

THE MUNICIPALITY OF
THE VILLAGE OF LIONS BAY

LET'S DISCUSS THE
INFRASTRUCTURE MASTER PLAN
30-YEAR STRATEGY WITH 5-YEAR FOCUS



THE STRATEGIC PLAN

Council priorities for 2016 - 2018





THE INFRASTRUCTURE MASTER PLAN

The plan that supports our decisions and funding requests



Developed by AECOM, a world-renowned and well respected civil engineering firm

- ✓ A long-range plan that identifies existing and future risks to the condition, capacity, and regulatory compliance of the Village's infrastructure
- ✓ While the Infrastructure Master Plan has a 30-year forecast for capital improvements, the primary focus right now is on the infrastructure projects that need our immediate attention over the next five years to deal with failing infrastructure
- ✓ Estimated project costs based upon AECOM's project tendering experience with contract costs

THE INFRASTRUCTURE BASICS

We have critical at-risk infrastructure that needs attention now

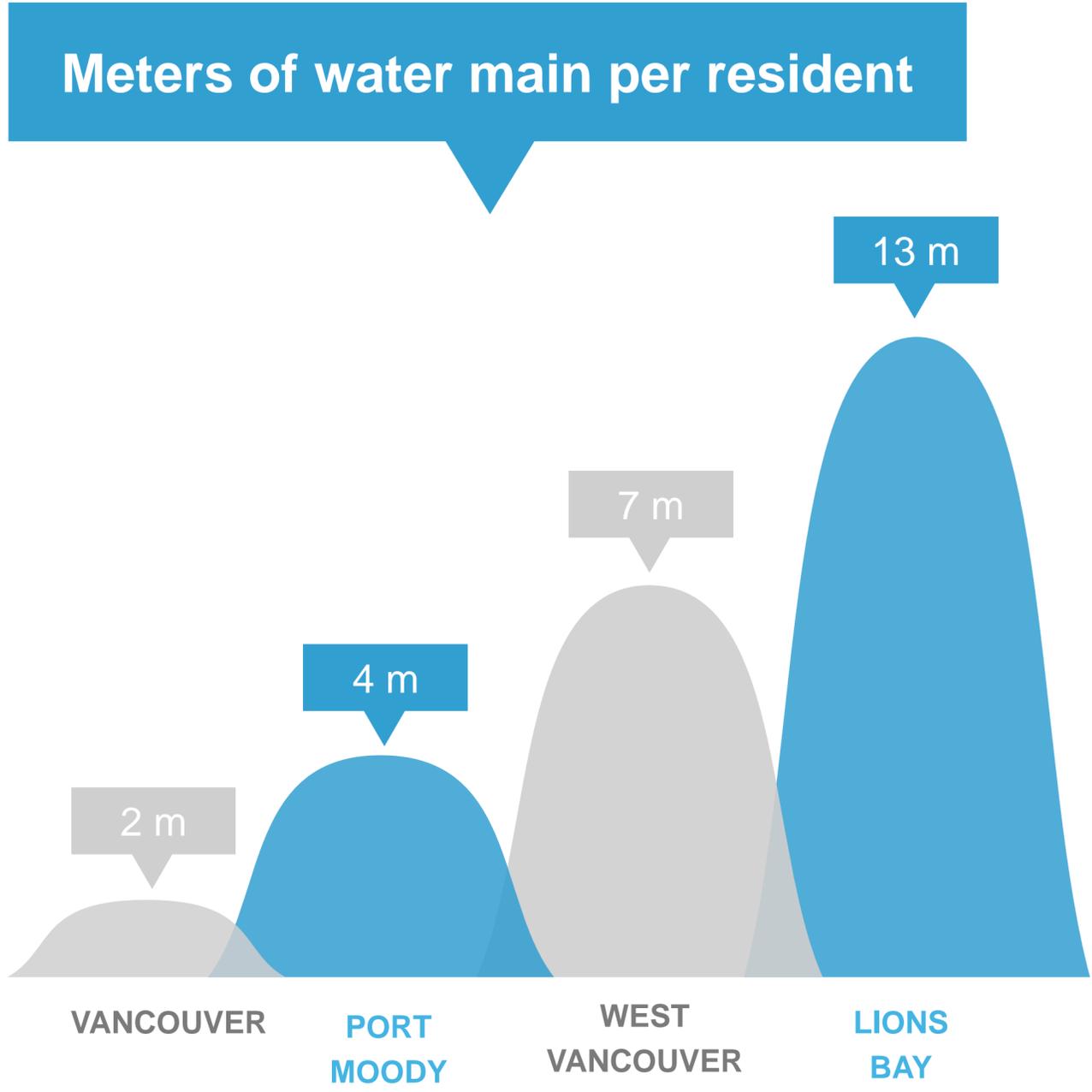


Our infrastructure is vital to safety and viability of our community, and its condition is directly related to our quality of life.

- Lions Bay owns, operates and maintains an extensive inventory of assets within our roads, water and drainage
- Most utility assets have a long life, but as they approach the end of their useful life, they must be replaced or renewed to ensure core services are maintained
- Some of our infrastructure is nearing the end of its service life and if we don't replace it now we will experience costly failures and resultant damage – think back to the water main break at Kelvin Grove a few years ago

THE FACTS

Lions Bay residents have a larger burden than other municipalities



Due to our small size, we do not have the financial resources required to replace and rehabilitate our infrastructure without help from the federal and provincial governments

DID YOU KNOW?

\$373.6 million of funding from the federal and provincial governments will flow through the new Clean Water and Wastewater Fund (CWWF) to provide communities with more reliable water and wastewater systems



THE OPPORTUNITY IS NOW

