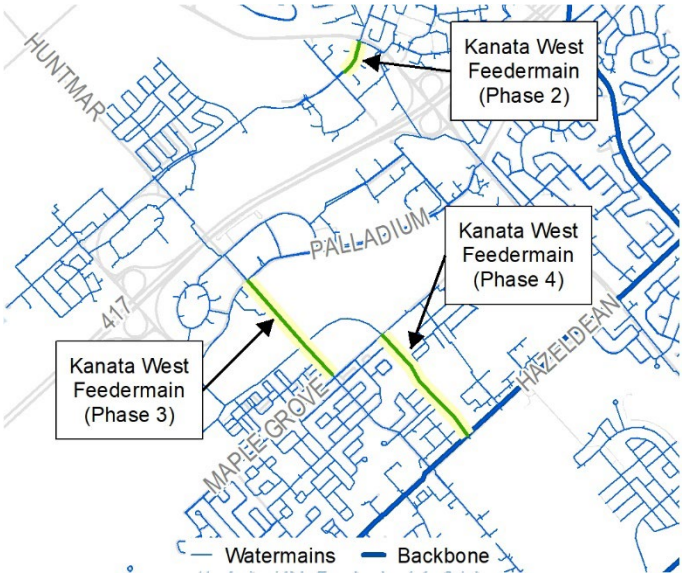
Appendix E: Water Infrastructure Project Sheets

Kanata West Feedermain



PROJECT RATIONALE

What: The project includes the construction of a 610mm diameter watermain along Campeau Dr from Terry Fox Dr to Didsbury Rd (Phase 2), a 406mm diameter watermain along Huntmar Drive from Palladium Dr to Maple Grove Rd (Phase 3), a 406mm diameter watermain along Gallantry Way from Huntmar Dr to Hazeldean Rd (Phase 4). The original Kanata West Feedermain project identified in the 2013 Infrastructure Master Plan was partially implemented to meet medium term needs. These project segments represent the remainder of the original project, with modifications.

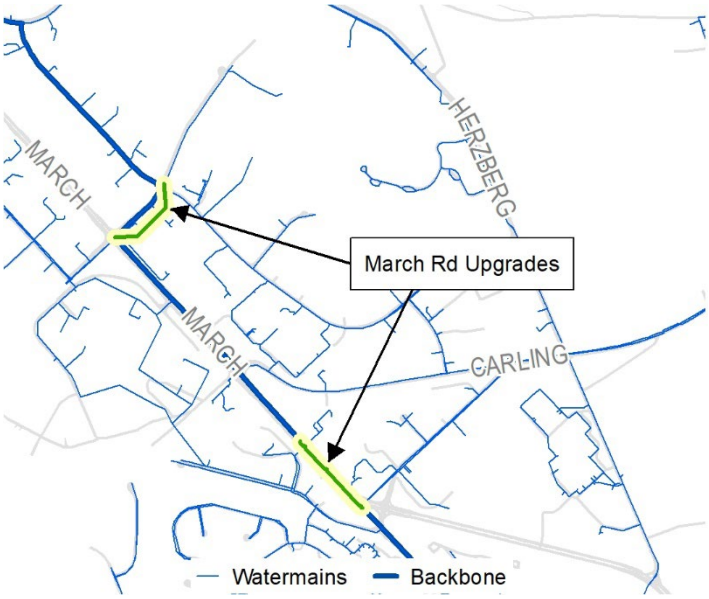
Why: The purpose of this project is to support development in the Kanata West area, in accordance with the current Master Servicing Study for the area.

PROJECT SCHEDULE	
Budget Authority	**2029-2034**

PROJECT FUNDING			
	Phase 2	**Phase 3**	**Phase 4**
Total Capital Estimate	**$ 4.4M**	**$ 6.0M**	**$13.8 M**
% Development Charge Funded	**90%**	**90%**	**90%**
% Rate Funded	**10%**	**10%**	**10%**
% Other Source Funded	**0%**	**0%**	**0%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**This project is Exempt under the Municipal Engineers Class EA.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Project to be coordinated with development in the Kanata West area (part of implementation may be developer led)** **2. Functional, preliminary, and detail design (functional design for Campeau segment complete)** **3. Implementation (tender and construction)**

March Road Upgrades



PROJECT RATIONALE

What: The project includes the construction of a 610mm diameter watermain along Solandt Rd from March Rd to Legget Dr, and a 610mm 610mm diameter watermain along March Rd from Teron Rd to Steacie Dr.

