 10 Yrs)	5,000,000	5,000,000	-	-	-
15536	Traffic Signals: Short-Term Allocation	Various locations	Short Term (1 - 5 Yrs)	1,200,000	1,200,000	-	-	-
14255	Traffic Signals: Pedestrian Short-Term Allocation	Various locations	Short Term (1 - 5 Yrs)	5,000,000	5,000,000	-	-	-

## ROADS

### Program 1102 - T - Traffic Signals

<b>Program Total</b>	<b>49,140,000</b>	<b>31,612,000</b>	<b>4,936,000</b>	<b>240,000</b>	<b>12,352,000</b>
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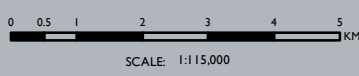
Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
11761	Traffic Signals: New	068 Ave / 144 St	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
10986	Traffic Signals: New with widening	103 Ave / City Parkway	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
10842	Traffic Signals: New	065 Ave / 192 St Div	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
10099	Traffic Signals: New	Fraser Hwy / 192 St Div.	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
7649	Traffic Signals: New	088 Ave / Harvie Rd	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
7648	Traffic Signals: New	088 Ave / 192 St	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
7620	Traffic Signals: New	110 Ave / 126A St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-
7619	Traffic Signals: New with widening	110 Ave / 128 St	Long Term (6 - 10 Yrs)	300,000	300,000	-	-	-



**LEGEND**

- Bicycle Network
- Surrey City Boundary
- Regional Road Network
- Major Roads
- Railways

**FIGURE 2.10 - Transportation Bicycle Infrastructure (Program 1120)**



**GIS SECTION ENGINEERING**

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

Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
 Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP10y\CCP\_Plan10y\ServicingPlan2019-28\Figure2-10-Transportation.mxd



## ROADS

### Program 1120 - T - Bicycle Infrastructure

<b>Program Total</b>	<b>49,530,040</b>	<b>27,372,080</b>	<b>-</b>	<b>1,668,960</b>	<b>20,489,000</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18124	Tactical Cycling Interventions Short Term Allocations	Various	Short Term (1 - 5 Yrs)	500,000	500,000	-	-	-
18089	Cycle Tracks	092 Ave: 140 Street - 148 Street	Short Term (1 - 5 Yrs)	2,928,000	1,259,040	-	1,668,960	-
18083	Tactical Cycling Interventions Long Term Allocation	Various	Long Term (6 - 10 Yrs)	500,000	500,000	-	-	-
17970	Cycle Tracks	Fraser Hwy: 164 St - 166 St	Short Term (1 - 5 Yrs)	1,811,040	611,040	-	-	1,200,000
17321	Local Street Bikeway	120A St: 70 Ave - 84 Ave	Long Term (6 - 10 Yrs)	3,000,000	1,500,000	-	-	1,500,000
17320	Cycle Tracks	140 St: 092 Ave - 096 Ave	Long Term (6 - 10 Yrs)	2,928,000	1,464,000	-	-	1,464,000
17319	Cycle Tracks	140 St: 096 Ave - 100 Ave	Long Term (6 - 10 Yrs)	2,928,000	1,464,000	-	-	1,464,000
17317	Cycle Tracks	100 Ave: 148 St - 154 St	Short Term (1 - 5 Yrs)	4,392,000	2,196,000	-	-	2,196,000
17316	Cycle Tracks	156 St: Fraser Hwy - 96 Ave	Short Term (1 - 5 Yrs)	7,259,000	4,864,000	-	-	2,395,000
17315	Cycle Tracks	156 St: 96 Ave - 100 Ave	Long Term (6 - 10 Yrs)	3,416,000	2,289,000	-	-	1,127,000
17314	Cycle Tracks	105 Boulevard: 152 St - 154 St	Long Term (6 - 10 Yrs)	1,464,000	732,000	-	-	732,000
17313	Cycle Tracks	104 Ave: 132 St - University Dr	Long Term (6 - 10 Yrs)	1,464,000	732,000	-	-	732,000
16192	Cycle Tracks	Whalley Blvd: Fraser Hwy - 100 Ave	Short Term (1 - 5 Yrs)	1,464,000	732,000	-	-	732,000
16187	Multi-Use Pathway	Sunnyside Greenway: 148 - 151A St	Long Term (6 - 10 Yrs)	2,800,000	1,400,000	-	-	1,400,000
16186	Multi-Use Pathway	Scottsdale Greenway: 121A - 132 St	Short Term (1 - 5 Yrs)	1,500,000	750,000	-	-	750,000
16179	Multi-Use Pathway	Bon Accord Greenway: 100 - 105A Ave	Long Term (6 - 10 Yrs)	3,660,000	1,830,000	-	-	1,830,000
16100	Cycle Tracks	BC Parkway: University/102 Ave - Old Yale/King George Blvd	Short Term (1 - 5 Yrs)	2,000,000	1,000,000	-	-	1,000,000
15505	Cycle Tracks	156 St: 100 Ave - 104 Ave	Long Term (6 - 10 Yrs)	3,416,000	2,289,000	-	-	1,127,000
15242	Cycle Tracks	102 Ave: Whalley Blvd - 140 St	Short Term (1 - 5 Yrs)	2,100,000	1,260,000	-	-	840,000

### 3. WATER

The water utility provides sufficient, safe and clean drinking water to the residents of the City. This is provided through the operation, maintenance and replacement of the existing system and planning the design and construction of new facilities to support growth.

#### 3.1 Water Supply

The City receives its water supply from the system of transmission mains and reservoir structures operated by the Greater Vancouver Water District (“GVWD”). Currently, the GVWD system supplies water at the following six reservoirs:

- Whalley
- Clayton
- Kennedy
- Newton
- Sunnyside
- Grandview Heights

In addition, there are a number of on-line feeds on the GVWD’s feeder mains. The overall regional system in Surrey is shown in **Figure 3.1**.

#### 3.2 Water Distribution System

The City distributes the water from the reservoirs and the on-line supply points to the City’s water customers. Under the agreement between the City and the GVWD, the GVWD has no obligation to provide any residual pressure at their supply points. As a result, the City operates a system of pump stations to provide adequate pressure under peak demand conditions and for firefighting purposes. The major pipe network (water mains of 250mm diameter and larger) currently used to supply and distribute flow through Surrey as illustrated in **Figure 3.1**, and the characteristics of the City’s distribution system is summarized in **Table 3.1**.

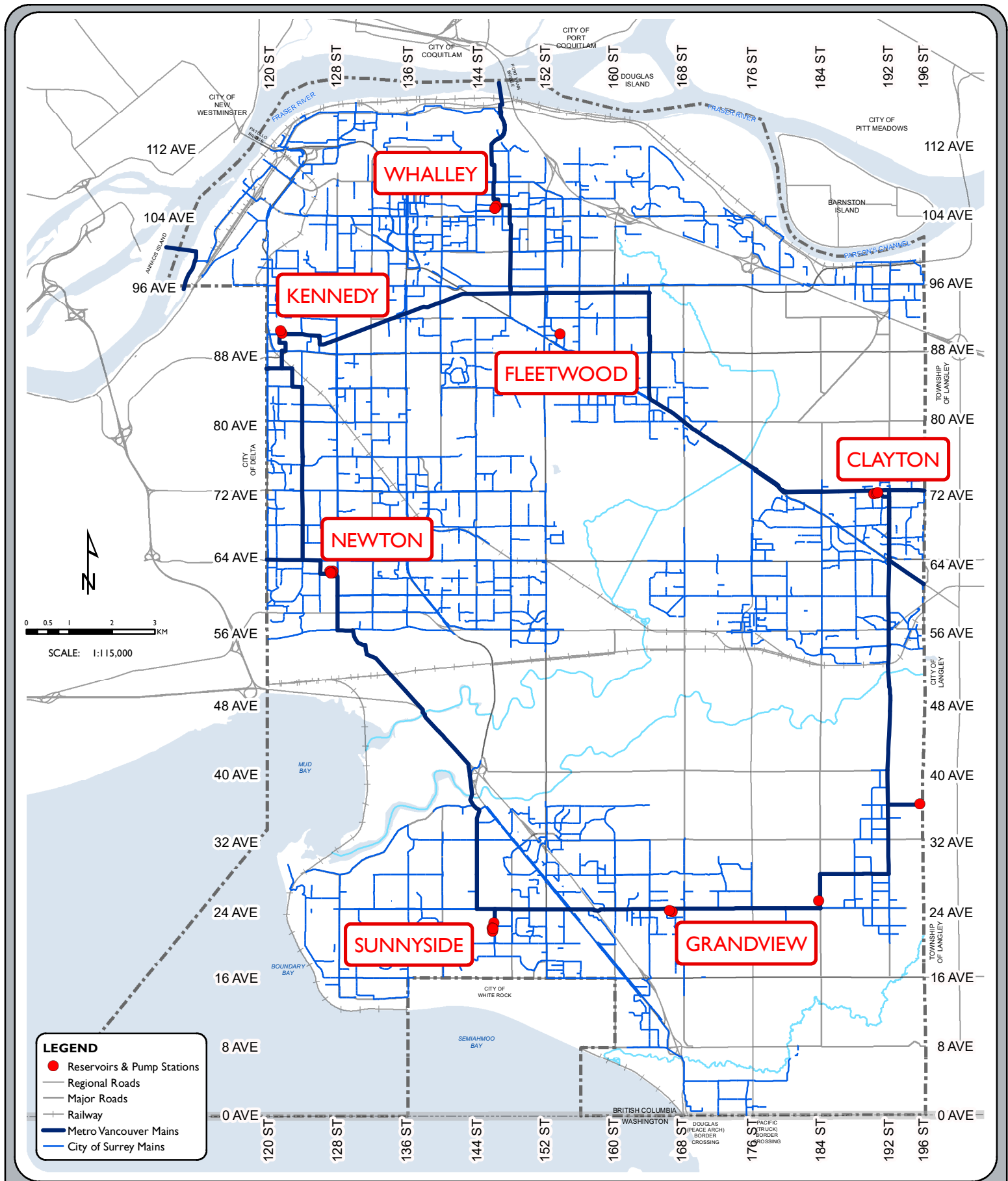
**Table 3.1 – Major Water System Infrastructure Summary**

Water Mains (acceptable materials)	1,720 km (typically constructed after 1970)
Water Mains (obsolete materials)	143 km (typically constructed before 1970)
Pressure Reducing Stations	103
Pump Stations	9

#### 3.3 Region’s Current Obligations to Provide Supply

The GVWD is obligated under the GVWD Water Act to provide the required water demand at the supply points and to upgrade its facilities to meet increased demand due to growth within the City, except where such regional works are to be constructed under existing agreements between the City and the GVWD which specify agreed supply flows, cost-sharing and timing of works.

The GVWD has identified a number of projects in their 10-year plan that would directly improve water supply to the City. The notable ones include Annacis water supply tunnel, Kennedy-Newton feeder main, Newton pump station, and South Surrey feeder main.



**FIGURE 3.1 - MAJOR WATER NETWORK**

### 3.4 Surrey's Water System in the Context of Growth

The demands on the water system increase with residential, commercial and industrial developments. To meet these increased demands, water system improvement studies were completed using the latest calibrated water models. The works identified from these studies and NCPs are included in the 10-Year Servicing Plan and have been divided into three programs:

1. **Supply Works and Feeder Mains** include essential additional works to store, pump and transfer water from the supply points to the local distribution network;
2. **Distribution Mains** are nominal mains up to and including 300mm diameter on Surrey's grid roads; and
3. **Development Coordinated Works Upsizing** includes new and/or the upsizing of replacement distribution mains required for maintaining pressures and meeting demands within local distribution areas.

### 3.5 Water Main Replacement Strategy

Water mains constructed in the 1950s and 1960s were mainly cast iron and asbestos cement. These materials are no longer used. The service life of these materials is generally between 50 to 65 years and, as a result, most of these pipes are at the end of their service life and are due for replacement.

The service life of water mains constructed of currently approved materials, such as plastic and ductile iron pipes, is estimated to be 75 to 100 years. Currently, it is assumed that plastic and ductile iron pipes are to be replaced when they reach 75 years old. This assumption will be reviewed periodically to consider more up-to-date information.

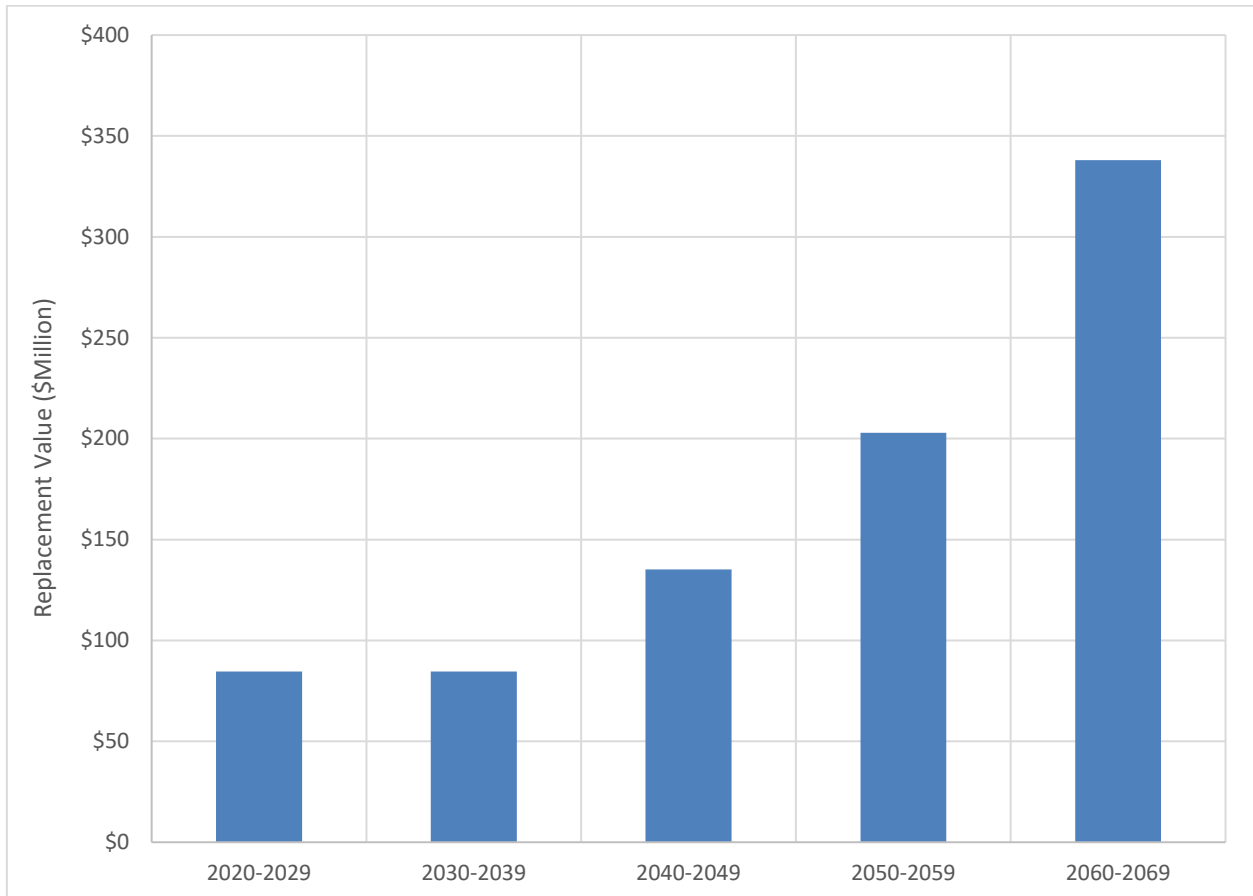
The characteristics of the pipes requiring replacement over the next 50 years is summarized in **Table 3.2**.

**Table 3.2 Water System Replacement Requirements in the Next 50 Years**

Material	Total Main Length	Replacement Demand up to 2069 (50 years)	Replacement Cost
<b>Misc.:</b> Cast Iron, Asbestos Cement, Concrete, Copper, Galvanized Iron, Galvanized Steel, and Steel	143 km (8% of entire pipe system by length)	143 km	\$169 million
<b>Plastic:</b> Poly Vinyl Chloride and Polyethylene	661 km (35% of entire pipe system by length)	92 km	\$100 million
<b>Ductile Iron</b>	1,044 km (56% of entire pipe system by length)	504 km	\$546 million
<b>Steel</b>	15 km (1% of entire pipe system by length)	14 km	\$30 million

The estimated cost to replace aging water mains in the next 10 years is \$76 million, and \$845 million in the next 50 years. The replacement cost in the next 50 years is illustrated in **Figure 3.2**.

**Figure 3.2 – Water Main Replacement Costs over the Next 50 Years**



It is too early to establish a strategy for the replacement of pipes beyond 50 years, as changing technologies, developments in asset management and demand management practices may influence the replacement strategy in that period.

### 3.6 Water Servicing Program

#### Program 1600 – General Items

This program covers the overhead costs associated with the general operating of the Water Section. Included are the costs of staff time, hardware and software equipment, and internal support services.

### Program 1602 - Distribution Mains ( $\leq 300\text{mm}$ )

This program is comprised of three categories:

- **The replacement of existing water distribution mains that are deficient, in terms of providing sufficient fire flow and adequate pressure at peak demand.**  
Replacement and upsizing of the existing system to meet existing demand is a non-growth cost component. There are also sections that require upsizing in order to meet the increasing demand from future OCP designated land use. The cost of upsizing is a growth cost component.
- **The replacement of water mains in conjunction with the City's Water Main Replacement Strategy.** Replacement of these water mains is prioritized based on their age, condition of the pipe, replacement costs versus maintenance cost, risk/frequency of breakage, hydraulic capacity, fire flow availability, criticality, and impact to environment and property. The replacement of these mains is a non-growth cost component, unless upsizing is required which is a growth cost component.
- **Within each supply zone a grid network, approximately on a half-mile grid.** This grid comprises 250mm diameter and greater water mains that help to provide adequate pressure and flow throughout each distribution zone. Based on both peak hour flows and maximum day demand plus fire flow demands, new locations for grid mains have been identified. New grid mains can have a non-growth cost component, a growth cost component, or a combination of the two.

Efforts will be made to complete pipe replacement works in conjunction with road reconstruction or widening or other utilities related works to minimize the cutting and patching of roads and to avoid construction in the same area within a short period of time.

### Program 1604 - Cross Connection

The City administers a comprehensive Cross Connection Control ("CCC") program to minimize the risk of contaminants originating from private properties from entering the City's water network and private property's plumbing system.

The program includes enforcement of annual testing of backflow preventers, installation of backflow preventers for all new construction (plumbing permit requirements), and installation of backflow preventers for all existing industrial, commercial and institutional ("ICI") properties through CCC survey.

CCC survey was started in 2015, and over the next 10 years, it is expected that all existing ICI properties will have been surveyed and any deficiencies would be addressed.

### Program 1606 - Minor Projects

The Minor Projects program includes the projects for the following initiatives:

- Water main abandonment;
- Water quality improvement; and
- Condition assessment on both distribution and feeder mains.

The water main abandonment initiative is to abandon approximately 12 km of cast iron and asbestos cement pipes by transferring existing service connections to an existing parallel main of currently approved pipe material.

The water quality improvement initiative is to eliminate stagnant water in dead-end mains and on either side of pressure zone boundaries, which may include the abandonment of some existing pressure reducing valves (“PRV”) and some minor piping adjustments around the PRV.

The condition assessment initiative is to conduct assessments on selected mains to better understand their condition. As a start, this initiative focuses on the older and more significant feeder mains.

In addition to projects under these initiatives, the Minor Projects program funds other minor works as required. The implementation schedule for the minor projects is typically coordinated with DCW and the City’s Water Main Replacement Strategy.

#### Program 1608 - Planning (Capital)

This program covers the overhead costs associated with program management of the utility related to supporting growth. Included are the costs of staff time specific to this program, internal support services and external services such as planning studies, preliminary engineering studies and feasibility studies for capital works.

#### Program 1609 - Demand Management

This program covers all water conservation related initiatives including outreach programs to residents, educational programs to students, rain barrel and water timer sales, and other water saving tools and programs as they may arise. The outreach and educational programs aim to promote a water conservation mindset in daily activities through informative, fun and hands-on events and workshops.

#### Program 1610 - Supply Works and Feeder Mains

This program includes water facilities such as pump stations and pressure reducing valves, as well as large-diameter feeder mains. These facilities serve overall City-wide supply needs and are generally beyond the servicing requirements of individual developers.

Supply works and feeder main projects are assigned a growth-related cost, a non-growth related cost, or a combination of the two, depending on whether growth or an existing system deficiency is driving the need for the works.

#### Program 1612 - Planning (Operating)

This program includes studies in water loss reduction, post-disaster water supply, water quality and other planning works that are required for the operation of the utility.

The City has an active Water Loss Reduction program with the objective of reducing non-revenue water and reducing water main break incidents. Studies and works are carried out such as water audits, leak detection surveys and zone meter installations.

Program 1620 - DCW Upsizing

NCPs have identified the need for grid and distribution mains where there are currently no water mains or the existing main does not have adequate capacity to service the new development. In these cases, the minimum (or base) water main size necessary for the fronting properties is funded by the fronting or benefiting properties, and the cost to upsize the water main from the base size to the ultimate size is funded by the overall DCC program.

An allowance is included in this program to upsize water mains not currently identified in the Plan. The upsizing provision will allow for a cost-effective sizing of the distribution system, as development opportunities arise.

**3.7 Water Cost Summary**

No.	Program	Program Type	Growth (\$)	Non-Growth (\$)	Total (\$)
1600	General Items	Operating	0	7,500,000	7,500,000
1602	Distribution Mains <=300mm dia	Capital	4,866,560	47,036,440	51,903,000
1604	Cross Connection	Operating	0	4,000,000	4,000,000
1606	Minor Projects	Operating	0	20,000,000	20,000,000
1608	Planning (Capital)	Non-Capital	3,500,000	2,500,000	6,000,000
1609	Demand Management	Operating	0	1,000,000	1,000,000
1610	Supply Works and Feeder Mains	Capital	44,396,500	29,370,273	73,766,773
1612	Planning (Operating)	Operating	0	4,000,000	4,000,000
1620	DCW Upsizing	Capital	15,253,500	1,000,000	16,253,500
<b>TOTAL</b>			<b>68,016,560</b>	<b>116,406,713</b>	<b>184,423,273</b>

**3.8 Water Projects by Program**

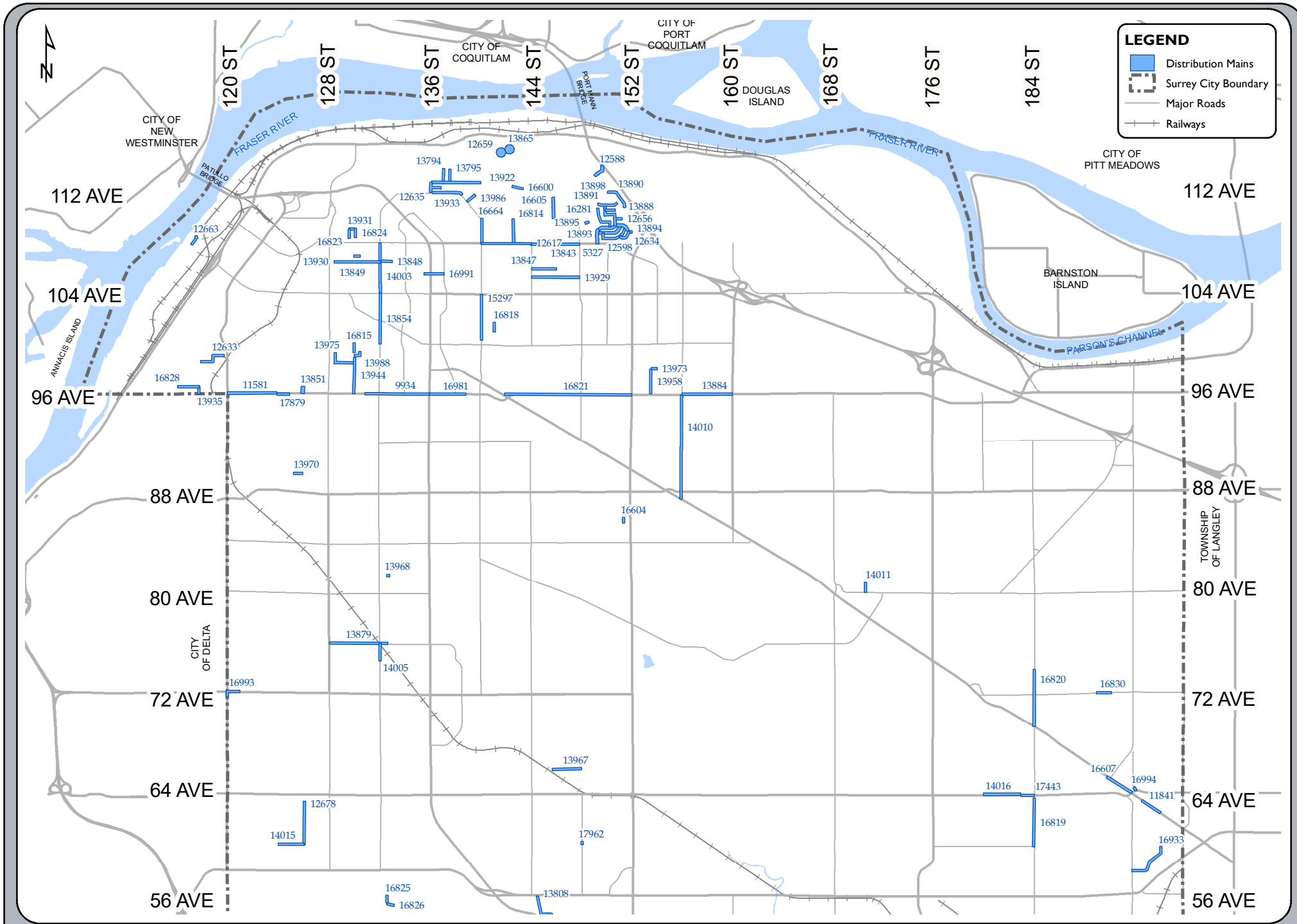
This section contains tables and figures that identify the projects under the Water programs.

The tables provide the following information:

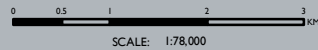
- a) Project ID - the unique identifier of the project
- b) Project name - the specific name or generic name that depicts the type of work
- c) Project location - the geographic extent of the works
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change)
- e) Costs – the high-level estimates in 2019 dollars (subject to change at the actual time of construction). The costs are comprised of growth and non-growth components.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations throughout Surrey may not be shown on the maps.



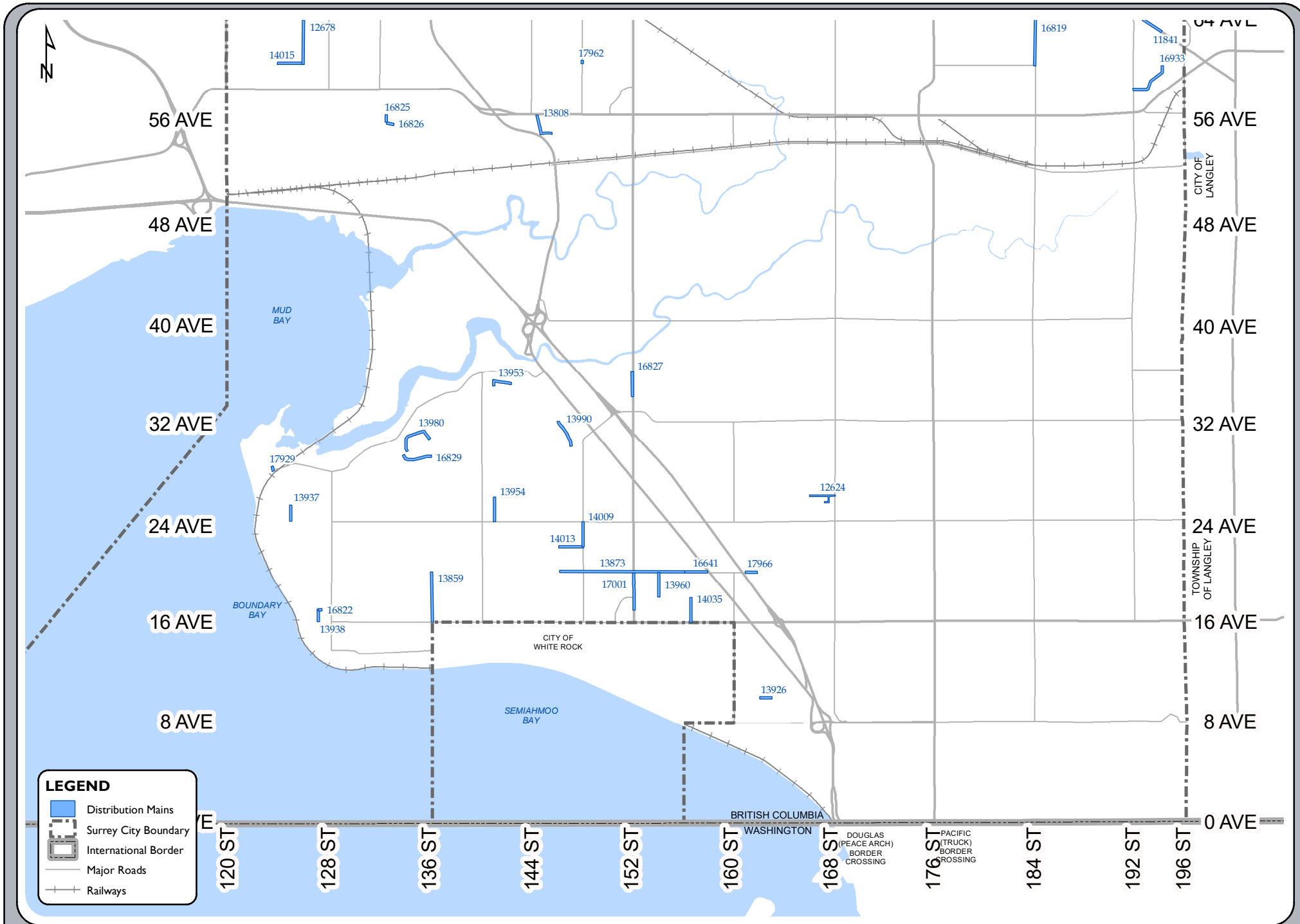


**FIGURE 3.2 - Water Distribution Mains <=300mm (Program 1602)**

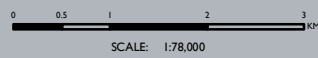


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Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yrCCP\_Plan\10yrServicingPlan2019-28\Figure 3-2-WaterNorth.mxd



**FIGURE 3.2 - Water Distribution Mains <=300mm (Program 1602)**



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Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yr\CCP\_Plan\10yr\Servicing\Plan2019-28\Figure3-2-WaterSouth.mxd

# WATER

## Program 1602 - W - Distribution Mains (<=300mm)

<b>Program Total</b>	<b>51,903,000</b>	<b>4,866,560</b>	<b>47,036,440</b>	-	-
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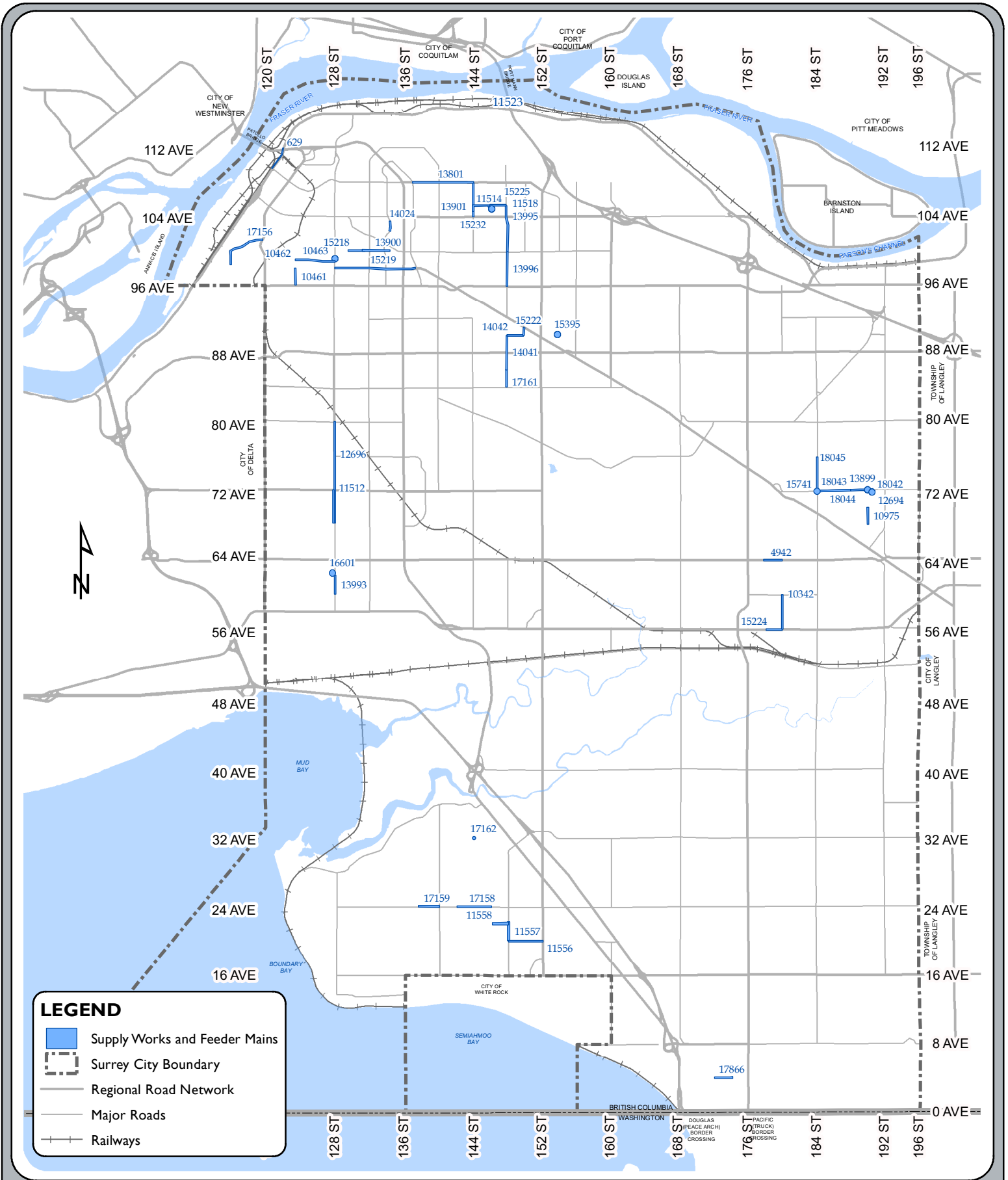
Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18022	Skytrain Related Works	Fraser Hwy - Misc.	Short Term (1 - 5 Yrs)	1,300,000	500,000	800,000	-	0
17966	110m of 100mm DI	020 Ave: Lot 16114 - Lot 16184*	Short Term (1 - 5 Yrs)	100,000	-	100,000	-	0
17962	65m of 300mm diameter	148 St: 60 Ave - Lot 6025	Short Term (1 - 5 Yrs)	85,000	47,000	38,000	-	0
17929	DMAF: 85m of 250mm diameter	Sullivan St: Beecher - Lot 12325	Short Term (1 - 5 Yrs)	102,000	36,000	66,000	-	0
17879	200m of 300mm diameter	096 Ave: 124 - 125 St	Short Term (1 - 5 Yrs)	260,000	-	260,000	-	0
17443	200m of 200mm; 30m of 300mm	064 Ave: lot 18303 to 184 St	Short Term (1 - 5 Yrs)	239,000	-	239,000	-	0
17001	500m of 300mm diameter	152 St: 17 - 20 Ave (East Side)	Long Term (6 - 10 Yrs)	650,000	-	650,000	-	0
16994	80m of 300mm diameter	192 St: 64 Ave - Watkins Dr	Long Term (6 - 10 Yrs)	104,000	57,000	47,000	-	0
16993	210m of 300mm diameter	120 St: Lot 7154 - 72 Ave; 72 Ave: 120 St - Lot 7171	Short Term (1 - 5 Yrs)	273,000	150,000	123,000	-	0
16991	250m of 300mm diameter	105A Ave: 135A St - Whalley Blvd	Long Term (6 - 10 Yrs)	325,000	-	325,000	-	0
16981	570m of 300mm diameter	096 Ave: King George Blvd - 139 St	Short Term (1 - 5 Yrs)	741,000	-	741,000	-	0
16933	160m of 200mm diameter	192 St: Enterprise Way - 59 Ave	Long Term (6 - 10 Yrs)	160,000	-	160,000	-	0
16830	420m of 300mm diameter	072 Ave: 188 St - Lot 18865; 189 St - Lot 19041	Short Term (1 - 5 Yrs)	546,000	300,000	246,000	-	0
16829	500m of 200mm diameter	Vine Maple Dr: Woodcrest Dr - 136 St	Short Term (1 - 5 Yrs)	500,000	-	500,000	-	0
16828	350m of 200mm diameter	096A Ave: 116 - 117B St	Short Term (1 - 5 Yrs)	350,000	-	350,000	-	0
16827	400m of 250mm diameter	152 St: 34 - 36 Ave	Short Term (1 - 5 Yrs)	480,000	-	480,000	-	0
16826	120m of 200mm diameter	55A Ave: 132A St - Lot 13295	Short Term (1 - 5 Yrs)	120,000	-	120,000	-	0
16825	120m of 200mm diameter	132A St: 55A - 56 Ave	Short Term (1 - 5 Yrs)	120,000	-	120,000	-	0
16824	150m of 200mm diameter	130 St: Lot 10843 - 109 Ave	Short Term (1 - 5 Yrs)	150,000	-	150,000	-	0
16823	100m of 200mm, 40m of 100mm	129A St: Lot 10823 - 109 Ave	Short Term (1 - 5 Yrs)	134,000	-	134,000	-	0
16822	60m of 100mm diameter	017 Ave: 127 St - Lot 12745	Short Term (1 - 5 Yrs)	52,000	-	52,000	-	0
16821	2050m of 300mm diameter	096 Ave: Fraser Hwy - 152 St	Long Term (6 - 10 Yrs)	2,665,000	-	2,665,000	-	0
16820	520m of 300mm diameter	184 St: Fraser Hwy - 72 Ave	Short Term (1 - 5 Yrs)	676,000	-	676,000	-	0
16819	850m of 300mm diameter	184 St: 60 - 64 Ave	Long Term (6 - 10 Yrs)	1,105,000	-	1,105,000	-	0
16818	150m of 250mm diameter	141 St: 101 - 102 Ave	Short Term (1 - 5 Yrs)	180,000	-	180,000	-	0
16815	200m of 200mm diameter	130 St: 99 - 100 Ave	Long Term (6 - 10 Yrs)	200,000	-	200,000	-	0
16814	400m of 200mm diameter	142A St: 108 - 110 Ave	Short Term (1 - 5 Yrs)	400,000	-	400,000	-	0
16664	400m of 300mm diameter	140 St: 108 - 110 Ave	Short Term (1 - 5 Yrs)	520,000	286,000	234,000	-	0
16641	400m of 300mm diameter	020 Ave: 156 St - King George Blvd	Short Term (1 - 5 Yrs)	520,000	286,000	234,000	-	0
16607	450m of 300mm diameter	Fraser Hwy: lot 19007 - 192 St	Short Term (1 - 5 Yrs)	585,000	322,000	263,000	-	0
16605	340m of 200mm diameter	146 St: 110 - 111A Ave	Long Term (6 - 10 Yrs)	340,000	-	340,000	-	0
16604	90m of 200mm diameter	151A St: 85A - 86 Ave	Short Term (1 - 5 Yrs)	90,000	-	90,000	-	0
16600	150m of 200mm diameter	Gladstone Dr: 143A St - Lot 14261	Short Term (1 - 5 Yrs)	150,000	-	150,000	-	0
16281	440m of 200mm diameter	Partridge Cr: Canary Dr - Blackbird Cr	Long Term (6 - 10 Yrs)	440,000	-	440,000	-	0
15297	750m of 300mm diameter	140 St: Lot 10029 - 104 Ave	Short Term (1 - 5 Yrs)	975,000	-	975,000	-	0
14035	400m of 200mm diameter	156A St: 16 - 18 Ave	Long Term (6 - 10 Yrs)	400,000	-	400,000	-	0
14016	650m of 200mm diameter	064 Ave: 180 - Lot 18303	Short Term (1 - 5 Yrs)	650,000	-	650,000	-	0
14015	400m of 300mm diameter	060 Ave: 124 - 126 St	Short Term (1 - 5 Yrs)	520,000	-	520,000	-	0
14013	410m of 300mm diameter	022 Ave: 146 - 148 St	Short Term (1 - 5 Yrs)	533,000	160,000	373,000	-	0
14011	170m of 200mm diameter	170A St: 80 Ave - Lot 8072	Long Term (6 - 10 Yrs)	170,000	-	170,000	-	0
14010	1700m of 300mm diameter	156 St: Fraser Hwy - 96 Ave	Long Term (6 - 10 Yrs)	2,210,000	-	2,210,000	-	0
14009	410m of 300mm diameter	148 St: 22 - 24 Ave	Short Term (1 - 5 Yrs)	533,000	160,000	373,000	-	0
14005	280m of 300mm diameter	132 St: Lot 7445 - 76 Ave	Long Term (6 - 10 Yrs)	364,000	-	364,000	-	0
14003	800m of 300mm diameter	132 St: 104 - 108 Ave	Long Term (6 - 10 Yrs)	1,040,000	-	1,040,000	-	0
13990	475m of 200mm diameter	Semiahmoo Trail: 30 - 32 Ave	Long Term (6 - 10 Yrs)	475,000	-	475,000	-	0
13988	150m of 200mm diameter	Pekin Pl: 130 St - Lot 13095	Long Term (6 - 10 Yrs)	150,000	-	150,000	-	0
13986	170m of 200mm diameter	Kalmar Rd: Hansen - Douglas Rd	Long Term (6 - 10 Yrs)	170,000	-	170,000	-	0
13980	800m of 200mm diameter	Balsam Cr: Woodcrest Dr - 136 St	Short Term (1 - 5 Yrs)	800,000	-	800,000	-	0
13975	500m of 200mm diameter	98A Ave: 128A - 130 St; 128A St: 98A - 99 Ave	Long Term (6 - 10 Yrs)	500,000	-	500,000	-	0
13973	100m of 200mm diameter	098 Ave: 153A - 154 St	Long Term (6 - 10 Yrs)	100,000	-	100,000	-	0
13970	150m of 200mm diameter	089A Ave: 125 - 126 St	Long Term (6 - 10 Yrs)	150,000	-	150,000	-	0
13968	50m of 100mm diameter	081A Ave: 132A - Lot 13289	Short Term (1 - 5 Yrs)	43,000	-	43,000	-	0
13967	250m of 250mm diameter	066 Ave: 146 - 148 St	Short Term (1 - 5 Yrs)	650,000	358,000	292,000	-	0