The Funding Split: 50% Federal + 33% Provincial + 17% Municipal





THREE INFRASTRUCTURE CATEGORIES

A combination of the projects from the Infrastructure Master Plan categorized into three groups.



Safety and security of water and stormwater distribution network

Replacement of aging and undersized watermains and stormwater distribution pipe networks throughout the Village



Safety and security of water storage system

Rehabilitative and replacement works of the Village's water storage system including structural modifications, seismic upgrading, and increased storage capacity



Prioritized road and bridge repairs

Includes rehabilitative works on fatigued asphalt and moderate to high priority bridge repairs that have been unattended to since 2004

THE WATER AND STORMWATER DISTRIBUTION NETWORK

The lifeblood of our community they're analogous to arteries and veins

1



Water mains act like arteries and capillaries transporting potable water throughout the Village of Lions Bay.

The original cast iron and asbestos cement lines are reaching the end of their service lives. In the case of the cast iron lines, corrosion has reduced the carrying capacity significantly (analogous to atherosclerosis). Moreover, many of the existing water mains are undersized and cannot provide adequate fire flows.

THE WATER STORAGE SYSTEM

Our tanks have structural and seismic defects that need attention now.

2



Storage tanks provide crucial supply during emergencies such as fire flow and they provide contact time for disinfectants to inactivate pathogens

The last inspection of the Village's water tanks was completed in 2004. The inspections identified significant issues including seismic deficiencies, leakage, corrosion, and overall deterioration of the tanks. In particular, the 1980 Harvey tank, and the 1960's tanks have exceeded their average service life of 50 years.

THE ROADS AND BRIDGES

The lifeline of our community's transportation network.

3



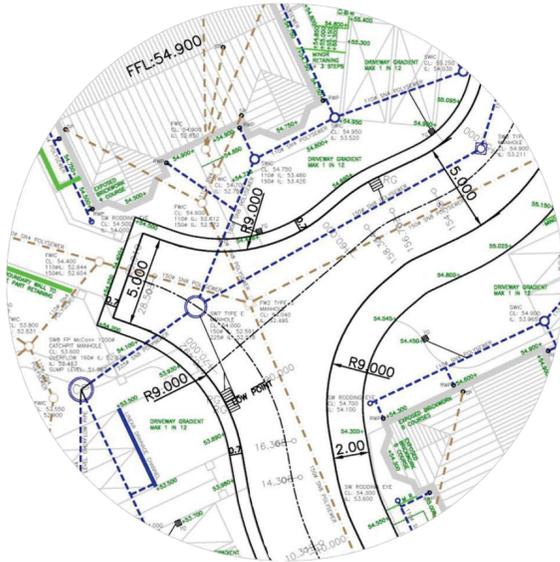
Roads and bridges provide access to an from our homes across and across creeks and rivers of our community. Many of the Villages bridges have watermains suspended beneath them.