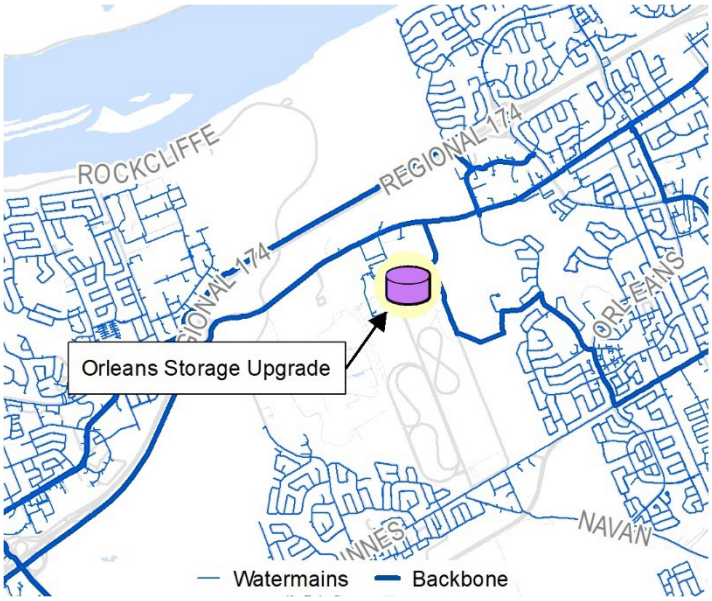
Why: The purpose of this project is to support development in Kanata North/Morgan's Grant.

PROJECT SCHEDULE	
Budget Authority	2024-2029

PROJECT FUNDING	
Total Capital Estimate	$5.0 M
% Development Charge Funded	90%
% Rate Funded	10%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is Exempt under the Municipal Engineers Class EA
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Coordinate with road renewal work 2. Preliminary and detailed design (functional design is complete) 3. Implementation (tender and construction)

Orleans Storage Upgrade



PROJECT RATIONALE

What: The project includes the expansion of the existing Orleans Reservoir, with the addition of 54.6 Megaliters of storage.

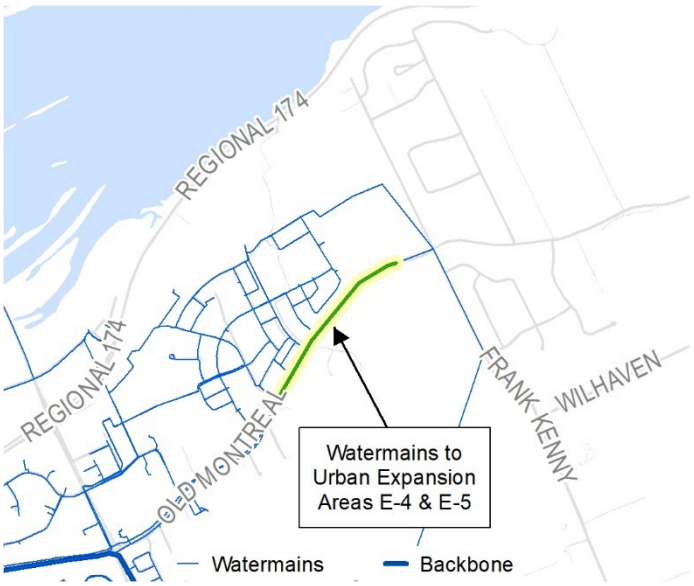
Why: The purpose of this project is to accommodate projected growth to 2046 and defer required water purification plant upgrades.

PROJECT SCHEDULE	
Budget Authority	2029-2034

PROJECT FUNDING	
Total Capital Estimate	$154.4 M
% Development Charge Funded	100%
% Rate Funded	0%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is a Schedule B project under the Municipal Engineers Class EA.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Monitor system level demands over time and refine project timing 2. Functional, preliminary and detailed design 3. Implementation (tender and construction)

Watermains to Urban Expansion Areas E-4 & E-5



PROJECT RATIONALE

What: The project includes the construction of a 406mm diameter watermain along Old Montreal Rd from Rue du Cartographe to Urban Expansion Areas E-4 & E-5/ Cox Country Rd.