# WATER

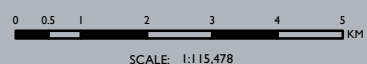
## Program 1602 - W - Distribution Mains (<=300mm)

<b>Program Total</b>	<b>51,903,000</b>	<b>4,866,560</b>	<b>47,036,440</b>	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
13960	410m of 300mm diameter	154 St: 18 - 20 Ave	Short Term (1 - 5 Yrs)	533,000	293,000	240,000	-	0
13958	400m of 200mm diameter	153A St: 96 - 98 Ave	Long Term (6 - 10 Yrs)	400,000	-	400,000	-	0
13954	400m of 200mm diameter	141 St: 24 - 26 Ave	Long Term (6 - 10 Yrs)	400,000	-	400,000	-	0
13953	430m of 200mm diameter	Greencrest Dr: 141 -142A St; 141 St: Lot 3467 -Greencrest Dr	Long Term (6 - 10 Yrs)	430,000	-	430,000	-	0
13944	750m of 300mm diameter	130 St: 96 - 98B Ave	Long Term (6 - 10 Yrs)	975,000	-	975,000	-	0
13938	200m of 200mm diameter	127 St: 16 - 17 Ave	Short Term (1 - 5 Yrs)	200,000	-	200,000	-	0
13937	200m of 200mm diameter	124B St: 24 - 25 Ave	Short Term (1 - 5 Yrs)	200,000	-	200,000	-	0
13935	100m of 200mm diameter	117B St: 96 - 96A Ave	Short Term (1 - 5 Yrs)	100,000	-	100,000	-	0
13933	520m of 250mm diameter	111A Ave: 136 St - Hansen Rd	Long Term (6 - 10 Yrs)	624,000	399,360	224,640	-	0
13931	100m of 200mm diameter	109 Ave: 129A - 130 St	Short Term (1 - 5 Yrs)	100,000	-	100,000	-	0
13930	750m of 200mm diameter	106A Ave: Old Yale Rd - 132 St	Long Term (6 - 10 Yrs)	750,000	-	750,000	-	0
13929	425m of 300mm diameter	105A Ave: 144 - Lot 14611	Short Term (1 - 5 Yrs)	553,000	304,000	249,000	-	0
13926	200m of 200mm diameter	010 Ave: 162 - 163 St	Long Term (6 - 10 Yrs)	200,000	-	200,000	-	0
13922	800m of 200mm diameter	113 Ave: 136 - 140 St	Short Term (1 - 5 Yrs)	800,000	-	800,000	-	0
13898	480m of 200mm diameter	Jay Cr: Canary Dr - Swallow Dr	Short Term (1 - 5 Yrs)	480,000	-	480,000	-	0
13895	70m of 100mm diameter	Lark Pl: Lot 10963 - 148 St	Long Term (6 - 10 Yrs)	60,000	-	60,000	-	0
13894	600m of 200mm diameter	Canary Dr: Oriole Dr - 152 St	Long Term (6 - 10 Yrs)	600,000	-	600,000	-	0
13893	460m of 200mm diameter	Bluebird Cr: Oriole Dr - Canary Dr	Long Term (6 - 10 Yrs)	460,000	-	460,000	-	0
13891	330m of 200mm diameter	Swallow Dr: Partridge Cr - Pheasant Dr	Short Term (1 - 5 Yrs)	330,000	-	330,000	-	0
13890	420m of 200mm diameter	Robin Cr: 150 St - Pheasant Dr	Short Term (1 - 5 Yrs)	420,000	-	420,000	-	0
13888	60m of 200mm; 100m of 100mm diameter	Peacock Pl: Jay Cr - 151 St	Short Term (1 - 5 Yrs)	146,000	-	146,000	-	0
13884	830m of 300mm diameter	096 Ave: 156 - 160 St	Short Term (1 - 5 Yrs)	1,079,000	-	1,079,000	-	0
13879	940m of 300mm diameter	076 Ave: 128 - 132A St	Long Term (6 - 10 Yrs)	1,222,000	-	1,222,000	-	0
13873	2010m of 300mm diameter	020 Ave: 146 - 156 St	Short Term (1 - 5 Yrs)	2,613,000	-	2,613,000	-	0
13865	140m of 200mm diameter	142 St: 115 - 115A Ave	Short Term (1 - 5 Yrs)	140,000	-	140,000	-	0
13859	820m of 300mm diameter	136 St: 16 - 20 Ave	Short Term (1 - 5 Yrs)	1,066,000	-	1,066,000	-	0
13854	970m of 300mm diameter	132 St: 100 - 104 Ave	Long Term (6 - 10 Yrs)	1,261,000	-	1,261,000	-	0
13851	90m of 200mm diameter	126 St: 96 - 96A Ave	Short Term (1 - 5 Yrs)	90,000	-	90,000	-	0
13849	100m of 200mm diameter	107 Ave: 130 - 130A St	Short Term (1 - 5 Yrs)	100,000	-	100,000	-	0
13848	310m of 200mm diameter	106A Ave: 132 - 133 St	Long Term (6 - 10 Yrs)	310,000	-	310,000	-	0
13847	350m of 200mm diameter	106 Ave: 144 - 146 St	Long Term (6 - 10 Yrs)	350,000	-	350,000	-	0
13843	820m of 300mm diameter	108 Ave: 144 - 148 St	Short Term (1 - 5 Yrs)	1,066,000	-	1,066,000	-	0
13808	490m of 200mm diameter	144A St: Lombard Pl - 56 Ave; Lombard Pl: 144A St -Lot 14567	Short Term (1 - 5 Yrs)	490,000	-	490,000	-	0
13795	220m of 200mm diameter	137A St: 113 - 114 Ave	Short Term (1 - 5 Yrs)	220,000	-	220,000	-	0
13794	230m of 200mm diameter	137 St: 113 - 114 Ave	Short Term (1 - 5 Yrs)	230,000	-	230,000	-	0
12678	560m of 300mm diameter	126 St: 60 - 62B Ave	Short Term (1 - 5 Yrs)	728,000	-	728,000	-	0
12663	160m of 300mm diameter	Dyke Rd: Tannery Rd - lot 10839	Short Term (1 - 5 Yrs)	208,000	-	208,000	-	0
12659	20m of 200mm diameter	115 Ave / 141A St	Short Term (1 - 5 Yrs)	20,000	-	20,000	-	0
12656	20m of 200mm; 100m of 100mm	Eagle Pl: Lot 15123 - Jay Cr	Short Term (1 - 5 Yrs)	106,000	-	106,000	-	0
12635	170m of 300mm; 70m of 200mm; 100m of 100mm diameter	112A Ave: 137 - 136 St; 136 St: 112 - 113 Ave	Short Term (1 - 5 Yrs)	377,000	-	377,000	-	0
12634	110m of 200mm diameter	Dove Pl: Raven Pl - lot 15151	Long Term (6 - 10 Yrs)	110,000	-	110,000	-	0
12633	400m of 200mm diameter	098A - 99 Ave: 118 - 119B St	Long Term (6 - 10 Yrs)	400,000	-	400,000	-	0
12624	400m of 250mm diameter and 140m of 200mm diameter	026 Ave: 166 - 168 St; 167A St: 12721 25A Ave - 26 Ave	Short Term (1 - 5 Yrs)	618,000	216,000	402,000	-	0
12617	980m of 300mm diameter	108 Ave: 138 - 142 St	Short Term (1 - 5 Yrs)	1,274,000	701,000	573,000	-	0
12598	550m of 200mm diameter	Raven Pl: Bluebird Cres - Canary Dr	Long Term (6 - 10 Yrs)	550,000	-	550,000	-	0
12588	220m of 200mm diameter	Loughren Dr: Perth Dr - Hwy 1	Long Term (6 - 10 Yrs)	220,000	-	220,000	-	0
11841	360m of 300 mm diameter	Fraser Hwy: Lot 19268 - 196 St	Long Term (6 - 10 Yrs)	619,000	291,200	327,800	-	0
11581	800m of 300mm diameter	096 Ave: 120 - 124 St	Short Term (1 - 5 Yrs)	1,040,000	-	1,040,000	-	0
9934	1000m of 300mm diameter	096 Ave: 131 - 136 St	Short Term (1 - 5 Yrs)	1,300,000	-	1,300,000	-	0
5327	240m of 200mm diameter	Oriole Dr: 108 Ave - Canary Dr	Long Term (6 - 10 Yrs)	240,000	-	240,000	-	0



**FIGURE 3.3 - Water Supply Works & Feeder Mains (Program 1610)**



The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office.  
Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yrCCP\_Plan\10yrServicingPlan2019-28\Figure3-3-Water.mxd

# WATER

## Program 1610 - W- Supply Works & Feeder Main

<b>Program Total</b>	<b>73,766,773</b>	<b>44,396,500</b>	<b>29,370,273</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18045	800m of 450mm water main (90m zone main)	184 St: 72 Ave - 76 Ave	Long Term (6 - 10 Yrs)	1,120,000	1,120,000	-	-	0
18044	800m of 450mm water main (115m zone main)	72 Ave: 184 St - 188 St	Long Term (6 - 10 Yrs)	1,120,000	1,120,000	-	-	0
18043	800m of 600mm water main (90m zone main)	72 Ave: 184 St - 188 St	Long Term (6 - 10 Yrs)	1,360,000	1,360,000	-	-	0
18042	600m of 750mm water main (90m zone main)	72 Ave: Clayton Res - 188 St	Long Term (6 - 10 Yrs)	1,380,000	1,380,000	-	-	0
17866	450m of 450mm diameter	004 Ave: 172 - 174 St	Short Term (1 - 5 Yrs)	630,000	126,000	504,000	-	0
17170	Jericho Reservoir - CoS Contribution Ph2 2025	Township of Langley (20400 - 73A Avenue)	Long Term (6 - 10 Yrs)	2,081,591	-	2,081,591	-	0
17169	Jericho Reservoir - CoS Contribution Ph2 2024	Township of Langley (20400 - 73A Avenue)	Short Term (1 - 5 Yrs)	2,081,591	-	2,081,591	-	0
17162	PRV Upgrade	032 Ave / 144 St	Long Term (6 - 10 Yrs)	250,000	140,000	110,000	-	0
17161	400m of 450mm diameter	148 St: 84 - 86 Ave	Long Term (6 - 10 Yrs)	560,000	560,000	-	-	0
17159	500m of 600mm diameter	24 Ave: 137A - 140 St (Low Pressure Main)	Long Term (6 - 10 Yrs)	850,000	467,500	382,500	-	0
17158	800m of 450mm diameter	24 Ave: Rotary Way - 142 St (High Pressure Main)	Long Term (6 - 10 Yrs)	1,120,000	616,000	504,000	-	0
17156	1200m of 600mm diameter	116 St: Millar - River Rd; River Rd: 116 St - Scott Rd	Short Term (1 - 5 Yrs)	2,040,000	2,040,000	-	-	0
17056	Jericho Reservoir - CoS Contribution Ph1 2022	Township of Langley (20400 - 73A Avenue)	Short Term (1 - 5 Yrs)	1,224,000	1,224,000	-	-	0
17055	Jericho Reservoir - CoS Contribution Ph1 2021	Township of Langley (20400 - 73A Avenue)	Short Term (1 - 5 Yrs)	1,360,000	1,360,000	-	-	0
17054	Jericho Reservoir - CoS Contribution Ph1 2020	Township of Langley (20400 - 73A Avenue)	Short Term (1 - 5 Yrs)	1,360,000	1,360,000	-	-	0
17019	Jericho Reservoir - CoS Contribution Ph2 2023	Township of Langley (20400 - 73A Avenue)	Short Term (1 - 5 Yrs)	2,081,591	-	2,081,591	-	0
16601	Newton Pump Station Electrical & Mechanical Upgrades	128 St: Lot 6275	Short Term (1 - 5 Yrs)	2,000,000	-	2,000,000	-	0
15741	West Clayton PRV Stations	072 Ave / 184 St	Short Term (1 - 5 Yrs)	400,000	280,000	120,000	-	0
15395	Fleetwood Reservoir Statutory Right-of-Way	090 Ave: lot 15385	Short Term (1 - 5 Yrs)	3,000,000	1,500,000	1,500,000	-	0
15232	850m of 750mm diameter	144 St: 104 - 108 Ave	Long Term (6 - 10 Yrs)	1,955,000	684,000	1,271,000	-	0
15225	Whalley Pump Station Electrical & Mechanical Upgrades	105A Ave: lot 14620	Short Term (1 - 5 Yrs)	2,000,000	-	2,000,000	-	0
15224	400m of 450mm diameter	056 Ave: 178 - 180 St	Long Term (6 - 10 Yrs)	560,000	560,000	-	-	0
15222	200m of 450mm diameter	150 St: 90 Ave - Fraser Hwy	Long Term (6 - 10 Yrs)	280,000	280,000	-	-	0
15219	2000m of 750mm diameter	098 Ave: 128 - 137A St	Long Term (6 - 10 Yrs)	4,600,000	4,600,000	-	-	0
15218	450m of 750mm diameter	100 Ave: 129A - 131A St	Long Term (6 - 10 Yrs)	1,035,000	673,000	362,000	-	0
14042	400m of 450mm diameter	090 Ave: 148 - 150 St	Long Term (6 - 10 Yrs)	560,000	560,000	-	-	0
14041	750m of 450mm diameter	148 St: 86 - 90 Ave	Long Term (6 - 10 Yrs)	1,050,000	1,050,000	-	-	0
14024	180m of 600mm diameter	University Dr: 102A - 103A Ave	Long Term (6 - 10 Yrs)	306,000	-	306,000	-	0
13996	800m of 600mm diameter	148 St: 96 - 100 Ave	Long Term (6 - 10 Yrs)	1,360,000	612,000	748,000	-	0
13995	1500m of 900mm diameter	148 St: 100 - 105A Ave	Long Term (6 - 10 Yrs)	4,500,000	2,475,000	2,025,000	-	0
13993	510m of 750mm diameter	128 St: 60 - 62A Ave	Long Term (6 - 10 Yrs)	1,173,000	411,000	762,000	-	0
13901	750m of 900mm diameter	104A Ave: 144 St - 146 St	Short Term (1 - 5 Yrs)	2,250,000	675,000	1,575,000	-	0
13900	740m of 600mm diameter	100 Ave: 131A St - 134A St / Old Yale Rd	Long Term (6 - 10 Yrs)	1,258,000	-	1,258,000	-	0
13899	Clayton P.S. 6th pump	72 Ave / 190 St	Long Term (6 - 10 Yrs)	750,000	750,000	-	-	0
13801	1460m of 600mm diameter	108 Ave: Whalley Blvd - 144 St	Long Term (6 - 10 Yrs)	2,482,000	1,117,000	1,365,000	-	0
12696	1600m of 600mm diameter	128 St: 72 - 80 Ave	Long Term (6 - 10 Yrs)	2,720,000	1,224,000	1,496,000	-	0
12694	Clayton P.S. 5th pump	72 Ave / 190 St	Long Term (6 - 10 Yrs)	750,000	750,000	-	-	0
11558	410m of 600mm diameter	022 Ave: 146 - 148 St	Long Term (6 - 10 Yrs)	697,000	697,000	-	-	0
11557	410m of 600mm diameter	148 St: 20 - 22 Ave	Long Term (6 - 10 Yrs)	697,000	697,000	-	-	0
11556	800m of 450mm diameter	020 Ave: 148 - 152 St	Long Term (6 - 10 Yrs)	1,120,000	1,120,000	-	-	0
11535	Rehab Existing PRVs	Various Locations	Long Term (6 - 10 Yrs)	4,500,000	1,500,000	3,000,000	-	0
11518	450m of 1200mm diameter	105A Ave: 146 - 148 St	Long Term (6 - 10 Yrs)	1,935,000	1,451,000	484,000	-	0
11514	Whalley P.S. 6th Pump	105A Ave: lot 14620	Short Term (1 - 5 Yrs)	750,000	750,000	-	-	0
11512	800m of 750mm diameter	128 St: 68 - 72 Ave	Long Term (6 - 10 Yrs)	1,840,000	644,000	1,196,000	-	0
10975	420m of 600mm diameter	190 St: 68 - 70 Ave	Short Term (1 - 5 Yrs)	714,000	714,000	-	-	0
10463	600m of 600mm diameter	099 St / 128 St to 100 Ave / 129A St	Long Term (6 - 10 Yrs)	1,020,000	1,020,000	-	-	0
10462	900m of 600mm diameter	099 Ave: 123A St - 128 Ave	Long Term (6 - 10 Yrs)	1,530,000	1,530,000	-	-	0
10461	600m of 600mm diameter	123A St: 96 Ave - 98 Ave	Long Term (6 - 10 Yrs)	1,020,000	1,020,000	-	-	0
10342	835m of 450mm diameter	180 St: 56 - 60 Ave	Long Term (6 - 10 Yrs)	1,169,000	1,169,000	-	-	0
4942	360m of 350mm diameter	064 Ave: 178 - 180 St*	Short Term (1 - 5 Yrs)	482,000	325,000	157,000	-	0
629	500m of 400mm diameter	SFPR/Bridge Road: Old Yale Rd - 112 Ave	Short Term (1 - 5 Yrs)	685,000	685,000	-	-	0

## 4. SANITARY SEWER

The City strives to build and maintain a robust sanitary sewer system that is cost-effective, scalable, lasting and environmentally responsible. To have a robust sanitary sewer system, the City shall:

- Replace systems that have a high operation and maintenance cost;
- Build a scalable system that accommodates future growth and additional sewer catchments, by upsizing sewers whenever opportunities arise;
- Replace sewers that are at the end of their service life; and
- Build an environmentally responsible system to minimize or eliminate sanitary sewer overflows.

### 4.1 Sewer Works Inventory

Surrey has approximately 1,600 km of sanitary sewers, as summarized in **Table 4.1**. The majority of this system is relatively young and in good condition. However, there are older sections of the system, constructed of asbestos cement, vitrified clay and other materials that are showing signs of deterioration due to wears and tears, cracks and joint dislocations, and are subject to excessive groundwater and rainwater infiltration. Surrey's existing sanitary sewer system is shown in **Figure 4.1**.

**Table 4.1 – Current Sanitary Sewer System Inventory**

Sanitary Sewers	1,588 km
Vacuum Sanitary System	12 km
Sanitary Pump Stations	43

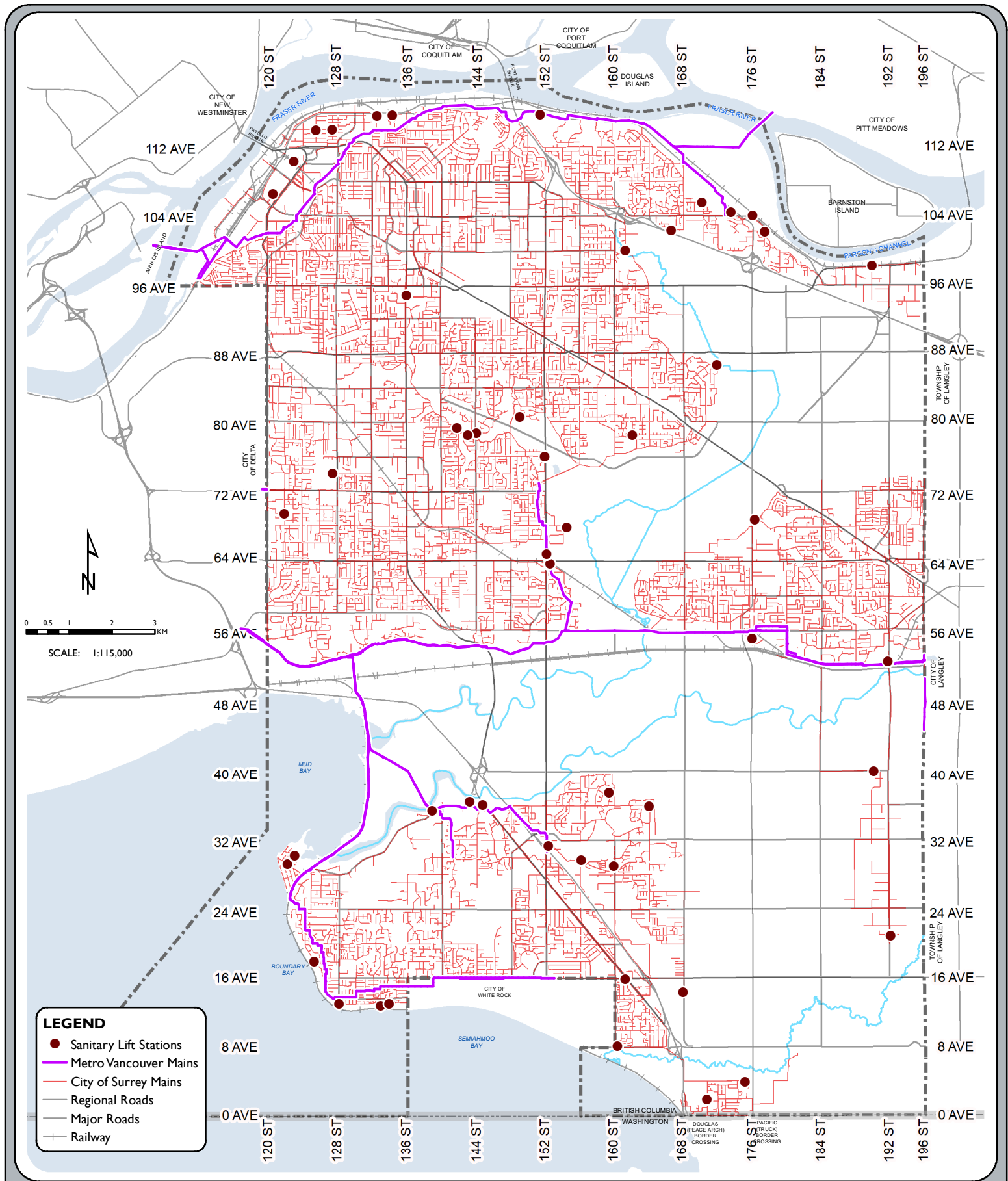
### 4.2 Rehabilitation or Replacement of the Gravity Sewer System

As part of the City's commitment to Strategy 3.18 – Manage Assets and Optimize Existing Sanitary Sewerage Operations under Metro Vancouver's Integrated Liquid Waste and Resource Management Plan, the City is developing an asset management plan targeting a 100-year replacement or rehabilitation cycle for the sanitary system.

However, it is too early to predict a strategy for the replacement of pipes beyond 50 years as changing technologies, development in asset management, and demand management practices may influence the replacement strategy in that period. **Table 4.2** and **Figure 4.2** provide some insight of the potential replacement demand over the next 50 years.

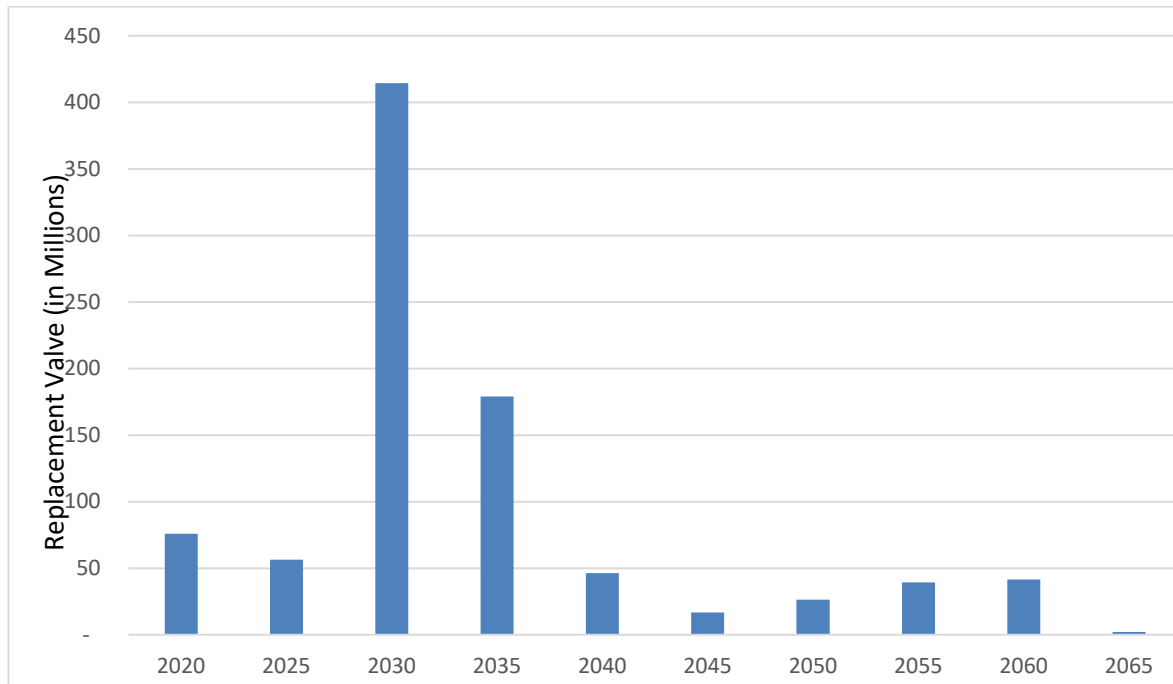
In the next 50 years, by age, about 25.5% of all sewer mains may have to be replaced at a cost of \$898 million. The remaining sewers will reach their end of service life in the subsequent 50 years. Such a large resource requirement necessitates careful planning and development of strategies to deal with the replacement demand, which the City is now actively preparing.

The rehabilitation work through the City's I&I reduction program will assist in dealing with part of this replacement demand as materials, such as vitrified clay pipe ("VCP") may be used for longer periods than expected, provided they are rehabilitated.



**FIGURE 4.1 - SEWER SEWER SYSTEM**



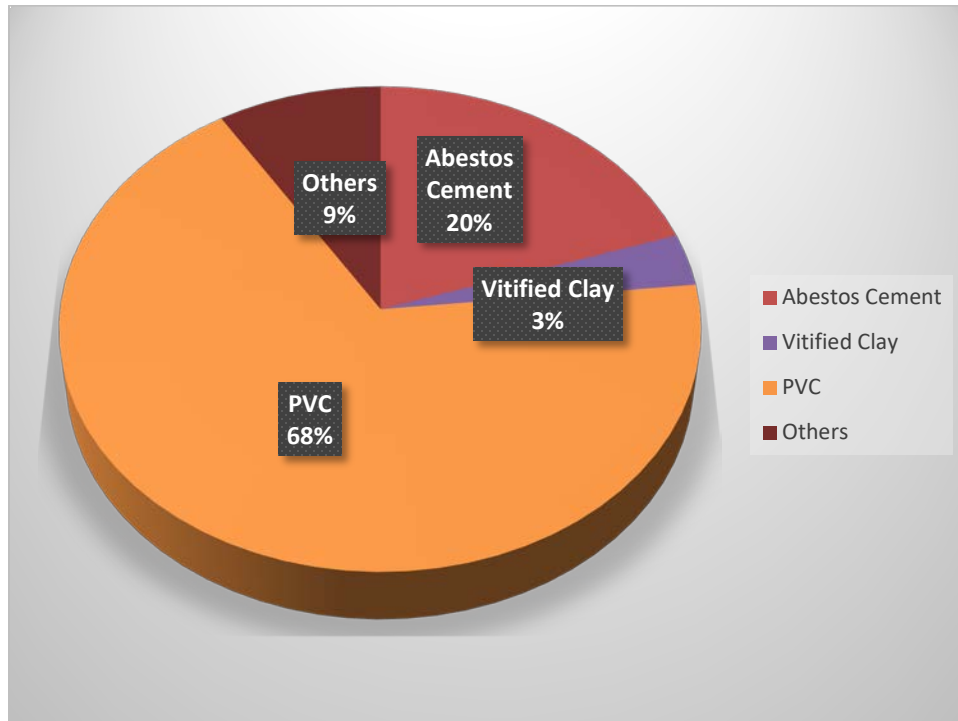
**Figure 4.2 – Sanitary Sewer Replacement Costs over the Next 50 Years**

Under this Servicing Plan, funding has been identified for sewer replacements and this will be used where it is needed most.

**Table 4.2 – Sanitary System Replacement Requirements in the Next 50 Years**

Material	Total Main Length	Replacement demand up to 2069 (50 years)	Cost of Replacement (\$)
Asbestos Cement, Vitrified Clay Pipe, and Cast Iron	374 km (23% of entire pipe length)	374 km	834 Million
Concrete Pipe, , Steel, and Ductile Iron	79 km (5% of entire pipe length)	34 km	64 Million

Through an established maintenance management program, the gravity sewer system is systematically video inspected to determine its condition. The rehabilitation needs for structural deficiencies are confirmed based on this inspection data. Based on the current projections and levels of expenditures, the estimated rehabilitation need over the next 10 years is in the range of \$15 million. The rehabilitation and continued serviceability of the sanitary sewer system, including the control of I&I, is a municipal commitment under the Metro Vancouver Integrated Liquid Waste and Resource Management Plan.

**Figure 4.3 – Sanitary Main Replacement over Next 50 Years (by material)**

Rehabilitation or replacement of the gravity sewer system components are included as projects within either Program 1632 - Minor Mains (< 450mm diameter) or Program 1644 – Major Facilities.

#### 4.3 Vacuum Sewer System Replacement

A vacuum sewer system still services a portion of the South Westminster area in North Surrey, as the area is low-lying, flat, and subject to considerable settlement. The City's vacuum sewer system is more expensive to operate than a conventional gravity system.

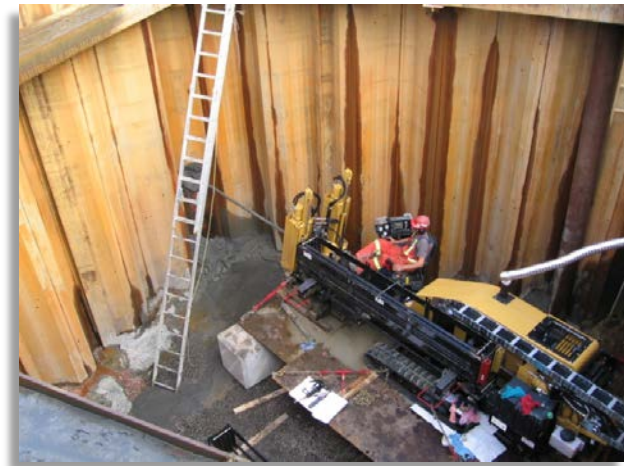
The servicing strategy for this area, as outlined in the South Westminster NCP, calls to replace the vacuum sewer in all new developments and redevelopments with a low-pressure system, because:

- a) The operation and maintenance costs associated with the vacuum sewer system are high; and
- b) The existing system does not have sufficient capacity to accommodate development and redevelopment, including new major industries.

The replacement program is to be funded by each development in accordance with their needs. Eventually, the vacuum sewer system in South Westminster will be replaced as development reaches build-out.

The adjacent Bridgeview area had its remaining vacuum sewers replaced in 2017. Bridgeview is now serviced by:

- a) A steep grade system for the residential area; and
- b) A low-pressure system for the industrial/commercial areas in general.



#### 4.4 Sewer Servicing Program

##### Program 1630 – General Items

This program covers the overhead costs associated with the general operating of the sewer section. Included are a portion of the cost of staff time, hardware and software equipment cost, and cost of internal services by other sections and division that are general in nature.

##### Program 1632 - Minor Mains (< 450mm diameter)

There are a number of sections of the existing sewer system that will not have sufficient capacity over the next 10 years to meet one or more of the following:

- Current flows that may have increased due to I&I; or
- Servicing demand from future OCP designated land uses.

Replacement of the existing system that is needed to provide capacity to meet current demand, or to meet the reduction in capacity due to structural failure of the existing sewer, are considered to be non-growth related costs. Upsizing these replacements, to allow for new growth to OCP designations, is considered to be growth related costs. Where a relief sewer is necessary for new growth, costs have been primarily assigned to growth, with a small contribution from non-growth to represent the depreciated value of the replaced asset.

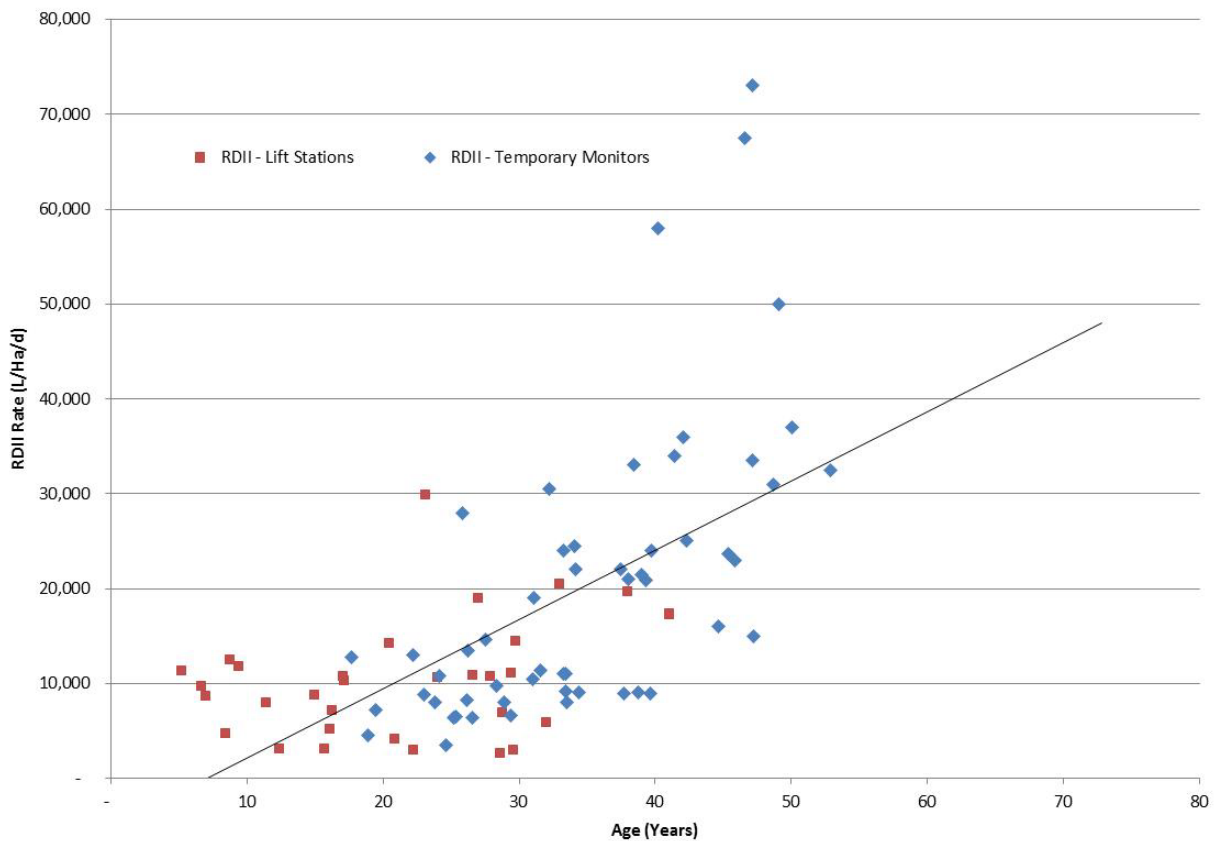
The Robson Creek Trunk Upgrade Phase 1 project, located along the east slope of Robson Creek in the northwest corner of the City, was completed in early 2014. This eliminated the only known City sanitary sewer overflow location other than Metro Vancouver sanitary sewer overflows in their system. Since then, Phase 2 Robson Creek Trunk Upgrade had been completed in 2016 and Phase 3 had been completed in 2017.

Program 1634 - Inflow and Infiltration (Operating)

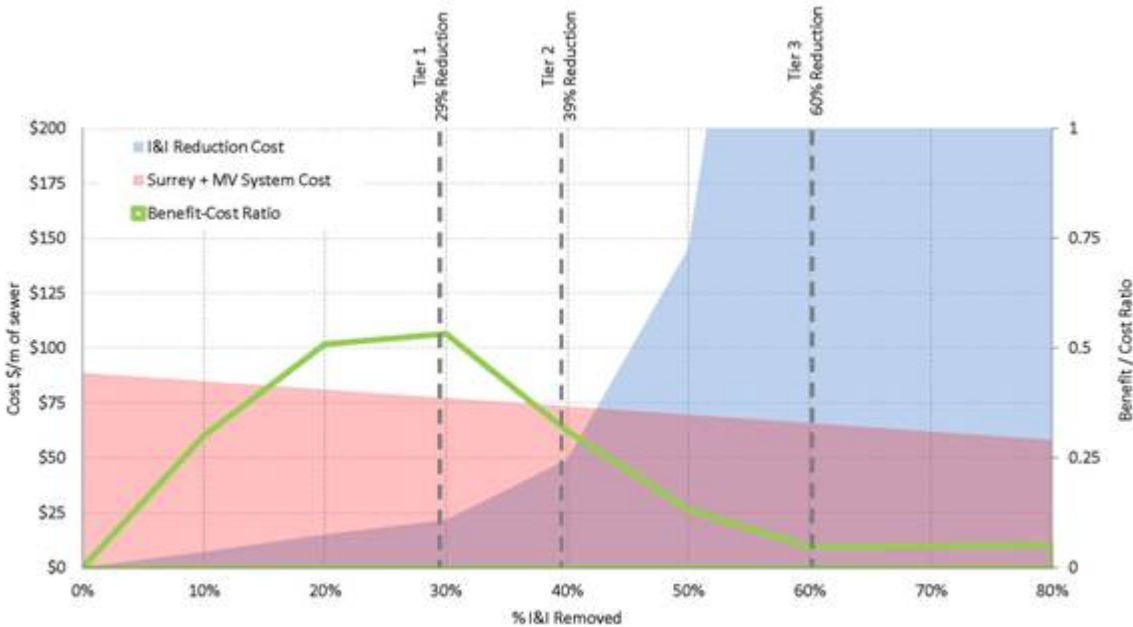
As part of the City’s commitments under Metro Vancouver’s Integrated Liquid Waste and Resource Management Plan, the City has developed an Inflow and Infiltration Management Plan (“IIMP”). In general, the plan establishes a long term, systematic, quantifiable and cost-effective approach to managing I&I in the sanitary sewer system. I&I is defined as rainwater and groundwater intrusion into the sanitary sewer system.

