



Item.....
Meeting..... 2015 Aug 24

COUNCIL REPORT

TO: CITY MANAGER **DATE:** 2015 August 17

FROM: DIRECTOR ENGINEERING **FILE:** 32000-05

SUBJECT: 2016 CAPITAL INFRASTRUCTURE FUNDING REQUEST
– 2016 DESIGN AND 2015 CONSTRUCTION COMPLETION

PURPOSE: To request approval and funding for initiation of the 2016 Capital Infrastructure Program and completion of the 2015 Infrastructure Construction Program.

RECOMMENDATIONS:

1. **THAT** Council approve capital expenditures of \$6.826 Million for infrastructure programs, as outlined in this report.
2. **THAT** Council authorize staff to bring down a Capital Reserves Bylaw in the amount of \$2,772,200 (inclusive of GST), and bring down a Local Area Service Bylaw in the amount of \$523,400 (inclusive of GST), and draw from the Waterworks Utility Capital Fund the amount of \$1,190,200 (inclusive of GST) and the Sanitary sewer Capital Fund the amount of \$2,658,700 (inclusive of GST) to finance the capital programs as outlined in this report.

REPORT

The 2015 – 2019 Provisional Financial Plan contains the following programs. In order to proceed with design work for the 2016 Capital Program in a timely manner, it is necessary to request funding in 2015. The detailed 2016 Capital Plan is available as *Attachment A* (subject to change).

1.0 2016 CAPITAL PROGRAM

1.1 *Pavement overlay* **\$702K**

The City has an annual pavement overlay program to restore deteriorated asphalt surfaces and extend the useful life of the pavement. This form of treatment is an integral part of the infrastructure renewal that protects the City's significant investment in the road network. The program includes rehabilitation of local roads in addition to sections of the Major Roads Network (MRN).

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• Local Roads	\$210K	EMC.0010
• MRN	\$182K	EMA.0007
• Road Upgrade - Dover St.	\$100K	ERA.0014
• Road Upgrade – Rumble St.	\$ 75K	ERA.0049
• Road Upgrade – Gilpin St.	<u>\$135K</u>	ERA.0057
	\$702K	

The cost of pavement rehabilitation on the MRN is fully funded by TransLink. However, the City must interim finance these expenditures as payment transfers from TransLink are made on a quarterly basis. The Capital Reserves will be reimbursed upon receipt of TransLink funding.

1.2 Structures \$200K EMJ.0008

Capital funds are provided annually for the ongoing rehabilitation and upgrade of existing bridges within the city. A recently completed bridge inspection report has identified a structural rehabilitation and seismic upgrades to Loughheed Highway Bridge R20, east of Gaglardi, which crosses Stoney Creek and a public trail.

1.3 Streetlight & Sidewalk Program \$100K ERA.0055

The City has identified new sidewalk and streetlight installations to improve pedestrian accessibility and safety. Locations include Douglas south of Canada Way, Wayburne from Canada Way to Village Drive, and Dawson from Willingdon to Beta.

1.4 Watermain Renewals \$637K EJA.0014

The City has an annual watermain renewal program that consists of the replacement of aging watermain infrastructure, capacity upgrades for adequate flow for firefighting purposes, and needs due to growth.

1.5 Sanitary Mains \$560K EKA.0014

The City has an annual sanitary sewer renewal program that consists of combined sewer separation, condition based sewer main renewal, and capacity upgrades to accommodate growth and re-development.

1.6 Wiggins Pump Station Upgrade \$30K EKB.0016

The Wiggins Sanitary Pump Station needs to be upgraded to accommodate growth and redevelopment, and to make timely condition-related upgrades to the existing pump station facility. Construction costs will be shared with nearby developments.

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1.7 Storm Sewers \$140K ELA.0021

The City has identified an annual storm sewer renewal program consisting of replacement of aging and undersized infrastructure.

1.8 Coordinated Works – Storm \$140K ELA.0024

The Capital Program includes provision for cost-sharing with private development for infrastructure improvements not solely related to the proposed development. The program takes advantage of the development process in providing a cost-effective solution for upgrading the City's infrastructure adjacent to a development site, when considered desirable by the City.

