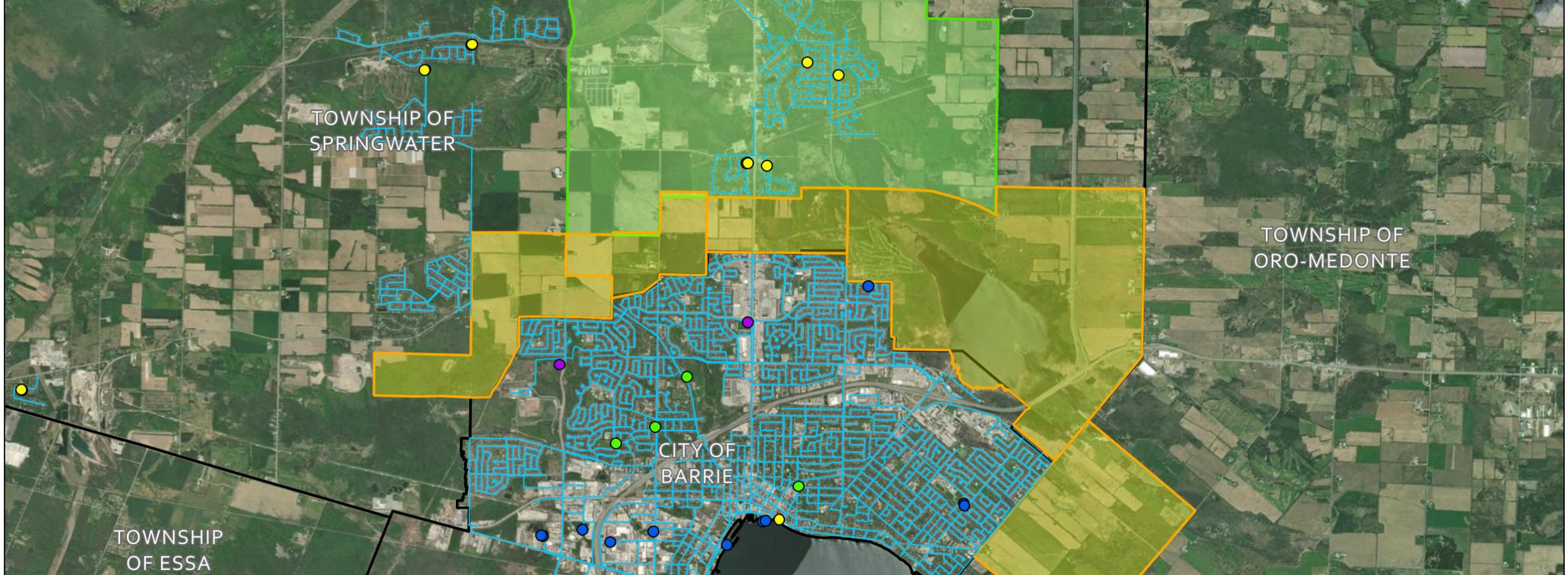




Prepared for the City of Barrie, County of Simcoe, Township of Oro-Medonte and Township of Springwater

JOINT LAND NEEDS ANALYSIS AND STUDY – STAGE 3

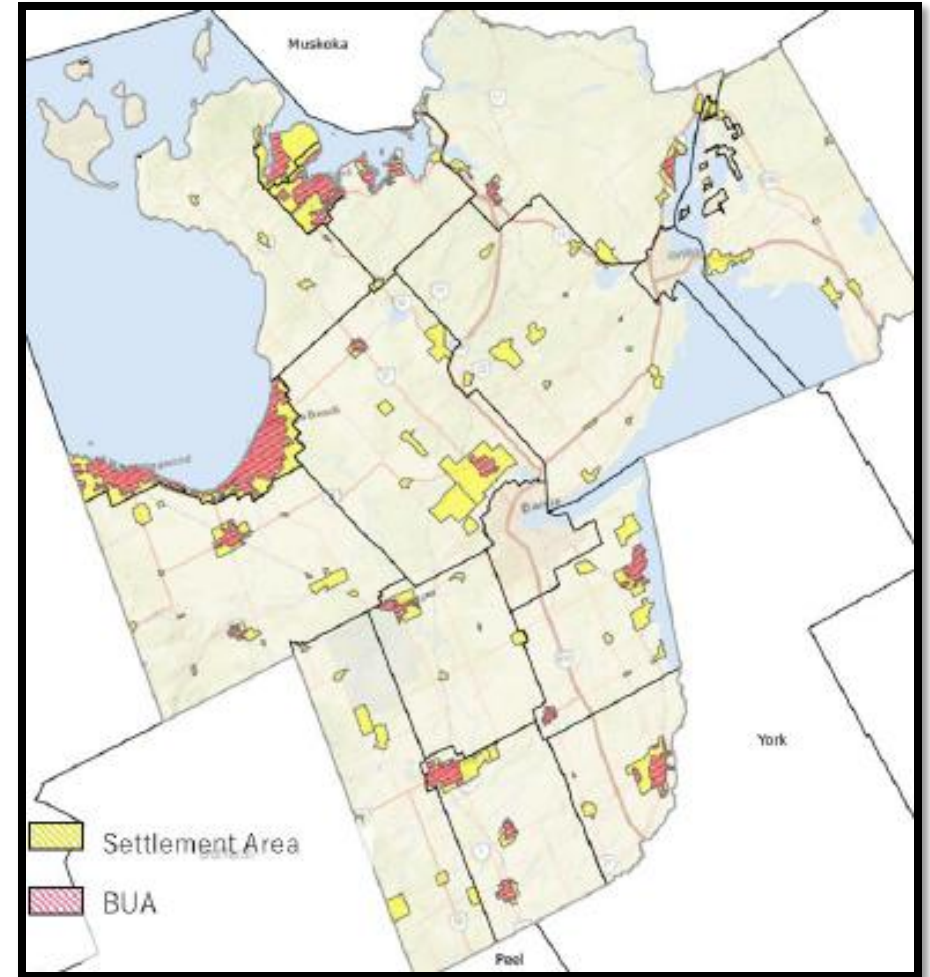
Plenary Session #2 - Engineering Analysis

September 16, 2025

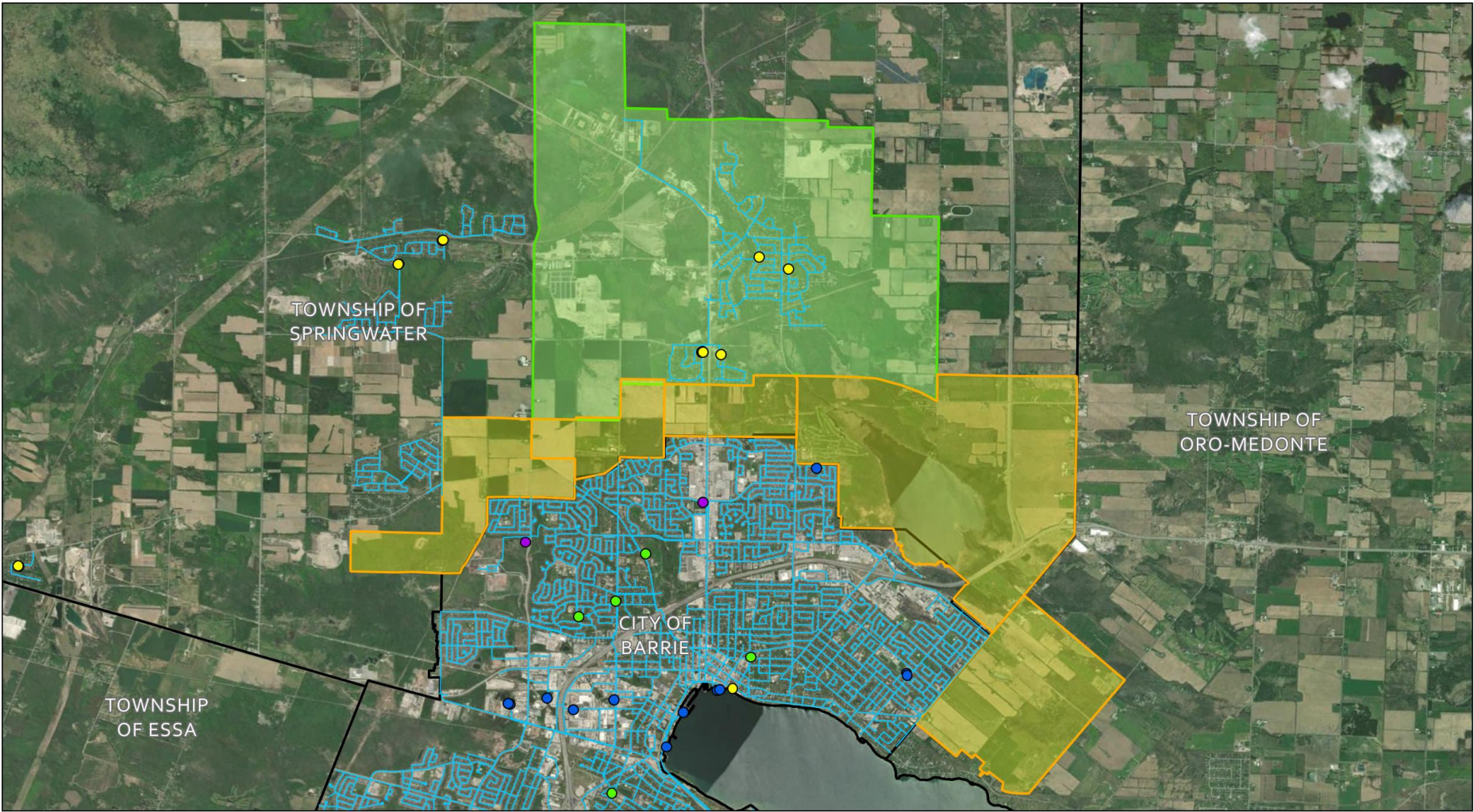
Servicing Agenda

1. Water and Wastewater
 - Recap from first Plenary Session
 - Water Demand and Wastewater Flows forecasts and Capacity Gap Analysis
 - Vertical and Linear Infrastructure Needs
 - Opinion of Probable Cost and other Considerations
2. Stormwater Management
 - Existing Conditions
 - Estimated SWM Pond Volumes and Locations
 - Opinion of Probable Costs
3. Roads Analysis
 - Existing and Future Traffic Volumes
 - Potential Improvements
 - Opinion of Probable Cost

All proposed infrastructure shown on maps and graphics is based on a high-level preliminary analysis and requires further study (e.g. MSP or Class EA) before the size, location and cost can be confirmed. This analysis is being shared with the intention of facilitating the decision-making process and is not considered final.