Generally, higher I&I rates are found in the older subdivision areas in the northern and southern parts of the City. This is expected as I&I rates increase as sewer pipes age and deteriorate. Eventually, these sewer pipes will be replaced when they reach the end of their service life. The range of I&I rates in Surrey are similar to other Metro Vancouver municipalities.

**Figure 4.4 – I&I Rates Per Pipe Age**



To ensure that the City’s investment in I&I mitigation is effective, a cost analysis was undertaken as part of the IIMP. Although the cost benefit ratio is never greater than 1, the optimal ratio is achieved at Tier 1 (sewer rehabilitation for mainline sewers only), and this value diminishes as one approaches Tier 2 and 3, where I&I reduction costs increase significantly. If additional social and environmental risk mitigation measures are taken into consideration, the benefit cost ratio may shift closer to Tier 2, meaning only completing sewer rehabilitation for mainline and laterals within public rights-of-way. Further details can be found in the IIMP.

**Figure 4.5 – I&I Reduction Cost-Benefit Curve**

Under the IIMP, the City will undertake the following activities:

- Continue the flow monitor program;
- Conduct systematic QA/QC for temporary and permanent flow monitoring sites and lift station data;
- Use the calibrated hydraulic model and EPA’s Sanitary Sewer Overflow Analysis and Planning (“SSOAP”) to determine the rain dependent inflow and infiltration factor;
- Continue with closed circuit video inspection (“CCTV”) and manhole inspection during wet weather and smoke testing during dry weather programs to identify rehabilitation works;
- Use the threshold limit table in the IIMP for evaluation of study areas;
- Focus on older areas within the City that have predominantly asbestos cement and vitrified clay sewer pipes;
- Plan works in conjunction with overall asset planning works where CCTV show rehabilitation is warranted; and
- Continue to develop and implement community outreach programs to encourage I&I mitigation on private sewers.

To satisfy these commitments, the City has established an ongoing evaluation and rehabilitation program. The estimated annual cost of this program is \$1,500,000.

Given that the benefits of traditional rehabilitation methods are difficult to evaluate (due to complexity and multiple factors influencing the hydrological system), the City has in recent years turned its focus to replacing sewers that are at the end of their service life. This approach achieves two major objectives: to reduce the I&I, and to renew sewers that are at the end of their service life. With the City’s policy requiring developments to replace service connections that are more than 30 years old, it is anticipated that most of the sewers that contribute I&I will be replaced in the long-term horizon.

### Program 1636 – Minor Projects

An allowance has been made for any minor sewer works (normally less than \$50,000 each) that come up on an as need basis and in situations where remediation works will be necessary prior to the next 10-Year Servicing Plan update.

### Program 1638 – Planning

As development takes place, additional sewage flows are generated which may cause some sections or components of the sewer system to reach capacity and, consequently, increase the need for relief works. These relief works can range from sewer twinning or replacement with a larger sewer, to upgrading pump stations to provide more capacity.

The impact of growth on the sewer system is tracked using computer models. These models are used to predict sections of the sewer system that need additional capacity:

- a) Within the next 10 years; and
- b) For ultimate development.

The works necessary to provide additional capacity are included in the following programs:

- Program 1644 - Major Facilities
- Program 1632 - Minor Mains ( $\leq$  450mm diameter)
- Program 1650 - DCW Upsizing

These programs do not include relief works associated to the Greater Vancouver Sewerage & Drainage District (“GVS&DD”) system, which are the responsibility of the GVS&DD, and are funded on a regional basis.

The provision of infrastructure for new growth is handled in two ways:

- i) Where infrastructure services a large area, and is of high cost which makes it unreasonable to expect one fronting or benefiting property to finance the works, the works are included in the Major Facilities program; however, sewers with a peak flow of less than 40 litres per second are not considered as growth related costs; and
- ii) Where servicing can be reasonably provided through upsizing or extending the services necessary for a fronting or benefiting property, then the works are included in the DCW Program.

In addition to flow monitoring and computer modeling, planning studies are required to develop master sewer plans, servicing plans, and specific project details. The costs of these engineering services are included in this program. Further, this program covers a portion of staff time related to Planning initiatives.

### Program 1643 – West Clayton

Sewer works to service the West Clayton NCP area are included in this program. This area-specific DCC program includes the Cloverdale Trunk Sewer extension through the NCP area, and an upsizing allowance for tributary sewers within the NCP area, along with offsite upgrades to the existing Cloverdale Trunk Sewer and the North Cloverdale Pump Station to support the flow increase from the West Clayton NCP area.

### Program 1644 - Major Facilities

Major facilities include sewage lift stations, pressure sewers, replacement of vacuum sewer system, and large-diameter trunk mains ( $\geq 450\text{mm}$  diameter). In some cases, major facilities do benefit existing customers, and therefore a portion of the projects costs is attributed as non-growth. These costs are attributed to:

- The replacement and/or upgrade of electrical components;
- Relief of Bear Creek Trunk sewer through trunk upgrades and relief pump station and forcemain;
- Quibble Creek pump station twin forcemain;
- Upgrade of the City Central trunk sewer;
- The addition of new pump stations; and
- The addition of new interceptors.

Typically, due to the size and scope of major facility projects, whether the project is located in existing serviced areas or the facilities service both new and existing areas, the City will initiate construction.



### Program 1650 - DCW Upsizing

Trunk mains to service new areas can be provided, with the City funding the upsize component of base size necessary for fronting or benefiting properties. For these trunk sewers, only the upsizing cost - the cost from the base size required for a fronting property to the size required for the overall catchment - is included. As the timing of these works is strictly dependent on the fronting property owners or development, no estimate of timing is provided.

In addition to the upsizing of identified trunks, an allowance for upsizing yet-to-be identified works is included in the overall provision for upsizing.

### Program 1652 – DCW Connections

This program provides funding for situations where it is beneficial to pre-install sanitary service connections within the road allowance for any unserviced lots when a sewer is extended by a land development project.

Program 1658 - Land Acquisition

Land acquisition and requirements, such as rights-of-way and working easements, are occasionally required for capital projects. This program deals with various such requirements for the projects listed under various programs.

**4.5 Sanitary Sewer Cost Summary**

No.	Program	Program Type	Growth (\$)	Non-Growth (\$)	External (\$)	Total (\$)
1630	General	Operating	0	2,950,000	0	2,950,000
1632	Minor Mains <450mm dia	Capital	11,189,010	56,853,770	0	68,042,780
1634	Inflow and Infiltration	Operating	1,000,000	5,135,000	0	6,135,000
1636	Minor Projects	Operating	0	4,032,400	0	4,032,400
1638	Planning	Non-Capital	4,825,000	4,825,000	0	9,650,000
1643	West Clayton	Capital	13,309,864	0	0	13,309,864
1644	Major Facilities	Capital	77,456,498	16,357,720	240,000	94,054,218
1650	DCW Upsizing	Capital	8,610,800	0	0	8,610,800
1652	DCW Connections	Capital	0	400,000	0	400,000
1658	Land Acquisition	Capital	250,000	450,000	0	700,000
<b>Total</b>			<b>116,641,172</b>	<b>91,003,890</b>	<b>240,000</b>	<b>207,885,062</b>

**4.6 Sanitary Sewer Projects by Program**

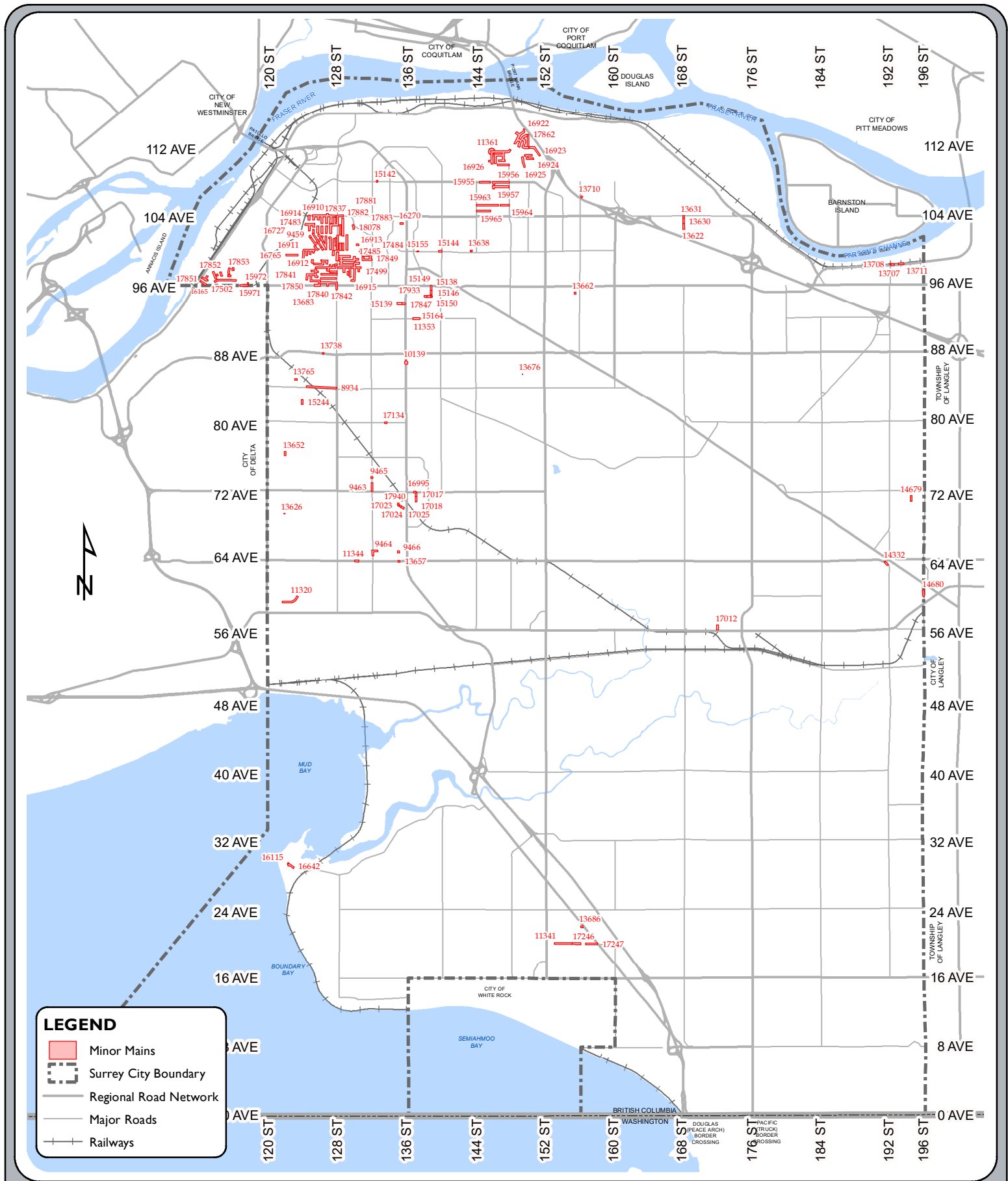
This section contains tables and figures that identify the projects under the Sanitary Sewer programs.

The tables provide the following information:

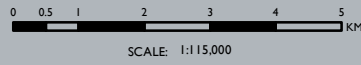
- a) Project ID - the unique identifier of the project
- b) Project name - the specific name or generic name that depicts the type of work
- c) Project location - the geographic extent of the works
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change)
- e) Costs - the high-level estimates in 2019 dollars (subject to change at the actual time of construction). The costs are comprised of growth, non-growth and external components.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations throughout Surrey may not be shown on the maps.





**FIGURE 4.2 - Sewer  
Minor Mains < 450mm (Program 1632)**



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

Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP10yrCCP\_Plan10yrServicingPlan2019-28\Figure4-2-Sewer.mxd

# SEWER

## Program 1632 - S - Minor Mains <450mm dia

<b>Program Total</b>	<b>68,042,780</b>	<b>11,189,010</b>	<b>56,853,770</b>	<b>-</b>	<b>-</b>
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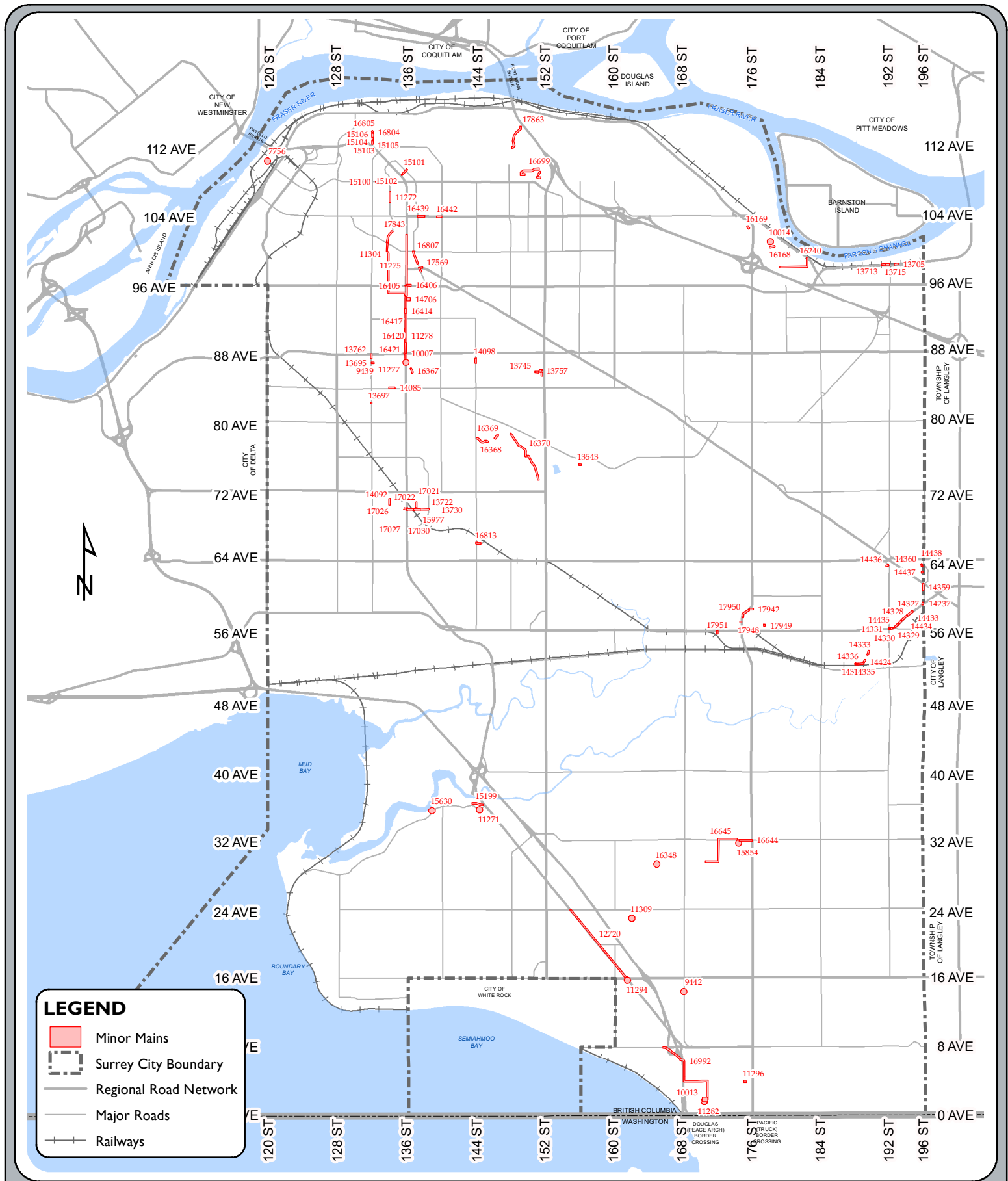
Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18078	100m of 200mm diam (Robson)	Lane East of 129A St: #10247 to 103 Ave	Short Term (1 - 5 Yrs)	215,000	-	215,000	-	0
17940	Newton TC NCP: 50m of 375mm Diam	135 St:7087 71 Ave to 70B Ave	NCP Driven	83,100	83,100	-	-	0
17933	City Centre NCP: 73m of 375mm diameter	9469 139 St Side Yard	Short Term (1 - 5 Yrs)	115,000	115,000	-	-	0
17883	550m of 200mm diam (Robson Replacement)	100 Ave to 102 Ave:128 St to 128A St	Short Term (1 - 5 Yrs)	1,393,900	-	1,393,900	-	0
17882	735m of 200mm diameter sewers (Robson)	101A Ave to 103A Ave:128 St to 128A St	Short Term (1 - 5 Yrs)	1,412,800	-	1,412,800	-	0
17881	520m of 200mm diam (Robson Replacement)	102 Ave to 103 Ave:125A St to 127 St	Short Term (1 - 5 Yrs)	1,262,700	-	1,262,700	-	0
17862	275m of 200mm diameter sewer (Birdland FRRS)	150 St: Robin Cr to Lansdowne Dr	Long Term (6 - 10 Yrs)	528,800	-	528,800	-	0
17853	270m of 200 to 250mm diam (Royal Heights)	Royal Heights (97 Ave to 98 Ave:115A St to 116 St)	Long Term (6 - 10 Yrs)	542,200	-	542,200	-	0
17852	280m of 200 to 250mm diam (Royal Heights)	Royal Heights (Crown Cr:97 Ave to 97A Ave, 9718 Princess Dr,	Long Term (6 - 10 Yrs)	544,900	-	544,900	-	0
17851	415m of 200-250mm diam. (Royal Heights)	Royal Heights (Queens PL, Regal Dr)	Long Term (6 - 10 Yrs)	809,200	-	809,200	-	0
17850	1300m of 200-300mm diameter (Robson)	96 Ave to 98 Ave:124A St to 126 St	Short Term (1 - 5 Yrs)	2,518,200	-	2,518,200	-	0
17849	692m of 200mm to 250mm Diam sewers (Robson)	99 Ave to 100A Ave:130 St to 132 St	Short Term (1 - 5 Yrs)	1,406,100	-	1,406,100	-	0
17847	City Centre NCP: 91m of 375mm diameter	9469 139 St Side Yard	Short Term (1 - 5 Yrs)	150,000	150,000	-	-	0
17842	592m of 200mm to 250mm diam (Robson Replacement)	N of 96 Ave: 126 St to 128 St	Long Term (6 - 10 Yrs)	1,100,000	-	1,100,000	-	0
17841	928m of 200mm diam (Robson Replacement)	928 Ave to 97A Ave, 126 St to 128 st	Long Term (6 - 10 Yrs)	1,935,500	-	1,935,500	-	0
17840	889m of 200mm to 300mm diam (Robson Replacement)	98 Ave: 125A st to 128 St	Long Term (6 - 10 Yrs)	1,829,300	-	1,829,300	-	0
17837	825m of 200 to 250mm diameter (Robson)	102 Ave to 104 Ave, 127A st to 128A St	Short Term (1 - 5 Yrs)	1,966,600	-	1,966,600	-	0
17502	490m of 250mm diam (Royal Heights)	Royal Heights (96A Ave:Townline Div to 11630)	Long Term (6 - 10 Yrs)	956,000	-	956,000	-	0
17499	898m of 200mm diam (Robson Replacement)	130 St: 96A Ave to 98A Ave	Long Term (6 - 10 Yrs)	1,799,700	-	1,799,700	-	0
17485	1298m of 200mm to 250mm diam (Robson Replacement)	99 Ave and 128 St	Long Term (6 - 10 Yrs)	3,058,400	-	3,058,400	-	0
17484	1095m of 200 to 250mm Sewers (Robson Replacement)	100 Ave and 127A St	Short Term (1 - 5 Yrs)	2,612,000	-	2,612,000	-	0
17483	720m of 250mm diameter (Robson Replacement)	Beaver Dr, Mary Dr, Helen Dr, Park Dr	Short Term (1 - 5 Yrs)	1,593,100	-	1,593,100	-	0
17247	280m of 450mm diameter	20 Ave: 15650 to King George Blvd	Short Term (1 - 5 Yrs)	667,200	667,200	-	-	0
17246	210m of 375mm diameter	20 Ave: 155 St to 156 St	Short Term (1 - 5 Yrs)	617,000	617,000	-	-	0
17134	Sag Repair on 200mm Sewer	80 Ave and 133A St	Short Term (1 - 5 Yrs)	10,000	-	10,000	-	0
17025	Newton TC NCP: 97m of 375mm Diam (Upsize Only)	70A Ave: 13541 to 13560	NCP Driven	16,600	16,600	-	-	0
17024	Newton TC NCP: 36m of 375mm Diam	70B Ave: 13521 to 13541 70A Ave	NCP Driven	6,200	6,200	-	-	0
17023	Newton TC NCP: 33m of 375mm Diam (Upsize Only)	70B Ave:135 St to 13521 70A Ave	NCP Driven	5,700	5,700	-	-	0
17018	Newton TC NCP: 152m of 375mm Diam	137 St:71A Ave to 71 Ave	NCP Driven	258,900	258,900	-	-	0
17017	Newton TC NCP: 91m of 300mm Diam	137 St:72 Ave to 71A Ave	NCP Driven	157,600	157,600	-	-	0
17012	Cloverdale TC NCP: 92m of 375mm Diam	172 St: At 17277 56 Ave	NCP Driven	195,000	195,000	-	-	0
16995	Newton TC NCP: 53m of 250mm diam	72 Ave: 13671 to 137 St	NCP Driven	98,800	98,800	-	-	0
16926	1585m of 200mm to 250mm diam (Birdland Replacement)	110 Ave to 111A Ave: 146 St to 148 St.	Long Term (6 - 10 Yrs)	3,878,900	-	3,878,900	-	0
16925	250m of 200mm diameter sewers (Birdland Replacement)	Partridge Cr: 10960 to Blackbird Cr	Long Term (6 - 10 Yrs)	565,300	-	565,300	-	0
16924	410m of 200mm diameter sewers (Birdland Replacement)	Peacock Pl, Jay Cr, and Swallow Dr in Birdland	Short Term (1 - 5 Yrs)	874,200	-	874,200	-	0
16923	350m of 200mm diameter sewer (Birdland Replacement)	Robin Cres: 15138 to 150 St	Short Term (1 - 5 Yrs)	706,300	-	706,300	-	0
16922	1310m of 200mm to 250mm diam sewer (Birdland Replacement)	Birdland North Area	Long Term (6 - 10 Yrs)	3,245,800	-	3,245,800	-	0
16915	716m of 200mm to 250mm diameter sewers (Robson)	Robson South Area	Long Term (6 - 10 Yrs)	1,490,700	-	1,490,700	-	0
16914	510m of 200mm to 250mm diam (Robson Replacement)	102 Ave to 103 Ave:124 St to 125 St	Short Term (1 - 5 Yrs)	1,110,500	-	1,110,500	-	0
16913	560m of 200mm diam (Robson Replacement)	100 Ave to 102 Ave:128 St to 128A St	Short Term (1 - 5 Yrs)	1,161,200	-	1,161,200	-	0
16912	582m of 200mm to 250mm diam (Robson Replacement -Ph 5)	Grove Cr:12502 99 Ave to woodland Pl	Long Term (6 - 10 Yrs)	1,226,300	-	1,226,300	-	0
16911	765m of 200mm to 250mm diam (Robson Replacement)	100 Ave & 124 St to 100 Ave & 125 St	Short Term (1 - 5 Yrs)	1,745,000	-	1,745,000	-	0
16910	1460m of 200mm to 300mm diam (Robson Replacement Ph x)	103 Ave to 104 Ave, 124A St to 127B St	Short Term (1 - 5 Yrs)	3,276,700	-	3,276,700	-	0
16765	245m of 200mm diameter (Robson Ph1)	99A Ave: 122 - 123A St	Long Term (6 - 10 Yrs)	800,000	-	800,000	-	0
16727	520m of 250mm diameter (Robson Replacement)	127 St, Helen Dr, Mary Dr	Short Term (1 - 5 Yrs)	1,181,000	-	1,181,000	-	0
16642	DMAF: 190m of 200mm diameter main	Mckenzie Ave: Sunshine-Sullivan; Sullivan St: Kidd to Gordon	Short Term (1 - 5 Yrs)	399,300	-	399,300	-	0
16270	75m of 525mm diameter upgrade	103 Ave: King George Blvd to City Park Way	Short Term (1 - 5 Yrs)	172,800	172,800	-	-	0
16115	DMAF: 10m of 200mm diameter main	Sullivan St: Kidd Rd to Sullivan pump station	Short Term (1 - 5 Yrs)	300,000	-	300,000	-	0
15972	61 m of 200 mm diameter (Royal Heights FRRS)	117B St: Flankage of 11779 96 Ave	Short Term (1 - 5 Yrs)	99,600	-	99,600	-	0
15971	180 m of 200 mm diameter (Royal Heights FRRS)	96 Ave: 11679 to 117B St	Short Term (1 - 5 Yrs)	350,000	-	350,000	-	0
15965	308 m of 250 mm diameter (Birdland FRRS)	104A Ave: 14424 to 14558	Long Term (6 - 10 Yrs)	718,000	-	718,000	-	0
15964	202 m of 200 mm diameter (Birdland FRRS)	105A Ave: 14689 to 148 St	Long Term (6 - 10 Yrs)	306,000	-	306,000	-	0
15963	498 m of 200 mm diameter (Birdland FRRS)	105A Ave: 144 St to 14660	Long Term (6 - 10 Yrs)	881,100	-	881,100	-	0

# SEWER

## Program 1632 - S - Minor Mains <450mm dia

<b>Program Total</b>	<b>68,042,780</b>	<b>11,189,010</b>	<b>56,853,770</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
15957	420m of 200 mm diameter (Birdland FRRS)	107A Ave: 14772 to 14630	Short Term (1 - 5 Yrs)	721,900	-	721,900	-	0
15956	420 m of 250 mm diameter (Birdland FRRS)	108 Ave: 146 St to 148 St	Short Term (1 - 5 Yrs)	923,300	-	923,300	-	0
15955	254 m of 250 mm diameter (FRRS)	108 Ave:14560 to 14440	Short Term (1 - 5 Yrs)	740,100	-	740,100	-	0
15244	120m of 375mm Sanitary Sewer Flow Diversion	124 St / 82 Ave	Short Term (1 - 5 Yrs)	200,000	200,000	-	-	0
15164	City Centre NCP: 71m of 250mm diameter	King George Blvd: lot 9457 (Queen Elizabeth SS)	NCP Driven	207,100	207,100	-	-	0
15155	City Centre NCP: 48m of 450mm diam sewer	100 Ave: 137A St to 13713 on the South side	Short Term (1 - 5 Yrs)	132,000	132,000	-	-	0
15150	City Centre NCP: 12m of 375mm diameter	094A Ave / 139 St	Short Term (1 - 5 Yrs)	22,700	22,700	-	-	0
15149	City Centre NCP: 61m of 300mm diameter	139St: 94A Ave to 9506 139 St	Short Term (1 - 5 Yrs)	132,600	132,600	-	-	0
15146	City Centre NCP: 85m of 300mm diameter	139 St: 9506 139 St to Tallon Pl	Short Term (1 - 5 Yrs)	198,700	198,700	-	-	0
15144	City Centre NCP: 51m of 300mm diameter	100 Ave: 140St to 13969 100 Ave	NCP Driven	123,200	123,200	-	-	0
15142	City Centre NCP: 9m of 375mm diameter	108 Ave / 132A St	NCP Driven	14,200	14,200	-	-	0
15139	City Centre NCP: 115m of 250mm diameter	King George Blvd: lot 9457 (Queen Elizabeth SS)	NCP Driven	230,100	230,100	-	-	0
15138	City Centre NCP: 101m of 375mm diameter	139 St: 96 Ave to Tallon Pl	Short Term (1 - 5 Yrs)	229,500	229,500	-	-	0
14680	Langley Bypass: 150m of 375mm diameter twinning	196 St: 6039 - 60 Ave	Long Term (6 - 10 Yrs)	407,200	407,200	-	-	0
14679	Langley Bypass: 220m of 300mm diameter twinning	194A St: SouthPL of 7185 to 71 Ave	Long Term (6 - 10 Yrs)	441,900	441,900	-	-	0
14332	Langley Bypass: 79m of 250mm diameter twinning (DCCFE)	19146 64 Ave - 6363 192 St	Long Term (6 - 10 Yrs)	63,380	63,380	-	-	0
13765	57m of 375mm diameter sewer upgrade	123 St: lot 8482 (ROW E1975-0018 )	Long Term (6 - 10 Yrs)	122,100	97,680	24,420	-	0
13738	26m of 375mm diameter	88 Ave: lot 12645	Long Term (6 - 10 Yrs)	68,200	61,380	6,820	-	0
13711	135m of 375mm diameter (Port Kells)	098A Ave:19287 to 19339	Long Term (6 - 10 Yrs)	353,900	283,120	70,780	-	0
13710	37m of 375mm diameter	Highway 1: 156 St to ROW E1987-0184	Long Term (6 - 10 Yrs)	58,200	46,560	11,640	-	0
13708	24m of 375mm diameter (Port Kells)	192 St / 98A Ave (intersection)	Long Term (6 - 10 Yrs)	63,000	50,400	12,600	-	0
13707	86m of 375mm diameter (Port Kells)	098A Ave: 192 St to 19287 98A Ave	Long Term (6 - 10 Yrs)	225,500	180,400	45,100	-	0
13686	60m of 300mm diameter	022 Ave: 156 St - King George Blvd (ROW W1974-0509)	Short Term (1 - 5 Yrs)	146,600	146,600	-	-	0
13683	138m of 200mm diameter (Robson)	127B St: lot 9946 - 100 Ave	Short Term (1 - 5 Yrs)	222,700	-	222,700	-	0
13676	13m of 300mm diameter	085A Ave / 149A St (intersection)	Short Term (1 - 5 Yrs)	23,400	23,400	-	-	0
13662	46m of 300mm diameter	155A st: 15547 95 Ave to 34A utility ROW (ROW1982-0021)	Long Term (6 - 10 Yrs)	137,000	137,000	-	-	0
13657	16m of 300mm diameter	064 Ave: lot 13498 - lot 13514	Long Term (6 - 10 Yrs)	39,900	39,900	-	-	0
13652	98m of 300mm diameter	122 St: 76 - 76A Ave	Long Term (6 - 10 Yrs)	175,900	140,720	35,180	-	0
13638	26m of 300mm diameter	100 Ave: lot 14345 - 143A St	Long Term (6 - 10 Yrs)	46,700	37,360	9,340	-	0
13631	DCCFE: 60m of 250mm diameter	168 St: 104 Ave to 10362 168 St	Long Term (6 - 10 Yrs)	22,800	22,800	-	-	0
13630	DCCFE: 126m of 250mm diameter	168 St: 103 Ave to 10362 168 St	Long Term (6 - 10 Yrs)	48,000	48,000	-	-	0
13626	21m of 300mm diameter	122 St: lot 6935 (south, in park)	Long Term (6 - 10 Yrs)	31,500	25,200	6,300	-	0
13622	DCCFE: 140m of 300mm diameter	168 St: 102 Ave - 103 Ave	Long Term (6 - 10 Yrs)	53,200	53,200	-	-	0
11361	20m of 200mm diameter	111A Ave / 146 St (flow diversion)	Long Term (6 - 10 Yrs)	33,500	33,500	-	-	0
11353	130m of 200mm diameter	092 Ave: 137A St to lot 13684 (flow diversion)	Short Term (1 - 5 Yrs)	335,300	268,240	67,060	-	0
11344	90m of 300mm diameter	064 Ave: 130 St - 13031 64 Ave	Long Term (6 - 10 Yrs)	247,500	123,750	123,750	-	0
11341	390m of 375mm diameter	020 Ave: #15305 to 155 St	Short Term (1 - 5 Yrs)	1,190,000	833,000	357,000	-	0
11320	415m of 375 diameter	Boundary Dr. South: Boundary Cres - 12181 (N)	Short Term (1 - 5 Yrs)	860,200	860,200	-	-	0
10139	Bear Creek Erosion Protection & Sewer Diversion	Bear Creek at 8700 blk and KG Hwy	Short Term (1 - 5 Yrs)	500,000	200,000	300,000	-	0
9466	51m of 250mm diameter	135 St: 064A Ave to 065A Ave	Long Term (6 - 10 Yrs)	88,500	70,800	17,700	-	0
9465	45m of 250mm diameter	132 St: 073A Ave to 7360	Long Term (6 - 10 Yrs)	124,400	99,520	24,880	-	0
9464	235m of 250mm diameter	132 St and 64A Ave to 13255 65A Ave	Short Term (1 - 5 Yrs)	454,500	363,600	90,900	-	0
9463	200m of 250mm diameter	132 St: 072 - 073 Ave	Long Term (6 - 10 Yrs)	529,500	317,700	211,800	-	0
9459	450m of 250mm diameter (Robson)	10148 Park Dr to 12619 Centre Drive	Short Term (1 - 5 Yrs)	1,020,200	-	1,020,200	-	0
8934	720m of 375mm diameter	084 Ave: 12450 - 128 St	Short Term (1 - 5 Yrs)	1,678,500	1,678,500	-	-	0



**FIGURE 4.3 - Sewer Major Facilities (Program 1644)**

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office.  
 Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
 Source: G:\MAPPING\GIS\Maps\Recuring\4\_CCP10yrCCP\_Plan10yrServicingPlan2019-28\Figure4-3-Sewer.mxd

# SEWER

## Program 1644 - S - Major Facilities

<b>Program Total</b>	<b>94,054,218</b>	<b>77,456,498</b>	<b>16,357,720</b>	<b>240,000</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17951	Cloverdale TC NCP: 69m of 450mm Diam	172 St:17277 56 Ave to 5580 172 St	NCP Driven	190,200	190,200	-	-	-
17950	Cloverdale TC NCP: 227m of 525mm Diam	Cloverdale Bypass:58A Ave to 57A Ave	NCP Driven	652,600	652,600	-	-	-
17949	Cloverdale TC NCP: 51m of 450mm Diam	Lane W of 177B St: 56A Ave to 5677 177B St	NCP Driven	106,100	106,100	-	-	-
17948	Cloverdale TC NCP: 44m of 525mm Diam	From 175 St to 17447 57 Ave, Row at 17447 57 Ave	NCP Driven	124,800	124,800	-	-	-
17942	Cloverdale TC NCP: 101m of 525mm Diam	58A Ave:5834 176 St to Cloverdale Bypass	NCP Driven	211,500	211,500	-	-	-
17863	620m of 600mm diam. Sewer(Birdland Trunk Sewer)	11187 Ellendale Dr to 11450 St Andrews Dr	Long Term (6 - 10 Yrs)	1,463,600	1,170,880	292,720	-	-
17843	Quibble Creek PS FM Twinning - 340m of 900mm forcemain (dry)	University Dr between Old Yale Rd and 102 Ave	Short Term (1 - 5 Yrs)	1,327,500	1,327,500	-	-	-
17569	City Centre NCP: 225m of 900mm	138 St and Fraser Hwy West and South to 97B Ave and 137B St	NCP Driven	879,750	879,750	-	-	-
17030	Newton TC NCP:4m of 675mm Diam	70 Ave at 136B St	Short Term (1 - 5 Yrs)	10,600	10,600	-	-	-
17027	Newton TC NCP: 37m of 450mm Diam	70 Ave: 7005 KGB to KGB	NCP Driven	65,300	65,300	-	-	-
17026	Newton TC NCP: 41m of 450mm Diam (Upsize Only)	70A Ave: 13560 to 7005 KGB	NCP Driven	13,400	13,400	-	-	-
17022	Newton TC NCP: 98m of 450mm Diam	137 St:71 Ave to 70 Ave	NCP Driven	172,800	172,800	-	-	-
17021	Newton TC NCP: 65m of 450mm Diam	137 St: 71 Ave to 70 Ave	NCP Driven	114,600	114,600	-	-	-
16992	1500m of 300mm diameter Forcemain - Douglas FM Twinning	Douglas PS to 8 Ave/165A St	Long Term (6 - 10 Yrs)	2,681,300	2,681,300	-	-	-
16813	136m of 900mm diameter	6596 144 St	Short Term (1 - 5 Yrs)	755,000	151,000	604,000	-	-
16807	City Centre NCP: 280m of 900mm diam - Whalley Blvd Upgrades	Whalley Blvd: 100 Ave to address 9830	Short Term (1 - 5 Yrs)	1,480,000	1,480,000	-	-	-
16805	City Centre NCP: 9m of 900mm diameter & Tie-in to MV's NSI	132 St: immediate west of lot 13208 114 Ave	Short Term (1 - 5 Yrs)	384,000	384,000	-	-	-
16804	City Centre NCP: 44m of 900mm diameter	132 St: 113B Ave north	Short Term (1 - 5 Yrs)	156,100	156,100	-	-	-
16699	740m of 200-600mm diam(Birdland Trunk Sewer Relocation Ph1b)	Bluebird, Oriole and Canary	Long Term (6 - 10 Yrs)	1,856,200	-	1,856,200	-	-
16645	1306m of 500mm diam Forcemain Redwood Heights (outside NCP C	Redwood Heights	Short Term (1 - 5 Yrs)	760,400	760,400	-	-	-
16644	307m of 600mm diam trunk Redwood Heights (outside NCP contri	32 Ave: Highway 15 to 17436	NCP Driven	86,300	86,300	-	-	-
16442	121m of 525mm dia sanitary - (104 Ave)	104 Ave: 13939 104 Ave to 140 St	Long Term (6 - 10 Yrs)	379,500	379,500	-	-	-
16439	168m of 600mm dia sanitary	104 Ave: Whalley Blvd to 138 St	Long Term (6 - 10 Yrs)	548,600	493,740	54,860	-	-
16421	84m of 750mm dia sanitary (KGB)	King George Blvd: 8739 to 88 Ave	Long Term (6 - 10 Yrs)	292,700	263,430	29,270	-	-
16420	248m of 750mm diamter sanitary main	King George Blvd: 88 Ave to 89 Ave	Long Term (6 - 10 Yrs)	929,400	836,460	92,940	-	-
16417	337m of 675mm diameter sanitary main	King George Blvd: 91 Ave to 89 Ave	Long Term (6 - 10 Yrs)	1,204,000	1,083,600	120,400	-	-
16414	122m of 675mm diameter sanitary main	King George Blvd: 9258 to 9310	Long Term (6 - 10 Yrs)	435,900	392,310	43,590	-	-
16406	City Centre: 107m of 525mm diameter sanitary main	96 Ave east of King George Blvd	Short Term (1 - 5 Yrs)	308,100	308,100	-	-	-
16405	62m of 600mm dia sanitary	King George Blvd and 96 Ave	Short Term (1 - 5 Yrs)	186,500	93,250	93,250	-	-
16370	Bear Creek Trunk: 1558m of 1500mm diameter sewer main	from 7865 148 St to 15098 73B Ave (through ROW)	Long Term (6 - 10 Yrs)	6,930,800	6,930,800	-	-	-
16369	Bear Creek trunk: 142m of 1500mm diameter sanitary main	79 Ave: 146 St to 14636 79 Ave	Long Term (6 - 10 Yrs)	626,400	626,400	-	-	-
16368	Bear Creek Trunk: 294m of 1500mm diameter sanitary main	78 Ave: 144 St to 145A St	Long Term (6 - 10 Yrs)	1,259,600	1,259,600	-	-	-
16367	Bear Creek Trunk: 146m of 900mm diameter sewer main	Bear Creek Park ROW	Long Term (6 - 10 Yrs)	437,100	437,100	-	-	-
16348	Odour Facility for GH East PS Redwood H (outside NCP contrib	16484 29A Ave	Long Term (6 - 10 Yrs)	325,100	325,100	-	-	-
16240	182A St Sanitary Pump Station and Forcemain	182A St and Hwy 17; 182A St: Hwy 17 to 98 Ave;	Short Term (1 - 5 Yrs)	1,524,400	1,524,400	-	-	-
16169	DCCFE: 71m of 900mm diameter sewer (7816-0032-01)	10245 176 St	Long Term (6 - 10 Yrs)	155,580	155,580	-	-	-
16168	DCCFE: 101m of 900mm diameter Sewer (LD 7816-0032-01)	17800blk of 100A Ave	Long Term (6 - 10 Yrs)	100,000	100,000	-	-	-
15977	182m of 450 to 525 mm diameter	King George Blvd: 7010 to 13720 70 Ave	Short Term (1 - 5 Yrs)	472,400	377,900	94,500	-	-
15854	Grandview Heights East Pump Station (outside NCP contrib)	17400 block of 32 Ave	Short Term (1 - 5 Yrs)	239,700	239,700	-	-	-
15630	Stewart Farm PS Flood-Proofing	Crescent Rd / 35A Ave	Short Term (1 - 5 Yrs)	740,000	-	500,000	240,000	-
15199	450mm diameter Flow Diversion	King George Blvd - Elgin Rd: lot 3653 (South Port P.S.)	Short Term (1 - 5 Yrs)	920,000	695,000	225,000	-	-
15190	Unallocated Allowance for Rehab & Replacement of Major Mains	Various Location	Annual	3,000,000	-	3,000,000	-	-
15106	City Centre NCP: 16m of 900mm diameter	132 St and 112B Ave (south of intersection)	Short Term (1 - 5 Yrs)	50,000	50,000	-	-	-
15105	City Centre NCP: 62m of 900mm diameter	132 St: 112B Ave to 11299 132 St	Short Term (1 - 5 Yrs)	187,800	187,800	-	-	-
15104	City Centre NCP: 92m of 900mm diameter	132 St: 11299 to 11354 132 St	Short Term (1 - 5 Yrs)	297,800	297,800	-	-	-
15103	City Centre NCP: 86m of 900mm diameter	132 St: 11242 to 11279 132 St	Short Term (1 - 5 Yrs)	241,900	241,900	-	-	-
15102	City Centre NCP: 43m of 525mm diameter	Bentley Rd: King George Blvd to 13546 Bentley Rd	NCP Driven	135,200	135,200	-	-	-
15101	City Centre NCP: 153m of 450mm diameter	Bentley Rd: 13546 to Hilton Rd	NCP Driven	465,300	465,300	-	-	-
15100	City Centre NCP: 16m of 450mm diameter	108 Ave / 132A St (intersection)	NCP Driven	44,000	44,000	-	-	-
14706	Quibble Creek Pump Station Upgrade	King George Blvd / 94A Ave	Long Term (6 - 10 Yrs)	2,098,800	2,098,800	-	-	-
14438	Langley Bypass: 17m of 525mm diameter twinning	063A Ave/195B St	Short Term (1 - 5 Yrs)	35,300	35,300	-	-	-
14437	Langley Bypass: 17m of 525mm diameter twinning	062A Ave/195B St	Short Term (1 - 5 Yrs)	35,300	35,300	-	-	-
14436	Langley Bypass: 30m of 250mm diameter twinning (DCCFE)	6355 192 St: ROW 1991-0400	Long Term (6 - 10 Yrs)	10,210	10,210	-	-	-