Corrosion of internal steel and deterioration of structural components is occurring and needs to be addressed in order to increase bridge life expectancy. 34% of our roads are in poor or mediocre quality with failing asphalt and sub grade deterioration.



THE PROCESS

The four steps to infrastructure renewal



ENGINEERING
DESIGN DRAWINGS
& REVIEW



TENDERING
COMPETITIVE BID
PROCESS & AWARD



PIPEWORKS
TRENCH EXCAVATION
AND PIPE INSTALL



SURFACE WORKS
ROAD AND DRAINAGE
INSTALLATION AND
CONSTRUCTION

●●● STEP 2: TENDERING

Getting the best bang for our buck through bid process



TENDERING
COMPETITIVE BID
PROCESS & AWARD

Design drawings and tendering packages will be posted on BC Bid

- **BC Bid is a marketplace where public sector organizations advertise opportunities for contracts for a wide range of goods and services.**
- **Competitive bidding stimulates competition and ensures we get the lowest price for our tendered projects.**
- **Sealed bids are publicly opened and then evaluated by staff to ensure they meet the project requirements.**
- **A winning firm is selected and staff make a recommendation to Council to award the tender.**

●●●● STEP 3: PIPEWORKS

The construction process, including mobilization, layout and excavation



PIPEWORKS
TRENCH EXCAVATION
AND PIPE INSTALL

Mobilizing and beginning construction works per the design

- **Contractors will mobilize on site, set up a traffic plan and install signage, lay out the design, locate underground utilities, and prepare for excavation and earthworks.**
- **Excavation and installation will commence followed by backfilling and compaction.**
- **Prep work for the final stages will take place.**

STEP 4: SURFACE WORKS

The restoration process includes finishing touches including drainage and pavement



SURFACE WORKS

ROAD AND DRAINAGE
INSTALLATION AND
CONSTRUCTION

Drainage and roadwork will culminate in a finished project

- Drainage installation and road works will occur. If a full reconstruct is required, existing asphalt will be removed and the road's sub-grade will reworked.
- Asphalt contractors will mill and overlay or, in the case of a full road reconstruct, lay the first course or 'lift' of asphalt to be followed later by a second lift.
- Upon completion of the paving works, line marking and final restoration works such as shoulder works or landscaping will occur.