Existing Water Systems Map

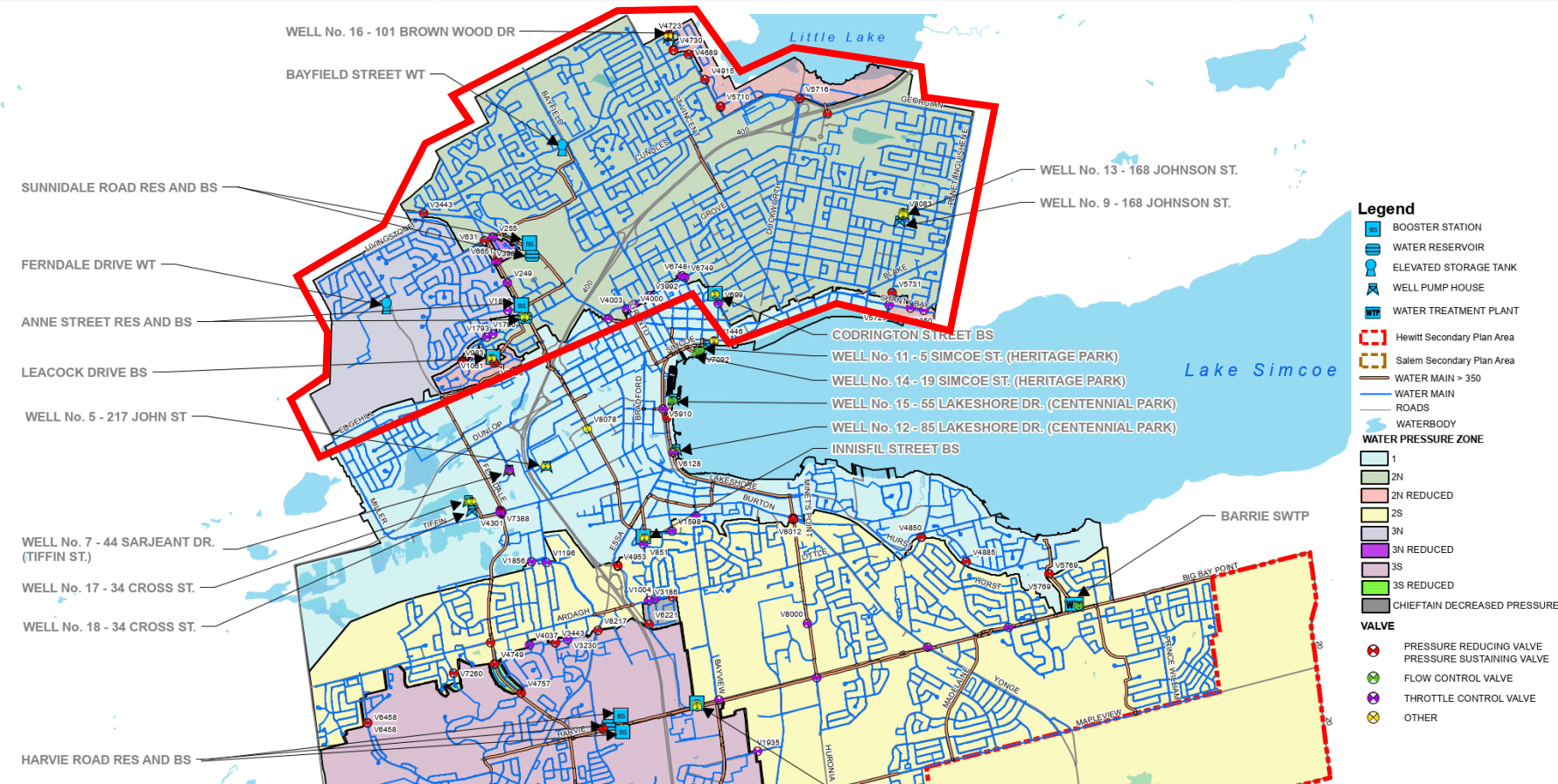


Servicing Capacity Review Hemson Consulting				Legend Booster Pumping Station Pump House Well Water Tower Watermain Municipal Boundary Proposed Expansion Area Midhurst		
	Date: 9/13/2025	Page 1				
	RVA: 247630	Draft By: KW				
Water Distribution Network Overview						
Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario.						

Existing Water Supply Capacities



Municipality	System	Capacity (m³/day)	Max Day Demand (m³/day)	% of Capacity Used
Barrie ¹	GW (Zones 1, 2N, 3N)	78,146	39,223	50
Springwater ²	Midhurst	6,480	1,937	30



- 1. Barrie Water Supply Capacity per 2019 Water Supply Master Servicing Plan (MSP). Barrie Max Day Demand from 2017 data per 2019 Water Supply MSP.
- 2. 2024 Midhurst Drinking Water System Schedule 22 Summary Report

Figure: Water Distribution Overview Map
Source: City of Barrie

Future Water Demands and Planned Capacities



Scenario	Servicing System	Planned Capacity (m ³ /day)	Projected Maximum Day Demand including "Spillover Growth" (m ³ /day)	Capacity Gap Analysis (m ³ /day)
Scenario 1	Midhurst	19,094 ²	30,941 ^{1,2}	-11,846
Scenario 2	Barrie	152,600 ^{3,5}	147,403 ⁴	5,197
Scenario 3	Barrie	152,600 ^{3,5}	147,403 ⁴	5,197

1. The growth area projected demand for scenario 1 doesn't include additional employment lands
2. Planned capacity and design criteria per the 2020 Midhurst Class EA
3. Planned capacity per the City of Barrie's 2019 MSP and communications on on-going MSP update
4. Design criteria per the City of Barrie's design criteria
5. Prior to 2062 the capacity will be 138,000 m³/day per the City of Barrie's 2019 MSP



Servicing Capacity Review Hemson Consulting				Legend Booster Pumping Station Municipal Boundary Watermain Wells Midhurst Proposed Watermain Water Tower Proposed Expansion Area Proposed Booster Pumping Station			
	Date: 9/13/2025	Page 1		Data Source: Maxar, Simcoe County, City of Barrie, Township of Springwater, Hemson Consulting			
Water Distribution Network Overview and Proposed Watermain (Scenario 1)		RVA: 247630	Draft By: KW				
Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario.							

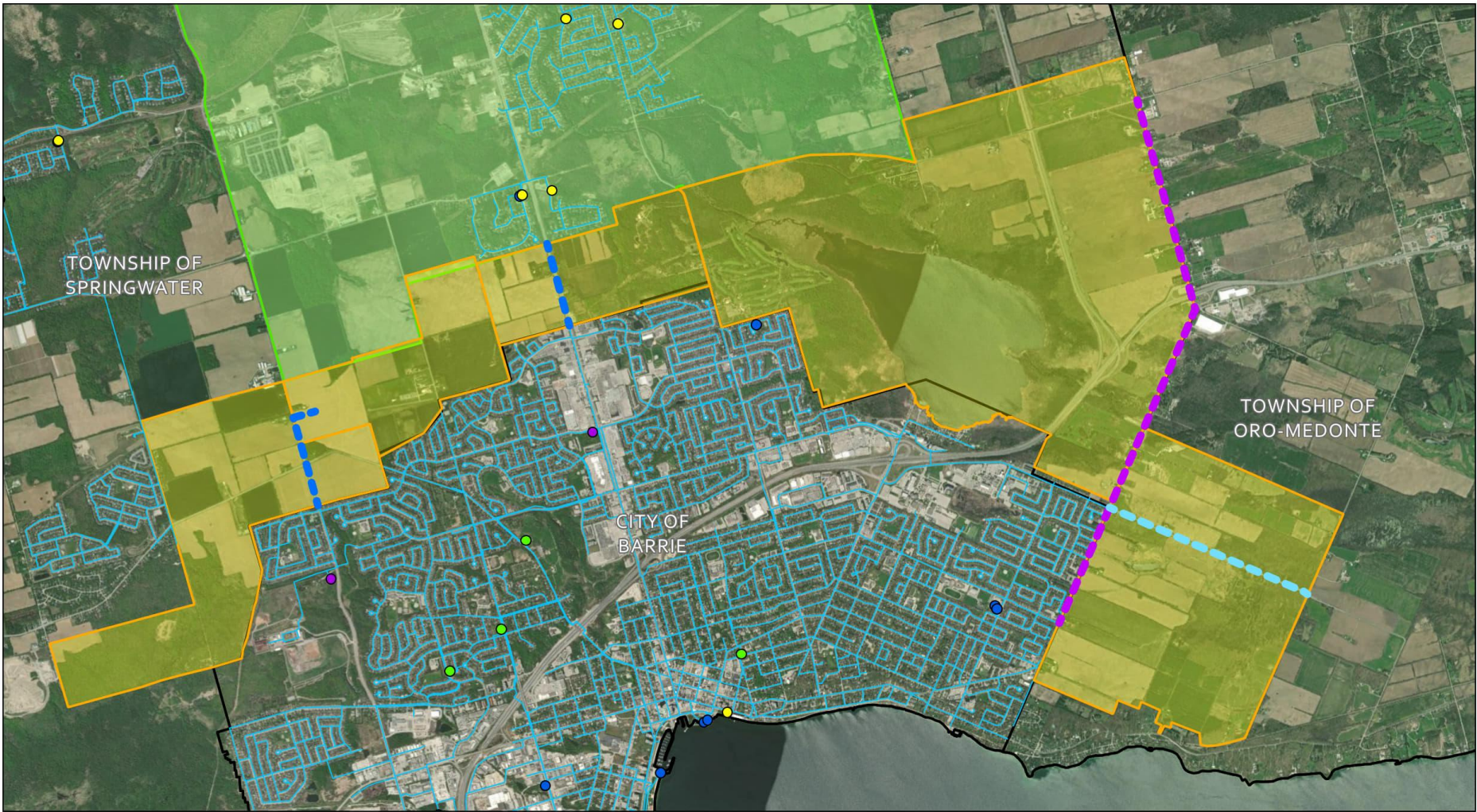
Scenario 1 – Water Infrastructure Needs Summary