# SEWER

## Program 1644 - S - Major Facilities

<b>Program Total</b>	<b>94,054,218</b>	<b>77,456,498</b>	<b>16,357,720</b>	<b>240,000</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
14435	Langley Bypass: 18m of 600mm diameter twinning (DCCFE)	19219 Hwy 10	Long Term (6 - 10 Yrs)	66,580	66,580	-	-	-
14434	Langley Bypass: 151m of 600mm diameter twinning (DCCFE)	19360 - 19300 Hwy 10	Long Term (6 - 10 Yrs)	173,890	173,890	-	-	-
14433	Langley Bypass: 110m of 600mm diameter twinning (DCCFE)	19415 - 19395 Hwy 10	Long Term (6 - 10 Yrs)	127,330	127,330	-	-	-
14424	Langley Bypass: 93m of 675mm diameter twinning (DCCFE)	18872 - 52 Ave	Long Term (6 - 10 Yrs)	67,530	67,530	-	-	-
14360	Langley Bypass: 56m of 525mm diameter twinning	195B St: 6332 - 6324	Short Term (1 - 5 Yrs)	116,100	116,100	-	-	-
14359	Langley Bypass: 139m of 525mm diameter twinning	196 St: south of Fraser Hwy	Short Term (1 - 5 Yrs)	400,200	400,200	-	-	-
14336	Langley Bypass: 10m of 1200mm diameter twinning (DCCFE)	052 Ave/188 St	Long Term (6 - 10 Yrs)	19,230	19,230	-	-	-
14335	Langley Bypass: 50m of 675mm diameter twinning (DCCFE)	052 Ave: South of 18833	Long Term (6 - 10 Yrs)	173,450	173,450	-	-	-
14334	Langley Bypass: 113m of 525mm diameter twinning (DCCFE)	052 Ave: south of 18833	Long Term (6 - 10 Yrs)	48,490	48,490	-	-	-
14333	Langley Bypass: 84m of 450mm diameter twinning (DCCFE)	5358 - 189 St East side ROW	Long Term (6 - 10 Yrs)	93,880	93,880	-	-	-
14331	Langley Bypass: 20m of 600mm diameter twinning (DCCFE)	Hwy 10/192 St	Long Term (6 - 10 Yrs)	62,720	62,720	-	-	-
14330	Langley Bypass: 29m of 750mm diameter twinning (DCCFE)	19225 Hwy 10	Long Term (6 - 10 Yrs)	68,890	68,890	-	-	-
14329	Langley Bypass: 83m of 675mm diameter twinning (DCCFE)	19289 - 19262 Hwy 10	Long Term (6 - 10 Yrs)	126,250	126,250	-	-	-
14328	Langley Bypass: 40m of 900mm diameter twinning (DCCFE)	19372 Hwy 10	Long Term (6 - 10 Yrs)	46,450	46,450	-	-	-
14327	Langley Bypass: 150m of 600mm diameter twinning (DCCFE)	19425 Hwy 10	Long Term (6 - 10 Yrs)	179,970	179,970	-	-	-
14237	Langley Bypass: 32m of 525mm diameter (DCCFE)	Hwy 10/196 St	Long Term (6 - 10 Yrs)	43,450	43,450	-	-	-
14098	122m of 525mm diameter sewer upgrade	144 St: 8684 - 8734	Long Term (6 - 10 Yrs)	409,300	409,300	-	-	-
14092	138m of 450mm diameter	134 St: 070B Ave to #7125	Long Term (6 - 10 Yrs)	332,100	332,100	-	-	-
14085	151m of 675mm diameter	84 Ave: 134 to 134B St	Short Term (1 - 5 Yrs)	458,600	458,600	-	-	-
13762	113m of 600mm diameter	132 St: 88 Ave to lot 8766	Short Term (1 - 5 Yrs)	300,000	300,000	-	-	-
13757	176m of 200mm to 450mm diameter (FRRS)	151A St: lot 8578 (ROW E1972-0129)	Short Term (1 - 5 Yrs)	347,500	347,500	-	-	-
13745	111m of 450mm diameter	151A St: 8585 151A St to 15096 86 Ave (lane behind)	Short Term (1 - 5 Yrs)	283,800	283,800	-	-	-
13730	157m of 525mm to 675 mm diameter	70 Ave: 136B St to 137A St	Short Term (1 - 5 Yrs)	394,500	315,600	78,900	-	-
13722	191m of 525mm diameter	70 Ave: 137A to 138 St	Long Term (6 - 10 Yrs)	447,500	358,000	89,500	-	-
13715	97m of 600mm diameter (Port Kells)	98A Ave: 192 St to 9875 (ROW E1976-0309)	Long Term (6 - 10 Yrs)	291,800	58,360	233,440	-	-
13713	99m of 600mm diameter (Port Kells)	98A Ave: 19031 to 9875 (along Railway)	Long Term (6 - 10 Yrs)	297,800	59,560	238,240	-	-
13705	92m of 450mm diameter (Port Kells)	098A Ave:19219 to 19287	Long Term (6 - 10 Yrs)	253,000	50,600	202,400	-	-
13697	29m of 525mm diameter	132 St: 82A Ave - lot 8217	Long Term (6 - 10 Yrs)	83,500	16,700	66,800	-	-
13695	13m of 675mm diameter	132 St: lot 8696 (street crossing)	Long Term (6 - 10 Yrs)	43,100	38,790	4,310	-	-
13543	Lower Tynehead Siphon Capacity Upgrades	075 Ave / 156 St	Long Term (6 - 10 Yrs)	3,614,600	3,614,600	-	-	-
12720	Twin 500mm FM from North Bluff to 24 Ave	King George Blvd: 016 Ave - 024 Ave	Short Term (1 - 5 Yrs)	5,944,700	5,944,700	-	-	-
11309	Grandview South P.S. Odour Control at outlet	023 Ave / 162 St	Long Term (6 - 10 Yrs)	902,100	902,100	-	-	-
11304	Quibble Creek PS FM Twinning - 1,660m of 900mm forcemain	QC PS West to 134 St and North to Old Yale Rd/University Dr	Short Term (1 - 5 Yrs)	6,647,500	6,647,500	-	-	-
11296	Peace Portal Pump Station Upgrade - 3rd pump	17510 4 Ave	Long Term (6 - 10 Yrs)	354,200	354,200	-	-	-
11294	North Bluff Pump Station Surge Tank (N)	King George Blvd / 016 Ave	Long Term (6 - 10 Yrs)	675,300	675,300	-	-	-
11287	Pump Stations Upgrades	Various Locations	Annual	5,000,000	-	5,000,000	-	-
11282	Douglas Pump Station West Surge Tank	171 St / 002 Ave	Long Term (6 - 10 Yrs)	450,000	450,000	-	-	-
11281	Odour Control Facility	Various Locations	Long Term (6 - 10 Yrs)	2,500,000	625,000	1,875,000	-	-
11278	Bear Creek Relief PS Forcemain Segment 1: 1,700m of 700mm FM	King George Blvd: 87 - 94A Ave (N)	Short Term (1 - 5 Yrs)	4,908,800	4,908,800	-	-	-
11277	Bear Creek Relief Pump Station	King George Blvd @ 87 Ave (N)	Short Term (1 - 5 Yrs)	5,631,800	5,631,800	-	-	-
11275	Bear Creek Relief PS Forcemain Segment 2: 2,000m of 700mm FM	King George Blvd @ 94A Ave to 102 Ave @ University Dr	Short Term (1 - 5 Yrs)	5,775,000	5,775,000	-	-	-
11272	265m of 1050mm diameter twinning	University Dr: 105A Ave to 10665	Short Term (1 - 5 Yrs)	865,000	865,000	-	-	-
11271	Pinch Valve Replacement at Crescent Road	144 St / Crescent Rd (N)	Long Term (6 - 10 Yrs)	199,600	199,600	-	-	-
10014	Big Bend Interceptor Tie Down	N of Hwy 1: 184 St - 104 Ave	Long Term (6 - 10 Yrs)	311,700	311,700	-	-	-
10013	DCCFE: Emergency Storage for Douglas Pump Stn (West)	171 St / 002 Ave	Long Term (6 - 10 Yrs)	483,168	483,168	-	-	-
10007	Bear Creek Trunk Manhole Tie Downs	Bear Creek Trunk - 88 Ave	Long Term (6 - 10 Yrs)	699,600	-	699,600	-	-
10006	Tynehead Interceptor Manhole Tie Downs	Tynehead Interceptor various locations	Long Term (6 - 10 Yrs)	466,400	-	466,400	-	-
9442	DCCFE: Grandview South/Fergus Pump Station & Forcemain	168 St / 13 Ave	Long Term (6 - 10 Yrs)	1,972,500	1,972,500	-	-	-
9439	50m of 675mm diameter relief trunk	132 St, North of Shakespeare Place	Short Term (1 - 5 Yrs)	143,200	143,200	-	-	-
7756	Steep Grade Lift Stations	11977-Old Yale Road - immediate opposite 11048 Oslen Rd	Long Term (6 - 10 Yrs)	2,642,700	2,246,300	396,400	-	-

## 5. STORMWATER

The City's drainage basins are comprised of upland and lowland areas. Generally, the upland areas are being urbanized while the lowlands are within the designated Agricultural Land Reserve ("ALR"), with the exception of the Fraser River and Crescent Beach floodplain areas. The City drains to four rivers - the Serpentine, Nicomekl, Campbell and Fraser rivers - through a network of watercourses (rivers, creeks and ditches) and storm sewers.

These watercourses are habitat areas that support aquatic life, including various species of Pacific salmon. In general, the upland drainage system operates as a free-flowing gravity system through open watercourses and storm sewers. The lowland drainage system's operation is impacted by the diurnal ocean tides and the extended wet weather of Pacific Northwest winters, and relies on a system of dyking, floodplain storage and pump stations.

The diverse meteorological, hydrological, topographical and eco-system characteristics of the City's watersheds and watercourses have created a complex drainage environment with distinct rainfall-runoff impact-control needs. This poses many challenges in developing and managing a viable servicing scheme for the City, as mandated by the *Local Government Act*, that addresses our current and long term needs based on our current characteristics and those that may be impacted through climate change, including sea level rise.

The 10-Year Servicing Plan aims at ensuring the City's drainage utility provides a high level of service within the natural constraints highlighted above. This includes operation and maintenance of the existing system, planning, design and construction of new infrastructure to support growth and development, and monitoring system performance. Climate adaptation investigations to determine vulnerable areas and projected servicing requirements are also a part of this plan.

### 5.1 Drainage Inventory

The drainage system in the City is comprised of a combination of man-made storm sewer systems in the urban areas, constructed drainage ditches and canals in the more rural and older urban areas, and natural watercourses, streams and rivers. The current estimated inventory is shown in **Table 5.1**.

**Table 5.1 – Major Drainage System Infrastructure Summary**

Storm Sewers	2,039 km
Ditches	1,168 km
Watercourses	354 km
Serpentine River	31 km
Nicomekl River	20 km
Campbell River	15 km
<b>TOTAL</b>	<b>3,627 km</b>

## 5.2 Drainage Program Needs

The capital needs for drainage comprise various programs of work to meet the needs of the existing residents and new growth.

Programs dealing with servicing existing residents are focused on infrastructure to address the following:

- Public safety;
- Preserving aquatic habitat;
- Avoiding property damage from flooding and land erosion;
- Reducing inconvenience to the public from problems like localized ponding; and
- Climate change adaptation.

The growth-related programs of works identified are intended to:

- Meet the drainage servicing needs for new growth; and
- Manage any downstream impacts associated with growth.

**Figure 5.1** provides an overview of the City's drainage system.

The works included in the 10-Year Servicing Plan reflect the current design criteria requirements, policies to promote orderly development, and protection of natural watercourses including the more holistic approaches proposed in Master Drainage Plans ("MDPs"), Functional Plans, NCPs, Integrated Stormwater Management Plans ("ISMPs") and Drainage Strategies that are either complete or substantially complete.

ISMPs are a municipal action item included in Metro Vancouver's Integrated Liquid Waste and Resource Management Plan ("ILWRMP"). These plans are aimed at bridging the gap between traditional drainage planning through MDPs and land-use planning, while protecting the recreational, environmental and physical functionalities of the City's natural drainage system. According to the ILWRMP, an ISMP must be completed for every urban (or potentially urban) watershed within the region.

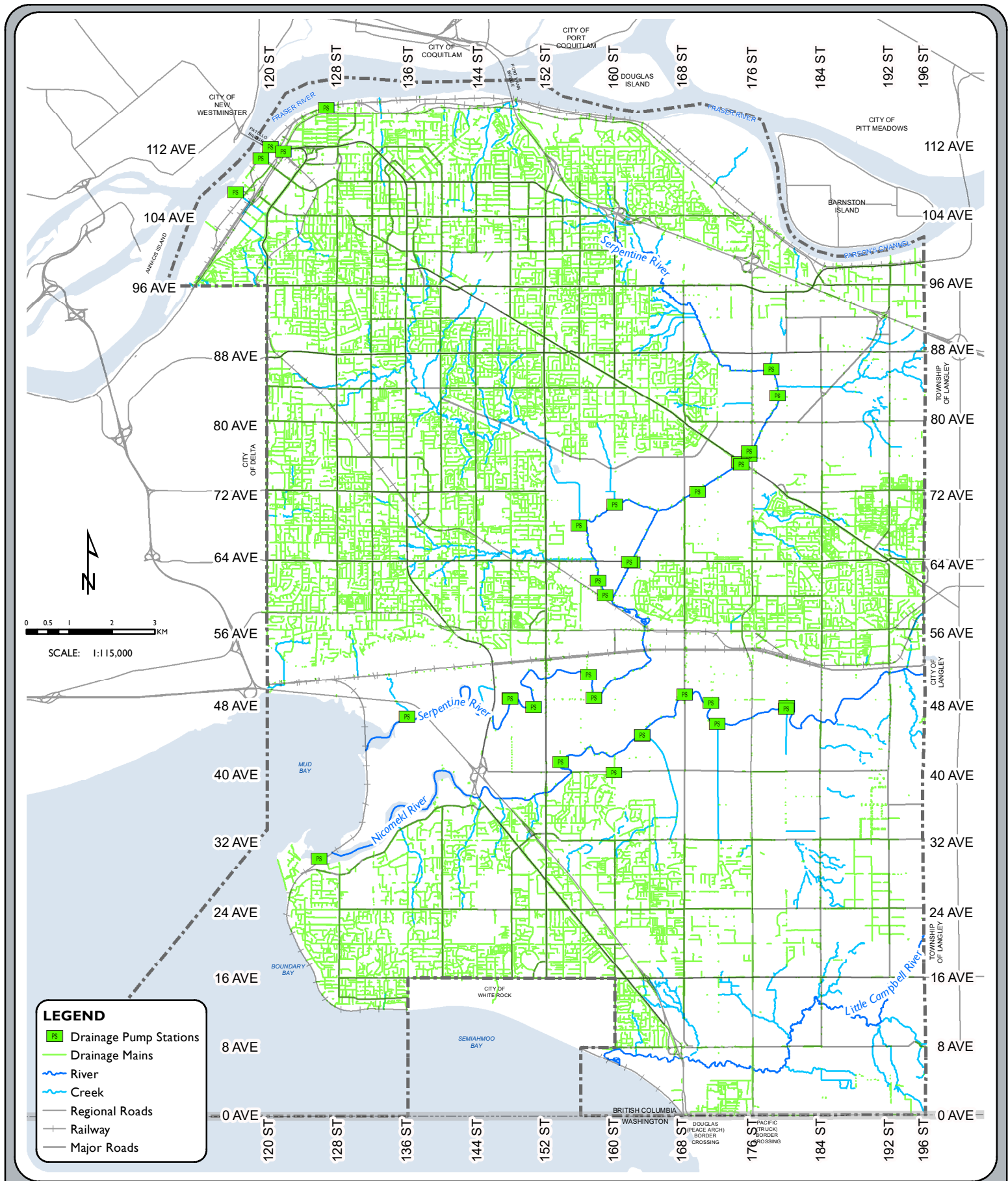
There are drainage related impacts due to urbanization that are not fully addressed in the programs mentioned above. These include impacts to water quality, base flows and groundwater. In these situations, the City relies on the development community to address these issues through the provisions of Best Management Practices ("BMPs") and source controls. A framework for implementation of these BMPs is provided through ISMPs, MDPs and NCPs.

The 10-Year Servicing Plan only identifies the offsite drainage work necessary to manage the impacts of development. Onsite works, as identified by ISMPs and NCPs, may be required in certain areas of the City. Onsite works are the responsibility of the developer, and they are not a DCC eligible item.

For the last three years, the City has been developing a Coastal Flood Adaptation Strategy ("CFAS"). This strategy looks at the potential impact of sea level rise and climate change on Surrey's coastal community. The strategic direction proposes a suite of recommendations to assist with adaptation efforts and flood resiliency moving forward.



In 2019, the City was successful in obtaining Federal Disaster Mitigation Adaptation (“DMAF”) funding to assist with funding of key projects which arose from the CFAS initiative. Funding ranged from 25% to 75% based on project type, ownership and partnership. DMAF projects total \$187 million (\$76 million Federal funding, \$61 million City funding, and \$50 million by other partners) and are to be implemented over the next eight years (2028 completion). The City’s 10-Year Servicing Plan complements this significant funding, which is enabling the City to advance resiliency from climate change and sea level rise while upgrading older infrastructure.



**LEGEND**

- Drainage Pump Stations
- Drainage Mains
- River
- Creek
- Regional Roads
- Railway
- Major Roads

**FIGURE 5.1 - DRAINAGE SYSTEM**



GIS SECTION

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

### 5.3 Drainage Main Replacement Strategy

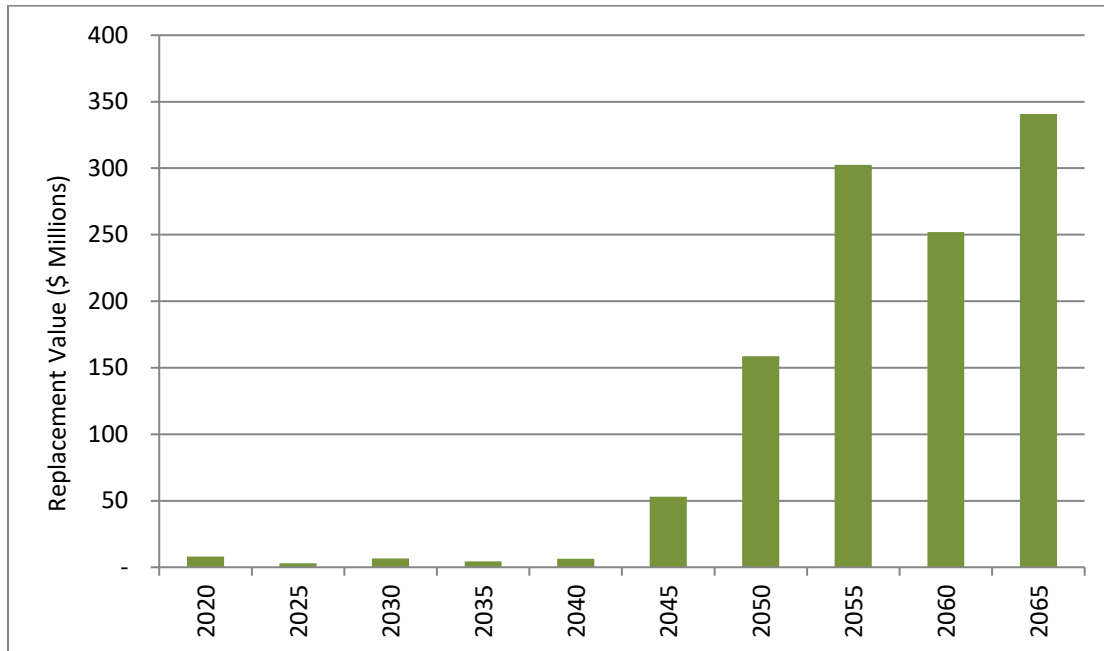
Replacement of drainage infrastructure at the end of their service lives will be of concern when competing servicing demands, such as growth needs and new standards or practices in drainage servicing, necessitates prioritization of replacement works.

The characteristics of the pipes requiring replacement in the next 50 years is summarized in **Table 5.2**.

**Table 5.2 Drainage System Replacement Requirements in the Next 50 Years**

<b>Material</b>	<b>Total Main Length</b>	<b>Replacement Demand up to 2069 (50 years)</b>	<b>Replacement Cost</b>
<b>Miscellaneous:</b> Asbestos Cement, Clay Tile, Corrugated Metal Pipe, Cast Iron, Ductile Iron, Steel Pipe, and Wood	58 km (3% of entire pipe length)	29 km	\$44 million
<b>Concrete:</b> Concrete Pipe	1,199 km (59% of entire pipe length)	706 km	\$845 million
<b>Plastic:</b> Poly Ethylene, Poly Vinyl Chloride, Polypropylene	782 km (38% of entire pipe length)	260 km	\$246 million

The estimated cost to replace aging sewer mains over the next 10 years is \$11 million and \$1.135 billion over the next 50 years. The annual replacement cost over the next 50 years is illustrated in **Figure 5.2**.

**Figure 5.2 – Drainage Main Replacement Costs over the Next 50 Years**

The service life of drainage mains, constructed of currently approved materials and installed after the 1970's, is estimated to be 75 years. Assuming there is an average 75-year lifespan for these materials, only a small amount of drainage mains may have to be replaced in the next 50 years.

It is too early to establish a strategy for the replacement of pipes beyond 50 years, as changing technologies and developments in asset management may influence the replacement strategy in that period.

## 5.4 Drainage Servicing Program

### Program 1660 – General Items

This program is comprised of projects necessary to the planning, design and operation of the drainage system. Some of the projects include:

- Funding resources required to manage all aspects of the drainage program including servicing plans, staffing, public liaison, the review and project management of ISMPs and NCPs, as well as internal coordination with other divisions in Engineering and other departments.
- Monitoring initiatives that assist in all factors of drainage planning and system operation. A Surrey-wide rainfall, flow and water quality monitoring program is in place to provide more accurate predictions of rainfall, stream flows and water quality. The monitoring also provides staff with a better understanding of existing system operations after significant rainfall or drought events. New to the monitoring program is the Ocean mets initiative. With this program, the City is looking to monitor winds, waves, storm surges and tides around the Boundary Bay area. This should help in emergency planning and to resolve questions regarding the local rate of sea level rise in the bay area.

### Programs 1662 - Existing System Upgrades

Drainage improvements within this program seek to resolve documented or potential flooding and environmental concerns. Improving the drainage systems in older neighbourhoods has been an ongoing issue and will likely continue beyond the current extent of the 10-Year Servicing Plan.

Included within this program is existing system upgrades in the Robson, Birdland and Crescent Beach areas. These areas have older drainage systems with limited service. In Crescent Beach, the City has received DMAF funding to assist with system implementation. Upgrading the internal drainage system in Crescent Beach along with raising the roads to keep ahead of rising groundwater are all components of the CFAS strategy.

### Program 1664, 1665 and 1666 - Lowlands Flood Control

The Strategic Plan for the Lowlands Flood Control program involves extending and raising dykes along the Serpentine and Nicomekl Rivers, as well as constructing pump stations and conveyance improvements throughout the lowland area in an effort to meet the Agri-Food Regional Development Subsidiary Agreement (“ARDSA”) drainage service criteria.

A new addition to the lowland strategy includes the recommendations of the CFAS strategy for the coastal farm areas. CFAS identified critical dykes, pump stations and infrastructure that require upgrading to address projected changes along the coastal environment. The City was successful in obtaining DMAF funds to assist with implementation of some key projects which include:

- Replacement of the Nicomekl and Serpentine River sea dams;
- Upgrades to the Colebrook dykes;
- Upgrades to the Serpentine and Nicomekl dykes between King George Boulevard and 152 Street;
- Burrows pump station low level pump;
- Colebrook pump station reconstruction; and
- Foreshore enhancements.

### Program 1668 – Planning (Capital)

New growth requires the development of strategies and servicing plans in advance of the functional and detailed design of drainage works. Areas of existing urban development also need drainage plan updates to meet new objectives such as infrastructure management, floodplain studies and asset replacement strategies. In the past, this program included MDPs necessary to scope projects for watershed management.

ISMPs now form the basis of planning for the capital program. The existing plans are being integrated with land-use, transportation and parks planning initiatives as part of the City’s commitment under the ILWRMP to update all watersheds on a 12-year cycle. Ongoing monitoring and updates of ISMPs is needed to keep plans current. This program also includes the Adaptive Management Framework, which monitors stormwater and assesses and reports on the implementation and effectiveness of ISMPs. The next round of ISMP updates are to include changes to precipitation associated with climate change.

### Program 1670 - Relief and Trunk System

Relief and trunk storm systems consist of storm sewers, overland flow paths, ditches and other conveyance systems that have a catchment area greater than 20 hectares and serve areas of urban development. These systems are sometimes applied as diversion systems to reduce flows to the natural creeks, and as alternatives to storm detention ponds. In this case, the storm diversion provides a similar function as a detention pond to reduce peak storm discharges to streams.

### Program 1671 – Planning (Operating)

This program includes funding for drainage parcel taxes related to City-owned drainage facilities.

### Program 1672 - Community Detention

This program includes provisions for land acquisition and construction of stormwater detention ponds. These ponds are planned and designed to reduce peak flows to natural streams, and in many cases, to improve water quality. The detention facilities listed have been recommended through existing ISMPs, MDPs and NCPs. Also included are detention/infiltration corridors proposed through recently completed NCPs.

### Program 1678 and 1679 - Erosion and Ravine Stabilization

Creeks form an integral part of the City's drainage system. Although the City practices stormwater management to reduce impacts of peak flows on natural creeks, some allowance for erosion control is necessary due to local conditions. Detailed assessments of problem areas are ongoing and the projects identified within this program are to address medium to high-risk areas.

### Program 1680 - DCW Upsizing

The design of community infrastructure (e.g., trunks and ponds) in developing areas has been optimized to provide the best possible long-term system for the City. In some cases, this leads to increased local drainage servicing requirements beyond the minimum fronting servicing needs for properties/developments. These local systems do not fall within the strict definition of community trunks, and are therefore not eligible for growth funding under the trunk program.

Since these larger local systems are integral to proper functioning of the community system, allocation has been made under this specific upsizing program through funding for growth. An allowance has been made based on a detailed review of the City's current drainage system make-up and anticipated future drainage system construction in developing neighbourhoods. The anticipated costs for upsizing are entirely linked to growth.

### Program 1681 – Minor Projects

This program includes minor drainage improvements at various locations throughout the City that arise during the year and in situations where remediation works will be necessary prior to the next 10-year plan update.

### Program 1682 – Environment

This program includes provisions for water quality and riparian health assessments required as a component of the ISMP process. Also, this program is to address compliance for the City's Stormwater and Erosion & Sediment Control Bylaws.

The program comprises:

- Overall programs for long-term monitoring of various riparian areas to meet Fisheries & Oceans' requirements;
- Benthic collection and assessments for ISMP stream health;
- Boundary Bay water quality sampling for non-point source pollution tracing;
- General environmental services to address spill events and other pollution events when they occur in the City's waterways; and
- Obtaining approvals for conducting drainage maintenance and emergency works on open channels throughout the City.

Since open channels are a significant component of the City's drainage system, maintaining environmental health in these systems is an item that the City needs to address on a consistent basis.

### Program 1683 – Climate Change Adaptation

New information and design considerations have come from the Province regarding potential impacts from climate change, in particular sea level rise. Rising seas and potential increases in precipitation will impact existing drainage systems. The projects in this program are meant to identify potential impacts, timing of potential vulnerabilities, work towards new strategies to address climate change in the drainage program, and times of asset renewal. In this plan, all the projects are study based and are in support of the City's Climate Adaptation Strategy.

One of the key projects has been the development of CFAS. CFAS has developed a recommended implementation list which includes additional technical assessments, policy work, modelling and engagement activities. This program is designed to keep advancing climate science relevant to the City and to assist in adaptation efforts.

### Program 1688 – Land Acquisition

This program includes provisions for land acquisition for future community stormwater detention ponds or water quality features as outlined in the various NCPs.

### Program 1690 - Operations and Maintenance

This program includes provisions for video inspection of older systems with conveyance issues, payments of water licenses, and general operating items.

Program 1691 – West Clayton

This program includes provisions for land acquisition and construction of the West Clayton community stormwater detention ponds and all associated trunk sewers. These ponds are planned and designed to reduce peak flows to natural streams, and in many cases, to improve water quality. The detention ponds listed have been recommended through the West Clayton NCP.

**5.5 Stormwater Cost Summary**

No.	Program	Program Type	Growth (\$)	Non-Growth (\$)	External (\$)	Total (\$)
1660	General Items	Operating	0	11,970,000	0	11,970,000
1662	Existing System Upgrades	Capital	3,759,104	34,863,510	4,831,860	43,454,474
1664	Lowlands Flood Control	Capital	4,612,231	30,496,063	109,322,656	144,430,950
1665	Lowlands Flood Control	Non-Capital	110,000	440,000	0	550,000
1666	Lowlands Flood Control	Operating	0	1,148,245	0	1,148,245
1668	Planning	Non-Capital	4,850,000	3,150,000	0	8,000,000
1670	Relief and Truck Systems	Capital	24,475,417	17,768,500	0	42,243,917
1671	Planning	Operating	0	25,000	0	25,000
1672	Community Detention	Capital	11,934,900	937,100	0	12,872,000
1678	Erosion and Ravine Stabilization	Operating	0	2,551,000	0	2,551,000
1679	Erosion and Ravine Stabilization	Capital	3,295,000	4,750,000	0	8,045,000
1680	DCW Upsizing	Capital	9,250,000	0	0	9,250,000
1681	Minor Projects	Operating	0	4,500,000	0	4,500,000
1682	Environment	Operating	0	19,260,000	320,000	19,580,000
1683	Climate Change Adaptation	Operating	850,000	4,350,000	8,201,833	13,401,833
1688	Land Acquisition	Capital	4,500,000	400,000	0	4,900,000
1690	Operations and Maintenance	Operating	0	1,440,000	0	1,440,000
1691	West Clayton	Capital	13,018,000	0	0	13,018,000
<b>Total</b>			<b>80,654,652</b>	<b>138,049,418</b>	<b>122,676,349</b>	<b>341,380,419</b>

**5.6 Stormwater Projects by Program**

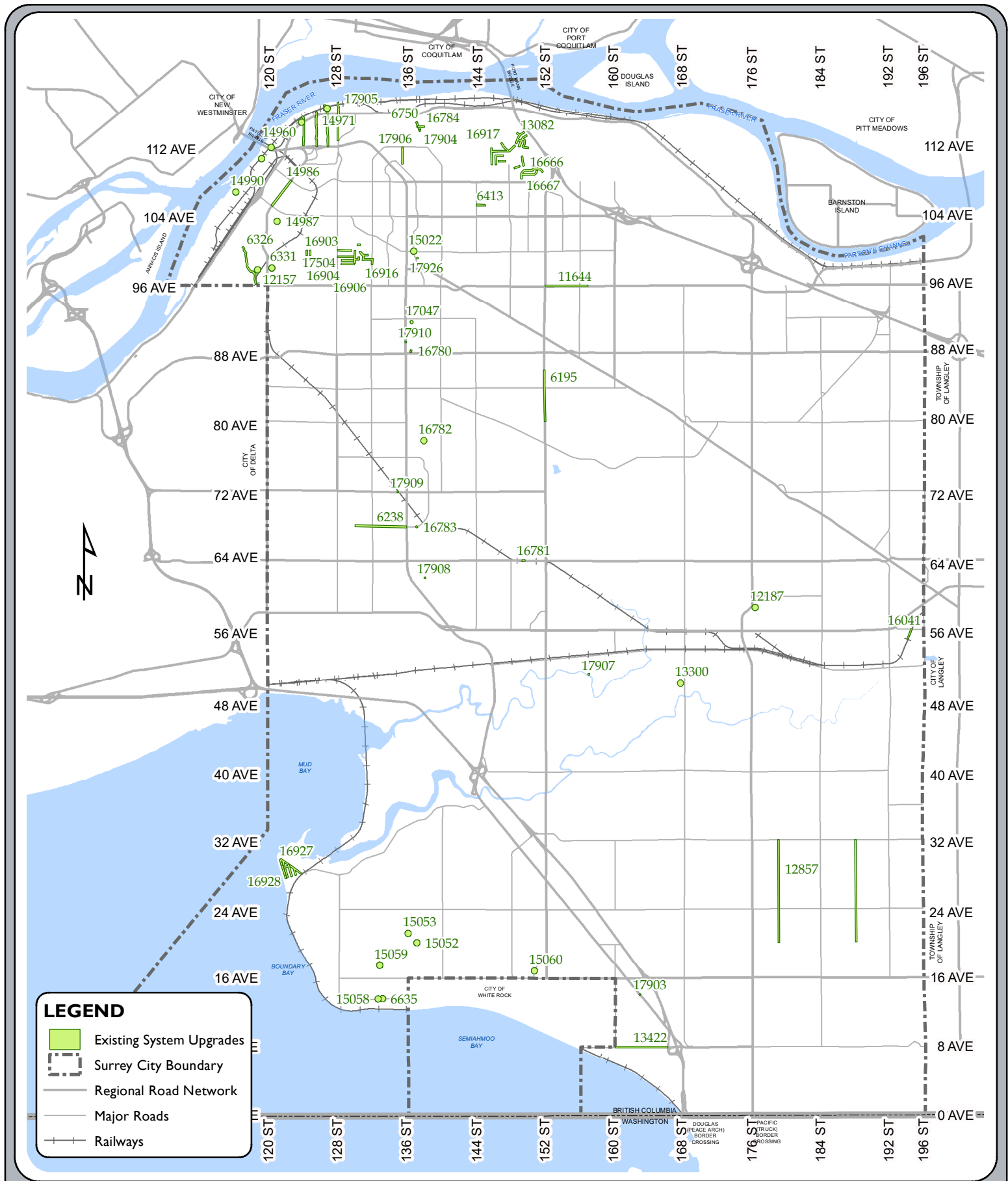
This section contains tables and figures that identify the projects under the stormwater programs.

The tables provide the following information:

- Project ID - the unique identifier of the project;
- Project name - the specific name or generic name that depicts the type of work;
- Project location - the geographic extent of the works;
- Priority - the intended time frame for when the project is planned to proceed (subject to change); and
- Costs – the high-level estimates in 2019 dollars (subject to change at the actual time of construction). The costs are comprised of growth and non-growth components.



Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations throughout Surrey may not be shown on the maps.