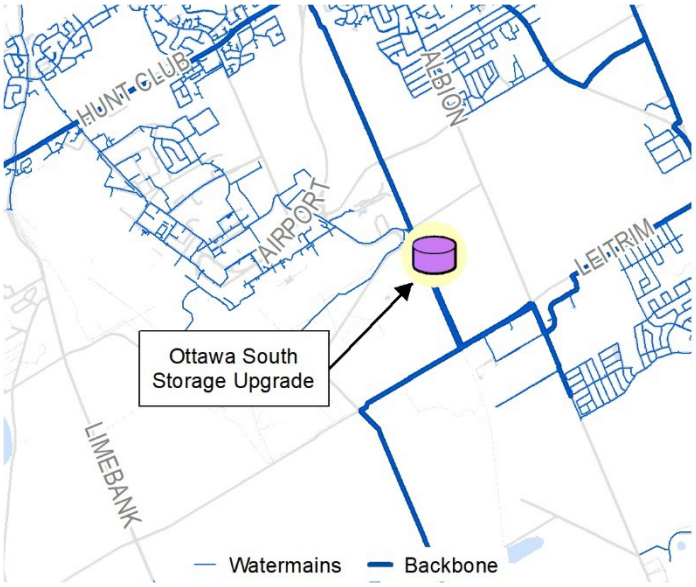
Why: The purpose of this project is to accommodate projected growth to 2046 in the urban expansion areas E-4 & E-5.

PROJECT SCHEDULE	
Construction Budget Authority	2039-2044

PROJECT FUNDING	
Total Capital Estimate	$6.3 M
% Development Charge Funded	100%
% Rate Funded	0%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is Exempt under the Municipal Engineers Class EA
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Coordinate project, including selection of preferred alignments, with expansion area development planning (part or all of implementation to be developer led) 2. Functional, preliminary and detailed design 3. Implementation (tender and construction)

Ottawa South Storage Upgrade



PROJECT RATIONALE

What: The project includes the expansion of the existing Ottawa South Reservoir, with the addition of 16 Megaliters of storage.

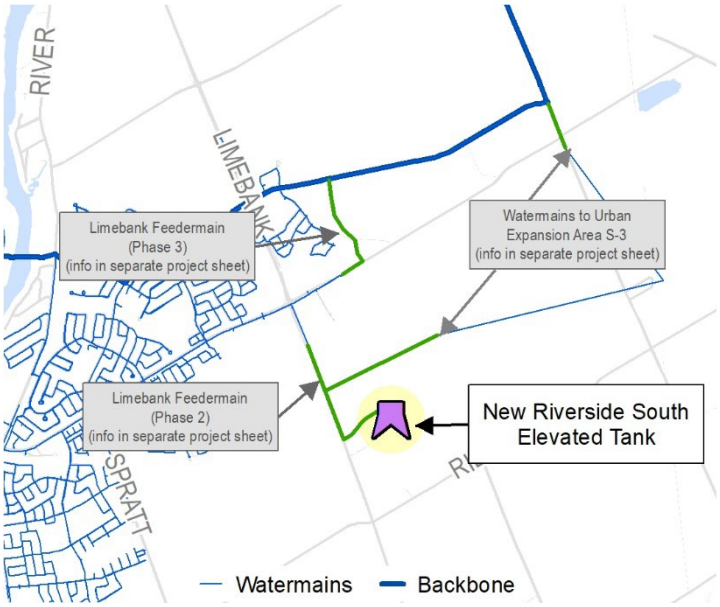
Why: The purpose of this project is to accommodate projected growth to 2046 and defer required water purification plant upgrades.

PROJECT SCHEDULE	
Budget Authority	2024-2029

PROJECT FUNDING	
Total Capital Estimate	$45.3 M
% Development Charge Funded	90%
% Rate Funded	10%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is a Schedule B project under the Municipal Engineers Class EA. A Federal Impact Assessment may also be required.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Confirm land acquisition needs and availability 2. Functional, preliminary and detailed design 3. Implementation (tender and construction)

New Riverside South Elevated Tank



PROJECT RATIONALE

What: The project includes the construction of a new 9ML elevated tank in Riverside South.