Component	Description
Water Treatment Plant (WTP)	Additional upgrades from 19,094 ¹ m ³ /day to 30,941 m ³ /day (70 L/s expansion at each existing WTP)
Supply Wells	Total 6 additional wells required: Doran Road Area - 3 Wells (2 Duty, 1 Standby, Firm Capacity 70 L/s) Carson Road Area - 3 Wells (2 Duty, 1 Standby, Firm Capacity 70 L/s)
Booster Pumping Stations (BPS)	3 BPSs will be required to service higher elevation areas (Blocks 2 and 3) and the Employment Area
Storage Facilities	Additional storage volume of 9,300 m ³ is required in Midhurst Additional storage volume of 3,200 m ³ is required in Employment Area
Watermain Trunks	Estimated 14 km of watermain trunks required. Does not include local watermain

1. Planned capacity per the 2020 Midhurst Class EA

Scenarios 2&3 – Water Infrastructure Needs Map

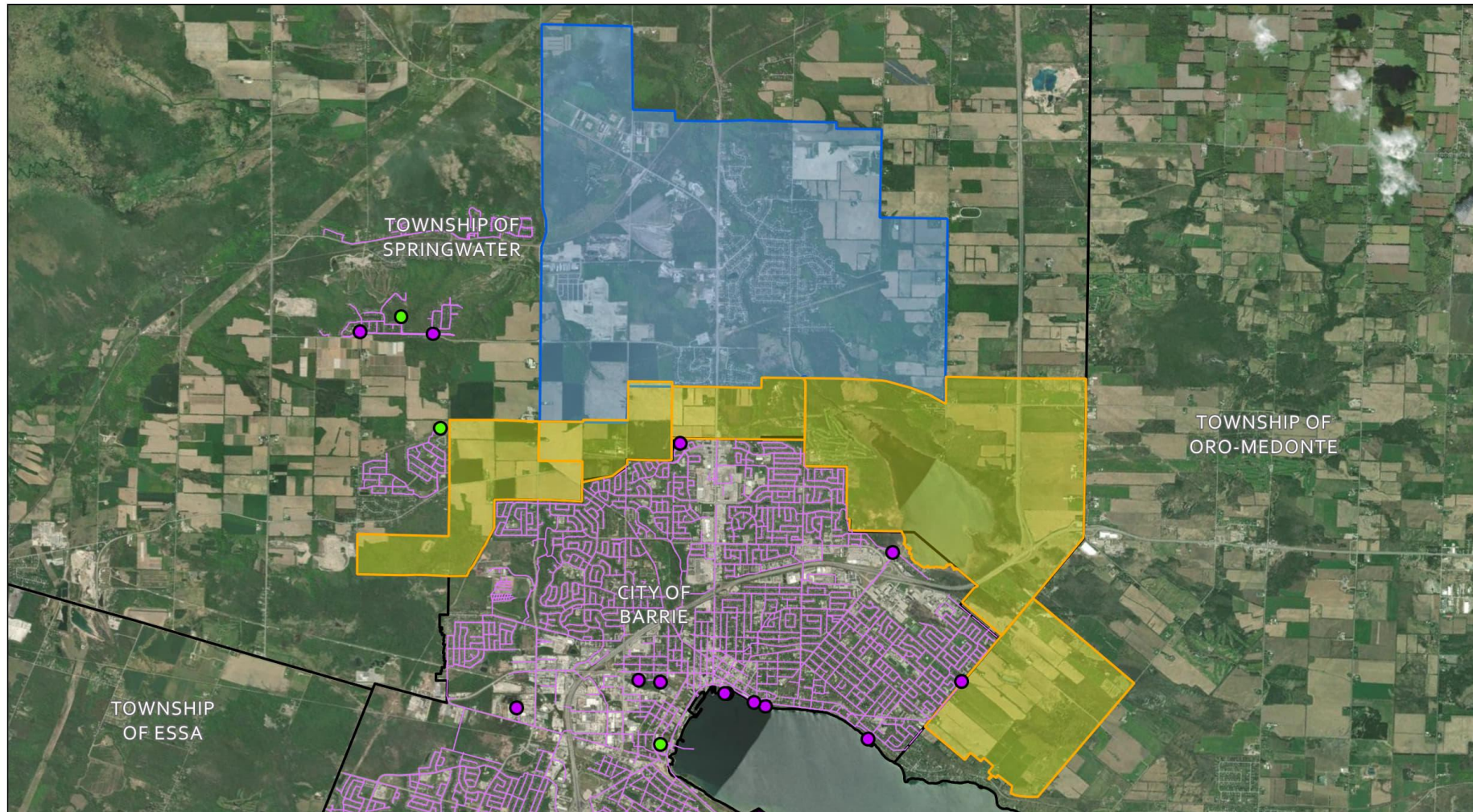


Servicing Capacity Review Hemson Consulting	0 500 1,000 1,500 2,000 m		Legend ● Booster Pumping Station ● Wells ● Pump House ● Water Tower ■ Municipal Boundary ■ Proposed Expansion Area ■ Midhurst ■ Watermain ■ Scenario 2 ■ Scenario 3 ■ Scenario 2&3	
	Date: 9/13/2025 Page 1			
Water Distribution Network Overview and Proposed Watermain (Scenario 2&3)				
Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario				

Scenario 2&3 – Water Infrastructure Needs Summary

Component	Description – Scenario 2	Description – Scenario 3
Water Treatment Plant	N/A	N/A
Supply Wells	N/A	N/A
Booster Pumping Stations (BPS)	N/A	N/A
Storage Facilities	Additional storage volume of 3,200 m ³ is required in Employment Area	Additional storage volume of 3,200 m ³ is required in Employment Area
Watermain Trunks	4.1 km of watermain trunks required. All watermain extensions. Does not include local watermains	5.1 km of watermain trunks required. All watermain extensions. Does not include local watermains

Existing Wastewater Systems Map



Servicing Capacity Review Hemson Consulting				Legend - Sanitary Pumping Station - Wastewater Treatment Plant - Sanitary Sewer - Proposed Expansion Area - Midhurst - Municipal Boundary	
	Date: 9/13/2025	Page 1			
Wastewater Distribution Network Overview	RVA: 247630	Draft By: KW	Data Source: Mapex, Simcoe County, City of Barrie, Township of Springwater, Hemson Consulting		
Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario.					

Existing Wastewater Supply Capacities



Municipality	System	Capacity (m ³ /day)	Average Day Flow (m ³ /day)	% of Capacity Used (m ³ /day)
Barrie ¹	Total (WwTF)	76,000	42,683	56
Springwater	Midhurst	1,032 ²	165 ³	16

1. Barrie Wastewater System Capacity per 2019 Wastewater Treatment MSP. Barrie Average Day Flow from 2017 data per 2019 Wastewater Treatment MSP.
2. As per Township communications, the interim plant capacity is 1,032 M3/d but as per the annual report the capacity is 516 m3/d
3. Midhurst System Capacity per the 2024 Midhurst Valley Interim Wastewater Treatment Plant Annual Performance Report.