**FIGURE 5.2 - Drainage Existing System Upgrades (Capital) (Program 1662)**

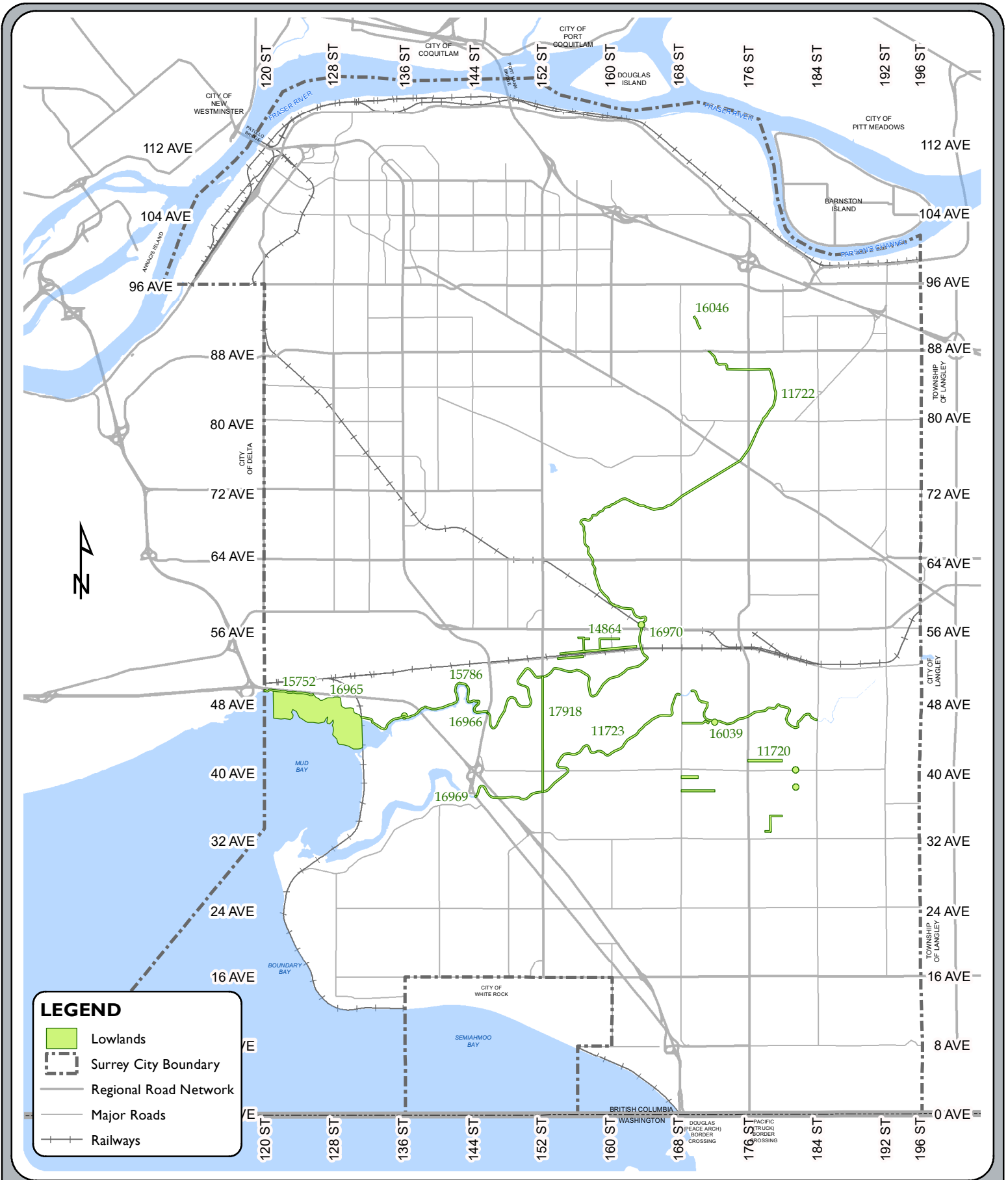
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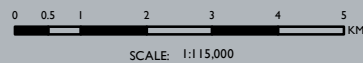
### Program 1662 - D - Ex Sys Upgrades (Capital)

<b>Program Total</b>	<b>43,454,474</b>	<b>3,759,104</b>	<b>34,863,510</b>	<b>4,831,860</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17926	City Centre Detention Pond Reinstatement	Whalley Blvd Between 100Ave and Fraser Hwy	Short Term (1 - 5 Yrs)	20,000	-	20,000	-	0
17910	Quibble Creek Outfall Headwall	KGB and 89 Ave	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	0
17909	Relining existing 600 & 900 Wood Stave/CP Pipe	72 Ave & Hall Rd	Short Term (1 - 5 Yrs)	20,000	-	20,000	-	0
17908	Modify Existing Archibald Creek Flow Control	138 St and 62 Ave	Short Term (1 - 5 Yrs)	15,000	-	15,000	-	0
17907	Gray Creek Drainage Pump Station Forebay Upsize	Grey Creek Drainage Pump Station near 5117 157 St	Short Term (1 - 5 Yrs)	20,000	-	20,000	-	0
17906	Stormmain in Lane	135A St and 136 St between 110 Ave and 112 Ave	Short Term (1 - 5 Yrs)	20,000	-	20,000	-	0
17905	BridgeView Culvert Replacement	Bridgeview	Long Term (6 - 10 Yrs)	60,000	-	60,000	-	0
17904	13745 114 Ave Erosion Protection	13745 114 Ave	Short Term (1 - 5 Yrs)	15,000	-	15,000	-	0
17903	Carlson Creek Fish Ladder	King George Blvd and 14 Ave	Short Term (1 - 5 Yrs)	15,000	-	15,000	-	0
17504	Robson 3A area - storm sewer upgrades on 124A & 124B from 99	124A & 124B from 99A Ave to 100 Ave	Short Term (1 - 5 Yrs)	300,000	-	300,000	-	0
17047	Quibble Creek Ravine Stability at 9168 136A Ave	9168 136A Street	Short Term (1 - 5 Yrs)	220,000	-	220,000	-	0
16928	DMAF - Crescent Beach Phase 4	portions of Ohare Lane, McBride, sunshine alley, McKenzie	Long Term (6 - 10 Yrs)	4,468,229	-	2,463,489	2,004,740	0
16927	DMAF - Crescent Beach Phase 3 - Perforated Piping	Sullivan, portions of Ohare lane, Alexandra, McBride and Go	Short Term (1 - 5 Yrs)	7,797,287	-	4,970,167	2,827,120	0
16917	Birdland Phase 3 & 4	North of 110 east of Bon Accord creek west of 148	Long Term (6 - 10 Yrs)	4,000,000	-	4,000,000	-	0
16916	Robson South East Phase 5 part 1	Semiahmoo Rd, 132 St, 98A Ave, 99A Ave, 99 Ave, 100A Ave	Short Term (1 - 5 Yrs)	1,300,000	-	1,300,000	-	0
16906	Phase 5 Robson Southeast Drainage - part 2	Semiahmoo Rd from 100 Ave to 99 Ave; 99A Ave to Semiahmoo Rd	Long Term (6 - 10 Yrs)	1,500,000	-	1,500,000	-	0
16904	Phase 3 Robson Southeast Drainage	99 Ave from 130 St to 128 St; 98B Ave from 130 St to 128 St;	Long Term (6 - 10 Yrs)	2,830,000	-	2,830,000	-	0
16903	Phase 2 Robson Southeast	100 Ave from 129A to 128 St	Long Term (6 - 10 Yrs)	1,850,000	-	1,850,000	-	0
16784	114A Ave Local Storm System Replacement	114A Ave: West of 138 St to creek	Short Term (1 - 5 Yrs)	250,000	-	250,000	-	0
16783	68 Avenue Hyland Creek Crossing	13705 68 Avenue (north and south sides of 68 Ave)	Short Term (1 - 5 Yrs)	1,400,000	-	1,400,000	-	0
16782	138 Street Manhole and Outlet Upgrade	7795 138 Street	Short Term (1 - 5 Yrs)	70,000	-	70,000	-	0
16781	Hyland Creek Culvert and Outlet Upgrade	14913 64 Avenue	Short Term (1 - 5 Yrs)	910,000	-	910,000	-	0
16780	Watercourse and Inlet Structure Assessment	13627 88 Avenue (eastern channel)	Short Term (1 - 5 Yrs)	60,000	-	60,000	-	0
16667	East Bon Accord - S.Birdland Phs 2 & 4 - 2021	Canary Dr, Bluebird Cres, & Oriole Dr	Long Term (6 - 10 Yrs)	1,616,000	-	1,616,000	-	0
16666	East Bon Accord - S.Birdland Phs 2 & 4 - 2020	Partridge Cres, & Lark Pl	Long Term (6 - 10 Yrs)	1,131,000	-	1,131,000	-	0
16041	Upgrade Existing Culverts	19458-56 Ave (Railway Corridor) at 19450 & 19495-55 Ave	Long Term (6 - 10 Yrs)	50,000	-	50,000	-	0
15060	125m pipe upgrade to 450mm	Martin Drive and Southmere Crescent,	Long Term (6 - 10 Yrs)	190,000	95,000	95,000	-	0
15059	230m pipe upgrade to 450mm	1755 - Amble Green Blvd	Long Term (6 - 10 Yrs)	350,000	175,000	175,000	-	0
15058	80m pipe upgrade to 450mm	13245 - Marine Dr	Long Term (6 - 10 Yrs)	120,000	60,000	60,000	-	0
15053	Sediment and water quality device Upper Chantrell	2101 - 136 St	Long Term (6 - 10 Yrs)	50,000	-	50,000	-	0
15052	Upper Chantrell Creek Green Corridor	13741 - 20 Ave	Long Term (6 - 10 Yrs)	300,000	150,000	150,000	-	0
15022	191m pipe upgrade to 900mm	Whalley Blvd at 100 Ave	Long Term (6 - 10 Yrs)	130,174	26,035	104,139	-	0
14990	Future design criteria for the South Westminster PS	Manson, Old Yale, & Pattullo Pump Stations	Long Term (6 - 10 Yrs)	30,000	6,000	24,000	-	0
14987	Improve hydraulic efficiency of culverts and inlets	121 St at 103A Ave	Long Term (6 - 10 Yrs)	60,000	12,000	48,000	-	0
14986	Improve drainage conveyance and storage	Scott Rd from Tannery Rd to Old Yale Rd	Long Term (6 - 10 Yrs)	50,000	10,000	40,000	-	0
14971	16m culvert upgrade to 2400mm	culvert under 126A St at Royal City PS	Long Term (6 - 10 Yrs)	79,911	15,982	63,929	-	0
14960	43 m pipe upgrade to 1350mm	124 St at Industrial Rd	Long Term (6 - 10 Yrs)	101,773	50,887	50,886	-	0
13422	South Surrey - 8th Avenue Storm Culvert Consolidation	8 Ave from 160 St to King George Blvd	Short Term (1 - 5 Yrs)	1,600,000	300,000	1,300,000	-	0
13300	Drainage System Upgrades	050 Ave / 168 St (west)	Long Term (6 - 10 Yrs)	300,000	-	300,000	-	0
13082	North Surrey - East Bon Accord Creek Drainage Improvements	Glen Avon Drive	Long Term (6 - 10 Yrs)	2,500,000	500,000	2,000,000	-	0
12857	South Surrey - Existing infrastructure and Culvert Upgrades	179 St and 188 and 20 to 32 Ave	NCP Driven	2,000,000	2,000,000	-	-	0
12187	5871-176A St ROW Drainage Improvement	5871-176A St	Short Term (1 - 5 Yrs)	50,000	-	50,000	-	0
12157	Storm Sewer Extension	118B Street: 98Ave to 97A Ave	Short Term (1 - 5 Yrs)	150,000	-	150,000	-	0
11644	Storm Sewer Upgrade	096Ave: 152 - 157St	Long Term (6 - 10 Yrs)	2,000,000	-	2,000,000	-	0
6750	Southward Creek Diversion 759 m -	138 St 114 Ave to 137 and 115 Ave	Long Term (6 - 10 Yrs)	627,000	63,000	564,000	-	0
6635	675mm Upgrade Storm	Marine Dr: 132B St - Knudson Creek	Long Term (6 - 10 Yrs)	77,400	4,000	73,400	-	0
6413	428m of 600mm diameter. Pipe Upgrades	105A Ave: 144 - 145 St	Long Term (6 - 10 Yrs)	302,700	30,200	272,500	-	0
6331	120A St/98Ave Culvert Upgrade	120A St - 98 Ave	Long Term (6 - 10 Yrs)	133,000	27,000	106,000	-	0
6326	Delta Creek Ravine protection	118 St - 96 - River Rd (100 Ave)	Long Term (6 - 10 Yrs)	791,000	160,000	631,000	-	0
6238	1200m pipe upgrade	068 Ave: 130 St - KG Hwy	Long Term (6 - 10 Yrs)	244,000	24,000	220,000	-	0
6195	Trunk: 1081m - 675 to 1050mm	152 St: 86 - 80 Ave	Long Term (6 - 10 Yrs)	1,030,000	-	1,030,000	-	0



**FIGURE 5.3 - Drainage Lowlands (Capital) (Program 1664)**

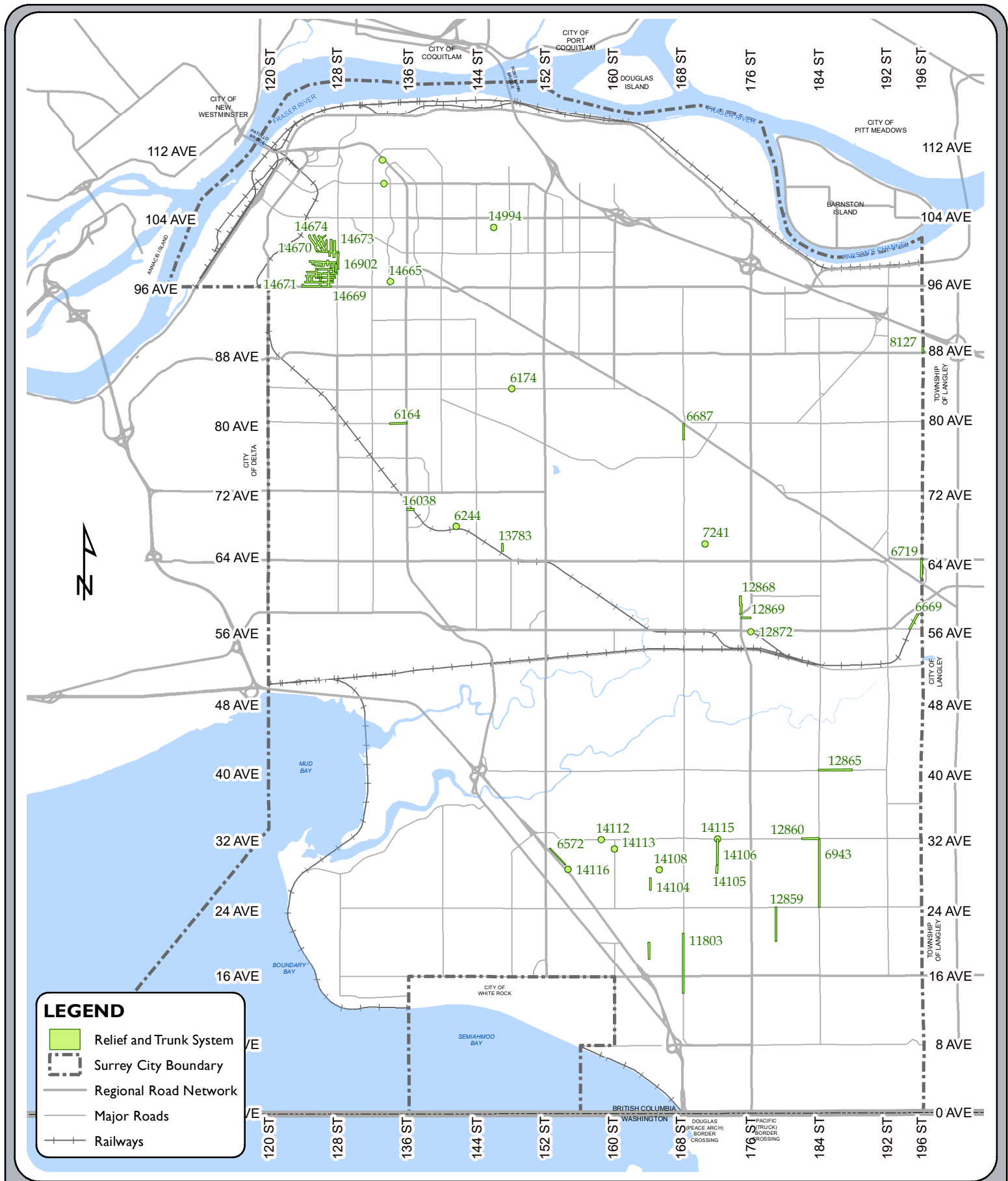


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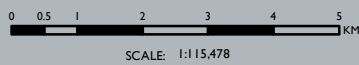
### Program 1664 - D - Lowlands (Capital)

<b>Program Total</b>	<b>144,430,950</b>	<b>4,612,231</b>	<b>30,496,063</b>	<b>109,322,656</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17918	DMAF 152 St road upgrades Serpentine river to Nicomekl river	152 Street - Serpentine river to Nicomekl river	Short Term (1 - 5 Yrs)	42,711,602	-	1,163,200	41,548,402	0
16970	DMAF - Southern Railway Serpentine Bridge	16367 56 Ave	Short Term (1 - 5 Yrs)	1,375,000	125,000	500,000	750,000	0
16969	DMAF - Nicomekl Sea Dam Construction	Nicomekl River: Elgin Rd to KGB	Short Term (1 - 5 Yrs)	39,393,035	553,670	2,214,680	36,624,685	0
16966	DMAF - Serpentine Sea Dam Construction	Serpentine Sea Dam location downstream of KGB	Short Term (1 - 5 Yrs)	18,998,718	2,332,526	9,330,107	7,336,085	0
16965	DMAF - Living Dyke Upgrades - Series 100 Dyke		Short Term (1 - 5 Yrs)	7,194,382	-	3,665,154	3,529,228	0
16046	Upper Serpentine dyke tie in 17040 92 Ave	17040 92 Ave	Long Term (6 - 10 Yrs)	250,000	-	250,000	-	0
16039	DMAF -Burrows Pump Station upgrades	Nicomekl River: 4444 168 St	Short Term (1 - 5 Yrs)	1,400,000	-	840,000	560,000	0
15786	DMAF - Colebrook Dyke Upgrades - Provincial Portion	Colebrook dyke - delta to Serpentine sea dam	Short Term (1 - 5 Yrs)	10,400,000	-	-	10,400,000	0
15752	DMAF - Colebrook Dyke Upgrades - City lands	Colebrook dykes - sea dam to Delta	Short Term (1 - 5 Yrs)	8,045,144	-	3,088,780	4,956,364	0
14944	Floodbox replacement program	various	Annual	3,000,000	-	3,000,000	-	0
14864	Surrey Lowlands - Gray Creek North of Colebrook Rd	152 St to Serpentine River	Long Term (6 - 10 Yrs)	1,240,000	240,000	1,000,000	-	0
14645	DMAF - Colebrook Pump Station Upgrades	Colebrook at Serpentine River	Long Term (6 - 10 Yrs)	5,196,950	632,790	2,531,160	2,033,000	0
11723	DMAF - Nicomekl River Dyking	Nicomekl River: Sea Dam to 184 Street	Short Term (1 - 5 Yrs)	2,050,479	222,179	888,718	939,582	0
11722	DMAF - Serpentine River Dyking	Serpentine River: Sea Dam to 088 Avenue	Short Term (1 - 5 Yrs)	1,925,640	256,066	1,024,264	645,310	0
11720	Erickson/Burrow Conveyance Works	Erickson/ Burrow	Short Term (1 - 5 Yrs)	1,250,000	250,000	1,000,000	-	0



**FIGURE 5.4 - Drainage Relief & Trunk System (Program 1670)**

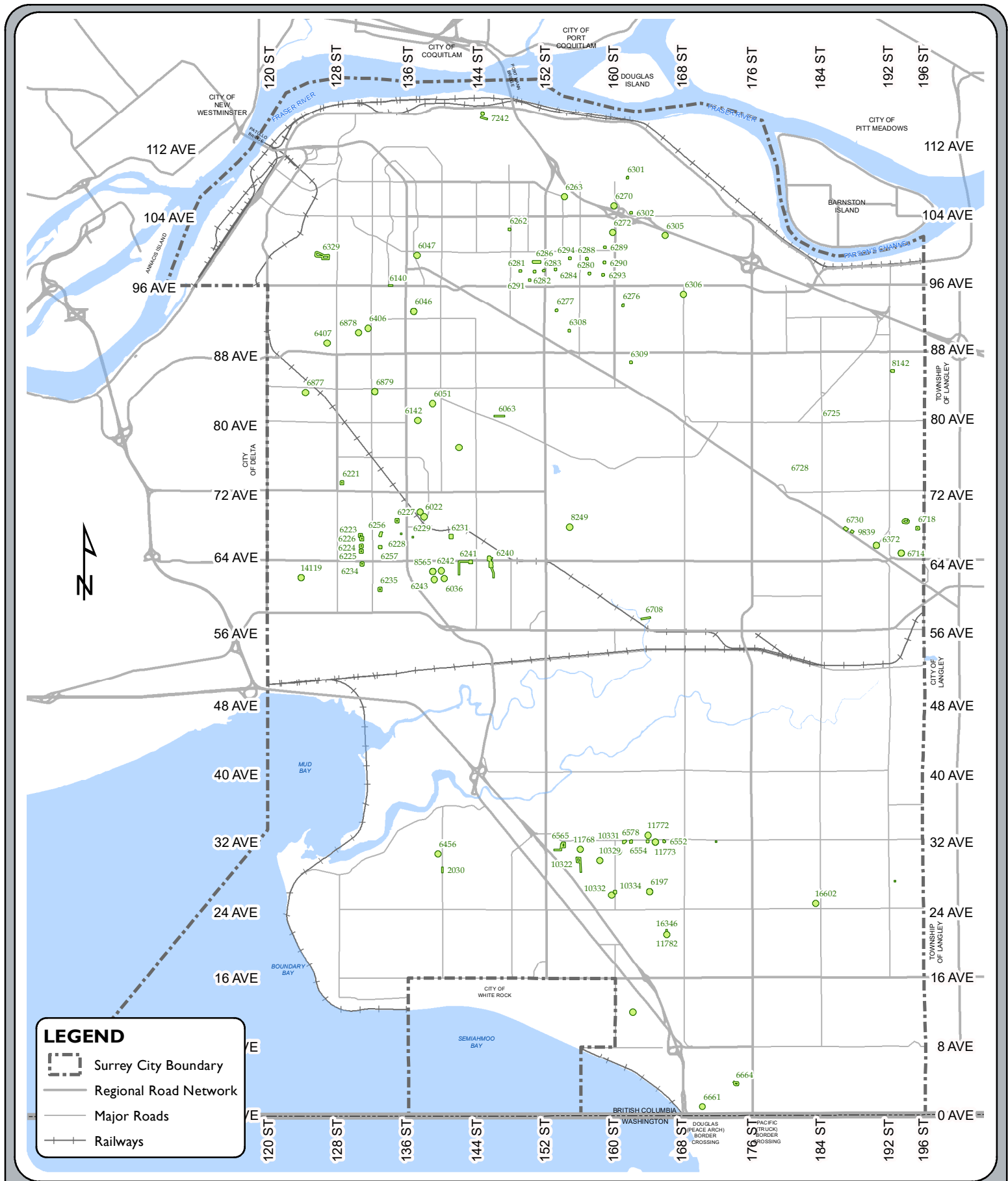


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### Program 1670 - D - Relief & Trunk System

<b>Program Total</b>	<b>42,243,917</b>	<b>24,475,417</b>	<b>17,768,500</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
16902	Phase 1 robson southeast storm sewer replacement	128 St from 100 Ave to 75m south of 98 Ave	Short Term (1 - 5 Yrs)	1,800,000	360,000	1,440,000	-	-
16038	Newton Pond Trunk Sewer Diversion	070 Ave from KGB to Newton pond	Short Term (1 - 5 Yrs)	500,000	250,000	250,000	-	-
14994	1775 m pipe upsize to 1050mm	103 Ave & 146 St to 105A Ave & 152 St	Long Term (6 - 10 Yrs)	4,336,010	4,336,010	-	-	-
14674	Robson North Beaver/Park Drive Trunk Project #6 McElhanney	Beaver/Park/Helen/Mary/Centre Drive	Short Term (1 - 5 Yrs)	3,000,000	600,000	2,400,000	-	-
14673	Robson 100 Ave Trunk project #5 McElhanney	100 Ave from 128 St to 127A St, 127A St & 127B St from 100 A	Short Term (1 - 5 Yrs)	3,000,000	600,000	2,400,000	-	-
14671	Robson 124A St Trunk Project #3 McElhanney/Urban Systems	Robson South - 124A St and 99A Ave	Short Term (1 - 5 Yrs)	4,500,000	900,000	3,600,000	-	-
14670	Robson North 100 Ave Trunk Replacement Project #2 McElhanney	100 Ave: 127A St to Robson Creek outfall	Short Term (1 - 5 Yrs)	2,900,000	580,000	2,320,000	-	-
14669	Robson South 99 Ave Trunk Project #1 McElhanney/USL reports	99 Ave from Grove Cr. To 127B St	Long Term (6 - 10 Yrs)	3,900,000	780,000	3,120,000	-	-
14665	City Centre Water Quality features	Various Locations	Short Term (1 - 5 Yrs)	1,579,000	1,579,000	-	-	-
14116	South Surrey - Hwy 99 Culvert at Morgan Creek	Hwy 99 at 28 Ave: Upper Titman Creek (Old Logging ISMP)	Long Term (6 - 10 Yrs)	100,000	-	100,000	-	-
14115	South Surrey - Burrow's Ditch at 32 Avenue culvert upgrade	32 Ave at 172 St (Old Logging/Burrow's ISMP)	Long Term (6 - 10 Yrs)	100,000	-	100,000	-	-
14113	South Surrey - Wills Brook trib at 160 St culvert upgrade	3087 - 160 St: Wills Brook trib (Old Logging/Burrow's ISMP)	NCP Driven	45,000	45,000	-	-	-
14112	South Surrey - Morgan Creek at 32 Avenue culvert upgrade	15850 - 32 Ave: Titman Creek (Old Logging/Burrow's ISMP)	Short Term (1 - 5 Yrs)	115,000	115,000	-	-	-
14108	South Surrey - April Creek headwaters trunk sewer	165 St at 28 Ave north to April Creek (Old Logging ISMP)	Long Term (6 - 10 Yrs)	220,000	-	220,000	-	-
14106	South Surrey - 172 St trunk sewer upgrade to 1200 mm diam	172 St from 32 ave to back of 2875 Country Woods Dr	NCP Driven	1,515,947	1,515,947	-	-	-
14105	South Surrey - 172 St trunk sewer upgrade to 600 mm diam	172 St alignment behind 2815 to 2875 Country Woods Dr	NCP Driven	227,000	227,000	-	-	-
14104	South Surrey - Orchard Grove NCP trunk sewer upgrade	164 St: 26 Ave to 2700 block	NCP Driven	395,000	395,000	-	-	-
13783	Ditch Improvements	147 St: 66 Ave - Hyland Creek	Short Term (1 - 5 Yrs)	500,000	500,000	-	-	-
12872	Cloverdale TC - 176 St Rail Crossing	176 St and BC Hydro Railway	Short Term (1 - 5 Yrs)	350,000	140,000	210,000	-	-
12869	Cloverdale TC - 57th Ave Storm Sewer	057 Ave: 175 to 176 St	Long Term (6 - 10 Yrs)	600,000	-	600,000	-	-
12868	Cloverdale - 175th St. Storm sewer Upgrade	175th St from 60 Ave to Cloverdale Bypass	Long Term (6 - 10 Yrs)	1,600,000	640,000	960,000	-	-
12865	South Surrey - Drainage Channel DC5	40 ave 188 to 184 St. Erickson watershed	NCP Driven	155,000	155,000	-	-	-
12860	South Surrey - Drainage Channel DC2	32 Ave 182 to 184 St Erickson Watershed	NCP Driven	139,000	139,000	-	-	-
12859	South Surrey - Drainage Channel DC1	179 St 20 to 24 ave Erickson Watershed	NCP Driven	217,000	217,000	-	-	-
11804	Ditch/Channel Erosion Protection	Sunnyside Heights NCP	NCP Driven	25,560	25,560	-	-	-
11803	7816-0376-00: Trunk Storm Sewers	Sunnyside Heights NCP @ 16692 16 Ave	NCP Driven	1,418,400	1,418,400	-	-	-
8127	New Storm Trunk Sewer (150m)	88 Ave - 196 St to Latimer Creek Trib	Long Term (6 - 10 Yrs)	125,000	112,500	12,500	-	-
7241	Culvert Drainage	066 Ave / 171 St	NCP Driven	72,000	36,000	36,000	-	-
6943	1,617m of 600mm diameter storm sewer	184 St: 024 Ave - 032 Ave	NCP Driven	1,750,000	1,750,000	-	-	-
6719	Trunk storm sewer diversion	196 St: 064 Ave - outfall	Short Term (1 - 5 Yrs)	1,895,000	1,895,000	-	-	-
6687	300m of 750mm diameter. Trunk	168 St: Fraser Hwy - 078 Ave	Long Term (6 - 10 Yrs)	700,000	700,000	-	-	-
6669	406m - Erosion protection.	195 St: 56 - 58 Ave	Long Term (6 - 10 Yrs)	200,000	200,000	-	-	-
6572	425m of 1,200mm trunk sewer	Croydon Dr: 029 - 031 Ave (Rosemary Hts Bus Prk NCP)	Short Term (1 - 5 Yrs)	1,089,000	1,089,000	-	-	-
6244	900mm Upgrade Existing Storm	068 Ave: 141 - 142 St	Long Term (6 - 10 Yrs)	1,000,000	1,000,000	-	-	-
6174	Trunk: 213m - 750 -900mm	84 Ave: E of 148 St	Long Term (6 - 10 Yrs)	175,000	175,000	-	-	-
6164	807m of 750 to 900mm diameter	080 Ave: 134 St - King George Hwy	Long Term (6 - 10 Yrs)	2,000,000	2,000,000	-	-	-



**FIGURE 5.5 - Drainage Community Detention (Program 1672)**

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Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yrCCP\_Plan10yrServicingPlan2019-28\Figure5-5-Drainage.mxd

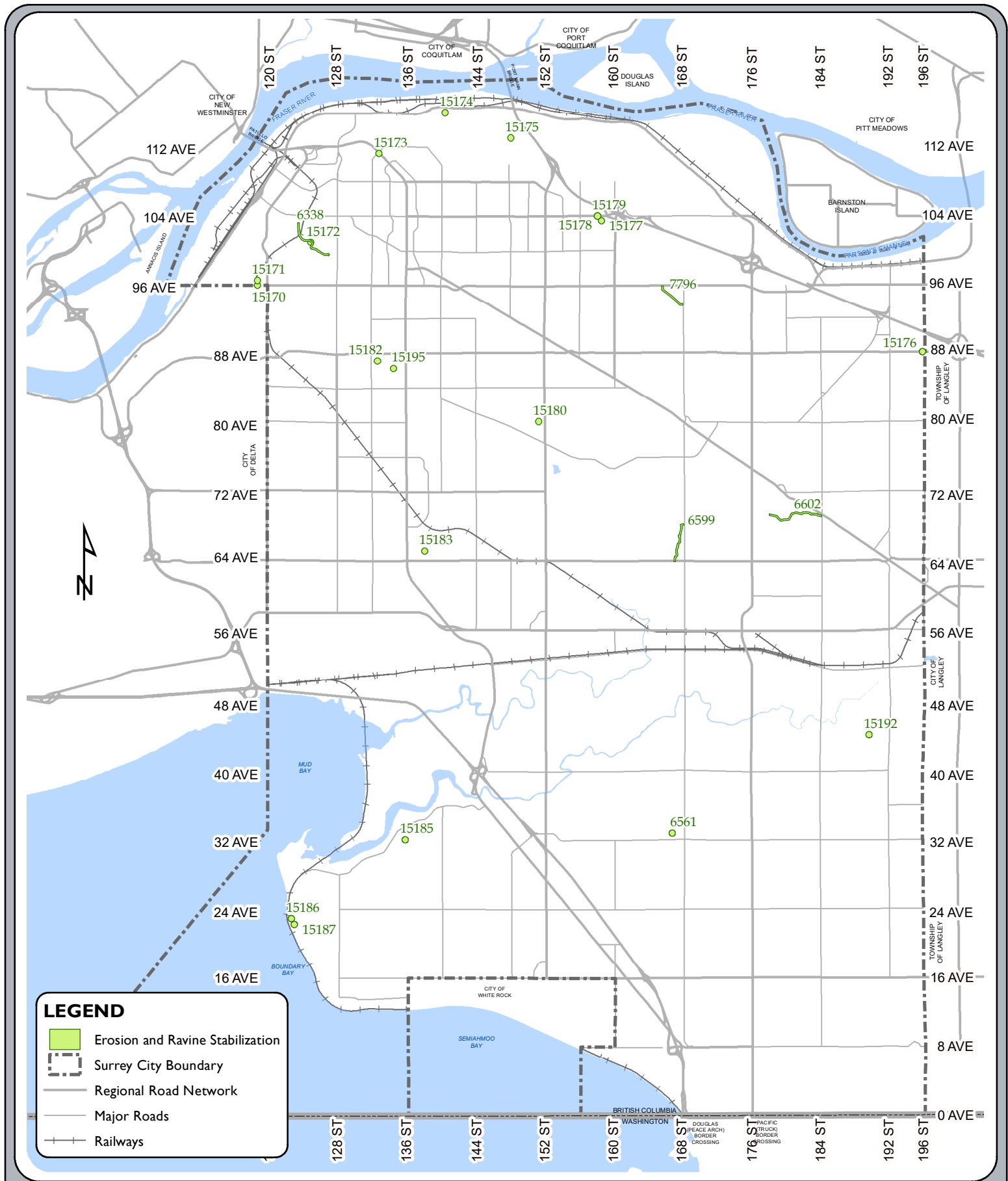


## DRAINAGE

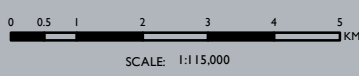
### Program 1672 - D - Community Detention

<b>Program Total</b>	<b>12,872,000</b>	<b>11,934,900</b>	<b>937,100</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17560	Chia Detention Pond	NE corner of 17190 32 Avenue	NCP Driven	1,500,000	1,500,000	-	-	-
14119	Central Surrey - Rain garden in Boundary Park	Boundary Drive East at 62 Ave; Boundary Park & Pond	Long Term (6 - 10 Yrs)	340,000	-	340,000	-	-
11782	Stormwater Corridors for Sunnyside Heights NCP	Grandview Heights #2 (Sunnyside Heights) NCP	NCP Driven	3,500,000	3,500,000	-	-	-
11773	DCC F/End - North Grandview Heights NCP Pond F: 1800 cu.m	032 Ave / 166 St (April Crk)	NCP Driven	616,000	616,000	-	-	-
8565	Archibald Detention Pond P1B	138 St / 62 Ave	NCP Driven	2,471,000	2,223,900	247,100	-	-
6879	Mahood Cruickshank Pond 3	Mahood Creek: 084 Ave / 132 St	Long Term (6 - 10 Yrs)	1,500,000	1,200,000	300,000	-	-
6372	East Clayton NCP Pond - D	Fraser Hwy / 190 St	NCP Driven	2,890,000	2,890,000	-	-	-
6046	Community detention/sediment Pond	093Ave: 136A St - Hydro ROW	Long Term (6 - 10 Yrs)	55,000	5,000	50,000	-	-



**FIGURE 5.6 - Drainage Erosion & Ravine Stabilization (Program 1679)**



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Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey  
Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP\10yr\CCP\_Plan\10yr\servicing\Plan2019-28\Figure5-6-Drainage.mxd

## DRAINAGE

### Program 1679 - D - E&R Stabilization (Capital)

<b>Program Total</b>	<b>8,045,000</b>	<b>3,295,000</b>	<b>4,750,000</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
15195	Erosion site (high risk): Bear Creek	Bear Creek: 8626 Tulsy Cr E (Tulsy Cr / Tulsy Cr E)	Long Term (6 - 10 Yrs)	250,000	50,000	200,000	-	-
15192	Erosion site (high risk): Armstrong Creek	Armstrong Creek: 4427 190 St (192 St / 42A Ave)	Short Term (1 - 5 Yrs)	125,000	25,000	100,000	-	-
15187	Erosion site (high risk): Crescent Beach Creek #2	Crescent Beach Creeks: 2233 123 St (123 St / 22 Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
15186	Erosion site (high risk): Crescent Beach Creek #1	Crescent Beach Creeks: 2267 Christopherson Rd (at 22B Ave)	Long Term (6 - 10 Yrs)	250,000	50,000	200,000	-	-
15185	Erosion site (high risk): Chantrell Creek	Chantrell Creek: 13552 32 Ave (136A St / 136 St)	Short Term (1 - 5 Yrs)	360,000	60,000	300,000	-	-
15183	Erosion site (high risk): Hyland Trib	Hyland Tributaries: 6542 138 St (138 St / 65 Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
15182	Erosion site (high risk): Grenville Creek	Grenville Creek: 13256 Tulsy Pl (132 St / Shakespeare Pl)	Long Term (6 - 10 Yrs)	250,000	50,000	200,000	-	-
15180	Erosion site (high risk): 152 St	152 St Creek: 15135 80 Ave (152 St / 80 Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
15179	Erosion site (high risk): Guildford Brook Creek #2	Guildford Brook Creek: 10461 158 St (158 St / 104 Ave)	Short Term (1 - 5 Yrs)	125,000	25,000	100,000	-	-
15178	Erosion site (high risk): Guildford Brook Creek#1	Guildford Brook Creek: 10461 158 St (158 St / 104 Ave)	Short Term (1 - 5 Yrs)	125,000	25,000	100,000	-	-
15177	Erosion site (high risk): Serpentine River Tributary	Serpentine River Trib:10336 158A St (158A St/102B Ave)	Short Term (1 - 5 Yrs)	125,000	25,000	100,000	-	-
15176	Erosion site (high risk): Latimer Creek	Latimer Creek: 19588 88 Ave (192 St / 88 Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
15175	Erosion site (high risk): Wallace Creek outfall	Wallace Creek: 11348 Roxburgh Rd (Wellington Dr)	Short Term (1 - 5 Yrs)	600,000	100,000	500,000	-	-
15174	Erosion site (high risk): Dingwall Creek	Dingwall Creek: 14037 116 Ave (140A St / 116 Ave)	Long Term (6 - 10 Yrs)	250,000	50,000	200,000	-	-
15173	Erosion site (high risk) : Bolivar Creek	Bolivar Creek: 13285 King George Blvd (132 St Div / KGB)	Long Term (6 - 10 Yrs)	250,000	50,000	200,000	-	-
15172	Erosion site (high risk): Robson Creek	Robson Creek: 10121 Park Dr (Park Dr / Centre Dr)	Long Term (6 - 10 Yrs)	125,000	25,000	100,000	-	-
15171	Erosion site (high risk) - Delta Creek #2	Delta Creek: 11822 97 Ave (118B St / 96A Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
15170	Erosion site (high risk) Delta Creek #1	Delta Creek: 11822 97A Ave (118B St / 91A Ave)	Short Term (1 - 5 Yrs)	250,000	50,000	200,000	-	-
7796	Upper Serpentine Erosion Prevention	Serpentine River: 16542 096 Ave to 9212 168 St	Short Term (1 - 5 Yrs)	2,000,000	1,000,000	1,000,000	-	-
6602	900m of creek improvement - North Cloverdale West NCP	North Creek: 70 Ave /184 - 178 St	NCP Driven	700,000	700,000	-	-	-
6599	Creek Protection- W Cloverdale North NCP	East Creek: 064 Ave - 168 St	NCP Driven	700,000	700,000	-	-	-
6561	Erosion protection - North Grandview Heights NCP	167 St / 033 Ave	NCP Driven	60,000	60,000	-	-	-
6338	Robson Creek Ravine Erosion Protection Works	Robson Creek: 127 St / 099 Ave - 104 Ave / 123 St	Short Term (1 - 5 Yrs)	250,000	-	250,000	-	-

## 6. CAMPBELL HEIGHTS

The Campbell Heights area encompasses approximately 800 hectares in southeast Surrey. The area generally lies between 18 Avenue and 44 Avenue to the south and north, and 186 Street and 196 Street to the west and east. The western boundary follows the top of a ridge that descends to the Nicomekl River lowland floodplain.

The City of Surrey OCP designates all of Campbell Heights as an industrial area.

A specific area servicing plan was developed for this area to address local site constraints and issues related to servicing an entire industrial development. Major servicing requirements include:

- Local feeder mains to provide water distribution and fire protection;
- New collector and arterial routes, and the widening of arterials to four-five lanes throughout the area;
- Pump station upgrades, siphons to the Metro Vancouver Cloverdale trunk sewer, and local gravity trunk sewers to provide sanitary sewer service; and
- Exfiltration systems, open channel wetlands, and detention ponds for drainage, also including environmental measures such as habitat restoration.