THE WAY FORWARD

PHASE 1 OF THE CLEAN WATER AND WATEWATER FUND



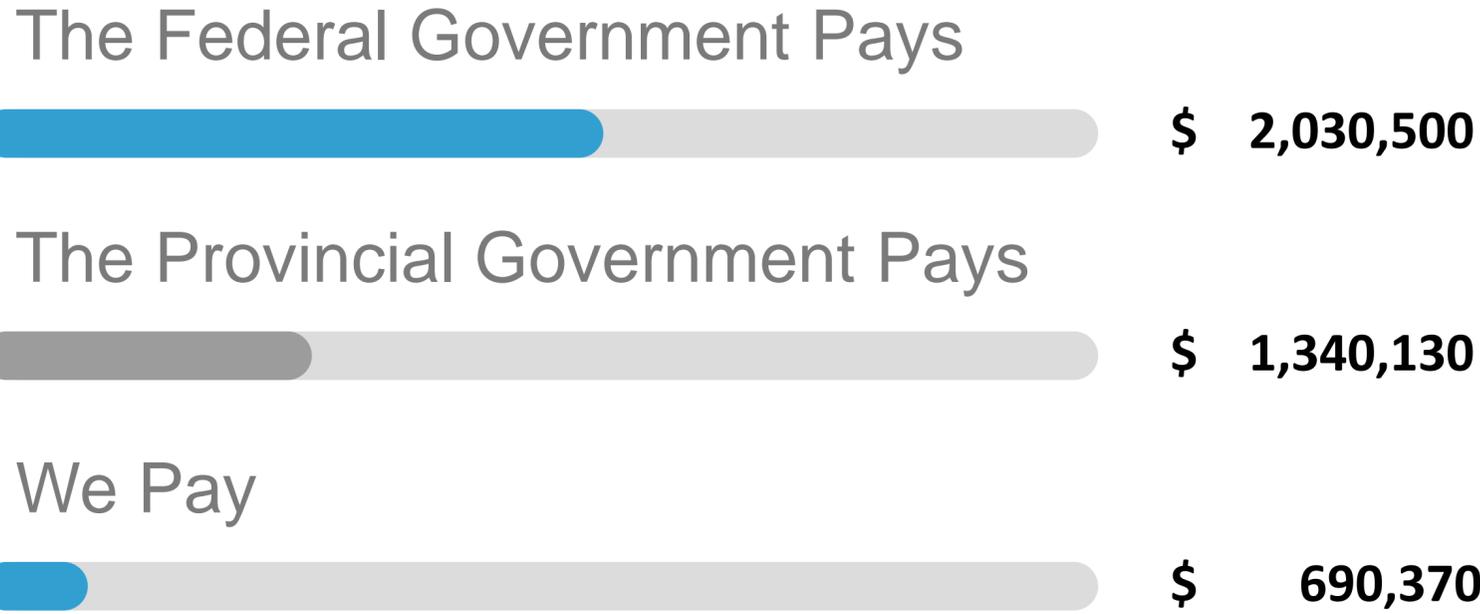


THE TWO PROJECTS FOR PHASE ONE

Water Tanks & Pressure Reducing Valve Stations



WHO PAYS WHAT?



HOW DO WE FUND OUR SHARE?



THE LOAN AUTHORIZATION BYLAW

The three categories to provide us with “our share”

Project Name	Description of Capital Works	Amount of Borrowing
Safety and security of water and stormwater distribution network	Replacement of water and stormwater distribution network piping and valves on Bayview Road, Oceanview Road, Creekview Place, Highview Place, Upper Bayview Road, Bayview Place, Centre Road, Tidewater Way, and Kelvin Grove Way, including associated road rehabilitative works.	\$1,993,222.00
Safety and security of water storage system	High priority rehabilitative and replacement works of the Village's water storage system including structural modifications, seismic upgrading, increased storage capacity, and associated pipeworks to provide safe and adequate supply and meet requisite fireflows.	\$867,520.00
Prioritized road and bridge repairs	Includes rehabilitative works on fatigued asphalt and moderate to high priority bridge repairs that have been unattended to since 2004.	\$139,258.00
Total		\$3,000,000.00

THE REFERENDUM QUESTION

What will I be asked during voting?



ON NOVEMBER 19
YOU WILL BE ASKED TO
VOTE YES OR NO

Are you in favour of the Village of Lions Bay borrowing up to \$3 million over the next five years, amortized for up to 30 years, to help fund the capital projects described in Infrastructure Master Plan Financing Loan Authorization Bylaw No. 508, 2016?



THE NEXT STEPS AFTER A YES VOTE

What happens after the referendum



Staff can continue with the grant application process

The Village of Lions Bay receives grant approval for 1 or 2 projects

Council approves a borrowing resolution to cover our portion of the total costs

Tender and award of project(s) - then construction begins!