Future Wastewater Flows and Planned Capacities



Scenario	Servicing System	Planned Capacity (m ³ /day)	Projected Flows including "Spillover Growth" (m ³ /day)	Capacity Gap Analysis
Scenario 1	Midhurst	12,314 ^{1,4}	19,585 ¹	-7,271
Scenario 2	Barrie	116,000 ²	116,354 ^{2,3}	-354
Scenario 3	Barrie	116,000 ²	116,354 ^{2,3}	-354

1. Planned capacity and design criteria per the 2020 Midhurst Class EA
2. Planned capacity per City of Barrie's 2019 MSP and communications on on-going MSP update
3. Design criteria per the City of Barrie's design criteria
4. The growth area projected demand for scenario 1 doesn't include additional employment lands for Midhurst

Scenario 1 – Wastewater Infrastructure Needs Map



Servicing Capacity Review Hemson Consulting	0 500 1,000 1,500 2,000 Scale: 1:34,000 m			Legend ● Sanitary Pumping Station ● Wastewater Treatment Plant — Sanitary Sewermain — Proposed Forcemain — Proposed Gravity Sewer — Proposed Expansion Area — Midhurst — Municipal Boundary ● Proposed Pumping Station ● Proposed WWTP	
	Date: 9/15/2025 RVA: 247630	Page 1 Draft By: KW			

Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario

Scenario 1 – Wastewater Infrastructure Needs

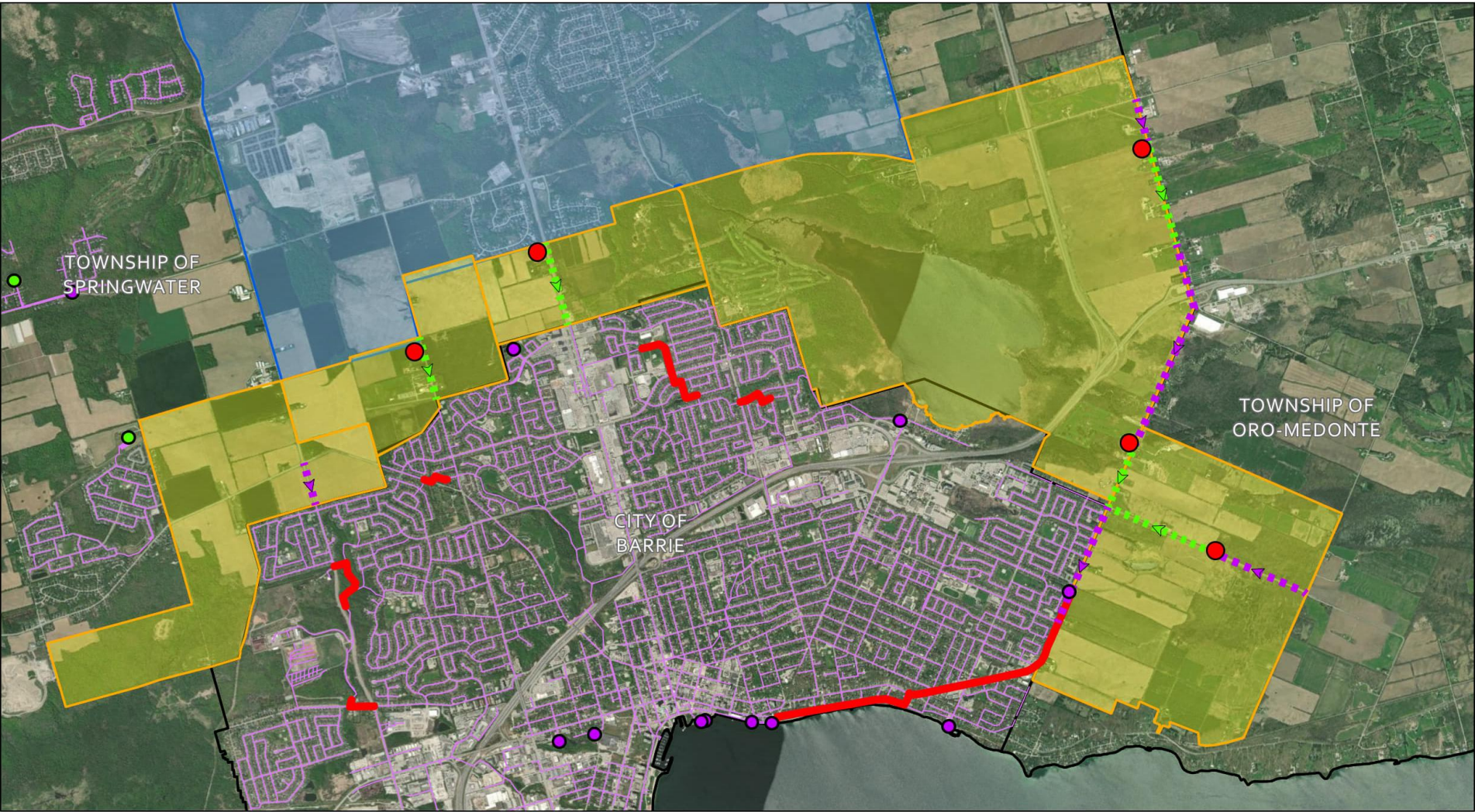


Summary

Component	Description
Wastewater Treatment Plant	Additional upgrades from 12,314 ¹ m ³ /day to 19,585 m ³ /day
Sanitary Pumping Stations (SPS)	2 SPS will be required as indicated on map
Sanitary Sewer Trunks and Forcemains	Estimated 14.3 km of sanitary sewer trunks / forcemains are required to service the studied growth areas. Does not include local sewers

1. Planned capacity per the 2020 Midhurst Class EA

Scenario 2&3 –Wastewater Infrastructure Needs Map



Servicing Capacity Review Hemson Consulting	 Scale: 1:34,000			Legend ● Sanitary Pumping Station ● Wastewater Treatment Plant — Sanitary Sewermain — Sanitary Sewermain (To be Upgraded) — Proposed Gravity Sewer — Proposed Expansion Area — Proposed Forcemain — Midhurst — Municipal Boundary ● Proposed Pumping Station	
	Date: 9/15/2025 RVA: 247630	Page 1 Draft By: KW			
Wastewater Distribution Network Overview (Scenario 2&3)					
Note: RVA makes no guarantees, representations or warranties respecting the accuracy, completeness or reliability on the map either expressed or implied. RVA specifically disclaims any and all liability, including without limitation, consequential and incidental damages, that may arise in any way from the use or reliance on the map. The digital drawing is not a legal plan or survey. Contains information licensed under the Open Government License - Ontario					

Scenario 2&3 –Wastewater Infrastructure Summary



Component	Description – Scenario 2	Description – Scenario 3
Wastewater Treatment Plant	N/A	N/A
Sanitary Pumping Stations (SPS)	4 new SPSs required	3 new SPSs required
Sanitary Sewer Trunks and Forcemains	Estimated 10.2 km of new sanitary sewer trunks / forcemains and upgrades are required to service the studied growth areas. Does not include local sewers	Estimated 11.2 km of new sanitary sewer trunks / forcemains and upgrades are required to service the studied growth areas. Does not include local sewers

Opinion of Probable Cost - Assumptions



- Based on experience, supplier information, Midhurst EA and Barrie MSP and EA estimates
- Land/property acquisition not included in opinion of probable cost
- Modelling, field studies, background studies, etc. not included in opinion of probable cost
- Allocation costs are not included. Allocation considerations are noted where required.
- Approximately 50% contingency added to all costs
- Forcemains twinned, per policy
- **High-level preliminary opinion of probable cost, intended to facilitate decision-making process**

Scenario 1 – Opinion of Probable W&WW Cost



Scenario 1 Excluding Employment Area	Wastewater Cost	Water Cost	Total Cost
Treatment	\$153,000,000	\$82,000,000	\$235,000,000
Vertical	\$20,000,000	\$76,000,000	\$96,000,000
Linear	\$21,000,000	\$17,000,000	\$38,000,000
Subtotal	\$194,000,000	\$175,000,000	\$369,000,000

Employment Area Only	Wastewater Cost	Water Cost	Total Cost
Treatment	\$ -	\$ -	\$ -
Vertical	\$16,000,000	\$27,000,000	\$43,000,000
Linear	\$19,000,000	\$15,000,000	\$34,000,000
Subtotal	\$35,000,000	\$42,000,000	\$77,000,000

Scenario 1 Total	Wastewater Cost	Water Cost	Total Cost
Total	\$229,000,000	\$217,000,000	\$446,000,000

Scenario 1 – Cost and Feasibility Considerations



Additional cost and feasibility considerations:

1. Wastewater treatment feasibility to be proven
 1. Class Environmental Assessment Study
 2. Receiving Water Body
 3. Assimilative Capacity Study (Willow Creek)
 4. Assimilative Capacity Study (Other receiving water body if Willow Creek not viable)
 5. Discussions with Approval Authorities
 6. Phosphorus offsets
 7. Public Consultation
2. Water supply feasibility to be proven
 1. Class Environmental Assessment Study
 2. Hydrogeological Assessment
 3. Discussions with Approval Authorities
 4. Availability of water supply
 5. Public Consultation

Scenario 2 – Opinion of Probable Cost



Scenario 2 Excluding Employment Area	Wastewater Cost	Water Cost	Total Cost
Treatment	\$- (foot note 1)	\$- (foot note 2)	\$- (foot notes 1&2)
Vertical	\$31,000,000	\$-	\$31,000,000
Linear	\$25,000,000	\$6,000,000	\$31,000,000
Subtotal	\$56,000,000	\$6,000,000	\$62,000,000
Employment Area Only	Wastewater Cost	Water Cost	Total Cost
Treatment	\$- (foot note 1)	\$- (foot note 2)	\$- (foot notes 1&2)
Vertical	\$35,000,000	\$19,000,000	\$54,000,000
Linear	\$23,000,000	\$13,000,000	\$36,000,000
Subtotal	\$58,000,000	\$32,000,000	\$90,000,000
Scenario 2 Total	Wastewater Cost	Water Cost	Total Cost
Total	\$114,000,000	\$38,000,000	\$152,000,000

1. Wastewater Treatment allocation costs for Blocks 1-5 and Employment Block are not included in opinion of probable cost. They can be considered as 7% of the total Barrie planned treatment expansion costs based on the percentage of estimated flows of Blocks 1-5 and Employment Block relative to the total treatment expansion in Barrie.
2. Water Treatment allocation costs for Blocks 1-5 and Employment Block are not included in opinion of probable cost. They can be considered as 10% of the total Barrie planned treatment expansion costs based on the percentage of estimated flows of Blocks 1-5 and Employment Block relative to the total treatment expansion in Barrie.