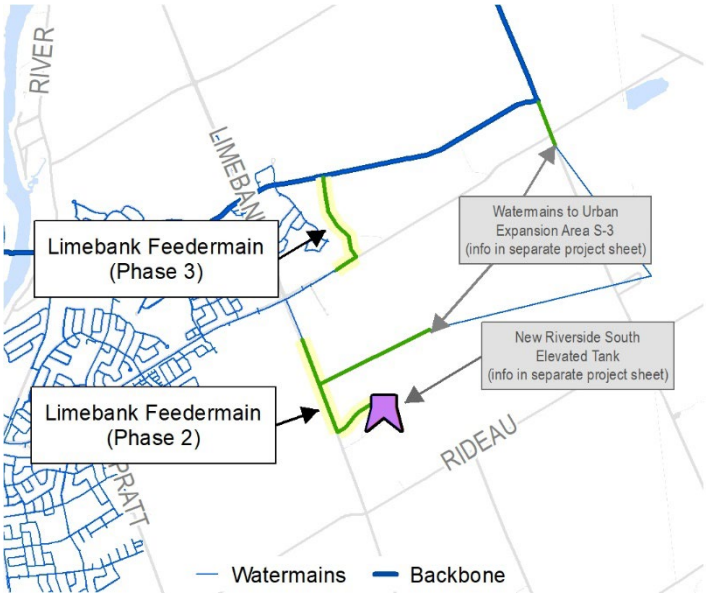
Why: The purpose of this project is to accommodate projected growth to 2046 in the pressure zone SUC.

PROJECT SCHEDULE	
Budget Authority	2024-2029

PROJECT FUNDING	
Total Capital Estimate	$33.8 M
% Development Charge Funded	90%
% Rate Funded	10%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is a Schedule B project under the Municipal Engineers Class EA. A previous EA was already completed in 2014. An EA Addendum may be required.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Confirm tank location 2. Functional, preliminary and detailed design 3. Implementation (tender and construction)

Limebank Feedermain



PROJECT SCHEDULE	
Budget Authority (Phase 2)	**2024-2029**
Budget Authority (Phase 3)	**2029-2034**

PROJECT FUNDING		
	Phase 2	**Phase 3**
Total Capital Estimate	**$ 11.1M**	**$ 8.1M**
% Development Charge Funded	**90%**	**90%**
% Rate Funded	**10%**	**10%**
% Other Source Funded	**0%**	**0%**

PROJECT RATIONALE

What: The project was first identified in the 2013 Infrastructure Master Plan and has been partially implemented. The remaining works include construction of a 610mm diameter watermain along Limebank Rd from Earl Armstrong Rd to Proposed Riverside South Elevated Tank **(Phase 2),** and a 610mm diameter watermain from Earl Armstrong Rd to Spratt Rd **(Phase 3).**

Why: The purpose of this project is to support development in the Riverside South community and to supply the future Riverside South Elevated Tank.

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**This project is Exempt under the Municipal Engineers Class EA**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Coordinate project, including selection of preferred alignment for connection from Limebank to tank, with local development planning (part of implementation may be developer led)** **2. Functional, preliminary and detailed design** **3. Implementation (tender and construction)**

Greenbank Watermain

PROJECT RATIONALE

What: The project includes the construction of a 610mm diameter watermain along Greenbank Rd from Jockvale Rd to Half Moon Bay, a 406mm diameter watermain along Greenbank Rd from Half Moon Bay to Perseus Ave, and a 406mm diameter watermain along Chapman Mills Rd from Greenbank Rd to Southwest Transitway.

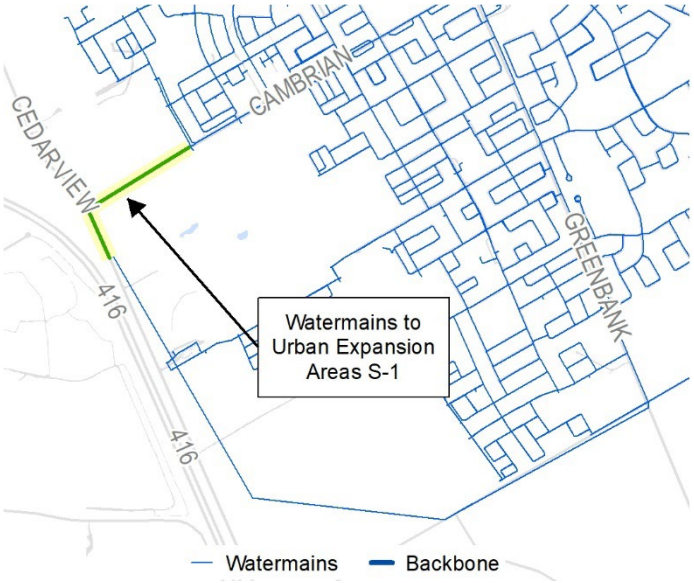
Why: The purpose of this project is to support development south of the Jock River.