1.9 Storm Water Management \$276.5K ELD.0017

Through completion of Integrated Stormwater Management Plans, the City has identified various stormwater management projects in order to improve watershed health, address aging or undersized infrastructure, and reduce the likelihood of increased erosion on watercourses. This is a multi-year project and expenditures will be incurred throughout 2015 and 2016 as per the capital plan.

1.10 Dyke Construction and Paving \$105K ELD.0019

Fraser River foreshore dike 'Reach 8' is located between Patterson Avenue (or Glenlyon Creek) and Byrne Road. This project is intended to improve flood protection at the Reach 8 dike section and public access along the unpaved sections of previously constructed Fraser River foreshore dikes.

2.0 2015 CONSTRUCTION COMPLETION

2.1 Watermain Renewals \$500K EJA.0013

The City has an annual watermain renewal program that consists of the replacement of aging watermain infrastructure, capacity upgrades for adequate flow for firefighting purposes and needs due to growth. Reports to Council in January and June raised the majority of the funding for the 2015 Watermain program. This request is to raise the remainder of the 2015 Watermain program as identified in the 2015 – 2019 Capital Plan.

2.2 Sanitary Mains \$1.95M EKA.0013

The City has an annual sanitary sewer renewal program that consists of combined sewer separation, condition based sewer main renewal and capacity upgrades to accommodate growth and re-development. Reports to Council in January raised a portion of the funding for the 2015 Sanitary Main program. This request is to raise the remaining funding for the 2015 program as laid out in the 2015 – 2019 Capital Plan, plus an additional amount to cover tenders received that were higher than the original estimates.

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2.3 2015 Storm Sewers \$410K ELA.0018

The City has an annual storm sewer renewal program that consists of condition based sewer main renewal and capacity upgrades to accommodate growth and re-development. Previous reports to Council raised the 2015 Capital Plan amount; additional funding is required for tenders received that were higher than the original estimates, and to accommodate additional scope not anticipated until detailed design was completed.

2.4 Curb Bulges / Traffic Calming \$35K EMI.0001

The City has an annual curb bulge installation program to improve pedestrian safety. Previous reports to Council raised the 2015 Plan Amount. This additional funding is required for a tender that was higher than the original estimate.

2.5 Byrne Creek Fish Barrier \$40K ELD.0013

The Byrne Creek ISMP identified fish passage improvements and previous reports to Council raised the 2015 Capital Plan amount. This additional funding is required for a tender that was higher than the original estimate.

2.6 Bridge Rehabilitation \$500K EMJ.0007

The City has an annual bridge rehabilitation program. Previous reports to Council raised the 2015 Capital Plan amount. This additional funding is required for future tenders where the detailed engineering estimate requires additional funding to complete the planned works.

2.7 LASP Construction \$500K ECC.0010

The City has an annual LASP construction program to upgrade interim streets to include curb and gutters, sidewalks, trees, and street lights. Previous reports to Council raised the 2015 Plan Amount. This additional funding is required for a tender that was higher than the original estimate for work to be done on the following locations:

- Denbigh, Kingsway to Irving
- Portland, Nelson to Gray Creek
- Enterprise, WPL 785 Enterprise
- Goring, Douglas to Holdom
- Kitchener, Macdonald to Gilmore

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RECOMMENDATION

Total cost of the above programs is estimated at \$7.145 Million (inclusive of GST). These expenditures are included in the 2015 – 2019 Provisional Financial Plan and sufficient Capital Reserves are available to complete these works.

It is recommended that Council authorize staff to bring down a Capital Reserves Bylaw in the amount of \$2,772,200 (inclusive of GST), and bring down a Local Area Service Bylaw in the amount of \$523,400 (inclusive of GST), and draw from the Waterworks Utility Capital Fund the amount of \$1,190,200 (inclusive of GST) and the Sanitary sewer Capital Fund the amount of \$2,658,700 (inclusive of GST) to finance the capital programs as outlined in this report.