Scenario 2 – Opinion of Probable Cost – Block 5



Infrastructure	Wastewater Cost	Water Cost	Total Cost
Treatment	\$-	\$-	\$-
Vertical	\$11,000,000	\$-	\$11,000,000
Linear	\$8,500,000	\$2,500,000	\$11,000,000
Total Cost	\$19,500,000	\$2,500,000	\$22,000,000

Consideration for possible servicing agreement to service Block 5 : \$22,000,000 for estimated 1,545 Units

Scenario 3 – Opinion of Probable Cost



Scenario 3 Excluding Employment Area	Wastewater Cost	Water Cost	Total Cost
Treatment	\$- (foot note 1)	\$- (foot note 2)	\$- (foot notes 1&2)
Vertical	\$25,000,000	\$-	\$25,000,000
Linear	\$17,000,000	\$5,000,000	\$22,000,000
Total Cost	\$42,000,000	\$5,000,000	\$47,000,000
Employment Area Only	Wastewater Cost	Water Cost	Total Cost
Treatment	\$- (foot note 1)	\$- (foot note 2)	\$- (foot notes 1&2)
Vertical	\$35,000,000	\$19,000,000	\$54,000,000
Linear	\$24,000,000	\$13,000,000	\$37,000,000
Total Cost	\$59,000,000	\$32,000,000	\$91,000,000
Scenario 3 Total	Wastewater Cost	Water Cost	Total Cost
Total	\$101,000,000	\$37,000,000	\$138,000,000

1. Wastewater Treatment allocation costs for Block 6 and Employment Block are not included in opinion of probable cost. They can be considered as 5% of the total Barrie planned treatment expansion costs based on the percentage of estimated flows of Block 6 and Employment Block relative to the total treatment expansion in Barrie.
2. Water Treatment allocation costs for Block 6 and Employment Block are not included in opinion of probable cost. They can be considered as 7% of the total Barrie planned treatment expansion costs based on the percentage of estimated flows of Block 6 and Employment Block relative to the total treatment expansion in Barrie.

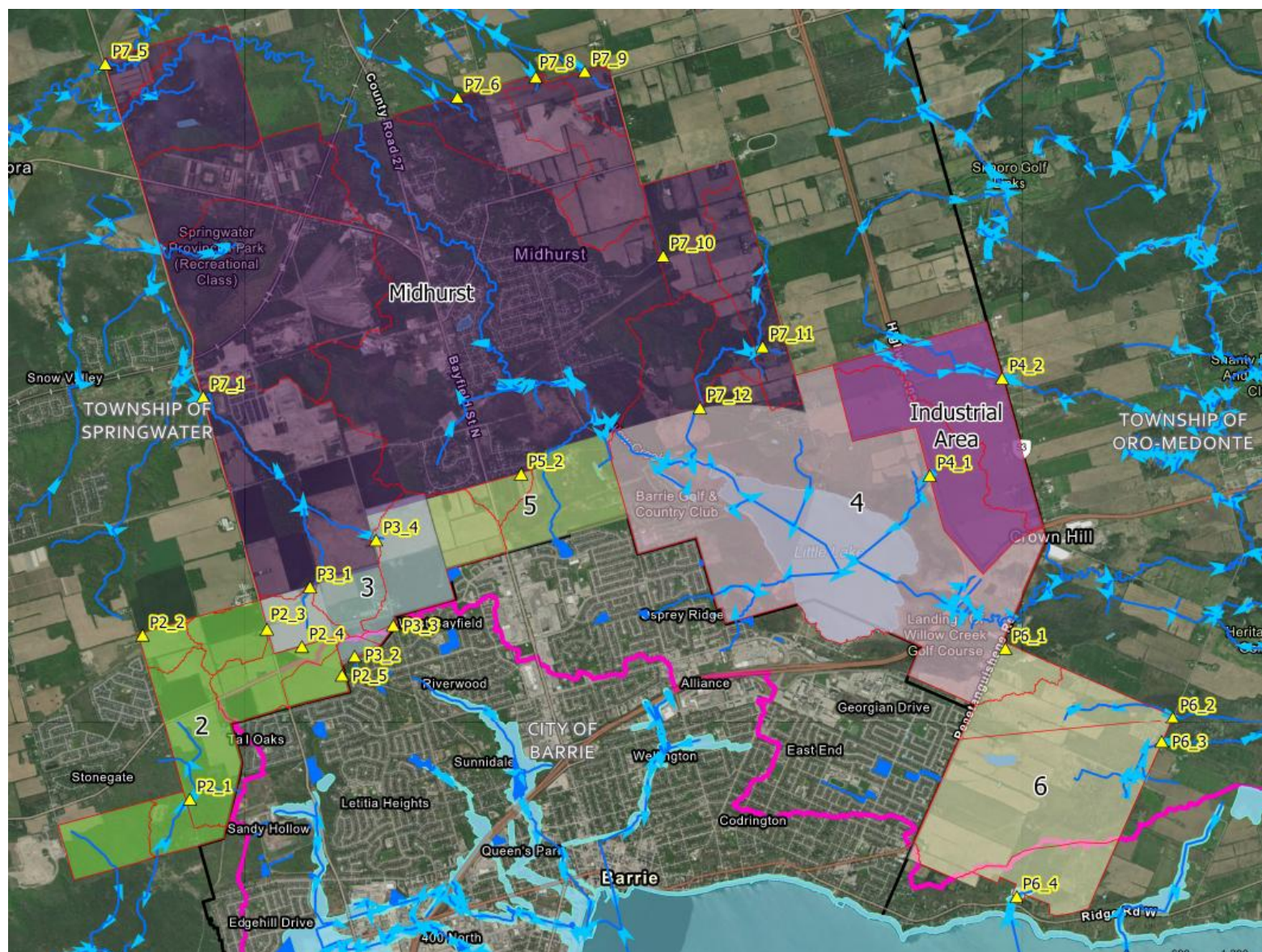
Summary – Water and Wastewater Cost Estimate



Infrastructure	Scenario 1	Scenario 2	Scenario 3
Treatment (WTPs, WWTPs)	\$235,000,000 (foot note 1)	\$- (foot note 2)	\$- (foot note 2)
Vertical (BPS, Storage, SPS)	\$139,000,000	\$85,000,000	\$79,000,000
Linear (Trunk Sewers and Watermains only)	\$72,000,000	\$67,000,000	\$59,000,000
Total Cost	\$446,000,000	\$152,000,000	\$138,000,000

1. **Scenario 1:** Wastewater Treatment and Water Supply feasibilities need to be proven as detailed in Slide #19
2. **Scenarios 2 and 3:** Water and Wastewater Treatment allocation costs are not included in the opinion of probable cost. They can be considered as a percentage of the total Barrie planned treatment expansion costs based on the percentage of estimated flows of Blocks 1-6 and Employment Block relative to the total treatment expansion in Barrie. These percentages have been estimated in Slides 20 and 22.