**Table 6.1 – Campbell Heights Cost Summary**

No.	Program	Growth (\$)	Non-Growth (\$)	External (\$)	GVTA (\$)	Total (\$)
1017	Transportation	113,174,750	0	17,173,750	24,587,500	154,936,000
1617	Water	14,390,000	0	0	0	14,390,000
1637	Sewer	5,044,650	0	0	0	5,044,650
1667	Drainage	6,123,700	0	0	0	6,123,700
<b>Total</b>		<b>138,733,100</b>	<b>0</b>	<b>17,173,750</b>	<b>24,587,500</b>	<b>180,494,350</b>

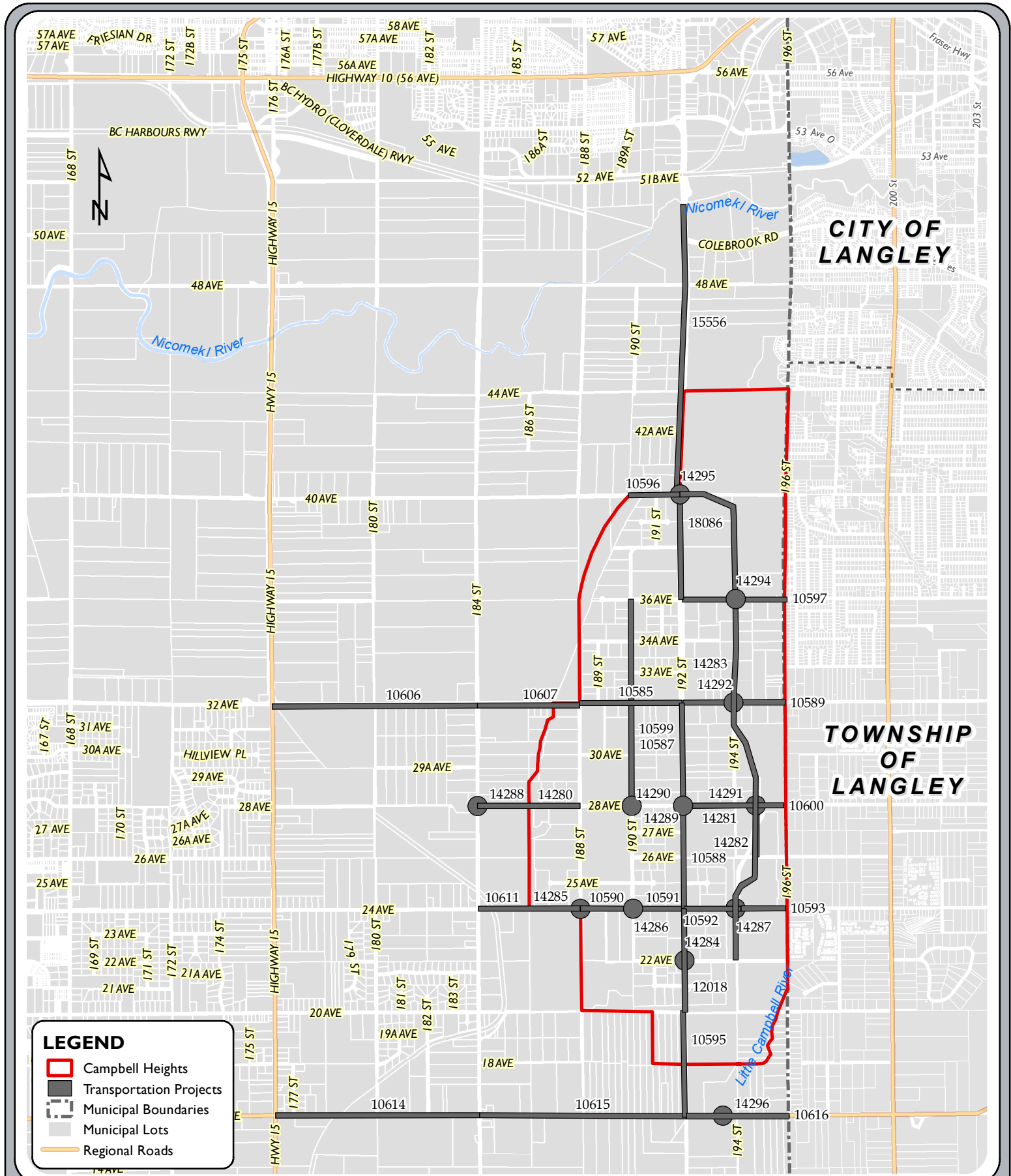
### 6.1 Campbell Heights Projects by Program

The following tables and figures identify the projects under the Campbell Heights programs for transportation, sanitary sewer, water and stormwater (drainage). The tables provide the following information:

- a) Project ID - the unique identifier of the project;
- b) Project name - the specific name or generic name that depicts the type of work;
- c) Project location - the geographic extent of the works;
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change); and
- e) Costs – the high-level estimates in 2019 dollars (subject to change at the actual time of construction).

The costs are comprised of growth, non-growth, external and GVTA funding components. External funding may include sources such as the Provincial government, the Federal government and developers' contributions through their projects.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations may not be shown on the maps.



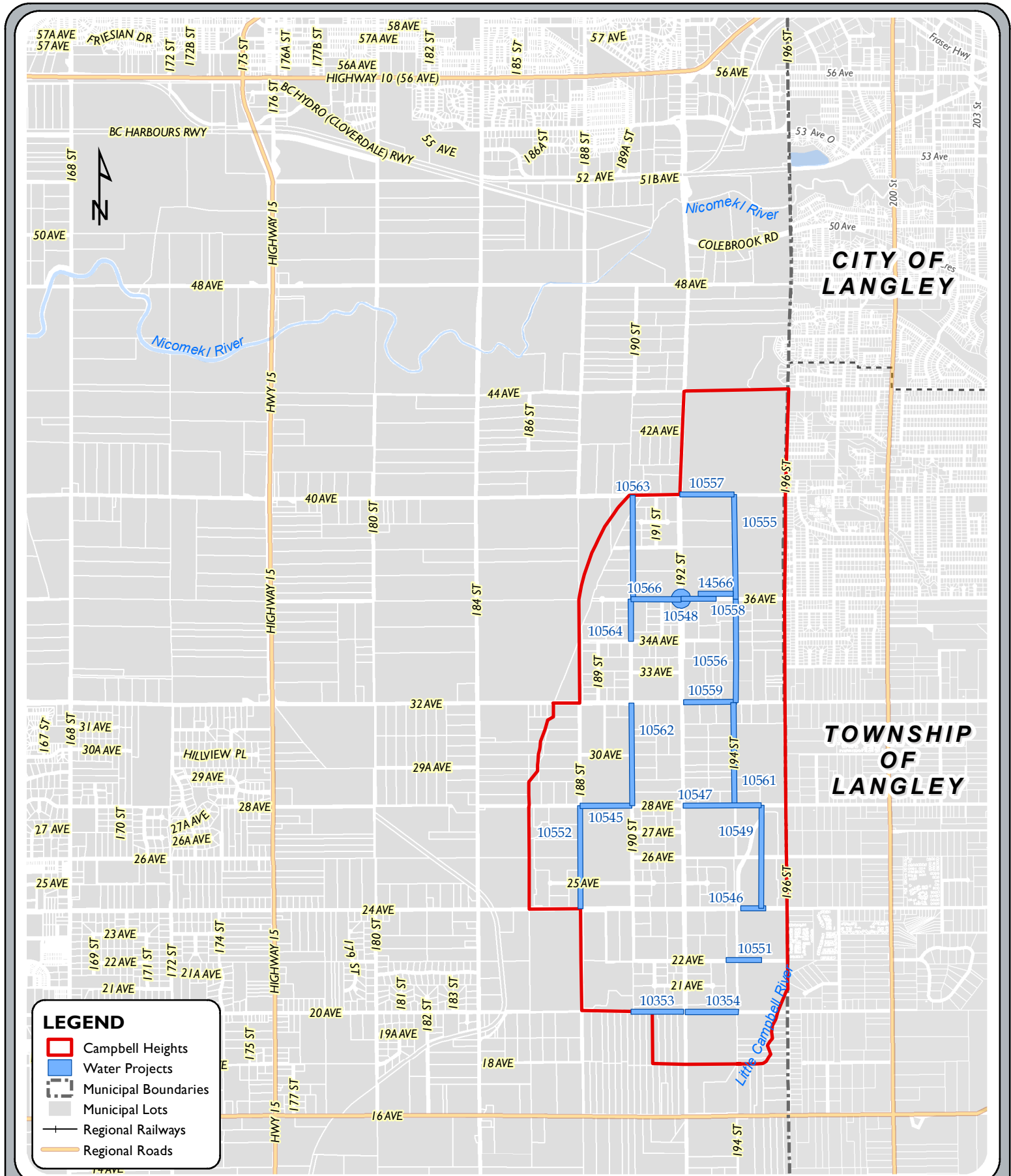
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## ROADS

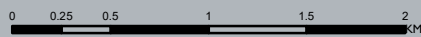
### Program 1017 - T - Transportation Campbell Heights

<b>Program Total</b>	<b>154,936,000</b>	<b>113,174,750</b>	<b>-</b>	<b>17,173,750</b>	<b>24,587,500</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
18086	Arterial Widening - 3 to 5 Lane (East Side)	192 St: 036 Ave - 040 Ave	NCP Driven	2,440,000	2,440,000	-	-	-
15556	Arterial Widening - 5 Lane	192 St: 40 Ave - 5000 Blk	NCP Driven	6,880,000	6,880,000	-	-	-
14296	Widen Crossing	016 Ave / Campbell River	NCP Driven	4,575,000	1,143,750	-	1,143,750	2,287,500
14295	Traffic Signal	040 Ave / 192 St	NCP Driven	183,000	183,000	-	-	-
14294	Traffic Signal	036 Ave / 194A St	NCP Driven	244,000	244,000	-	-	-
14292	Traffic Signal	032 Ave / 194A St	NCP Driven	244,000	244,000	-	-	-
14291	Traffic Signal	028 Ave / 194A St	NCP Driven	244,000	244,000	-	-	-
14290	Traffic Signal	028 Ave / 192 St	NCP Driven	244,000	244,000	-	-	-
14289	Traffic Signal	028 Ave / 190 St	NCP Driven	244,000	244,000	-	-	-
14288	Traffic Signal	028 Ave / 184 St	NCP Driven	244,000	244,000	-	-	-
14287	Traffic Signal	024 Ave / 194A St	NCP Driven	244,000	244,000	-	-	-
14286	Traffic Signal	024 Ave / 190 St	NCP Driven	244,000	244,000	-	-	-
14285	Traffic Signal	024 Ave / 188 St	NCP Driven	244,000	244,000	-	-	-
14284	Traffic Signal	022 Ave / 192 St	NCP Driven	244,000	244,000	-	-	-
14283	Collector Upsizing	194/194A St: 022 Ave - 040 Ave	NCP Driven	5,124,000	5,124,000	-	-	-
14282	Collector Widening	194A St: 026 Ave - 028 Ave	NCP Driven	1,220,000	1,220,000	-	-	-
14281	Collector Widening	028 Ave: 192 St - 194 St	NCP Driven	1,220,000	1,220,000	-	-	-
14280	Collector Widening	028 Ave: 184 St - 188 St	NCP Driven	4,392,000	4,392,000	-	-	-
12018	Arterial Widening - 3 to 5 Lane (East Side)	192 St: 020 Ave - 024 Ave	NCP Driven	4,392,000	4,392,000	-	-	-
10616	Arterial Widening - 5 Lane	016 Ave: 192 St - 196 St	NCP Driven	8,920,000	2,230,000	-	2,230,000	4,460,000
10615	Arterial Widening - 5 Lane	016 Ave: 184 St - 192 St	NCP Driven	17,840,000	4,460,000	-	4,460,000	8,920,000
10614	Arterial Widening - 5 Lane	016 Ave: 176 St - 184 St	NCP Driven	17,840,000	4,460,000	-	4,460,000	8,920,000
10611	Arterial Widening - 5 Lane	024 Ave: 184 St - 188 St	NCP Driven	9,760,000	4,880,000	-	4,880,000	-
10607	Arterial Widening - 3 Lane	032 Ave: 184 St - 188 St	NCP Driven	5,368,000	5,368,000	-	-	-
10606	Arterial Widening - 5 Lane	032 Ave: 176 St - 184 St	NCP Driven	10,736,000	10,736,000	-	-	-
10600	Collector Upsizing	028 Ave: 192 St - 196 St	NCP Driven	732,000	732,000	-	-	-
10599	7814-0337-00: Collector Upsizing	190 St: 028 Ave - 036 Ave	NCP Driven	1,464,000	1,464,000	-	-	-
10597	Arterial Widening - 5 Lane	036 Ave: 192 St - 196 St	NCP Driven	7,320,000	7,320,000	-	-	-
10596	Arterial Widening - 5 Lane	040 Ave: 190 Blk - 192 St	NCP Driven	3,660,000	3,660,000	-	-	-
10595	Arterial Widening - 5 Lane	192 St: 016 Ave - 020 Ave	NCP Driven	7,320,000	7,320,000	-	-	-
10593	New Arterial Construction	024 Ave: 194 St - 196 St	NCP Driven	4,148,000	4,148,000	-	-	-
10592	Arterial Widening - 3 to 5 Lane (South Side)	024 Ave: 192 St - 194 St	NCP Driven	1,708,000	1,708,000	-	-	-
10591	Arterial Widening - 3 to 5 Lane (South Side)	024 Ave: 190 St - 192 St	NCP Driven	1,708,000	1,708,000	-	-	-
10590	Arterial Widening - 5 Lane	024 Ave: 188 St - 190 St	NCP Driven	3,660,000	3,660,000	-	-	-
10589	Arterial Widening - 5 Lane	032 Ave: 192 St - 196 St	NCP Driven	7,320,000	7,320,000	-	-	-
10588	Arterial Widening - 3 to 5 Lane (East Side)	192 St: 024 Ave - 028 Ave	NCP Driven	3,416,000	3,416,000	-	-	-
10587	Arterial Widening - 5 Lane	192 St: 028 Ave - 032 Ave	NCP Driven	7,320,000	7,320,000	-	-	-
10585	Arterial Widening (South Side)	032 Ave: 188 St - 192 St	NCP Driven	1,830,000	1,830,000	-	-	-



**FIGURE 6.2 - Water  
Campbell Heights (Program 1617)**



SCALE: 1:38,500

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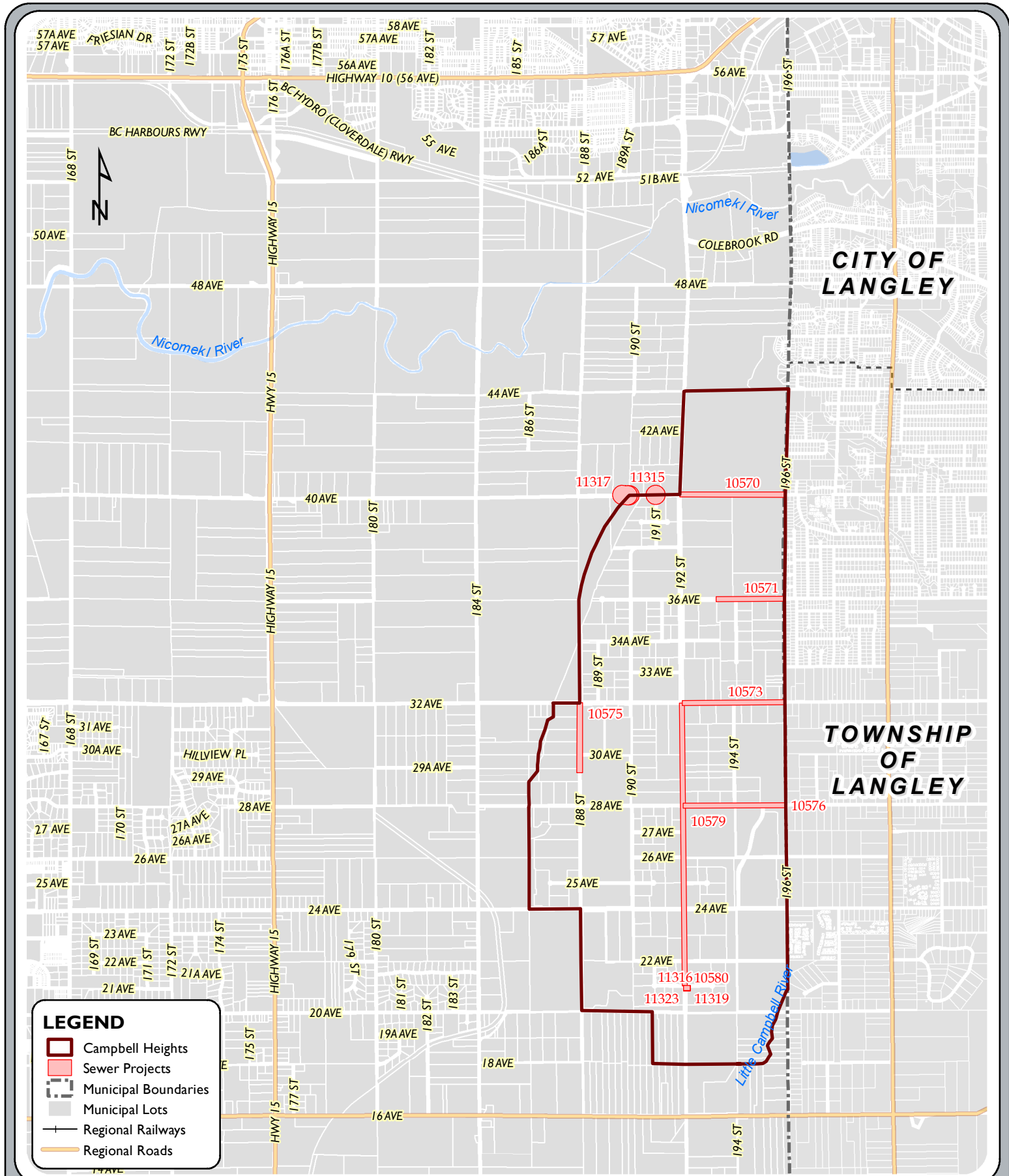


# WATER

## Program 1617 - W - Campbell Heights

<b>Program Total</b>	<b>14,390,000</b>	<b>14,390,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17060	Jericho Reservoir - CoS Contribution (Camp Heights) Ph1 2022	Township of Langley (20400 - 73A Avenue)	NCP Driven	486,000	486,000	-	-	-
17059	Jericho Reservoir - CoS Contribution (Camp Heights) Ph1 2021	Township of Langley (20400 - 73A Avenue)	NCP Driven	540,000	540,000	-	-	-
17058	Jericho Reservoir - CoS Contribution (Camp Heights) Ph1 2020	Township of Langley (20400 - 73A Avenue)	NCP Driven	540,000	540,000	-	-	-
14566	150m of 350mm diameter	36 Ave: 19310 - 194 St	NCP Driven	183,000	183,000	-	-	-
10566	400m of 350mm diameter	036 Ave: 192 - 190 St	NCP Driven	488,000	488,000	-	-	-
10564	800m of 300mm diameter	190 St: 34 - 36 Ave	NCP Driven	952,000	952,000	-	-	-
10563	800m of 300mm diameter	190 St: 040 - 036 Ave	NCP Driven	952,000	952,000	-	-	-
10562	800m of 300mm diameter	190 St: 032 - 028 Ave	NCP Driven	952,000	952,000	-	-	-
10561	800m of 350mm diameter	194 St: 032 - 028 Ave	NCP Driven	976,000	976,000	-	-	-
10559	400m of 300/350mm diameter	032 Ave: 194 - 192 St	NCP Driven	476,000	476,000	-	-	-
10558	285m of 350mm diameter	036 Ave: 192 - 19310	NCP Driven	348,000	348,000	-	-	-
10557	400m of 350mm diameter	040 Ave: 194 - 192 St	NCP Driven	488,000	488,000	-	-	-
10556	800m of 350mm diameter	194 St: 036 - 032 Ave	NCP Driven	976,000	976,000	-	-	-
10555	800m of 350mm diameter	194 St: 040 - 036 Ave	NCP Driven	976,000	976,000	-	-	-
10552	800m of 350mm diameter	188 St: 028 - 024 Ave	NCP Driven	976,000	976,000	-	-	-
10551	200m of 300mm diameter	022 Ave: 194 - 195 St	NCP Driven	244,000	244,000	-	-	-
10549	800m of 350mm diameter	195 St: 028 - 024 Ave	NCP Driven	976,000	976,000	-	-	-
10548	GVWD Connection	192 St / 036 Ave	NCP Driven	225,000	225,000	-	-	-
10547	600m of 350mm diameter	028 Ave: 195 - 192 St	NCP Driven	732,000	732,000	-	-	-
10546	400m of 300mm diameter	024 Ave: 194 - 195 St	NCP Driven	476,000	476,000	-	-	-
10545	400m of 300mm diameter	028 Ave: 190 - 188 St	NCP Driven	476,000	476,000	-	-	-
10354	400m of 300mm diameter	020 Ave: 192 - 194 St	NCP Driven	476,000	476,000	-	-	-
10353	400m of 300mm diameter	020 Ave: 190 - 192 St	NCP Driven	476,000	476,000	-	-	-



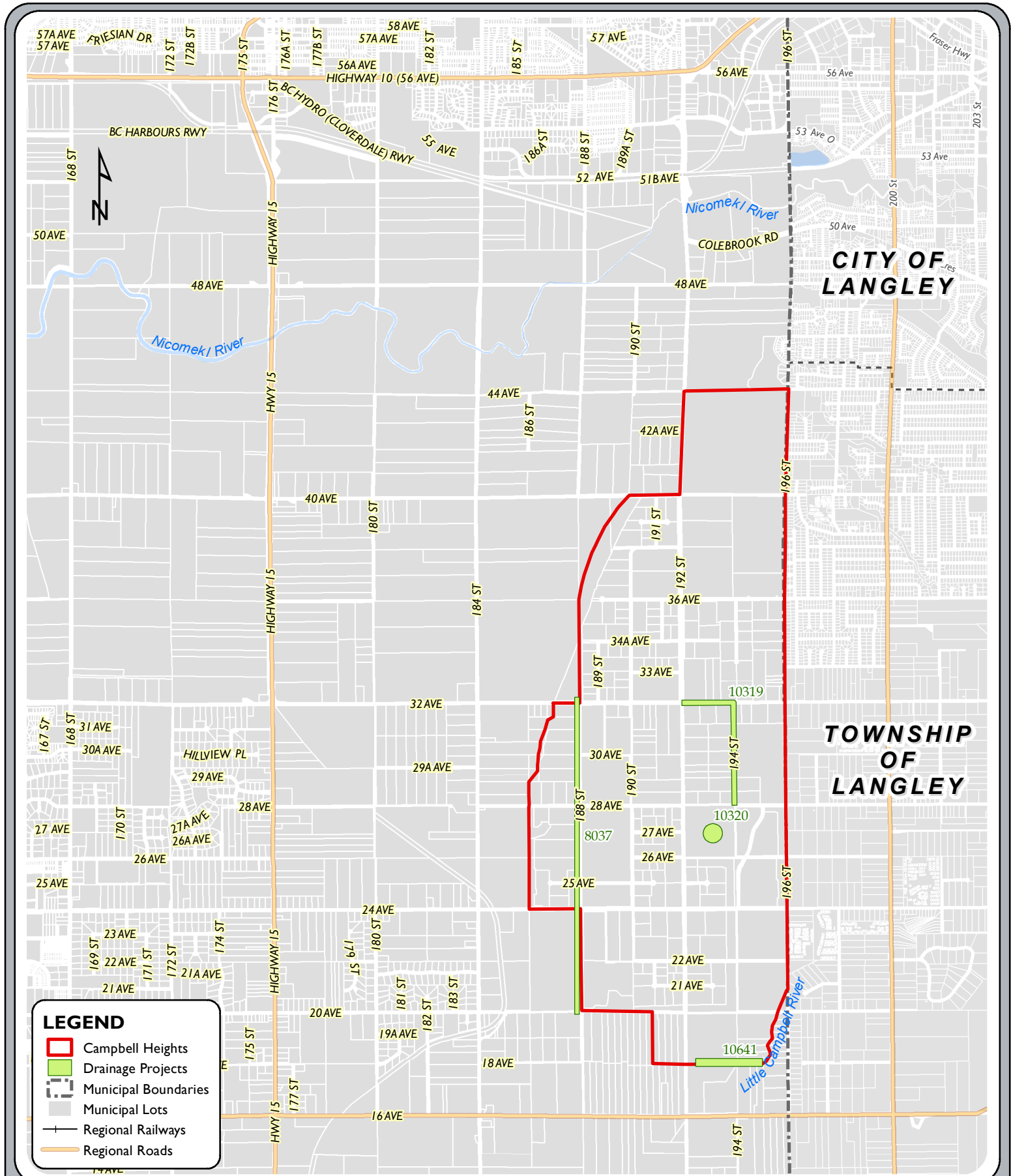
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## SEWER

### Program 1637 - S - Campbell Heights

<b>Program Total</b>	<b>5,044,650</b>	<b>5,044,650</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
11323	Campbell Hts. Pump Station - 2nd Upgrade to 210 L/s	021 Ave / 192 St	NCP Driven	442,200	442,200	-	-	0
11319	Campbell Hts. Overflow Storage Tank at P.S.	2090 192 St	NCP Driven	1,101,900	1,101,900	-	-	0
11318	Campbell Hts Sewer Upsizing	Various Locations	NCP Driven	219,300	219,300	-	-	0
11317	Campbell Hts Grid Chamber	040 Ave / 19000 blk (N)	NCP Driven	612,200	612,200	-	-	0
11316	Odour Control Facilities at Pump station	021 Ave / 192 St	NCP Driven	98,000	98,000	-	-	0
11315	Odour Control Facilities	040 Ave / 19000 blk	NCP Driven	789,550	789,550	-	-	0
10580	Campbell Heights PS interim upgrade to 120 L/s	021 Ave / 192 St	NCP Driven	871,500	871,500	-	-	0
10579	2,200m of 450mm diameter forcemain	192 St: 021 - 032 Ave	NCP Driven	175,000	175,000	-	-	0
10576	800m of 300mm diameter upsizing	028 Avenue: 192 to 196 Street	NCP Driven	109,600	109,600	-	-	0
10575	400m of 375mm diameter upsizing	188 Street: 031 - 032 Avenue	NCP Driven	86,100	86,100	-	-	0
10573	800m of 375mm diameter upsizing	032 Ave: 192 - 196 St	NCP Driven	239,000	239,000	-	-	0
10571	525m of 375mm diameter upsizing	036 Ave: 19370 - 196 St	NCP Driven	156,900	156,900	-	-	0
10570	800m of 375mm diameter upsizing	040 Ave: 192 - 196 St	NCP Driven	143,400	143,400	-	-	0



## DRAINAGE

### Program 1667 - D - Campbell Heights

<b>Program Total</b>	<b>6,123,700</b>	<b>6,123,700</b>	<b>-</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
10641	Exfiltration Drainage System	018 Ave: 192 - 195 St	NCP Driven	435,000	435,000	-	-	0
10320	Latimer Pond (Campbell Heights)	192 St / 028 Ave	NCP Driven	440,200	440,200	-	-	0
10319	Latimer 194 St and 28 Ave Trunk (Campbell Heights)	194 St, from 28 Ave to 32 Ave; 28 Ave, from 192 St to 194 St	NCP Driven	2,377,500	2,377,500	-	-	0
8037	Storm Exfiltration System	188 St: 020 - 028 Ave	NCP Driven	2,871,000	2,871,000	-	-	0

## 7. HIGHWAY 99 CORRIDOR

The Highway 99 Corridor area encompasses approximately 195 hectares and generally lies along Highway 99 from 8 Avenue to 32 Avenue.

The City's OCP designates the Highway 99 Corridor for commercial and industrial development.

A specific area servicing plan was developed for this area to address issues related to servicing a mixed-use commercial/industrial development. Major servicing requirements include:

- Feeder mains, pressure reducing valves and local feeder mains to provide water distribution and fire protection;
- Intersection improvements, and the widening of collectors and arterials throughout the area;
- A new sanitary pump station and forcemain, and local gravity trunk sewers to provide sanitary sewer service; and
- Community detention facilities, and culvert and watercourse upgrades.

**Table 7.1 – Highway 99 Corridor Cost Summary**

No.	Program	Growth (\$)	Non-Growth (\$)	External (\$)	GVTA (\$)	Total (\$)
1019	Transportation	32,950,000	0	22,800,750	3,170,500	58,921,250
1619	Water	3,406,000	0	0	0	3,406,000
1639	Sanitary Sewer	4,435,300	0	0	0	4,435,300
1669	Drainage	200,000	0	0	0	200,000
	<b>Total</b>	<b>40,991,300</b>	<b>0</b>	<b>22,800,750</b>	<b>3,170,500</b>	<b>66,962,550</b>

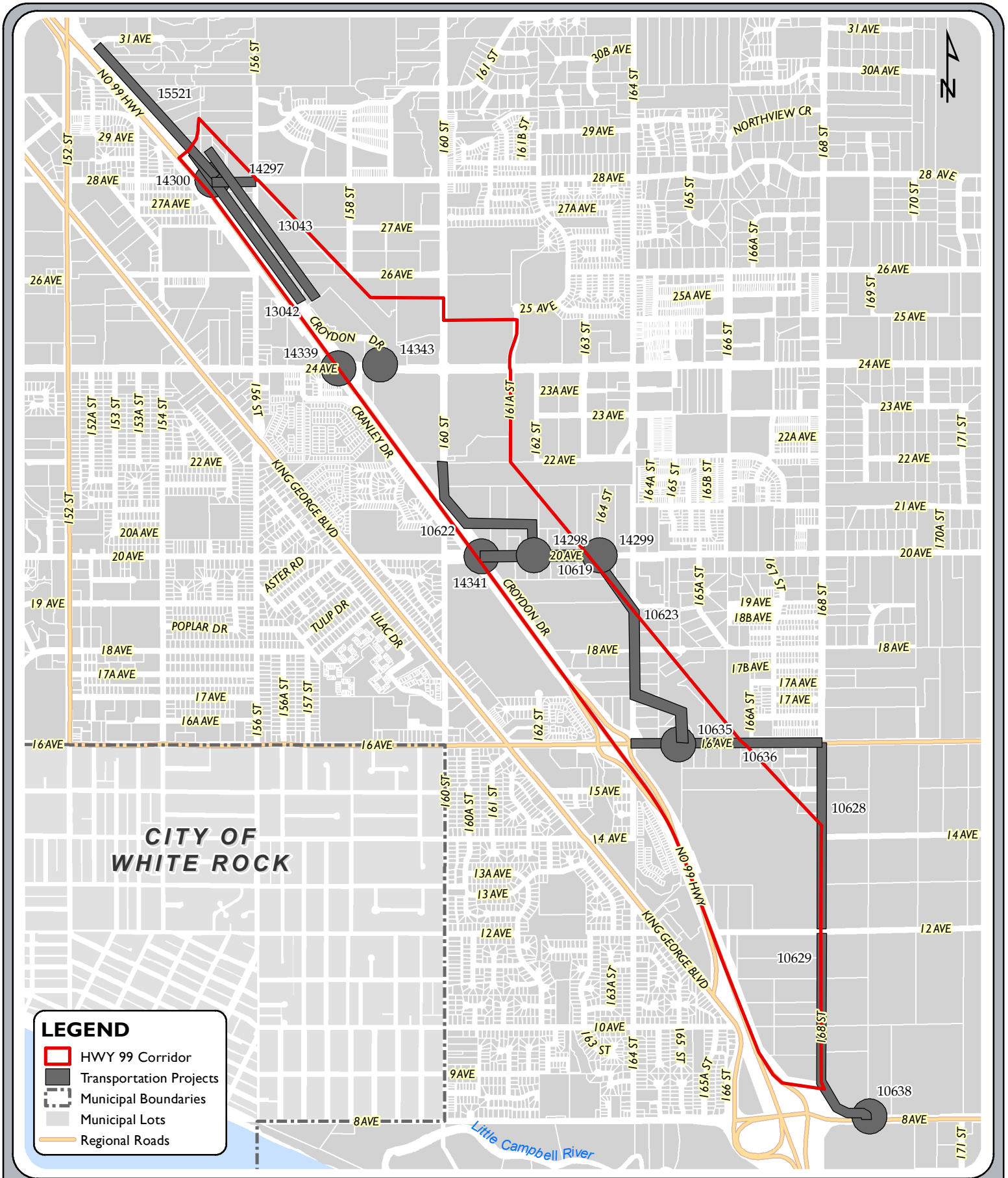
### 7.1 Highway 99 Corridor Projects by Program

The following tables and figures identify the projects under the Highway 99 Corridor programs for transportation, sanitary sewer, water and stormwater (drainage). The tables provide the following information:

- a) Project ID - the unique identifier of the project;
- b) Project name - the specific name or generic name that depicts the type of work;
- c) Project location - the geographic extent of the works;
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change); and
- e) Costs – the high-level estimates in 2019 dollars (subject to change at the actual time of construction).

The costs are comprised of growth, non-growth, external and GVTA funding components. External funding may include sources such as the Provincial government, the Federal government and developers' contributions through their projects.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations may not be shown on the maps.



**FIGURE 7.1 - Transportation Highway 99 Corridor (Program 1019)**

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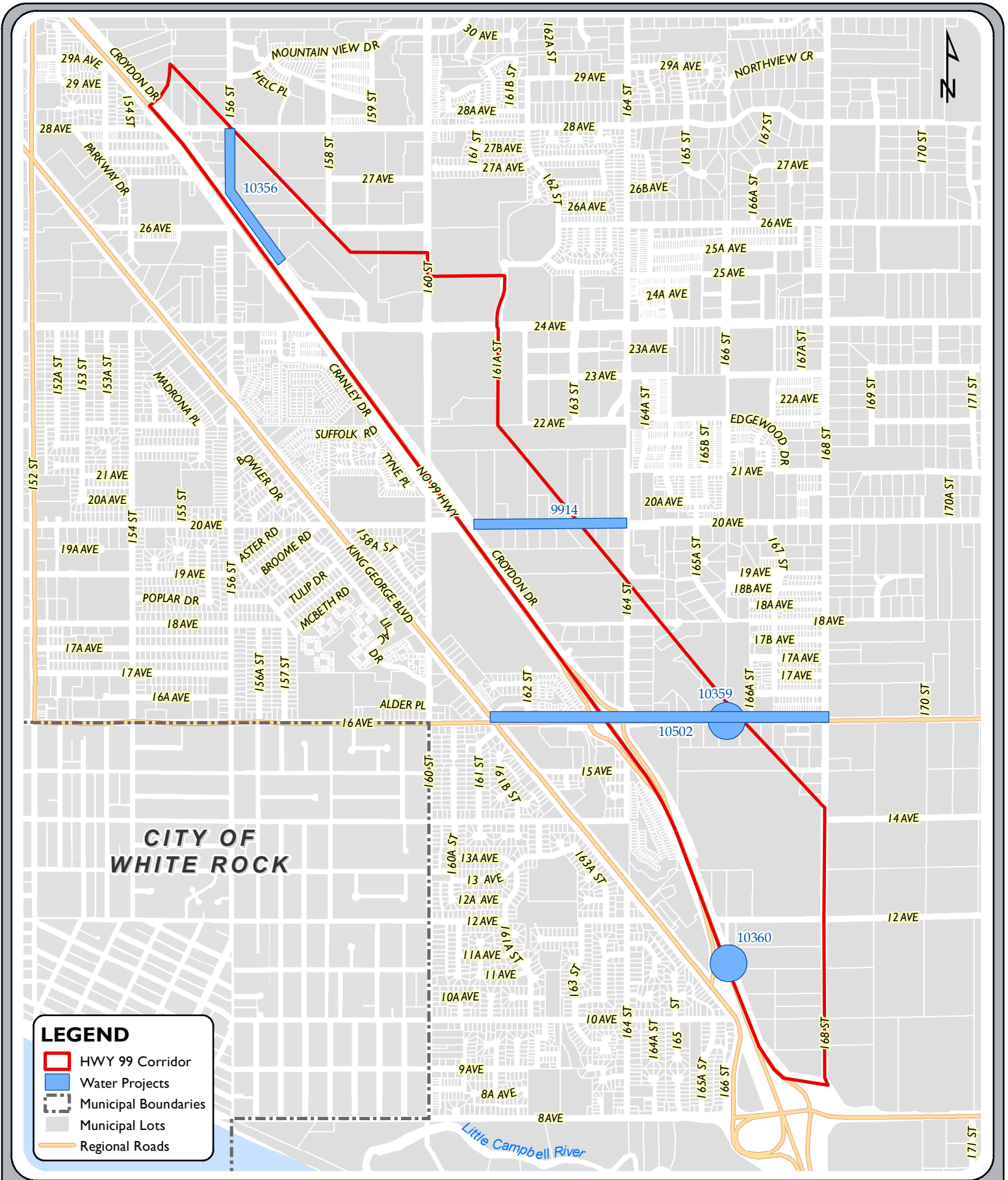
## ROADS

### Program 1019 - T - Highway 99 Corridor

<b>Program Total</b>	<b>58,921,250</b>	<b>32,950,000</b>	<b>-</b>	<b>22,800,750</b>	<b>3,170,500</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
15521	Collector Widening	Croydon Dr: 028 Ave - 032 Ave	NCP Driven	236,789	236,789	-	-	-
14343	Arterial Intersection Improvements	024 Ave / Croydon Dr	NCP Driven	1,541,536	1,541,536	-	-	-
14341	New Crossing (50% share w/ ID 14247)	020 Ave Overpass Hwy 99	NCP Driven	14,900,000	7,000,000	-	7,900,000	-
14339	Interchange Ramps (25% share w/Citywide ID 10056)	024 Ave / Hwy 99	NCP Driven	10,064,944	2,452,444	-	7,612,500	-
14300	Traffic Signal	028 Ave / Croydon Dr	NCP Driven	235,821	235,821	-	-	-
14299	Roundabout	020 Ave / 164 St	NCP Driven	884,330	884,330	-	-	-
14298	Roundabout	020 Ave / Croydon Dr	NCP Driven	884,330	884,330	-	-	-
14297	Collector Upsizing	028 Ave: Croydon Dr - 156 St (South Side)	NCP Driven	289,944	289,944	-	-	-
13043	Collector Upsizing (2 to 3 lanes)	Croydon Dr: 2500 Blk to 28 Ave	NCP Driven	362,430	362,430	-	-	-
13042	Collector Ultimate Widening (50% share)	Croydon Dr: 2500 Blk to 28 Ave	NCP Driven	1,208,101	1,208,101	-	-	-
10638	Traffic Signal: New	008 Ave / 168 St	NCP Driven	443,856	443,856	-	-	-
10636	Arterial Ultimate Widening (50% share w/ ID 10627)	016 Ave: Hwy 99 - 168 St (2 to 5 Lanes)	NCP Driven	6,287,863	1,532,113	-	1,585,250	3,170,500
10635	Traffic Signal: New	016 Ave / 164A St	NCP Driven	289,944	289,944	-	-	-
10629	Arterial Ultimate Widening (3 Lane)	168 St: 008 Ave - 012 Ave	NCP Driven	3,092,737	3,092,737	-	-	-
10628	Arterial Ultimate Widening (3 Lane)	168 St: 012 Ave - 016 Ave	NCP Driven	3,092,737	3,092,737	-	-	-
10623	Collector Upsizing (5 Lane)	164 St Realignment: 016 Ave - 020 Ave	NCP Driven	7,256,313	3,566,313	-	3,690,000	-
10622	Collector Upsizing (5 Lane)	Croydon Dr: 020 Ave - 2200 Blk	NCP Driven	3,958,525	1,945,525	-	2,013,000	-
10619	Arterial Ultimate Widening	020 Ave: 161 St - 164 St	NCP Driven	3,891,050	3,891,050	-	-	-