D. Dattani
Leon A. Gous, P. Eng., MBA
DIRECTOR ENGINEERING

FV:ac

Attachment

Copied to: Director Finance

PROPOSED 2016 INFRASTRUCTURE CAPITAL PROGRAM (Updated August 2015)

Super Project ID	Project Name	Street	From	To	Proposed Scope of Work
ENGINEERING - ROAD R-01	2016 Major Road Network Rehabilitation Program - Southridge & Griffiths	Southridge Dr	Griffiths Dr	Manne Dr	road rehab
		Griffiths Dr	10th Av	Beauford St	road rehab
		Buchanan Dr	Buchanan St	Buchanan St	road rehab, accessibility improvements
		Buchanan St	Blenstone	Hickam Av	road rehab, accessibility improvements
		Crutcher Dr	Crutcher Dr	cut-de-sac	road rehab, accessibility improvements
		Collister Dr	Collister Dr	Roycroft Ct	road rehab, accessibility improvements
		Comely Pl	Collister Dr	cut-de-sac	road rehab, accessibility improvements
		Chaboy Pl	Collister Dr	cut-de-sac	road rehab, accessibility improvements
		Sanders St	Nelson Av	cut-de-sac	road rehab, accessibility improvements
		Nelson St	Nelson Av	Royal Oak Av	road rehab
		Mariborough Av	Mariborough Av	Royal Oak Av	road rehab
		Maponough Av	Kingsway	Sanders St	road rehab
		Mandy Av	Impati St	Hunt St	road rehab
		Mandy Av	Mandy Av	Joffre Av	road rehab
		Dubois St	Government Rd	Boundary Rd	road rehab
ENGINEERING - ROAD R-02	2016 Local Road Network Rehabilitation Program	Alford Ct	Dorchester Dr	road rehab	
		Epene Ct	Dorchester Dr	road rehab	
		Chelsea Ct	Dorchester Dr	road rehab	
		Howard Av	Hickam	cut-de-sac	
		Gilbo St	Waiwakaon Av	cut-de-sac	
		Stoney Creek Pl	Norcrest Ct	End of Road (East)	
		Norcrest Ct	S.J. Creek Pl	cut-de-sac (south)	
		Griffiths Av	Kingsway	cut-de-sac (northwest)	
		Gama Av	Lane south of Hazlewood St	Impati	
		Imman Av	Burka St	Union St	
		Endersby St	16th Av	Thurston St	
		16th Av	Gumberland St	Armalong Av	
		14th Av	4th St	Endersby St	
		14th Av	Armalong Av	2nd St	
		14th Av	Armalong Av	10th Av	
ENGINEERING - MAJOR ROADS M-01	2016 Sidewalk and Streetlighting Program	Garden Grove Dr (west side)	Waiwakaon Av	Woodswain Dr	sidewalk replacement
		Glen Abbey Dr (west side)	Waiwakaon Av	Aubrey St	sidewalk replacement
		Phillips Ave (both sides)	Broadway	Lawrence St	sidewalk replacement
		Lawrence St (both sides)	Phillips Ave	Lawrence St	sidewalk replacement
		Camrose Dr (both sides)	Broadway	Camrose Dr	sidewalk replacement
		Kilgus Cr (west side)	Camrose Dr	Lawrence St	sidewalk replacement
		Curis St (both sides)	Augusta Ave	Lawrence St	sidewalk replacement
		Ellen Ave (south side)	Beechcraffe Dr	Phillips Ave	sidewalk replacement
		Loughhead Hwy Bridge (R20)	Loughhead Hwy at Emslake Dr	Truway Dr	bridge rehabilitation
		Meadow Av	Byrne Road	12th St	road rehab, storm sewer upgrades
		17th St	Meadow Av	Ward St	road rehab, storm sewer upgrades, watermain replacement
		Douglas Rd (east side)	Loughhead Hwy	200m south of Loughhead	sidewalk installation, civic communication conduits
		Winburne Dr	Canada Way	Village Dr	sidewalk & streetlight installation
		Dixon St	Waiwakaon Av	Boia Av	sidewalk & streetlight installation
		Rumble St	Boundary Rd	McKer Av	urban gas, sidewalk & road rehab, storm sewer, watermain, watermain (Paterson to McKer), civic communication conduits
Over St	Royal Oak Av	McMurray Av	intersection improvement & road rehab, civic communication conduits		