Stormwater Management Considerations

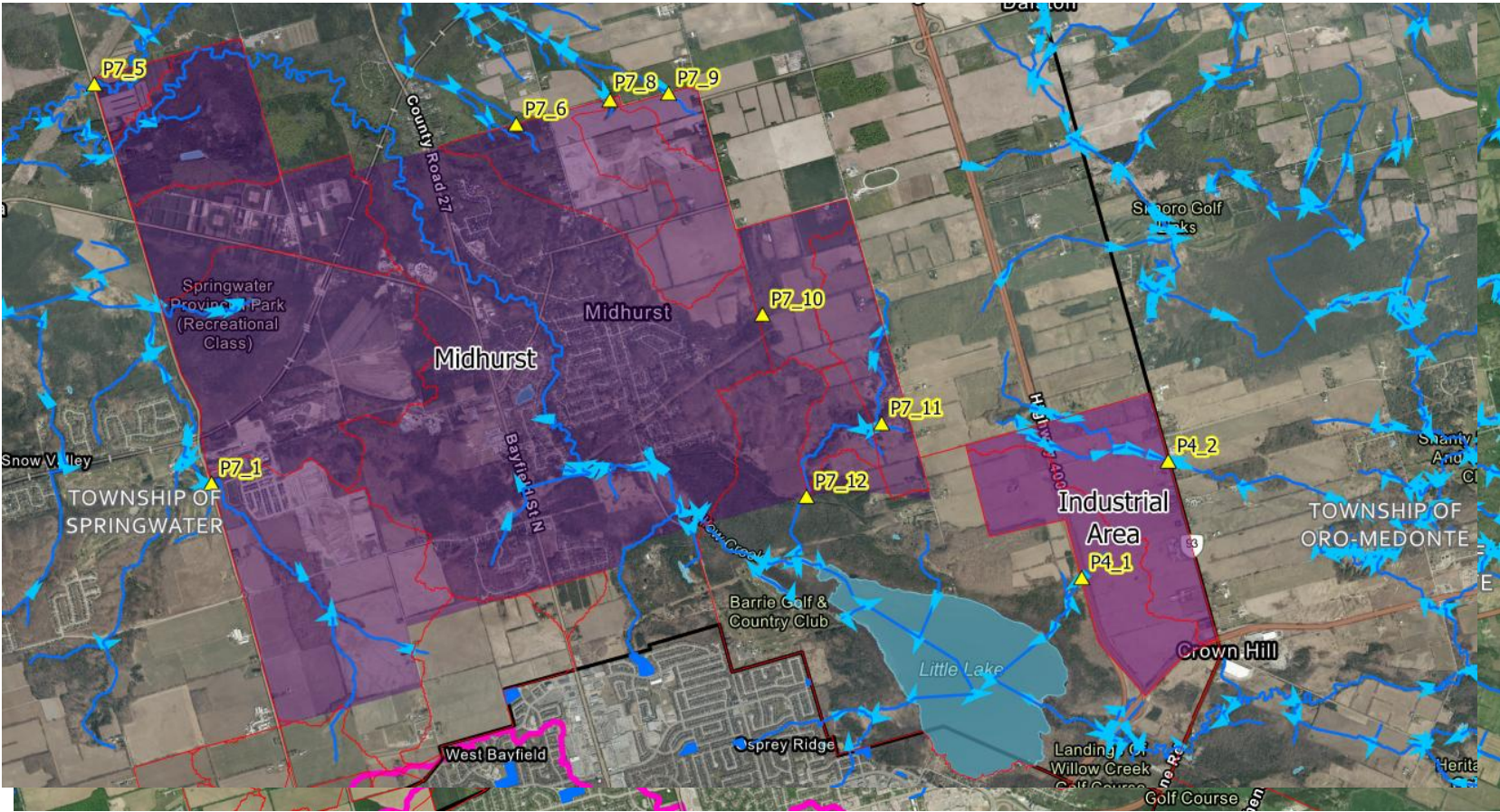


Stormwater Management Considerations



- Expansion areas are within LSRCA and NVCA watersheds
- Block areas divided into subcatchments based on existing topography and proximity to a watercourse
- Each subcatchment includes a SWM facility schematically placed at a suitable outlet location
- For larger subcatchment areas, multiple SWM facilities will be required – the actual location/size of SWM facilities will depend on the future road network and more refined land use plan

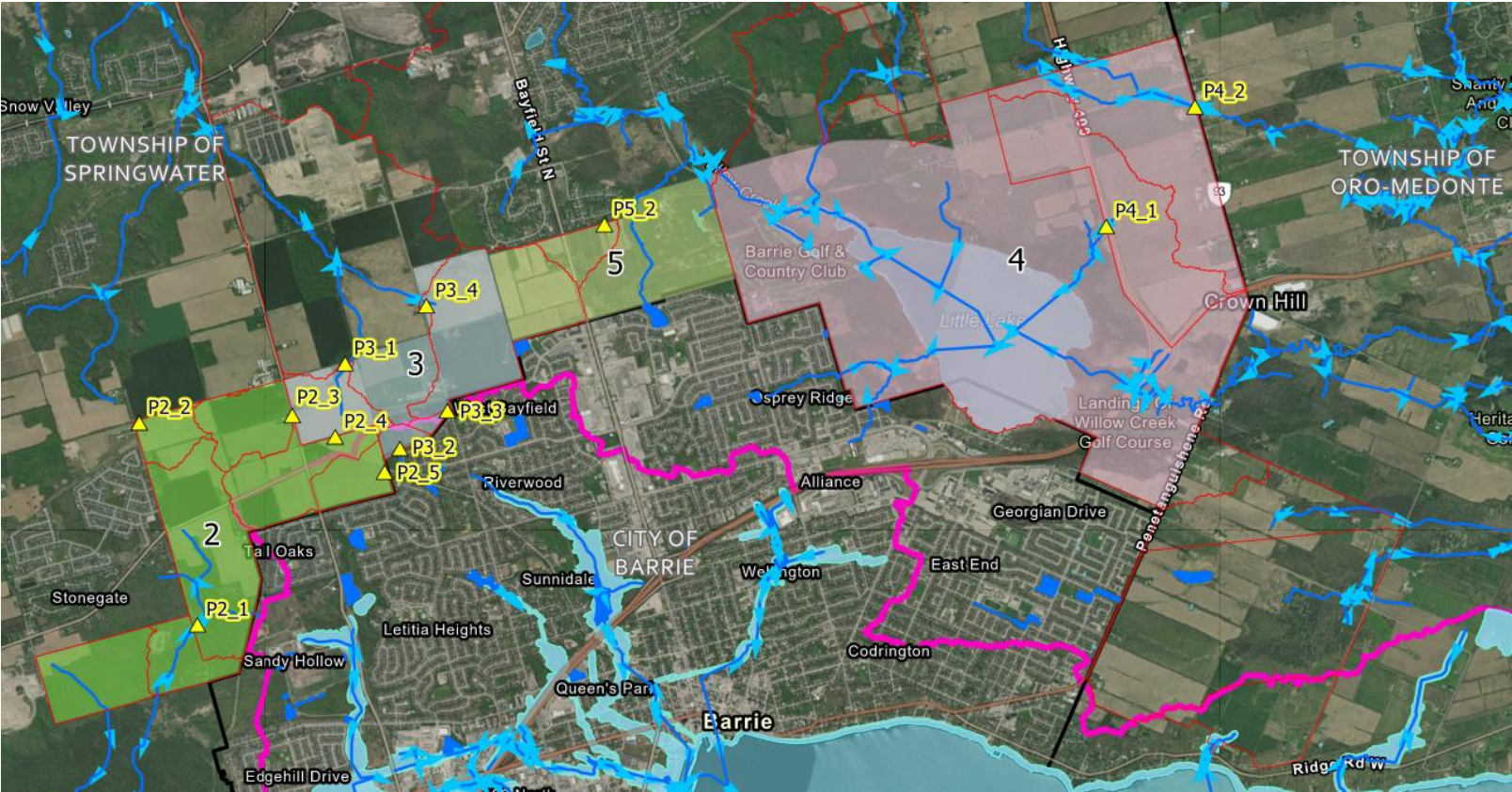
Scenario 1 - Growth Areas and Potential SWM Facility Locations



Block	Pond ID	Catchment Area (ha)	* SWM Block Requirement (ha)
4	P4_1	162	8.1
4	P4_2	168	8.5
Midhurst	P7_1	397	19.9
Midhurst	P7_5	27	1.4
Midhurst	P7_6	110	5.6
Midhurst	P7_8	133	6.7
Midhurst	P7_9	30	1.6
Midhurst	P7_10	97	4.9
Midhurst	P7_11	108	5.5
Midhurst	P7_12	45	2.3

*SWM block area assumes 5% of the catchment area

Scenario 2 - Growth Areas and Potential SWM Facility Locations



Block	Pond ID	Catchment Area (ha)	* Pond Block Requirement (ha)
2	P2_1	119	6.0
2	P2_2	24	1.3
2	P2_3	49	2.5
2	P2_4	64	3.2
2	P2_5	28	1.5
3	P3_1	41	2.1
3	P3_2	8	0.5
3	P3_3	4	0.2
3	P3_4	142	7.1
4	P4_1	162	8.1
4	P4_2	168	8.5
5	P5_2	22	1.2

*SWM block area assumes 5% of the catchment area

Scenario 3 - Growth Areas and Potential SWM Facility Locations



Block	Pond ID	Catchment Area (ha)	* SWM Block Requirement (ha)
4	P4_1	162	8.1
4	P4_2	168	8.5
6	P6_1	3	0.2
6	P6_2	96	4.8
6	P6_3	324	16.3
6	P6_4	74	3.7

*SWM block area assumes 5% of the catchment area

Stormwater Management Opinion of Probable Cost



Description	Development Scenario 1	Development Scenario 2	Development Scenario 3
# of SWM Blocks	10	12	6
Approximate Cost (Mil.)	\$70.5M	\$67.1M	\$55.6M

Notes/Assumptions:

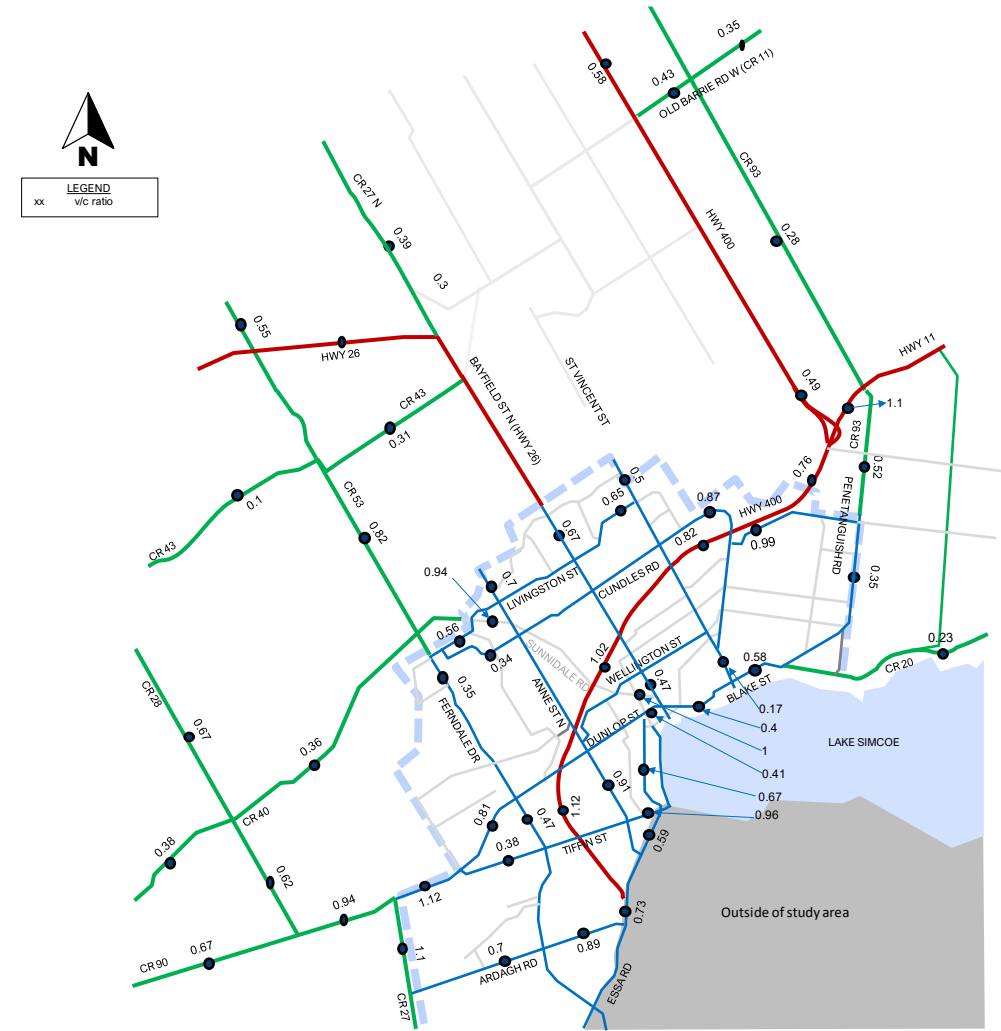
- Cost estimate based on cost associated with the SWM facility construction
- Count of SWM block is an aggregate number based on the subcatchment delineation. The actual number of SWM blocks required will depend on a more detailed land use plan and road network
- Cost estimate excludes other storm infrastructure such as SWM LIDs and storm sewers. Estimates for such infrastructure will depend on a more detailed land use plan and road network

Existing Road Network

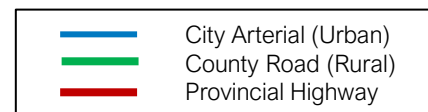


Source

- City of Barrie Traffic Counts Open Dataset
- County of Simcoe AADT Summary
- MTO Library – Traffic Volume Data

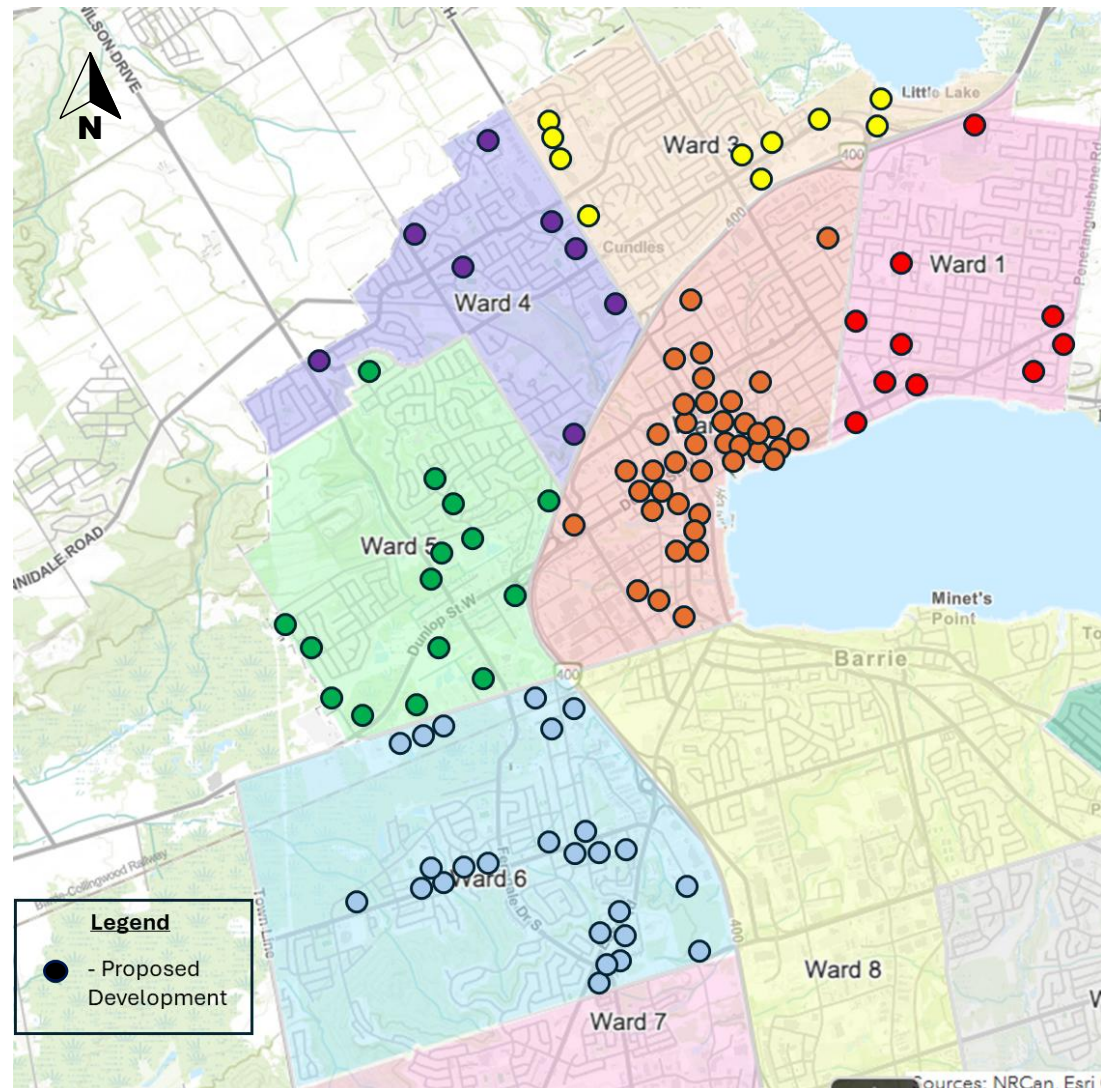


- City of Barrie Traffic Counts Open Dataset
- County of Simcoe AADT Summary
- MTO Library – Traffic Volume Data
- TIS Studies
- 2019 Barrie TMP EMME Model