PROJECT SCHEDULE	
Construction Budget Authority	**2029-2034**

PROJECT FUNDING	
Total Capital Estimate	**$14.1 M**
% Development Charge Funded	**90%**
% Rate Funded	**10%**
% Other Source Funded	**0%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**This project is a Schedule B project under the Municipal Engineers Class EA.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Coordinate project with Greenbank Road realignment and bridge project** **2. Finalize detailed design (functional and preliminary design complete)** **3. Implementation (tender and construction)**

Watermains to Urban Expansion Area S-1



PROJECT RATIONALE

What: The project includes the construction of a 406mm diameter watermain along Cambrian Rd/Borrisokane Rd from Apolune St to Urban Expansion Area S-1.

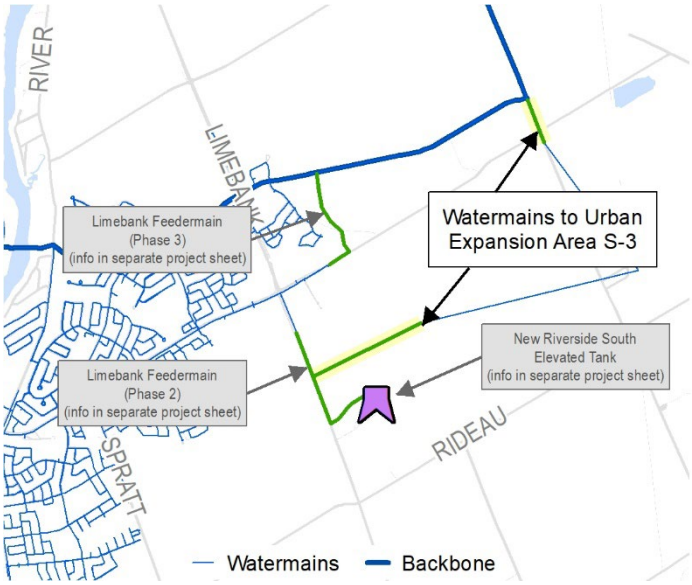
Why: The purpose of this project is to accommodate projected growth to 2046 in the urban expansion area S-1.

PROJECT SCHEDULE	
Budget Authority	2029-2034

PROJECT FUNDING	
Total Capital Estimate	$5.1M
% Development Charge Funded	100%
% Rate Funded	0%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA. Planning Act approvals may be required.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Coordinate project, including selection of preferred alignments, with expansion area development planning (part or all of implementation to be developer led) 2. Functional, preliminary and detailed design 3. Implementation (tender and construction)

Watermains to Urban Expansion Area S-3



PROJECT RATIONALE

What: The project includes the construction of a 610mm diameter watermain along Limebank Rd from Earl Armstrong Rd to Urban Expansion Area S-3 and 610mm diameter watermain along Bowesville Road from Spratt Road to Urban Expansion Area S-3.

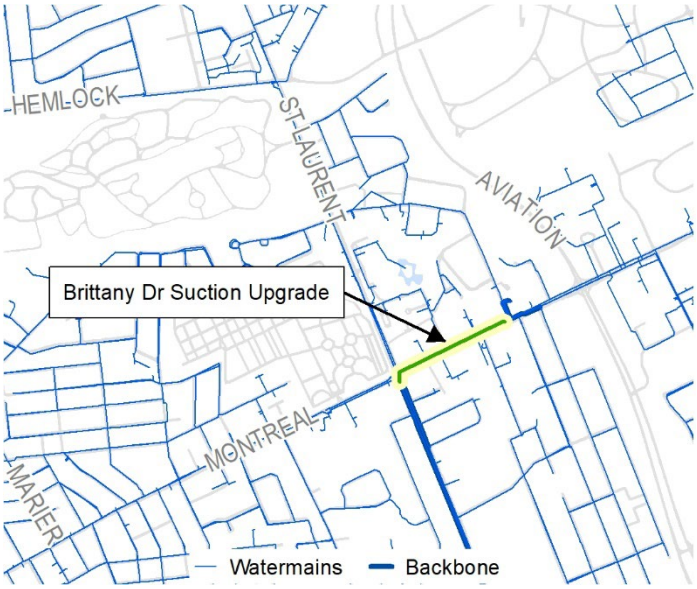
Why: The purpose of this project is to accommodate projected growth to 2046 in the urban expansion area S-3.