**FIGURE 7.2 - Water Highway 99 Corridor (Program 1619)**

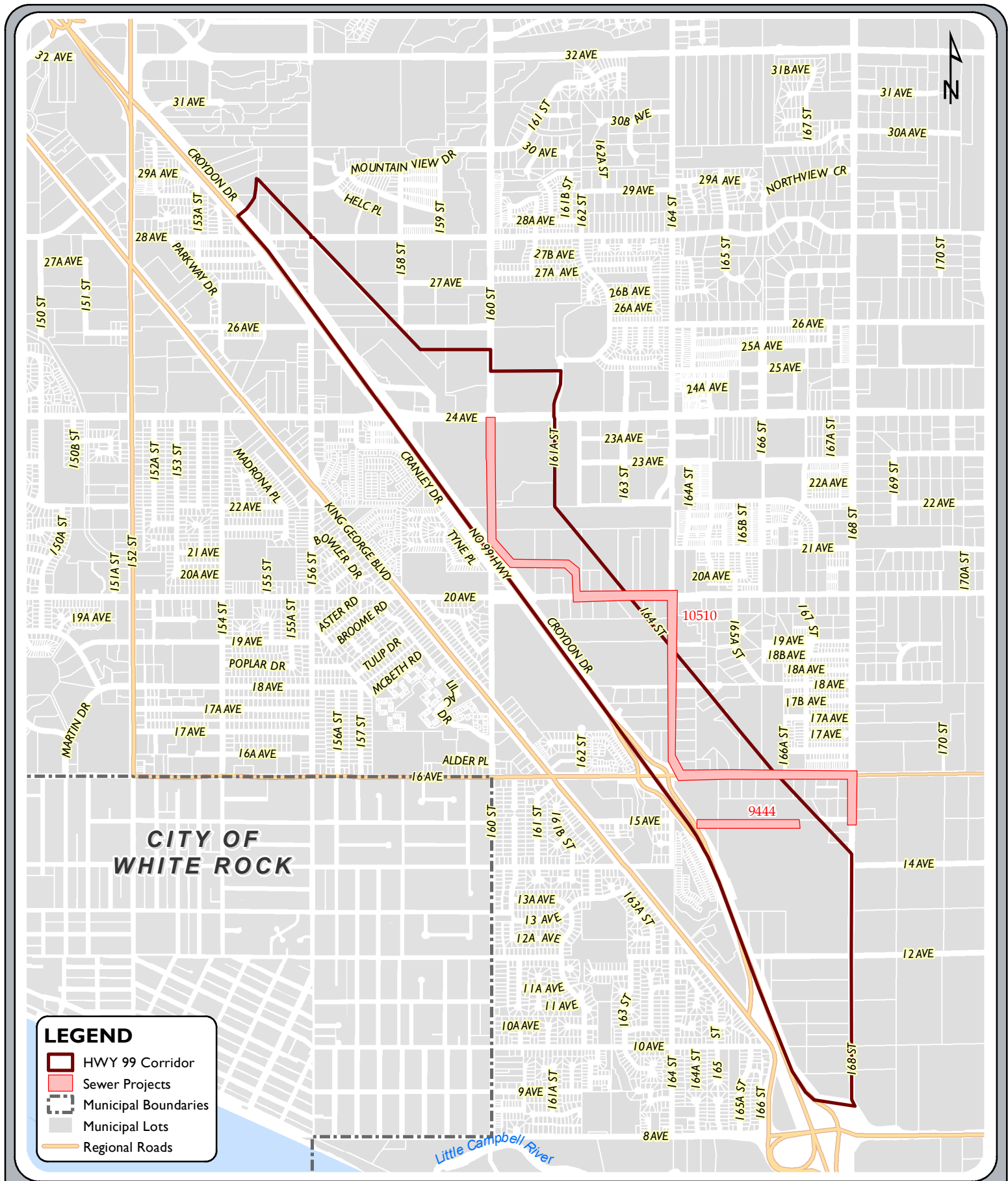
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## WATER

### Program 1619 - W - Hwy 99

<b>Program Total</b>	<b>3,406,000</b>	<b>3,406,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
17064	Jericho Reservoir - CoS Contribution (Highway 99) Ph1 2022	Township of Langley (20400 - 73A Avenue)	NCP Driven	90,000	90,000	-	-	-
17063	Jericho Reservoir - CoS Contribution (Highway 99) Ph1 2021	Township of Langley (20400 - 73A Avenue)	NCP Driven	100,000	100,000	-	-	-
17062	Jericho Reservoir - CoS Contribution (Highway 99) Ph1 2020	Township of Langley (20400 - 73A Avenue)	NCP Driven	100,000	100,000	-	-	-
10502	1,300m of 300mm diameter	016 Ave: King George Blvd - 168 St	NCP Driven	1,690,000	1,690,000	-	-	-
10360	Hwy 99 watermain crossing	011 Ave / Hwy 99	NCP Driven	120,000	120,000	-	-	-
10359	Pressure Reducing Valve	016 Ave / 16600 blk	NCP Driven	180,000	180,000	-	-	-
10356	400m of 350mm diameter	Croydon Dr: 026 - 028 Ave	NCP Driven	536,000	536,000	-	-	-
9914	430m of 400mm diameter	020 Ave: Lot 16184 - 164 St	NCP Driven	590,000	590,000	-	-	-



**FIGURE 7.3 - Sewer Highway 99 Corridor (Program 1639)**

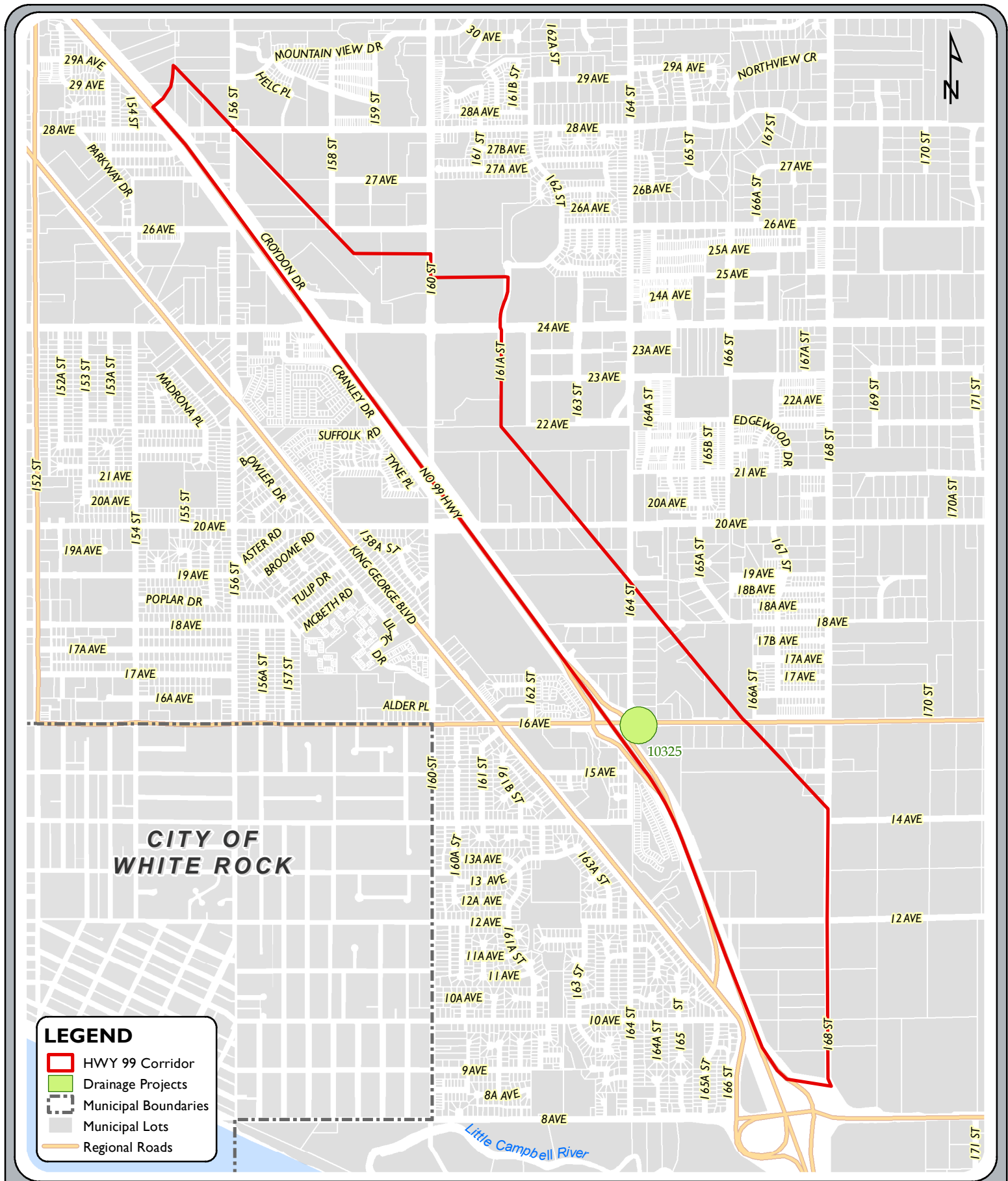
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## SEWER

Program 1639 - S - Hwy 99

<b>Program Total</b>	<b>4,435,300</b>	<b>4,435,300</b>	<b>-</b>	<b>-</b>	<b>-</b>
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
10510	DCCFE Fergus Pump Station & Forcemain (partial cost)	168 Street/1400 blk	Long Term (6 - 10 Yrs)	2,958,700	2,958,700	-	-	0
9444	670m of 525mm diameter gravity sewer	15 Ave/Hwy 99 - 168 St/1200 blk (Grandview South PS)	NCP Driven	1,476,600	1,476,600	-	-	0



**FIGURE 7.4 - Drainage Highway 99 Corridor (Program 1669)**

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# DRAINAGE

Program 1669 - D - Hwy 99

Program Total	200,000	200,000	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
10325	Diversion Channel to Fergus	016 Ave / 164 St	NCP Driven	200,000	200,000	-	-	-

## 8. ANNIEDALE-TYNEHEAD

The Anniedale-Tynehead NCP area encompasses approximately 415 hectares and generally lies south of Highway 1 and north of the Agricultural Land Reserve located from 168 Street to Harvie Road.

The NCP designates the area for a variety of land uses including commercial, light industrial, business park, institutional and a range of multi-family and single-family housing densities (2 to 45 units per acre).

An area specific DCC was developed for this area to provide an equitable way to distribute the high costs of providing sanitary sewer, water, drainage and transportation servicing infrastructure required to support build out of the NCP area. Major servicing requirements include:

- Four new sanitary sewer pump stations, three low pressure systems and a network of gravity trunk sewers and forcemains;
- Two new water supply sources, and a network of distribution and feeder mains;
- Eight community detention and water quality ponds, and construction of a major drainage system; and
- Highway overpasses, intersection roundabouts, traffic signals, road widening and upgrades throughout the area.

**Table 8.1 – Anniedale-Tynehead Cost Summary**

No.	Program	Growth (\$)	Non-Growth (\$)	External (\$)	GVTA (\$)	Total (\$)
1021	Transportation	124,000,000	0	116,275,000	25,560,000	265,835,000
1621	Water	20,500,000	0	0	0	20,500,000
1641	Sewer	29,293,000	0	0	0	29,293,000
1676	Drainage	26,637,000	0	0	0	26,637,000
	<b>Total</b>	<b>200,430,000</b>	<b>0</b>	<b>116,275,000</b>	<b>25,560,000</b>	<b>342,265,000</b>

### 8.1 Anniedale-Tynehead Projects by Program

The following tables and figures identify the projects under the Anniedale-Tynehead programs for transportation, sanitary sewer, water and stormwater. The tables provide the following information:

- a) Project ID - the unique identifier of the project;
- b) Project name - the specific name or generic name that depicts the type of work;
- c) Project location - the geographic extent of the works;
- d) Priority - the intended time frame for when the project is planned to proceed (subject to change); and
- e) Costs – the high-level estimates in 2012 dollars (subject to change at the actual time of construction).

The costs are comprised of growth, non-growth, external, and GVTA funding components. External funding may include sources such as the Provincial government, the Federal government and developers' contributions through their projects.

Each program table is accompanied by a figure (map) that shows the location and extent of the projects. Projects that are general in nature or in various locations may not be shown on the maps.



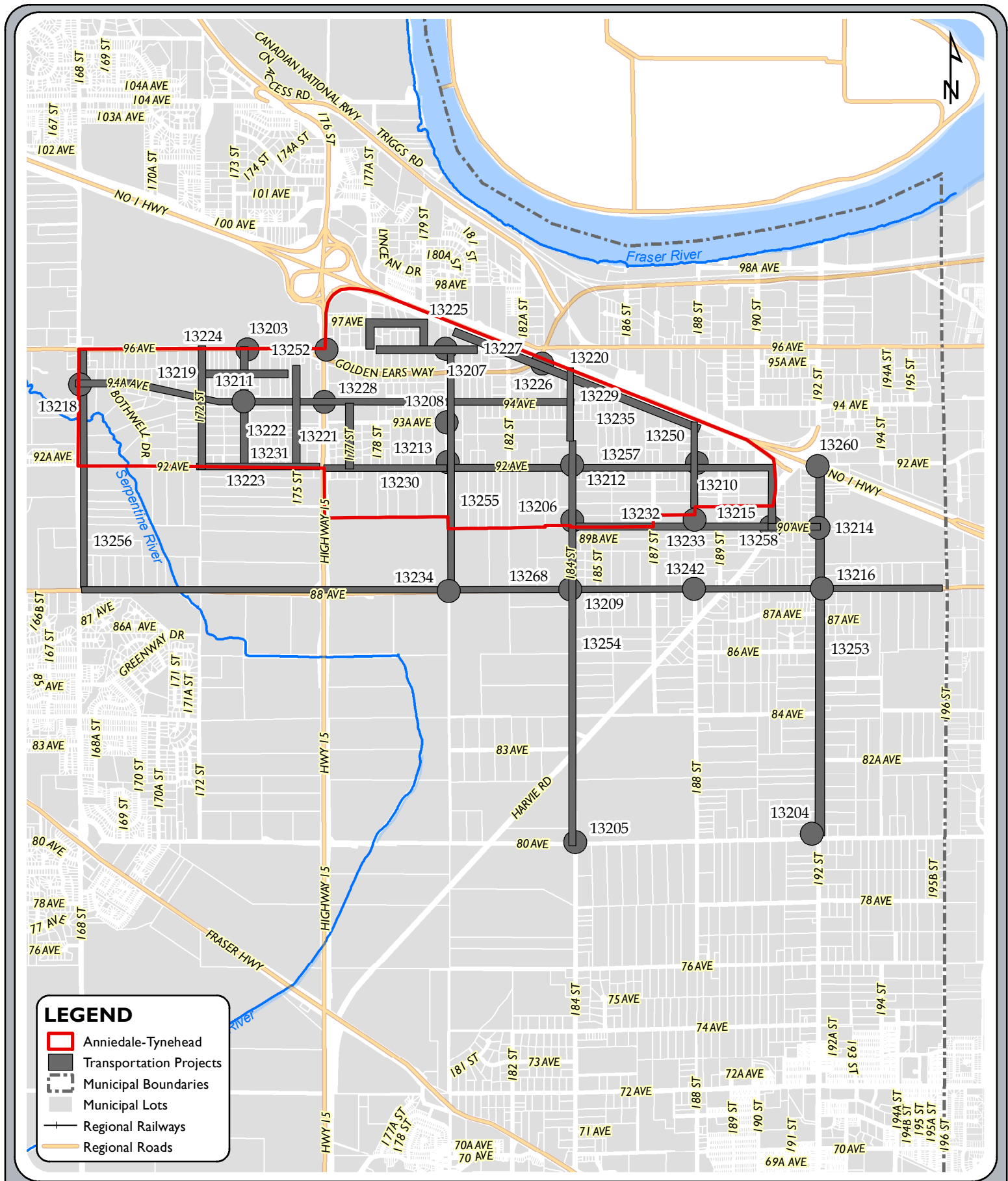


FIGURE 8.1 - Transportation  
Anniedale-Tynehead (Program 1021)

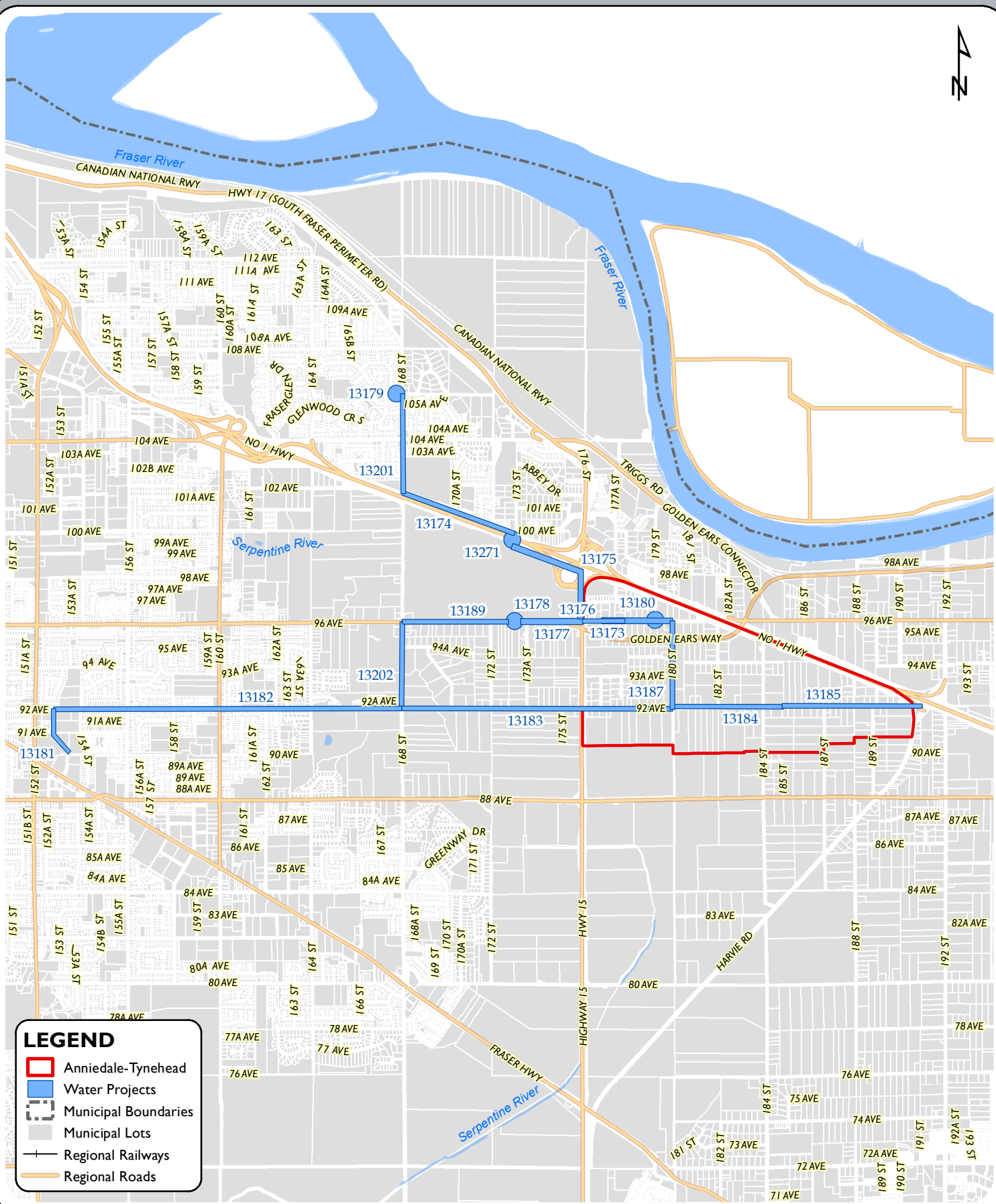
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# ROADS

## Program 1021 - T - Anniedale-Tynehead

<b>Program Total</b>	<b>265,835,000</b>	<b>124,000,000</b>	<b>-</b>	<b>116,275,000</b>	<b>25,560,000</b>
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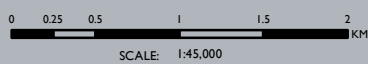
Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
13268	Arterial Ultimate Widening	088 Ave: 168 -192 St	NCP Driven	50,400,000	20,160,000	-	5,040,000	25,200,000
13260	Interchange	Hwy 1 / 192 St	NCP Driven	16,000,000	4,000,000	-	12,000,000	-
13258	Arterial Ultimate Widening	090 Ave: Harvie Rd - 192 St	NCP Driven	2,700,000	1,890,000	-	810,000	-
13257	Arterial Interim Upsizing (Special Section II)	092 Ave: 180 St - Harvie Rd; Harvie Rd: 92 - 90 Ave	NCP Driven	18,200,000	18,200,000	-	-	-
13256	Arterial Ultimate Widening	168 St: 088 - 096 Ave	NCP Driven	14,400,000	7,200,000	-	7,200,000	-
13255	Arterial Ultimate Widening (Special Section HH)	180 St: 088 - 096 Ave	NCP Driven	12,800,000	12,800,000	-	-	-
13254	Arterial Ultimate Widening & New Arterial	184 St: 080 - 093 Ave	NCP Driven	21,600,000	10,800,000	-	10,800,000	-
13253	Arterial Ultimate Widening	192 St: 080 - 088 Ave	NCP Driven	19,200,000	9,600,000	-	9,600,000	-
13252	Interchange	Hwy 15 / GEW / 96 Ave	NCP Driven	47,500,000	11,870,000	-	35,630,000	-
13250	Upsizing	188 St: 090A Ave - Hwy 1	NCP Driven	3,533,000	742,000	-	2,791,000	-
13242	Traffic Signal	088 Ave / 188 St	NCP Driven	180,000	72,000	-	18,000	90,000
13235	Upsizing of Frontage Rd (Special Section GG)	South of Hwy 1: 181 - 188 St	NCP Driven	6,370,000	3,188,000	-	3,182,000	-
13234	Traffic Signal	088 Ave / 180 St	NCP Driven	180,000	72,000	-	18,000	90,000
13233	Roundabout/Intersection Improvements	090 Ave / 188 St	NCP Driven	750,000	750,000	-	-	-
13232	Upsizing (Special Section KK)	090 Ave: 184 St - Harvie Rd	NCP Driven	1,810,000	325,000	-	1,485,000	-
13231	Upsizing & South Side (Special Section CC)	092 Ave: 172 - 176 St	NCP Driven	2,230,000	670,000	-	1,560,000	-
13230	Upsizing	092 Ave: 176 - 180 St	NCP Driven	3,112,000	654,000	-	2,458,000	-
13229	Upsizing & South Side of 94A Ave (Special Section AA)	094A Ave: 168 - 176 St and 93A Ave: 176 - 184 St	NCP Driven	13,200,000	2,973,000	-	10,227,000	-
13228	Overpass Structure	094 Ave / Hwy 15	NCP Driven	6,500,000	6,500,000	-	-	-
13227	Upsizing	096 Ave: 177A - 181A St	NCP Driven	2,515,000	527,000	-	1,988,000	-
13226	Frontage Road Overpass Structure	Hwy 1 / Golden Ears Way	NCP Driven	5,500,000	5,500,000	-	-	-
13225	Anniedale Triangle Upsizing	097 Ave: 177A - 179 St; 177A St: 96 - 97 Ave; 179 St: 96 - 9	NCP Driven	3,000,000	675,000	-	2,325,000	-
13224	Upsizing	172 St: 092 - 096 Ave	NCP Driven	2,870,000	603,000	-	2,267,000	-
13223	Upsizing	173A St: 092 - 096 Ave	NCP Driven	2,870,000	603,000	-	2,267,000	-
13222	Upsizing (Special Section EE)	175 St: 092 - 095 Ave	NCP Driven	1,545,000	351,000	-	1,194,000	-
13221	Upsizing	177 St: 092 - 094A Ave	NCP Driven	1,005,000	211,000	-	794,000	-
13220	Upsizing	184 St: 92A Ave - Hwy 1	NCP Driven	1,475,000	310,000	-	1,165,000	-
13219	Upsizing (Special Section DD)	095 Ave: 172 - 175 St	NCP Driven	1,120,000	168,000	-	952,000	-
13218	Traffic Signal	168 St / 94A Ave	NCP Driven	180,000	90,000	-	90,000	-
13216	Traffic Signal	088 Ave / 192 St	NCP Driven	180,000	72,000	-	18,000	90,000
13215	Traffic Signal	090 Ave / Harvie Rd	NCP Driven	180,000	126,000	-	54,000	-
13214	Traffic Signal	090 Ave / 192 St	NCP Driven	180,000	126,000	-	54,000	-
13213	Traffic Signal	092 Ave / 180 St	NCP Driven	180,000	180,000	-	-	-
13212	Traffic Signal	092 Ave / 184 St	NCP Driven	180,000	180,000	-	-	-
13211	Roundabout/Intersection Improvements	094A Ave / 173A St	NCP Driven	750,000	750,000	-	-	-
13210	Traffic Signal	092 Ave / 188 St	NCP Driven	180,000	180,000	-	-	-
13209	Traffic Signal	088 Ave / 184 St	NCP Driven	180,000	72,000	-	18,000	90,000
13208	Traffic Signal	180 St / 93A Ave	NCP Driven	180,000	180,000	-	-	-
13207	Traffic Signal	180 St / 096 Ave	NCP Driven	180,000	180,000	-	-	-
13206	Traffic Signal	184 St / 090 Ave	NCP Driven	180,000	90,000	-	90,000	-
13205	Traffic Signal	184 St / 080 Ave	NCP Driven	180,000	90,000	-	90,000	-
13204	Traffic Signal	192 St / 080 Ave	NCP Driven	180,000	90,000	-	90,000	-
13203	Traffic Signal	096 Ave / 173A St	NCP Driven	180,000	180,000	-	-	-



**LEGEND**

- ▭ Anniedale-Tynehead
- ▭ Water Projects
- Municipal Boundaries
- Municipal Lots
- Regional Railways
- Regional Roads

**FIGURE 8.2 - Water  
Anniedale-Tynehead (Program 1621)**



GIS SECTION  
ENGINEERING

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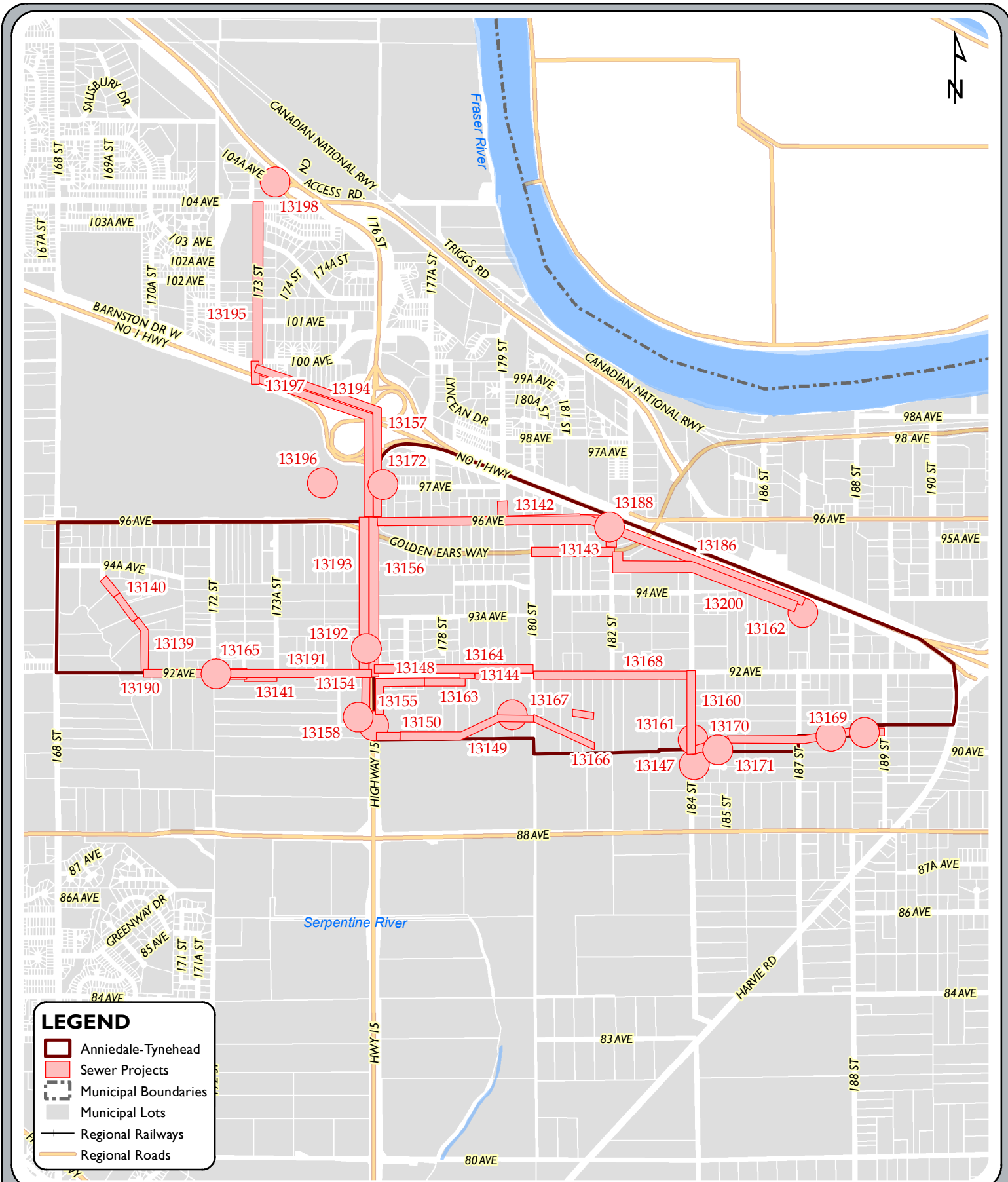
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# WATER

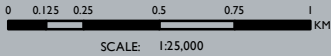
## Program 1621 - W - Anniedale-Tynehead

<b>Program Total</b>	<b>20,500,000</b>	<b>20,500,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
13271	Hwy 1 Crossing	Hwy 1 / 173 St	NCP Driven	400,000	400,000	-	-	-
13202	760m of 350mm diameter	168 St: 96 - 92 Ave	NCP Driven	585,200	585,200	-	-	-
13201	1,060m of 450mm diameter	168 St: 106 Ave - Hwy 1	NCP Driven	901,000	901,000	-	-	-
13189	1,095m of 300mm diameter	096 Ave: 173A - 168 St	NCP Driven	814,000	814,000	-	-	-
13187	770m of 350mm diameter	180 St: 96 - 92 Ave	NCP Driven	592,900	592,900	-	-	-
13185	780m of 450mm diameter	092 Ave: 185 - 191 St	NCP Driven	663,000	663,000	-	-	-
13184	955m of 600mm diameter	092 Ave: 180 - 185 St	NCP Driven	1,260,600	1,260,600	-	-	-
13183	2,405 of 750mm diameter	092 Ave: 168 - 180 St	NCP Driven	4,087,000	4,087,000	-	-	-
13182	3,000m of 750mm diameter	092 Ave: 153 - 168 St	NCP Driven	5,100,000	5,100,000	-	-	-
13181	550m of 750mm diameter	153 St: 90 - 92 Ave	NCP Driven	935,000	935,000	-	-	-
13180	PRV station	096 Ave/179 St	NCP Driven	115,000	115,000	-	-	-
13179	80m of 450mm diameter	Cherry Hill Cr/Cherry Hill Ct - 168 St/106 Ave	NCP Driven	102,500	102,500	-	-	-
13178	PRV station	096 Ave/173A St	NCP Driven	115,000	115,000	-	-	-
13177	505m of 300mm diameter	096 Ave: Hwy 15 - 173A St	NCP Driven	373,700	373,700	-	-	-
13176	350m of 450mm diameter	096 Ave: Hwy 15 - 178 St	NCP Driven	297,500	297,500	-	-	-
13175	1,060 of 450mm diameter	South of Hwy 1: 173 -176 St; 176 St: South of Hwy 1 - 96 Ave	NCP Driven	901,000	901,000	-	-	-
13174	1,060 of 450mm diameter	Hwy 1: 168 - 173 St	NCP Driven	901,000	901,000	-	-	-
13173	440m of 300mm diameter	096 Ave: 177 - 180 St	NCP Driven	325,600	325,600	-	-	-
13145	Upsizing 1,595m of 300mm diameter	Various Locations	NCP Driven	160,000	160,000	-	-	-
13138	Upsizing 9,345m of 300mm diameter	Various Locations	NCP Driven	1,870,000	1,870,000	-	-	-



**FIGURE 8.3 - Sewer Anniedale-Tynehead (Program 1641)**



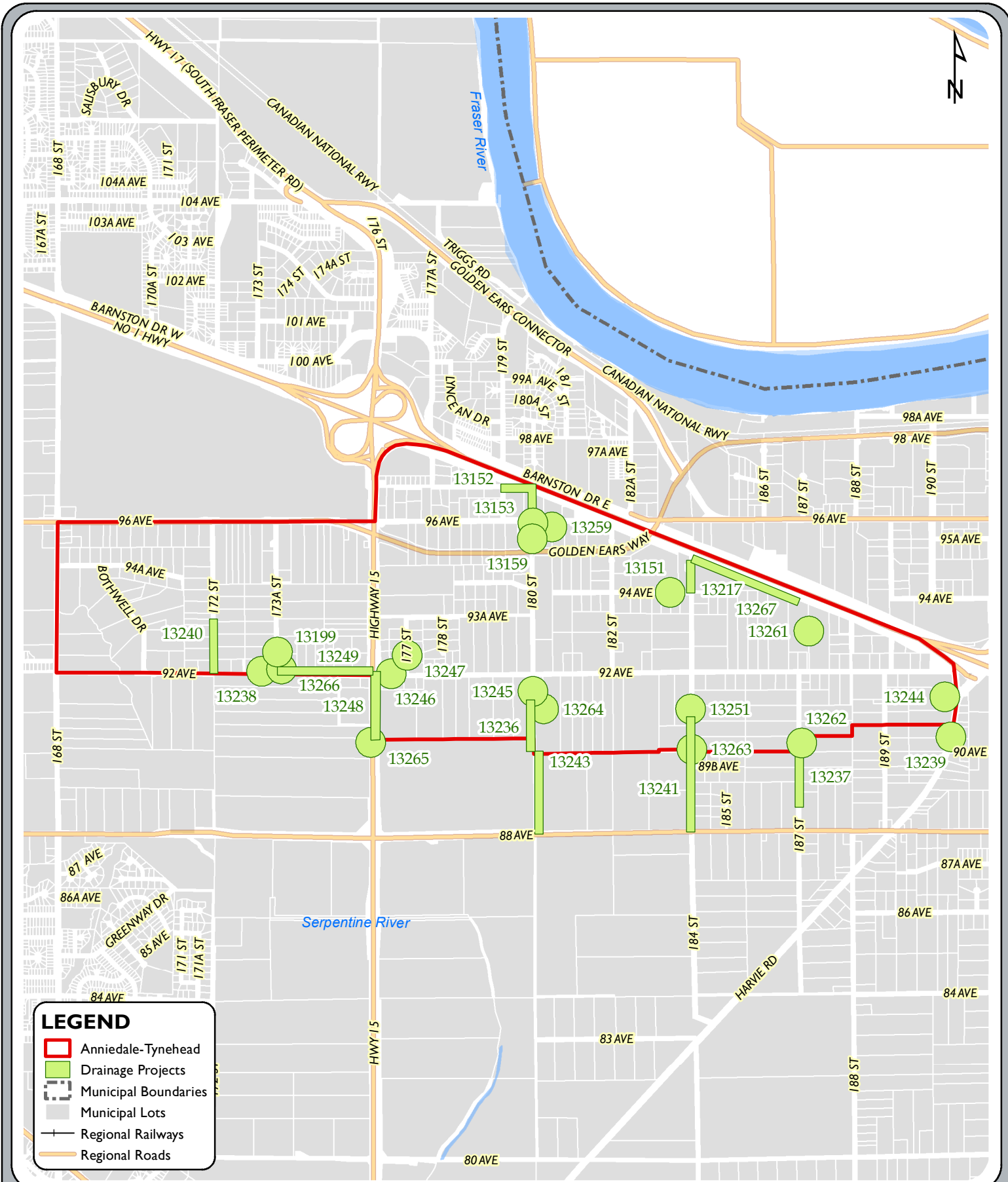
The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office. Source: G:\MAPPING\GIS\Maps\Recurring\4\_CCP110yr\CCP\_Plan110yr\ServicingPlan2019-28\Figure8-3\_AnniedaleTynehead-S.mxd Date Printed: 2020-01-30 Cartographer: P205934 © City of Surrey

**SEWER**

**Program 1641 - S - Anniedale-Tynehead**

<b>Program Total</b>	<b>29,293,000</b>	<b>29,293,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
13200	AT: 1000m of 375mm diameter upsizing	South of Hwy 1: 182 - 187 St	NCP Driven	240,000	240,000	-	-	-
13198	AT: South Port Kells odour control	17337 104A Ave	NCP Driven	660,000	660,000	-	-	-
13197	AT: Hwy 1 crossing	Hwy 1 / 173 St	NCP Driven	500,000	500,000	-	-	-
13196	AT: Tynehead Trunk ROW	097 Ave / 175A St	NCP Driven	90,000	90,000	-	-	-
13195	AT: 800m of 600mm diam South Port Kells Trunk Sewer	173 St: Hwy 1 - 104 Ave	NCP Driven	1,133,000	1,133,000	-	-	-
13194	AT: 1150m of 400mm diam South Port Kells Forcemain	S. of Hwy 1: 176 - 173 St and Hwy 15: 096 Ave - S. of Hwy 1	NCP Driven	1,117,000	1,117,000	-	-	-
13193	AT: 980m of 400mm diameter	Hwy 15: 096 - 092 Ave	NCP Driven	952,000	952,000	-	-	-
13192	AT: Tynehead forcemain odour control	Hwy 15 / 092A Ave	NCP Driven	60,000	60,000	-	-	-
13191	AT: 835m of 400mm diameter Tynehead Forcemain	092 Ave: 176 - 172 St	NCP Driven	811,000	811,000	-	-	-
13190	AT: 355m of 375mm diameter Tynehead Trunk	092 Ave: 171 - 172 St	NCP Driven	85,500	85,500	-	-	-
13188	AT: Anniedale A forcemain odour control	096 Ave / 182 St	NCP Driven	60,000	60,000	-	-	-
13186	AT: 2140m of 400mm diameter Anniedale A Forcemain	South of Hwy 1: 182 - 187 St and 096 Ave: 182 St - Hwy 15	NCP Driven	2,078,000	2,078,000	-	-	-
13172	AT: Hwy 15 crossing	Hwy 15 / 097 Ave	NCP Driven	200,000	200,000	-	-	-
13171	AT: Anniedale B2 Trunk ROW	089 Ave / 185 St; 90A Ave / 188 St; 91 Ave / 188A St	NCP Driven	235,000	235,000	-	-	-
13170	AT: 190m of 600 diameter Anniedale B2 Trunk -2	090 Ave: 186 - 184 St	NCP Driven	191,000	191,000	-	-	-
13169	AT: 890m of 525mm diameter Anniedale B2 Trunk-2	090A Ave: 189 - 186 St	NCP Driven	822,000	822,000	-	-	-
13168	AT: 920m of 250mm diameter Anniedale B2 forcemain	092 Ave: 184 - 180 St	NCP Driven	699,000	699,000	-	-	-
13167	AT: Anniedale B3 Trunk ROW	091 Ave / 179 St	NCP Driven	225,000	225,000	-	-	-
13166	AT: 220m of 300mm diameter Anniedale B3 Trunk -1	091 Ave: 180 - 181 St	NCP Driven	30,000	30,000	-	-	-
13165	AT: Tynehead Pump Station	092 Ave / 172 St	NCP Driven	3,300,000	3,300,000	-	-	-
13164	AT: 850m of 250mm diameter Anniedale B forcemain	092 Ave: 180 to 176 St	NCP Driven	646,000	646,000	-	-	-
13163	AT: 265m of 375mm diameter Anniedale B4 Trunk -1	092 Ave: 178 - 177 St	NCP Driven	63,500	63,500	-	-	-
13162	AT: Anniedale Pump Station	South of Hwy 1 / 187 St	NCP Driven	3,600,000	3,600,000	-	-	-
13161	AT: Anniedale B2 FM odour control	090 Ave / 184 St	NCP Driven	60,000	60,000	-	-	-
13160	AT: 400m of 250mm diameter Anniedale B2 Forcemain	184 St: 090 -092 Ave	NCP Driven	304,000	304,000	-	-	-
13158	AT: Anniedale B4 Pump Station	176 St / 091 Ave	NCP Driven	3,500,000	3,500,000	-	-	-
13157	AT: 1150m of 650mm diameter South Port Kells FM Twin	Hwy 15: 096 Ave - S. of Hwy 1; S. of Hwy 1: Hwy 15 - 173 St	NCP Driven	1,396,000	1,396,000	-	-	-
13156	AT: 980m of 500mm diameter Forcemain Twin	Hwy 15: 092 - 096 Ave	NCP Driven	1,065,500	1,065,500	-	-	-
13155	AT: Anniedale B4 FM odour control	Hwy 15 / 091 Ave	NCP Driven	60,000	60,000	-	-	-
13154	AT: 200m of 400mm diameter Anniedale B4 Forcemain	Hwy 15: 091 -092 Ave	NCP Driven	194,000	194,000	-	-	-
13150	AT: 135m of 375mm diameter Anniedale B3 Trunk -3	090A Ave: 178 - 176 St	NCP Driven	32,500	32,500	-	-	-
13149	AT: 690m of 300mm diameter Anniedale B3 Trunk -2	091 Ave: 180 - 178 St	NCP Driven	94,000	94,000	-	-	-
13148	AT: 390m of 375mm diameter Anniedale B4 Trunk -2	092 Ave: 177 - 176 St	NCP Driven	93,500	93,500	-	-	-
13147	AT: Anniedale B2 pump station	184 St / 089 Ave	NCP Driven	4,400,000	4,400,000	-	-	-
13146	AT: 100m of 300mm diameter local main upsizing	Anniedale B3	NCP Driven	13,500	13,500	-	-	-
13144	AT: 75m of 375mm diameter local main upsizing	Anniedale A1/B1/B4	NCP Driven	18,000	18,000	-	-	-
13143	AT: 350m of 300mm diameter local main upsizing	Anniedale A/B1/B4	NCP Driven	47,500	47,500	-	-	-
13142	AT: 1,135m of 250mm diameter local main upsizing	Anniedale A/B1/B4	NCP Driven	72,500	72,500	-	-	-
13141	AT: 270m of 250mm diameter (upsizing)	Tynehead 250mm diameter upsizing	NCP Driven	17,500	17,500	-	-	-
13140	AT 160m of 300mm diameter	Tynehead 300mm diameter upsizing	NCP Driven	22,000	22,000	-	-	-
13139	AT: 435m of 375mm diameter	Tynehead 375mm diameter upsizing	NCP Driven	104,500	104,500	-	-	-