Super Project ID	Project Name	Street	From	To	Proposed Scope of Work		
W-01	ENGINEERING - WATERWORKS 2018 Watermain Replacement Program Package - City Forces	Gordon Av	Imperial St	Frimby St	Watermain replacement (future road rehab by others)		
		Frimby St	cut-to-acc west of Gordon Av	Canada Way	Watermain replacement (future road rehab by others)		
		Mayfield St	cut-to-acc west of Gordon Av	Canada Way	Watermain replacement (future road rehab by others)		
		Layfield St	Canada Way	6th St	Watermain replacement (future road rehab and civic communication conduits by others)		
		Linden Av	Imperial St	6th St	Watermain replacement (future road rehab and civic communication conduits by others)		
		16th St	Ewell St	Commerce St	Watermain replacement (future road rehab and civic communication conduits by others)		
		16th Av	16th St	16th Av	Watermain replacement (future road rehab by others)		
		17th St	17th St	17th St	Watermain replacement (future road rehab by others)		
		18th Av	Shade Av	18th Av	Watermain replacement (future road rehab by others)		
		18th St	18th St	18th St	Watermain replacement (future road rehab by others)		
		19th Av	19th Av	19th Av	Watermain replacement (future road rehab by others)		
		20th St	20th St	20th St	Watermain replacement (future road rehab by others)		
		21st St	21st St	21st St	Watermain replacement (future road rehab by others)		
		22nd St	22nd St	22nd St	Watermain replacement (future road rehab by others)		
		23rd St	23rd St	23rd St	Watermain replacement (future road rehab by others)		
		24th St	24th St	24th St	Watermain replacement (future road rehab by others)		
		25th St	25th St	25th St	Watermain replacement (future road rehab by others)		
		26th St	26th St	26th St	Watermain replacement (future road rehab by others)		
		W-02	2018 Water Replacement and Road Rehabilitation Program - Windsor	Windsor	Windsor	Windsor	Watermain replacement, road rehab, accessibility improvements, watermain replacement
		W-03	2018 Watermain Replacement and Road Rehabilitation Program - South Slope	McGregor Av	Royal Oak Av	McGregor Av	road rehab, watermain replacement
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
McGregor Av	Royal Oak Av			McGregor Av	road rehab, watermain replacement		
W-04	2018 Watermain Replacement and Road Rehabilitation Program - Stanley			Stanley	Stanley	Stanley	Watermain replacement, road rehab, watermain replacement
W-05	Gapan Street Upgrade			Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
		Gapan St	Gapan St	Gapan St	Watermain replacement, road rehab, watermain replacement		
W-06	Capital Hill Pump Station Upgrade	Capital Hill Pump Station	Capital Hill Pump Station	Capital Hill Pump Station Upgrade			
W-07	Meters - Replacement Upgrade Program	Meters	Meters	Meters - Replacement Upgrade Program			
W-08	10th Av PRV	10th Av PRV	10th Av PRV	10th Av PRV			
W-09	2318 Water Services	2318 Water Services	2318 Water Services	2318 Water Services			
W-10	Dawson St Watermain (Development Coordinated Works)	Dawson St	Dawson St	Dawson St Watermain (Development Coordinated Works)			
W-11	Gapan PRV	Gapan PRV	Gapan PRV	Gapan PRV			