PROJECT SCHEDULE	
Budget Authority	**2029-2034**

PROJECT FUNDING	
Total Capital Estimate	**$15.2 M**
% Development Charge Funded	**100%**
% Rate Funded	**0%**
% Other Source Funded	**0%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA. Planning Act approvals may be required.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Coordinate project, including selection of preferred alignments, with expansion area development planning (part or all of implementation to be developer led)** **2. Confirm sizing and complete functional, preliminary and detailed design** **3. Implementation (tender and construction)**

Brittany Drive Suction Upgrade



PROJECT RATIONALE

What: The project involves the construction of a 406mm diameter watermain along Montreal Rd from St-Laurent Blvd to Brittany Dr.

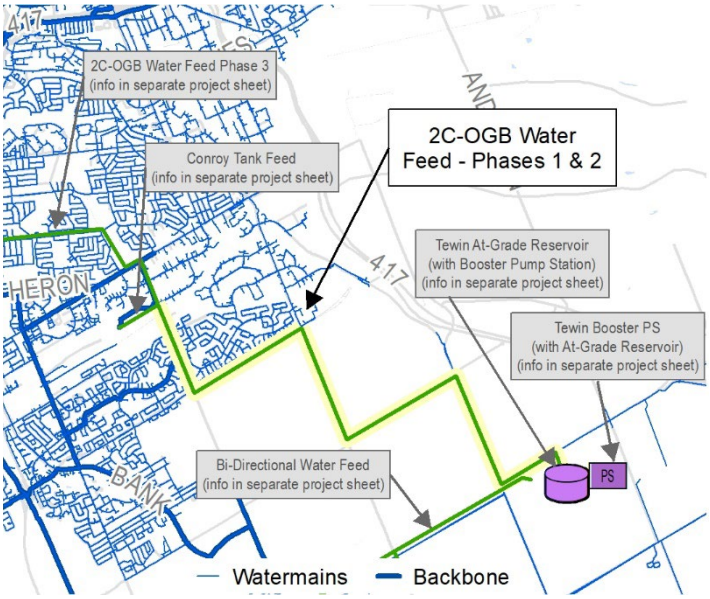
Why: The purpose of this project is to improve suction capacity for the Brittany Drive Pump Station.

PROJECT SCHEDULE	
Construction Budget Authority	2039-2044

PROJECT FUNDING	
Total Capital Estimate	$2.8M
% Development Charge Funded	50%
% Rate Funded	50%
% Other Source Funded	0%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	This project is Exempt under the Municipal Engineers Class EA
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Explore coordination opportunities with the future Montreal-Blair Road Transit Priority Corridor project or future road rehabilitation works. 2. Complete functional, preliminary and detailed design 3. Implementation (tender and construction)

2C-OGB Water Feed Phases 1 & 2



PROJECT RATIONALE

What: The project includes the construction of a 1220mm diameter watermain along Hunt Club / Hawthorne /Whyte Side / Ramsayville / Leitrim from Conroy Tank to Tewin.

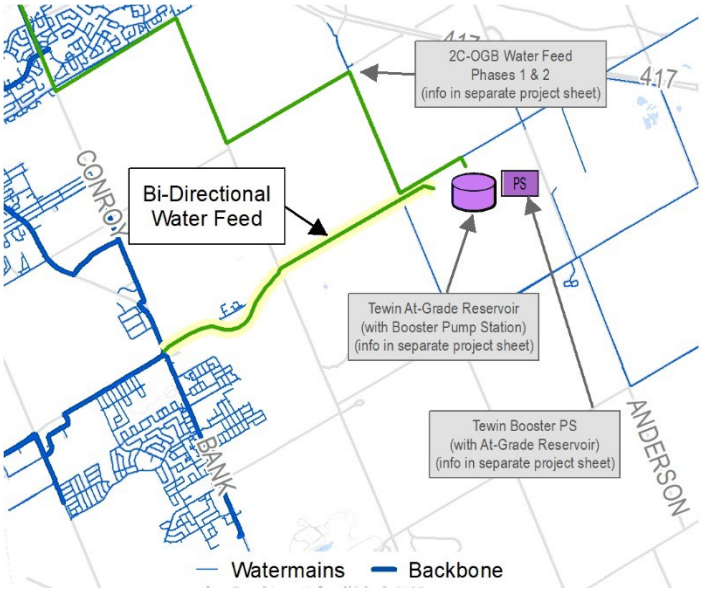
Why: The purpose of this project is to extend the central water transmission system to the Tewin Lands and provide additional capacity to supply the South Urban Community.