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

## DRAINAGE

### Program 1676 - D - Anniedale-Tynehead

<b>Program Total</b>	<b>26,637,000</b>	<b>26,637,000</b>	-	-	-
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Project ID	Project Name	Project Location	Priority	Total	Growth Component	Non-Growth Component	External Funding	GVTA Funding
13267	1050m of 1050mm diameter	South of Hwy 1: 184 - 187 St Anniedale NCP	NCP Driven	1,624,000	1,624,000	-	-	-
13266	Tynehead 1 water quality pond	173A St / 92 Ave Anniedale NCP	NCP Driven	2,122,000	2,122,000	-	-	-
13265	Anniedale 2 water quality pond	90A Ave / Hwy 15	NCP Driven	2,967,000	2,967,000	-	-	-
13264	Anniedale 3 water quality pond	180 St / 91 Ave	NCP Driven	1,738,000	1,738,000	-	-	-
13263	Anniedale 4 water quality pond	184 St / 90 Ave	NCP Driven	1,679,000	1,679,000	-	-	-
13262	Anniedale 5 water quality pond	090 Ave / 187 St	NCP Driven	1,439,000	1,439,000	-	-	-
13261	Anniedale 8 water quality pond	187 St / 93 Ave	NCP Driven	2,217,000	2,217,000	-	-	-
13259	Anniedale 7 detention pond	096 Ave / 180 St Anniedale NCP	NCP Driven	4,888,000	4,888,000	-	-	-
13251	290m of 900mm diameter	184 St: 91A - 90 Ave Anniedale NCP	NCP Driven	482,000	482,000	-	-	-
13249	350m of ditch improvement	092 Ave: 173A - 176 St Anniedale NCP	NCP Driven	47,000	47,000	-	-	-
13248	350m of 900mm diameter	176 St: 90A - 92 Ave Anniedale NCP	NCP Driven	809,000	809,000	-	-	-
13247	170m of 600mm diameter	177 St: 93 - 92 Ave Anniedale NCP	NCP Driven	217,000	217,000	-	-	-
13246	150m of 750mm diameter	092 Ave: 176 - 177 St Anniedale NCP	NCP Driven	220,000	220,000	-	-	-
13245	150m of 450mm diameter	180 St: 91 - 92 Ave Anniedale NCP	NCP Driven	134,000	134,000	-	-	-
13244	Anniedale 6 detention pond	191 St / 91 Ave	NCP Driven	3,279,000	3,279,000	-	-	-
13243	400m of ditch improvement & ROW	180 St: 90 - 88 Ave Anniedale NCP	NCP Driven	509,000	509,000	-	-	-
13241	400m of ditch improvement	184 St: 90 - 88 Ave Anniedale NCP	NCP Driven	54,000	54,000	-	-	-
13240	150m of 750mm diameter	172 St: 93 - 92 Ave Anniedale NCP	NCP Driven	220,000	220,000	-	-	-
13239	100m of ditch improvement	Harvie Rd: 91 -90 Ave Anniedale NCP	NCP Driven	14,000	14,000	-	-	-
13238	200m of ditch improvement	092 Ave: 173 - 173A St Anniedale NCP	NCP Driven	27,000	27,000	-	-	-
13237	250m of ditch improvement	187 St: 89 - 90 Ave. Anniedale NCP	NCP Driven	34,000	34,000	-	-	-
13236	270m of 525mm diameter	180 St: 91 - 90 Ave Anniedale NCP	NCP Driven	266,000	266,000	-	-	-
13217	150m of 1050mm diameter	184 St: 94 - 95 Ave Anniedale NCP	NCP Driven	279,000	279,000	-	-	-
13199	150m of 900mm diameter	173A St: 92 - 93 Ave Anniedale NCP	NCP Driven	249,000	249,000	-	-	-
13159	160m of 1050mm diameter	180 St: 96 Ave - Golden Ears Way. Anniedale NCP	NCP Driven	297,000	297,000	-	-	-
13153	65m of 1050mm diameter	096 Ave / 180 St Anniedale NCP	NCP Driven	108,000	108,000	-	-	-
13152	250m of 900mm diameter	097 Ave: 179 - 180 St; 180 St: 97 - 96 Ave Anniedale NCP	NCP Driven	347,000	347,000	-	-	-
13151	200m of 1050mm diameter	094 Ave: 183 - 184 St Anniedale NCP	NCP Driven	371,000	371,000	-	-	-



CITY OF SURREY

BYLAW NO. 20019

A Bylaw to impose development cost charges.

.....

**WHEREAS:**

- A. Pursuant to Part 14, Division 19 of the *Local Government Act*, as amended from time to time, and the regulations passed pursuant thereto, the Council of the City of Surrey may, by bylaw, impose development cost charges; and
  
- B. Development cost charges may be imposed for the purpose of providing funds to assist the City of Surrey to pay the capital costs of providing, constructing, altering or expanding sewage, water, drainage and highway facilities, other than off-street parking facilities, and providing and improving park land to service, directly or indirectly, the development for which the charges are being imposed.

NOW THEREFORE, the Council of the City of Surrey, ENACTS AS FOLLOWS:

**TITLE**

- 1. This Bylaw may be cited for all purposes as "Surrey Development Cost Charge Bylaw, 2020, No. 20019".

**DEFINITIONS AND INTERPRETATION**

- 2. For the purposes of this Bylaw, unless the context otherwise requires:

**"Anniedale-Tynehead"** means the area of the City of Surrey shown in Section E.27(a) of Schedule "G" of the Surrey Zoning Bylaw.

**“Assisted Living Residence”** means a multiple-unit residential building containing 45 Dwelling Units per acre or greater which is subject to a housing agreement pursuant to Section 483 of the *Local Government Act*, as amended from time to time, between the City of Surrey and the owner of the building, but does not include Not-for-Profit Rental Housing. The housing agreement will specify that the multiple unit residential building will:

- (a) be occupied only by persons who are Qualified Occupants;
- (b) be registered as an Assisted Living Residence under the *Community Care and Assisted Living Act*, S.B.C. 2002, c. 75, as amended from time to time; and
- (c) not be strata-titled or further subdivided.

**“BA”** or **“Building Area”** means building area as defined by the total sum of all floor areas enclosed or partially enclosed by the exterior perimeter of a building or structure including without limitation stairways, elevator shafts, storage rooms, mechanical rooms and basements, and excluding areas for parking that are provided as an accessory use to the building or structure.

**“Bylaw 5942”** means Surrey Zoning By-law, 1979, No. 5942 as amended from time to time.

**“Campbell Heights”** means the area of the City of Surrey shown in Section E.17(a) of Schedule "G" of the Surrey Zoning Bylaw.

**“City Centre”** means the area of the City of Surrey shown in Schedule E.30(a) of the Surrey Zoning Bylaw.

**“Community Charter”** means the *Community Charter*, S.B.C. 2003, c.26, as amended from time to time.

**“Completed”** means, in the case of a subdivision, an application for which the servicing agreement is completed and signed, appropriate zoning is in place, all applicable fees and levies are paid, all conditions of approval are fulfilled, and the final plan of subdivision is ready for approval by the approving officer.

“**Developed Area**” means that area of a lot containing any improvements for the accommodation of a building, accessory building, structure, storage or parking or circulation area, landscaping or anything or device to facilitate the permitted use.

“**DU**” or “**Dwelling Unit**” means dwelling unit as defined in the Surrey Zoning Bylaw.

“**Effective Date**” means the date on which this bylaw comes into force, which is established as May 15, 2020.

“**Federal and Provincial Buildings**” means buildings or land owned by the Provincial or Federal government for use by the Provincial or Federal government or crown corporations, excluding Hospitals operating under Federal or Provincial legislation, located in any zone.

“**Highway 99 Corridor**” means the area of the City of Surrey shown in Section E.20(a) of Schedule "G" of the Surrey Zoning Bylaw.

“**Hospitals**” means hospitals as defined under the *Hospital Act*, R.S.B.C. 1996, c. 200, as amended from time to time, the *Hospital Insurance Act*, R.S.B.C. 1996, c. 204, as amended from time to time, private hospitals as defined under the *Hospital Act* and private mental hospitals as defined under the *Mental Health Act*, R.S.B.C. 1996, c. 288, as amended from time to time.

“**In-Stream**” means, in reference to an application, not determined, rejected or withdrawn and:

- (a) in the case of an application for subdivision, one for which the application form has been submitted, the application fees have been paid, and all supporting documentation required by the City of Surrey has been submitted and accepted by the City of Surrey as a legitimate application;

- (b) in the case of an application for building permit, one for which the application form has been submitted, the application fees have been paid, and all supporting documentation required by the City of Surrey including without limitation all applicable architectural, structural, plumbing, electrical, mechanical and site drainage drawings has been submitted and accepted by the City of Surrey as a legitimate application;
- (c) in the case of a rezoning application, one for which the application form has been submitted, the application fees have been paid, and all supporting documentation required by the City of Surrey has been submitted and accepted by the City of Surrey as a legitimate application; and
- (d) in the case of an application for development permit, one for which the application form has been submitted, the application fees have been paid, and all supporting documentation required by the City of Surrey has been submitted and accepted by the City of Surrey as a legitimate application.

**“Issuable”** means, in the case of a building permit, an application which meets the requirements of an In-Stream application and for which:

- (a) Council has approved any applicable rezoning and/or development permit and/or development variance permit;
- (b) all required off-site legal encumbrances relating to engineering services have been registered at the Land Title Office on title to the subject property;
- (c) any plan, including a plan of subdivision, consolidation, or road dedication, that would affect the legal description of the subject property has been registered at the Land Title Office on title to the subject property;
- (d) all review comments arising from the building permit application review process have been addressed to the satisfaction of the City of Surrey; and
- (e) all applicable fees and levies have been paid.

**“Local Government Act”** means *Local Government Act*, R.S.B.C. 2015, c. 1, as amended from time to time.

**“Minor Change”** means a change to the scope of work authorized by a building permit which results in an increase of five percent (5%) or less in the cumulative total Square Footage of the Dwelling Unit, the Building Area, the number of Dwelling Units within a building or on a lot, or the Developed Area of a lot.

**“Not-for-Profit Rental Housing”** means a housing development project subject to either the Memorandum of Understanding on Responding to Homelessness between the BC Housing Management Commission and the City of Surrey dated for reference March 31, 2008 or the Memorandum of Understanding Regarding the Development of Housing for the Homeless between the BC Housing Management Commission and the City of Surrey dated for reference September 2015.

**“Precursor Application”** means, in relation to a building permit, that there is an:

- (a) In-Stream development permit application and that the development authorized by the building permit is entirely within the area of land that is the subject of the application; or
- (b) In-Stream rezoning application and that the development authorized by the building permit is entirely within the area of land to which the application relates.

**“Qualified Occupants”** means:

- (a) a person who is a resident as defined under the *Community Care and Assisted Living Act*, S.B.C. 2002, c. 75, as amended from time to time; and
- (b) a person who is employed to manage the Assisted Living Residence and their spouse, provided only one Dwelling Unit within the Assisted Living Residence is designated for this type of occupant.

**“Revision Permit”** means a revised building permit issued by the City of Surrey where the City of Surrey has accepted a proposed change to the scope of work originally authorized by a building permit.

**“Seniors Apartments”** means a multiple unit residential building with a minimum density of 45 Dwelling Units per acre and where there exists a housing agreement pursuant to Section 483 of the *Local Government Act*, as amended from time to time, between the City of Surrey and the owner specifying that the multiple unit residential building will be restricted to seniors, but does not include Not-for-Profit Rental Housing.

**“Square Footage of the Dwelling Unit”** or **“sq. ft. of DU”** means the cumulative floor area measured from the outside edge of the exterior walls or sheathing of the Dwelling Unit and, where applicable, the centre line of the common walls dividing the Dwelling Units and shall include all the internal walls within each Dwelling Unit excluding parking areas (to a maximum of 250 square feet per parking space), crawl spaces less than or equal to 1.5 metres [5 ft.] clear height, balconies, canopies, terraces and sun decks.

**“Substantial Change”** means a change to the scope of work authorized by a building permit which results in either:

- (a) an increase by more than five percent (5%) in the cumulative total Square Footage of the Dwelling Unit, the Building Area, the number of Dwelling Units within a building or on a lot, or the Developed Area of a lot; or
- (b) a change to the zone or land use on which the development cost charges was based, as determined by the City of Surrey.

**“Surrey Zoning Bylaw”** means Surrey Zoning By-law, 1993, No. 12000, as amended from time to time.

**“West Clayton”** means the area of the City of Surrey shown in Section E.29(a) of Schedule "G" of the Surrey Zoning Bylaw.

3. Words not specifically defined in this Bylaw shall have the same meaning as defined in Surrey Zoning Bylaw.
4. If any section, clause or phrase of this Bylaw is held to be invalid by a court of competent jurisdiction, the invalid portion shall be severed and the remainder of the Bylaw shall be deemed to have been enacted without the invalid portion.

## DEVELOPMENT COST CHARGES

5. Every person who obtains:

- (a) approval of a subdivision; or
- (b) a building permit authorizing the construction, alteration or extension of a building or structure, including a building permit that authorizes the construction, alteration or extension of a building or part of a building that will, after the construction, alteration or extension, contain one or more Dwelling Units

shall pay to the City of Surrey the development cost charges in the amounts set out in Schedule "B" of this Bylaw except for those within:

- (c) West Clayton, which shall pay the amounts set out in Schedule "B" plus Schedule "C" of this Bylaw;
- (d) City Centre, which shall pay the amounts set out in Schedule "B" plus Schedule "D" of this Bylaw; and
- (e) Anniedale-Tynehead, which shall pay the amounts set out in Schedule "E" of this Bylaw.

The list of zones set out in Schedule "A" of this Bylaw include zones in both the Surrey Zoning Bylaw and Bylaw 5942. The development cost charges payable for any zones where Bylaw 5942 is applicable are determined by referring to its equivalent zone in the "Bylaw 12000 Zone" column in Schedule "A".

6. Development cost charges shall be payable at the time specified below:

- (a) after application for a subdivision has been submitted, but before the approval of the subdivision and the subdivision plan has been executed by the approving officer, for agricultural, single family and single family with a secondary suite land use, or all zones and land uses within Campbell Heights;

- (b) for all zones and land uses within Campbell Heights whose development cost charges were not collected upon approval of the subdivision as described in clause 6(a), after application for a building permit has been submitted, but before the building permit has been issued; and
- (c) for all cases other than those described in clause 6(a) and clause 6(b), after application for a building permit has been submitted, but before the building permit has been issued.

## EXEMPTIONS

- 7. Development cost charges are not payable if any of the following applies in relation to a development authorized by a building permit:
  - (a) the permit authorizes the construction, alteration or extension of a building or part of a building that is, or will be, after the construction, alteration or extension, exempt from taxation under Section 220(1)(h) or 224(2)(f) of the *Community Charter*;
  - (b) the value of the work authorized by the permit does not exceed \$100,000;
  - (c) the size of the Dwelling Unit is no greater than 312.2 ft<sup>2</sup> [29 m<sup>2</sup>]; and
  - (d) the permit authorizes the construction, alteration or extension of a building or part of a building that is, or will be, after the construction, alteration or extension, used for Not-for-Profit Rental Housing.

## MIXED USE AND COMPREHENSIVE DEVELOPMENTS

- 8. For mixed use developments, the development cost charges payable shall be calculated separately for each portion of the development contained in the building permit or subdivision application in accordance with the zones and land uses identified in the applicable Schedule(s). The total payable will be the sum of the development cost charges for each portion of the development.
- 9. Development cost charges payable for comprehensive development zones shall be calculated as specified in the applicable comprehensive development zone amendment to Surrey Zoning Bylaw.



## CHANGES TO WORK AUTHORIZED BY A BUILDING PERMIT

10. If a Minor Change to a building permit is proposed, the development cost charges will be recalculated based on the increase in Building Area, Developed Area, or Dwelling Units (as applicable) using the rates in the Surrey Development Cost Charge Bylaw in effect at the time of issuance of the Revision Permit. The difference between the original development cost charges amount and the recalculated development cost charges amount shall be paid to the City of Surrey prior to the issuance of the Revision Permit.
11. If a Substantial Change to a building permit is proposed, the development cost charges will be recalculated on the entire project at the rates in the Surrey Development Cost Charge Bylaw in effect at the time of issuance of the Revision Permit. The difference between the original development cost charges amount and the recalculated development cost charges amount shall be paid to the City of Surrey prior to the issuance of the Revision Permit.

## EFFECTIVE DATE AND TRANSITIONAL PROVISIONS

12. This Bylaw will come into force on the Effective Date.
13. *Surrey Development Cost Charge Bylaw, 2018, No. 19478*, and all amendments thereto, is hereby repealed except in the case of:
  - (a) applications for subdivision of land that are In-Stream on the Effective Date and which are Completed within one year of the Effective Date;
  - (b) building permits that are In-Stream on the Effective Date and which are Issuable within one year of the Effective Date; and
  - (c) building permits on lands with a Precursor Application In-Stream on the Effective Date and where the related building permit is Issuable within one year of the Effective Date

in which case *Surrey Development Cost Charge Bylaw, 2018, No. 19478*, and all amendments thereto, shall apply. *Surrey Development Cost Charge Bylaw, 2018, No. 19478*, and all amendments thereto, shall be wholly repealed one year from the Effective Date.



**SCHEDULE "A"**

**LIST OF ZONES**

**SURREY ZONING BYLAWS 12000 AND 5942**

	Name of Zone	Bylaw 12000 Zone	Bylaw 5942 Zone
<b>Residential Zones</b>	General Agriculture	A-1	A-1, A-3
	Intensive Agriculture	A-2	A-2
	One-Acre Residential	RA	RS
	Acreage Residential Gross Density	RA-G	R-A(G)
	Half-Acre Residential	RH	R-1
	Half-Acre Residential Gross Density	RH-G	R-H(G)
	Single Family Residential	RF	R-F, R-F(R), R-F(F)
	Single Family Residential Secondary Suite	RF-SS	RF-SS, RFR-SS
	Single Family Residential Gross Density	RF-G	R-F(C)
	Duplex Residential	RM-D	R-F(D)
	Manufactured Home Residential	RM-M	R-F(M), CT(2)
	Multiple Residential 15	RM-15	RT-1
	Multiple Residential 30	RM-30	RM-1
	Multiple Residential 45	RM-45	RM-2
	Multiple Residential 70	RM-70	RM-3
	Multiple Residential Commercial 150	RMC-150	RM-4
	Special Care Housing 1	RMS-1	P-P, P-P(2)
Special Care Housing 2	RMS-2	P-P, P-P(2)	
<b>Institutional Zones</b>	Cemetery	PC	P-C
	Assembly Hall 1	PA-1	P-A
	Assembly Hall 2	PA-2	P-A

**SCHEDULE "A"**

**LIST OF ZONES continued**

**SURREY ZONING BYLAWS 12000 AND 5942**

	Name of Zone	Bylaw 12000 Zone	Bylaw 5942 Zone
<b>Commercial Zones</b>	Local Commercial	C-4	C-L
	Community Commercial	C-8	C-S
	Town Centre Commercial	C-15	CR-1, CR-2, CR-3, CR-4
	Downtown Commercial	C-35	C-C
	Highway Commercial Industrial	CHI	C-H, I-S
	Self-Service Gasoline Station	CG-1	C-G(1)
	Combined Service Gasoline Station	CG-2	C-G(2), CG
	Tourist Accommodation	CTA	C-T(1), C-T(2)
	Child Care	CCR	P-P(1)
	Commercial Recreation	CPR	P-R, P-D
	Golf Course	CPG	P-R
	Marina	CPM	P-R
<b>Industrial Zones</b>	Business Park	IB, IB-3	I-1, I-P(2), I-G, I-4
	Light Impact Industrial	IL	I-G, I-S, I-T, I-W
	High Impact Industrial	IH	I-H, I-W
	Salvage Industrial	IS	I-L(S)
	Agro-Industrial	IA	I-A
<b>Comprehensive Development Zone</b>	Comprehensive Development	CD	C-D

**Schedule "B"**  
**City Wide**

**Surrey Development Cost Charge Bylaw, 2020, No. 20019**

No	Zones and Land Uses	DCC Components						Total	Units for Each Column
		Water	Sewer	Arterial Roads	Collector Roads	Drainage	Parkland Acquisition		
<b>Agricultural</b>									
1	A-1, A-2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	/lot
<b>Single Family Residential</b>									
2	RA, RA-G, RH, RH-G, RC (Types I and II), RF-O, RQ	\$2,769	\$4,008	\$18,969	\$4,409	\$6,199	\$4,945	\$41,299	/lot
3	RF, RF-G, RF-SS, RF-12, RF-12C, RF-13	\$2,769	\$4,008	\$18,969	\$4,409	\$3,542	\$9,889	\$43,586	/lot
4	RF-10, RF-10S, RF-9, RF-9C, RF-9S, RF-SD, RM-23	\$2,494	\$3,609	\$17,273	\$4,015	\$2,090	\$9,005	\$38,486	/lot
5	RM-D	\$2,494	\$3,609	\$17,273	\$4,015	\$2,090	\$9,005	\$38,486	/DU (a)
6	RM-M	\$1,484	\$2,147	\$8,655	\$2,012	\$779	\$9,005	\$24,082	/pad or /DU
<b>Multi Family Residential</b>									
7	RM-10, RM-15, RM-30, RC (Type III) (except line 8)	\$1.20	\$1.73	\$7.13	\$1.66	\$1.33	\$9.07	\$22.12	/sq.ft. of DU (b)
8	RM-30 (in City Centre)	\$1.20	\$1.73	\$7.13	\$1.66	\$1.33	\$9.07	\$22.12	/sq.ft. of DU (b)
9	RM-45, RM-70 (except lines 10, 11, 12, & 13)	\$1.56	\$2.26	\$9.28	\$2.16	\$0.93	\$9.24	\$25.43	/sq.ft. of DU (c)
10	RM-45, RM-70 (for Seniors Apartments not in City Centre)	\$1.75	\$2.53	\$6.03	\$1.40	\$1.04	\$10.32	\$23.07	/sq.ft. of DU (c)
11	RM-45, RM-70 (for Assisted Living Residences)	\$1.75	\$2.53	\$6.03	\$1.40	\$1.04	\$3.44	\$16.19	/sq.ft. of DU (c)
12	RM-45, RM-70 (in City Centre, except for lines 11 & 13)	\$1.75	\$2.53	\$6.60	\$1.53	\$1.04	\$5.51	\$18.96	/sq.ft. of DU (d)
13	RM-45, RM-70 (for Seniors Apartments in City Centre)	\$1.75	\$2.53	\$6.03	\$1.40	\$1.04	\$5.51	\$18.26	/sq.ft. of DU (d)
14	RM-135, RMC-135, RMC-150 (except lines 15, 16, & 17)	\$1.67	\$2.41	\$8.24	\$1.92	\$0.40	\$10.15	\$24.79	/sq.ft. of DU (e)
15	RM-135, RMC-135, RMC-150 (for Seniors Apartments not in City Centre)	\$1.67	\$2.41	\$6.18	\$1.44	\$0.40	\$10.15	\$22.25	/sq.ft. of DU (e)
16	RM-135, RMC-135, RMC-150 (Assisted Living Residences)	\$1.67	\$2.41	\$6.18	\$1.44	\$0.40	\$3.38	\$15.48	/sq.ft. of DU (e)
17	RM-135, RMC-135, RMC-150 (in City Centre) (except for line 16)	\$1.67	\$2.41	\$5.27	\$1.22	\$0.40	\$5.37	\$16.34	/sq.ft. of DU (f)
18	RMS-1, RMS-2, RMS-1A	\$0.71	\$1.02	\$1.44	\$0.34	\$0.89	\$0.00	\$4.40	/sq.ft. of BA
<b>Commercial Zones excluding CTA, CPG, CPM, CPR, and CCR (except for lines 33, 34 &amp; 35)</b>									
19	Commercial - Ground floor	\$0.71	\$1.02	\$7.05	\$1.64	\$2.30	\$0.00	\$12.72	/sq.ft. of BA (g)
20	Commercial - All other floors	\$0.71	\$1.02	\$4.45	\$1.03	\$0.46	\$0.00	\$7.67	/sq.ft. of BA (g)
<b>CTA, CPG, CPM, CPR, and CCR (except for lines 33, 34 &amp; 35)</b>									
21	CTA	\$1,060	\$1,530	\$4,330	\$1,010	\$780	\$0	\$8,710	/pad (h)
22	CPG, CPM, CPR, CCR	\$0.78	\$1.02	\$5.61	\$1.30	\$1.38	\$0	\$10.09	/sq.ft. of BA
<b>Dwelling Units in Non Residential</b>									
23	DU in Non Residential Zones (excluding line 24)	\$1.56	\$2.26	\$9.28	\$2.16	\$0.93	\$9.24	\$25.43	/sq.ft. of DU (c)
24	DU in Non Residential Zones (in City Centre)	\$1.75	\$2.53	\$6.60	\$1.53	\$1.04	\$5.51	\$18.96	/sq.ft. of DU (d)
<b>Industrial (except for lines 33, 34 &amp; 35)</b>									
25	All Industrial Zones & Land Uses - Developed Area	\$7,065	\$10,225	\$37,988	\$8,830	\$30,108	\$0	\$94,216	/acre (g)
26	All Industrial Zones & Land Uses - All other floors	\$0.16	\$0.23	\$0.55	\$0.13	\$0.14	\$0	\$1.21	/sq.ft. of BA (g) (i)
<b>Institutional (except for lines 33, 34 &amp; 35)</b>									
27	PA-1, PA-2, PC	\$0.78	\$1.02	\$0.00	\$0.00	\$1.38	\$0.00	\$3.18	/sq.ft. of BA (g)
28	Public & Private Schools (to grade 12)	\$0.78	\$1.02	\$0.00	\$0.00	\$1.38	\$0.00	\$3.18	/sq.ft. of BA (g)
29	Public & Private Schools (Post Secondary)	\$0.78	\$1.02	\$4.49	\$1.04	\$1.38	\$0.00	\$8.71	/sq.ft. of BA (g)
30	Hospitals	\$0.78	\$1.02	\$2.24	\$0.52	\$1.38	\$0.00	\$5.94	/sq.ft. of BA (g)
31	Federal and Provincial Buildings	\$0.78	\$1.02	\$4.41	\$1.02	\$0.46	\$0.00	\$7.69	/sq.ft. of BA (g)
32	Municipal Buildings	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	/sq.ft. of BA
<b>Highway 99 Corridor</b>									
33	All Commercial Zones & Land Uses	\$17,751	\$25,611	\$161,668	\$36,916	\$0	\$11,332	\$253,278	/acre (g)
34	All Industrial Zones & Land Uses	\$17,751	\$25,611	\$47,549	\$10,858	\$0	\$11,332	\$113,101	/acre (g)
<b>Campbell Heights</b>									
35	All Zones & Land Uses	\$20,417	\$5,388	\$113,675	\$18,419	\$4,237	\$0	\$162,136	/acre (g)

**Notes:**

**West Clayton rates equal to the sum of the rates provided in Schedule "B" and Schedule "C"**

**City Centre rates equal to the sum of the rates provided in Schedule "B" and Schedule "D"**

**Anniedale-Tynehead rates are the rates provided in Schedule "E"**

(a) Rate to be charged per DU, with an ultimate of 2 DU per lot.

(b) Rate to be charged based on the total sq. ft. of DU to a maximum of \$38,710/DU.

(c) Rate to be charged based on the total sq. ft. of DU to a maximum of \$34,330/DU.

(d) Rate to be charged based on the total sq. ft. of DU to a maximum of \$25,596/DU.

(e) Rate to be charged based on the total sq. ft. of DU to a maximum of \$30,988/DU.

(f) Rate to be charged based on the total sq. ft. of DU to a maximum of \$20,425/DU.

(g) Dwelling Units within Non Residential Zones and Land Uses shall be charged the applicable rate in line 23 or line 24.

(h) Rate to be charged per trailer pad or camping site in addition to rate of lines 19 and 20 for BA of any other building.

(i) Rate to be charged for all other floors in addition to rate of line 25.

**Schedule "C"**  
**West Clayton - Additional Rates**

**Surrey Development Cost Charge Bylaw, 2020, No. 20019**

No	Zones and Land Uses	DCC Components		Total	Units for Each Column
		Sewer	Drainage		
	<b>Single Family Residential</b>				
1	RA, RA-G, RH, RH-G, RC (Types I and II), RQ	\$1,555	\$3,867	\$5,422	/lot
2	RF, RF-G, RF-SS, RF-12, RF-12C, RF-13	\$1,555	\$2,210	\$3,765	/lot
3	RF-10, RF-10S, RF-SD, RM-23	\$1,383	\$1,304	\$2,687	/lot
4	RM-D	\$1,383	\$1,304	\$2,687	/DU (a)
	<b>Multi Family Residential</b>				
5	RM-10, RM-15, RM-30, RC (Type III)	\$0.78	\$0.83	\$1.61	/sq.ft. of DU (b)
6	RM-45, RM-70 (except lines 7 & 8)	\$0.76	\$0.58	\$1.34	/sq.ft. of DU (c)
7	RM-45, RM-70 (for Seniors Apartments)	\$0.85	\$0.65	\$1.50	/sq.ft. of DU (c)
8	RM-45, RM-70 (for Assisted Living Residences)	\$0.85	\$0.65	\$1.50	/sq.ft. of DU (c)
9	RMS-1, RMS-2, RMS-1A	\$0.35	\$0.55	\$0.90	/sq.ft. of BA
	<b>Commercial Zones</b>				
10	Commercial - Ground floor	\$0.35	\$1.44	\$1.79	/sq.ft. of BA (d)
11	Commercial - All other floors	\$0.35	\$0.29	\$0.64	/sq.ft. of BA (d)
12	CPG, CPM, CPR, CCR	\$0.35	\$0.86	\$1.21	/sq.ft. of BA
	<b>Dwelling Units in Non Residential</b>				
13	DU in Non Residential Zones	\$0.76	\$0.58	\$1.34	/sq.ft. of DU (c)
	<b>Institutional</b>				
14	PA-1, PA-2, PC	\$0.35	\$0.86	\$1.21	/sq.ft. of BA (d)
15	Public & Private Schools (to grade 12)	\$0.35	\$0.86	\$1.21	/sq.ft. of BA (d)
16	Public & Private Schools (Post Secondary)	\$0.35	\$0.86	\$1.21	/sq.ft. of BA (d)
17	Hospitals	\$0.35	\$0.86	\$1.21	/sq.ft. of BA (d)
18	Federal and Provincial Buildings	\$0.35	\$0.29	\$0.64	/sq.ft. of BA (d)
19	Municipal Buildings	\$0.00	\$0.00	\$0.00	/sq.ft. of BA

**Notes:**

**West Clayton rates equal to the sum of the rates provided in Schedule "B" and Schedule "C"**

(a) Rate to be charged per DU, with an ultimate of 2 DU per lot.

(b) Rate to be charged based on the total sq. ft. of DU to a maximum of \$2,925/DU.

(c) Rate to be charged based on the total sq. ft. of DU to a maximum of \$1,796/DU.

(d) Dwelling Units within Non Residential Zones and Land Uses shall be charged the applicable rate in line 13.

**Schedule "D"**  
**City Centre - Additional Rates**

**Surrey Development Cost Charge Bylaw, 2020, No. 20019**

No	Zones and Land Uses	DCC Component	Total	Units for Each Column
		Local Road		
	<b>Multi Family Residential</b>			
1	RM-10, RM-15, RM-30, RC (Type III)	\$3.10	\$3.10	/sq.ft. of DU (a)
2	RM-45, RM-70	\$2.87	\$2.87	/sq.ft. of DU (b)
3	RM-135, RMC-135, RMC-150	\$2.29	\$2.29	/sq.ft. of DU (c)
	<b>Commercial Zones</b>			
4	Commercial - Ground floor	\$3.06	\$3.06	/sq.ft. of BA (d)
5	Commercial - All other floors	\$1.93	\$1.93	/sq.ft. of BA (d)
	<b>Dwelling Units in Non Residential</b>			
6	DU in Non Residential Zones	\$2.87	\$2.87	/sq.ft. of DU (b)
	<b>Institutional</b>			
7	Public & Private Schools (Post Secondary)	\$1.95	\$1.95	/sq.ft. of BA (d)
8	Hospitals	\$0.97	\$0.97	/sq.ft. of BA (d)
9	Federal and Provincial Buildings	\$1.91	\$1.91	/sq.ft. of BA (d)
10	Municipal Buildings	\$0.00	\$0.00	/sq.ft. of BA

**Notes:**

**City Centre rates equal to the sum of the rates provided in Schedule "B" and Schedule "D"**

(a) Rate to be charged based on the total sq. ft. of DU to a maximum of \$5,426/DU.

(b) Rate to be charged based on the total sq. ft. of DU to a maximum of \$3,875/DU.

(c) Rate to be charged based on the total sq. ft. of DU to a maximum of \$2,863/DU.

(d) Dwelling Units within Non Residential Zones and Land Uses shall be charged the applicable rate in line 6.

## APPENDIX “III”

### Proposed 2020 Development Cost Charge Rates

#### City-Wide DCCs

Zone	2018 Existing DCC Rate (\$)	2020 Proposed DCC Rate (\$)	Rate Change (\$)	Rate Change (%)
SF (RF, RF-12) (per lot)	41,220	43,586	2,366	5.7
SF Small Lot (RF-10, RF-SD) (per lot)	36,193	38,486	2,293	6.3
RM-10, RM-15 and RM-30 (per sq. ft.)	21.28	22.12	0.84	3.9
RM-45 and RM-70 (per sq. ft.)	24.18	25.43	1.25	5.2
RM-45 and RM-70 in City Centre (per sq. ft.)	17.97	18.96	0.99	5.5
RM-135 and RMC-150 (per sq. ft.)	23.62	24.79	1.17	4.9
RM-135 and RMC-150 in City Centre (per sq. ft.)	15.49	16.34	0.85	5.5
Commercial (ground floor) (per sq. ft.)	11.98	12.72	0.74	6.2
Industrial (per acre)	91,807	94,216	2,409	2.6

#### Campbell Heights DCCs

Zone	2018 Existing DCC Rate (\$)	2020 Proposed DCC Rate (\$)	Rate Change (\$)	Rate Change (%)
All Zones (per acre)	147,837	162,136	14,299	9.7

#### Highway 99 Corridor DCCs

Zone	2018 Existing DCC Rate (\$)	2020 Proposed DCC Rate (\$)	Rate Change (\$)	Rate Change (%)
All Commercial Zones (per acre)	230,442	253,278	22,836	9.9
All Industrial Zones (per acre)	111,991	113,101	1,110	1.0

#### West Clayton DCCs \*

Zone	2018 Existing DCC Rate (\$)	2020 Proposed DCC Rate (\$)	Rate Change (\$)	Rate Change (%)
SF (RF, RF-12) (per lot)	3,601	3,765	164	4.6
SF Small Lot (RF-10, RF-SD) (per lot)	2,696	2,687	-9	-0.3
RM-10, RM-15 and RM-30 (per sq. ft.)	1.59	1.61	0.02	1.3
RM-45 and RM-70 (per sq. ft.)	1.37	1.34	-0.03	-2.2
Commercial (ground floor) (per sq. ft.)	1.52	1.79	0.27	17.8
Institutional (per sq. ft.)	1.08	1.21	0.13	12.0

Note: \* West Clayton DCCs shown are in addition to the City-Wide DCC rates to cover the cost of infrastructure needed to service this specific area.



**City Centre DCCs \*\***

<b>Zone</b>	<b>2018 Existing DCC Rate (\$)</b>	<b>2020 Proposed DCC Rate (\$)</b>	<b>Rate Change (\$)</b>	<b>Rate Change (%)</b>
RM-10, RM-15 and RM-30 (per sq. ft.)	2.83	3.10	0.27	9.5
RM-45 and RM-70 (per sq. ft.)	2.62	2.87	0.25	9.5
RM-135 and RMC-150 (per sq. ft.)	2.09	2.29	0.20	9.6
Commercial (ground floor) (per sq. ft.)	2.79	3.06	0.27	9.7
Institutional (per sq. ft.)	1.78	1.95	0.17	9.6

Note: \*\* City Centre DCCs shown are in addition to the City-Wide DCC rates to cover the cost for strategic land acquisition to service this specific area.

**Anniedale-Tynehead DCCs**

<b>Zone</b>	<b>2018 Existing DCC Rate (\$)</b>	<b>2020 Proposed DCC Rate (\$)</b>	<b>Rate Change (\$)</b>	<b>Rate Change (%)</b>
SF (RF, RF-12) (per lot)	42,151	44,390	2,239	5.3
SF Small Lot (RF-10, RF-SD) (per lot)	36,767	38,643	1,876	5.1
RM-10, RM-15 and RM-30 (per sq. ft.)	22.60	23.65	1.05	4.6
RM-45 and RM-70 (per sq. ft.)	25.52	26.67	1.15	4.5
RM-135 and RMC-150 (per sq. ft.)	20.14	21.05	0.91	4.5
Commercial (ground floor) (per sq. ft.)	15.84	16.82	0.98	6.2
Industrial (per acre)	140,713	150,403	9,690	6.9
Institutional (per sq.ft.)	4.30	4.74	0.44	10.2