Super Project ID	Project Name	Street	From	To	Proposed Scope of Work (Please list indicator work done in other projects)
ENGINEERING - SANITARY SEWER					
S-01	2016 Combined Sewer Separation Program Package I - City Forces	Endersby St 14th Av	18th Av 4th St	7662 Endersby St 2nd St	sewer separation, wellman replacement (2015), road rehab by R-02 sewer separation, wellman replacement (2015), road rehab by R-02
S-03	2016 Combined Sewer Separation Program Package III - Lane North of Venables	Venables St Emond	Gimore Av Boundary Rd Venables St Umon	Boundary Rd Ingleton Av Umon	road rehab, sewer separation road rehab, sewer separation, wellman replacement wellman replacement
S-04	2016 Combined Sewer Separation Program Package IV - Graham & 15th Av	Graham St 15th Av	15th Av 4th St	4th St 2nd St	road rehab, sewer separation, wellman replacement road rehab, sewer separation, wellman replacement (Emond-Gimore)
S-10	2016 Combined Sewer Separation Program Package VI - Albert Lane	Albert St	Boundary Rd	Gimore Av	road rehab, sewer separation, wellman replacement
S-05	2016 Combined Sewer Separation Program Package V - 11th Av (Design Only)	11th Av	Boundary Rd Newcombs St Newcombs St	Emond Av Cumberland St	Design only - road rehab, accessibility improvements, sewer separation, wellman replacement
S-08	2016 Hastings Street Infrastructure Renewal - Gimore to Ingleton	Hastings St	Newcombs St Gimore Av	Cumberland St Ingleton Av	Design only - road rehab, sewer separation road rehab, sewer separation, wellman replacement
S-07	Not mapped (Various Locations - TBD)	MacDonald Av	Gimore Av	Ingleton Av	road rehab, sewer separation
S-09	Bela Pump Station	Bela Pump Station	Hastings St	Lane south of Hastings	mech sanitary and storm sewer rehab and pipe bursting
S-13	SCADA System Upgrade (Water and Sewer RTUs)	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	standby pump station upgrade, schedule TBD, developer driven
S-11	2016 Sanitary Services - Brentwood (M) Management	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	SCADA upgrades
S-12	2016 Sanitary Services - Brentwood (M) Management	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	sanitary service replacement
ENGINEERING - STORM SEWER					
D-01	2016 Storm Sewer Replacement and Road Rehabilitation Program	Hedley Av Cully Av Ritchie St Franklin St Loughheed Hwy frontage road Green St Av Keith St Av Kymmer Creek Culvert Upgrade Maine Av Raspberry Av	Bumble St Mackie St MacPherson MacPherson 6343 Loughheed Hwy Maine Dr Greenall Av Greenall Av Maine Dr Maine Dr Maine Dr	Bank Street (Byrne Creek Trls.) Byrne Dr East of MacPherson (end of road) East of MacPherson (JM Creek) 6357 Loughheed Hwy Maine Dr Raspberry Av Maine Dr Maine Dr	road rehab, storm sewer upgrade road rehab, storm sewer upgrade road rehab, storm sewer upgrade road rehab, storm sewer upgrade storm sewer upgrade road rehab, accessibility improvements, wellman replacement by W-01 road rehab culvert upgrade road rehab road rehab creek erosion mitigation and embankment repairs creek erosion mitigation and embankment repairs culvert upgrade culvert upgrade
D-02	Kymmer Creek Erosion Mitigation and Embankment Repairs	Kymmer Creek @ Maine Dr Lyon Lyon Creek south of Mums Dr	West of Raspberry Av Patterson Av	Carson St west of Sussex Av	creek erosion mitigation and embankment repairs creek erosion mitigation and embankment repairs
D-03	Gray Creek Culvert Upgrade	Sussex Creek	Maine Dr		culvert upgrade
D-04	Kensland Culvert Rehabilitation	Crab Apple Trl 1 culvert	Loughheed Hwy	South Pt of 3700 Kensington Dr	culvert upgrade
D-10	Stony Creek (SMP)	Not mapped (study)			integrated stormwater management plan (ISMP) study
D-11	Reach 8 Dike Construction & Dike Paving Program	Reach 8 Dike Reach 1 Dike Reach 6 Dike Reach 8 Dike	Glenyon Creek Fenwick Dr CN Rail Triple Boundary Rd	Byrne Rd Meadow Av Tilicum Dr Glenyon Creek	Dike construction, urban trail paving urban trail paving urban trail paving storm service replacement
D-17	2016 Storm Services	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	Not mapped (Various Locations - TBD)	local area improvement (streets/curbs, lighting, lanes, traffic calming)
LOCAL AREA SERVICES					
L-41	2016 Roadworks and Streetlighting LASP	Wagon Av		Pennington Dr	linear path, wellman (Venables St, Brentwood St), civic communication conduits
OTHER DEPARTMENTS					
P-01	Parks Department - Wagon Av				