PROJECT SCHEDULE	
Budget Authority	2029-2034

PROJECT FUNDING	
Total Capital Estimate	$174.3 M
% Development Charge Funded	58%
% Rate Funded	0%
% Other Source Funded	42%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA. A Federal Impact Assessment process may also be required.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Coordinate project as appropriate with other Tewin-related projects 2. Explore alternative alignments through a Class EA process 3. Confirm sizing and complete functional design 4. Complete preliminary and detailed design 5. Implementation (tender and construction)

Bi-Directional Water Feed



PROJECT RATIONALE

What: The project includes the construction of a 914mm diameter watermain along Leitrim Rd from Bank St to Tewin.

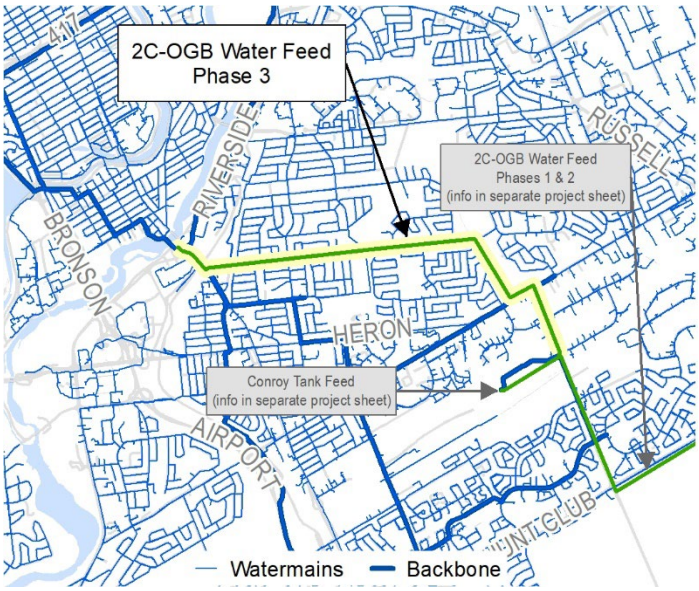
Why: The purpose of this project is to provide a back-up water supply source for the Tewin community under emergency conditions. This project will also serve to augment supply to the South Urban Community under normal operating conditions, to accommodate 2046 growth.

PROJECT SCHEDULE	
Budget Authority	2029-2034

PROJECT FUNDING	
Total Capital Estimate	$52.9 M
% Development Charge Funded	83%
% Rate Funded	0%
% Other Source Funded	17%

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA. A Federal Impact Assessment process may also be required.
Follow-up Actions	The following actions are required to pursue implementation of this project: 1. Coordinate project as appropriate with other Tewin-related projects 2. Explore alternative alignments through a Class EA process 3. Confirm sizing and complete functional design 4. Complete preliminary and detailed design 5. Implementation (tender and construction)

2C-OGB Water Feed Phase 3



PROJECT RATIONALE

What: The project includes the construction of a 1220mm diameter watermain along Bank St/ Kilborn Ave from Billings Bridge Pump Station to Conroy Rd.

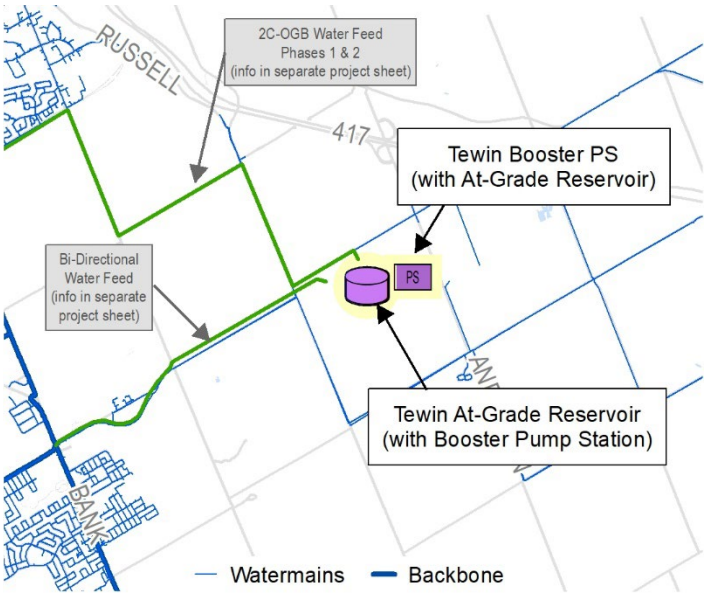
Why: The purpose of this project is to accommodate the expansion of the central water distribution system to the Tewin Lands and to the South Urban Community. The project will provide a minor improvement to pressures in existing development areas.