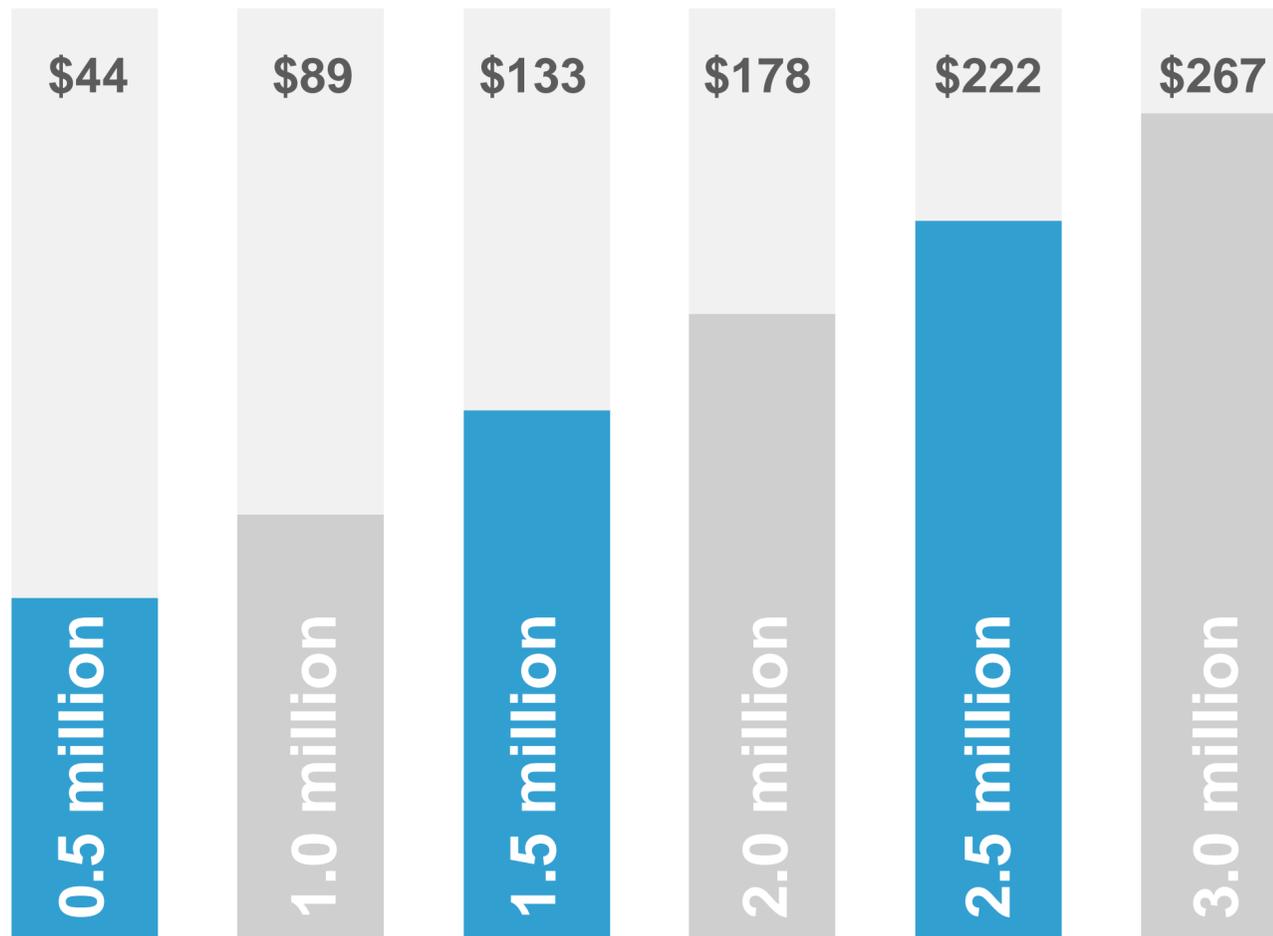
Each round of grant approved projects will be funded by a loan for Lions Bay's share

Council must approve a borrowing resolution after each successful grant application



THE BOTTOM LINE FOR RESIDENTS

How much is it going to cost me?



Annual Costs

The loan costs will be factored into the upcoming budget, recognizing that the amount of the loan will affect the impact on taxes and user fees. The amount of grant funding we receive will dictate the bottom line for how much we borrow.

If the full \$3 million is borrowed, it's anticipated that the average annual cost per household for the loan will be about \$267, although the actual impact on taxes and user fees per household may be less.



DON'T FORGET TO VOTE!

ADVANCE POLL – Council Chambers on November 9th

REGULAR POLL – Broughton Hall on November 19th

MAIL IN BALLOT – See lionsbay.ca/by-election-2016 for information