PROJECT SCHEDULE	
Budget Authority	**2034-2039**

PROJECT FUNDING	
Total Capital Estimate	**$82.7 M**
% Development Charge Funded	**46%**
% Rate Funded	**12%**
% Other Source Funded	**42%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Explore alternative alignments through a Class EA process** **2. Confirm sizing and complete functional design** **3. Complete preliminary and detailed design** **4. Implementation (tender and construction)**

Tewin Pump Station & Reservoir Phases 1 & 2



PROJECT RATIONALE

What: The project includes the construction of a new 10.7 Mega Liters at-grade reservoir and pump station in Tewin, to supply the Tewin Lands (32.2 Mega Liters/Day pumping capacity) **(Phase 1)** and the South Urban Community (30 Mega Liters/Day pumping capacity) **(Phase 2)**.

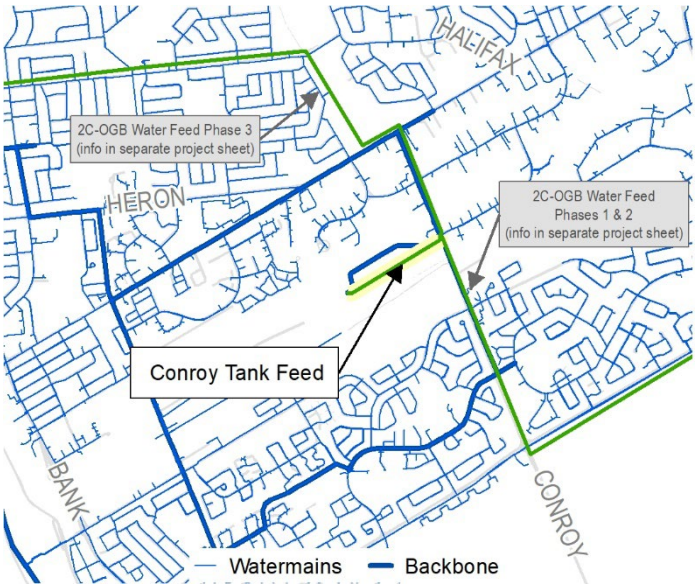
Why: The purpose of this project is to accommodate projected growth to 2046 in the Tewin Lands expansion area and in the South Urban Community.

PROJECT SCHEDULE	
Budget Authority (Phase 1)	**2029-2034**
Budget Authority (Phase 2)	**2034-2039**

PROJECT FUNDING		
	Phase 1	**Phase 2**
Total Capital Estimate	**$ 44.1M**	**$ 18.9M**
% Development Charge Funded	**100%**	**100%**
% Rate Funded	**0%**	**0%**
% Other Source Funded	**0%**	**0%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**This project is a Schedule B project under the Municipal Engineers Class EA.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Explore alternative project locations through a Class EA process** **2. Confirm sizing and complete functional design** **3. Complete preliminary and detailed design** **4. Implementation (tender and construction)**

Conroy Tank Feed



PROJECT RATIONALE

What: The project includes the construction of a 610mm diameter watermain along the Conroy Public Works Yard access road from Conroy to Conroy Tank.

Why: The purpose of this project is to increase water transmission system capacity to the Tewin Lands and to the South Urban Community.

PROJECT SCHEDULE	
Budget Authority	**2034-2039**

PROJECT FUNDING	
Total Capital Estimate	**$12.6 M**
% Development Charge Funded	**46%**
% Rate Funded	**12%**
% Other Source Funded	**42%**

APPROVALS AND FOLLOW-UP ACTIONS	
EA Requirements	**Depending on the final alignment, this project may be a Schedule B undertaking or will be exempt under the Municipal Engineers Class EA.**
Follow-up Actions	**The following actions are required to pursue implementation of this project:** **1. Coordinate project as appropriate with other Tewin-related projects** **2. Confirm sizing and complete functional design** **3. Complete preliminary and detailed design** **4. Implementation (tender and construction)**