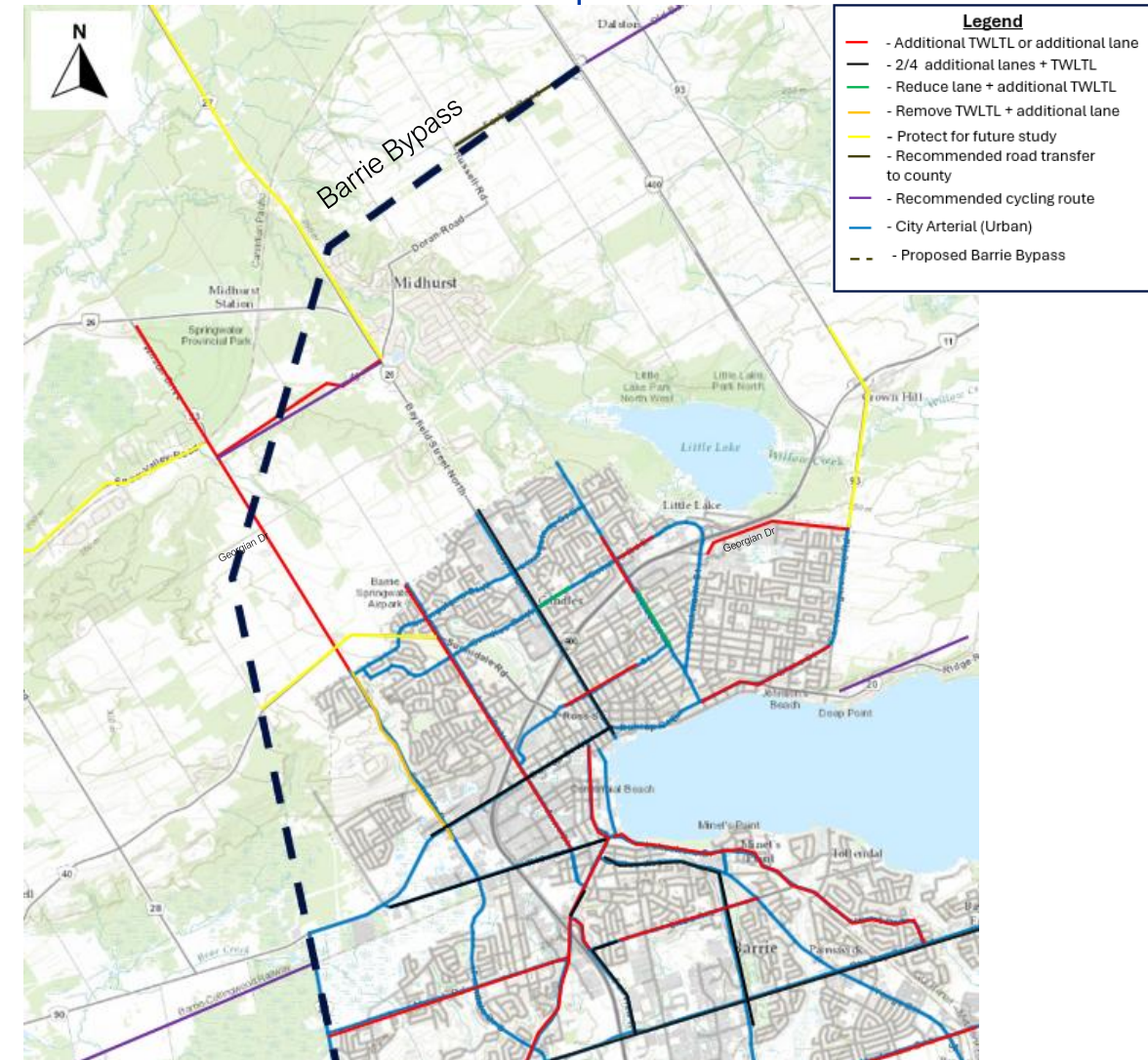


Planned Developments & Road Improvements

Planned Developments



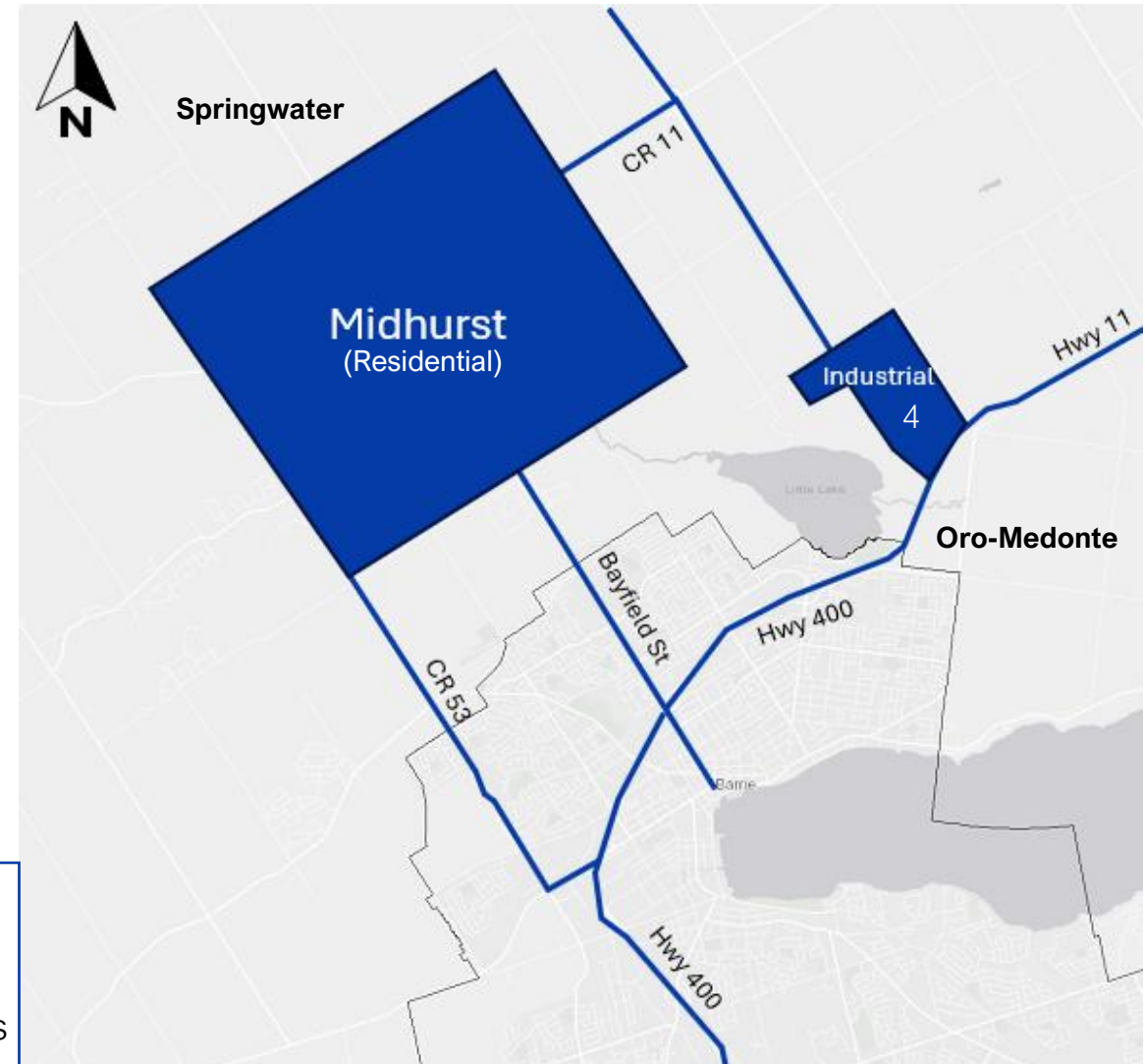
Planned Road Improvements



Scenario 1 - Major Impacted Roads

Growth Area	Land Use	Trip Generation	
		AM (# of trips)	PM (# of trips)
Midhurst	Residential	3646	3773
Block 4 (Industrial Park)	Industrial	2416	1846
Total		6062	5619

Legends	
	- Growth Area
	- Potentially Impacted Corridors



Scenario 2 - Major Impacted Roads

Block	Land Use	Trip Generation	
		AM (# of trips)	PM (# of trips)
2	Residential	996	885
	Commercial	221	479
3	Residential	1540	1626
	Commercial	173	376
4	Residential	647	778
	Industrial	2416	1846
5	Residential	380	355
Total		6,373	6,345

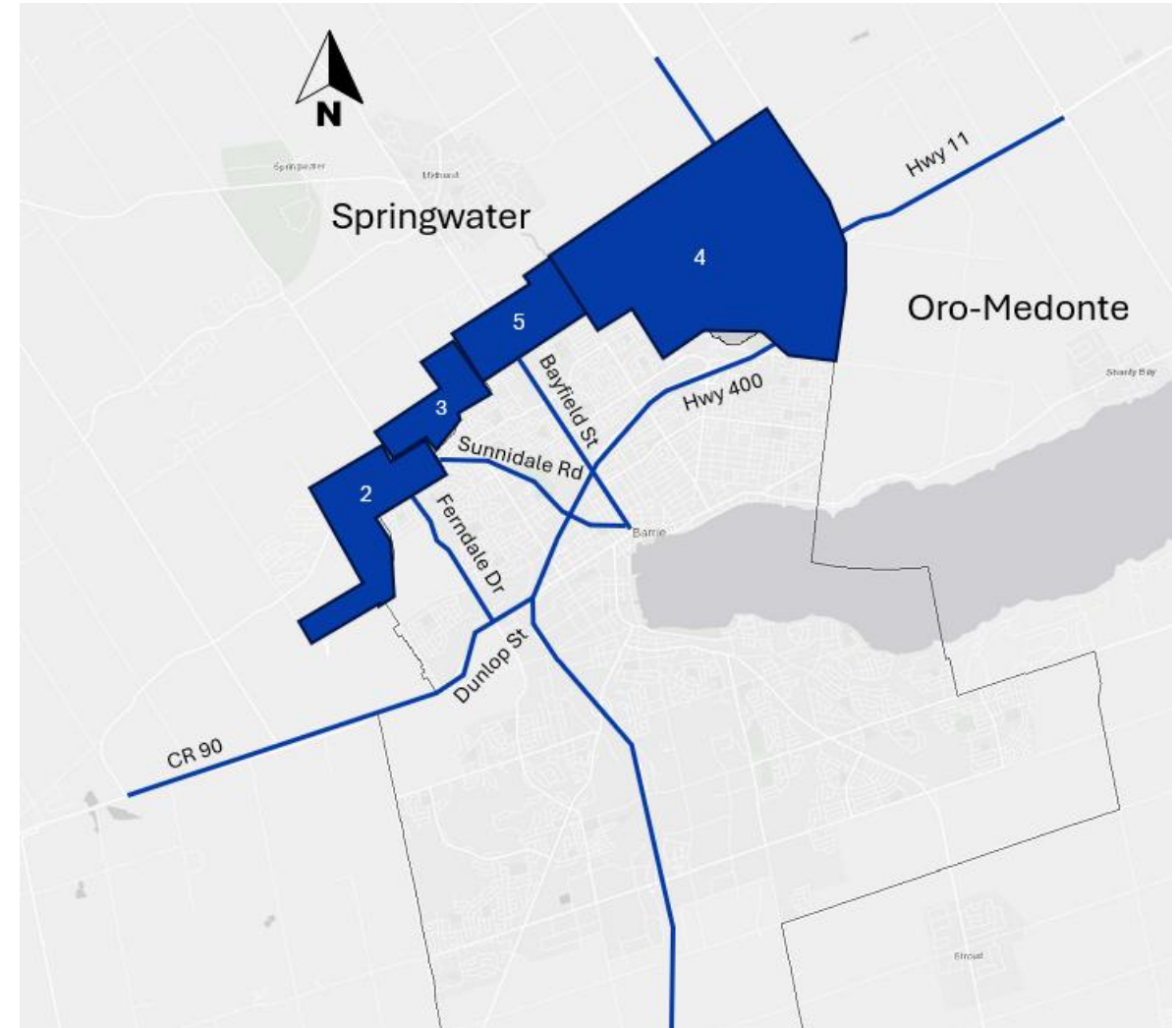
Legends



- Growth Areas



- Potentially Impacted Corridors



Scenario 3 - Major Impacted Roads

Block	Land Use	Trip Generation	
		AM (# of trips)	PM (# of trips)
6	Residential	1533	1445
	Commercial	263	569
4 (Industrial Park)	Industrial	2416	1846
Total		4,212	3,860

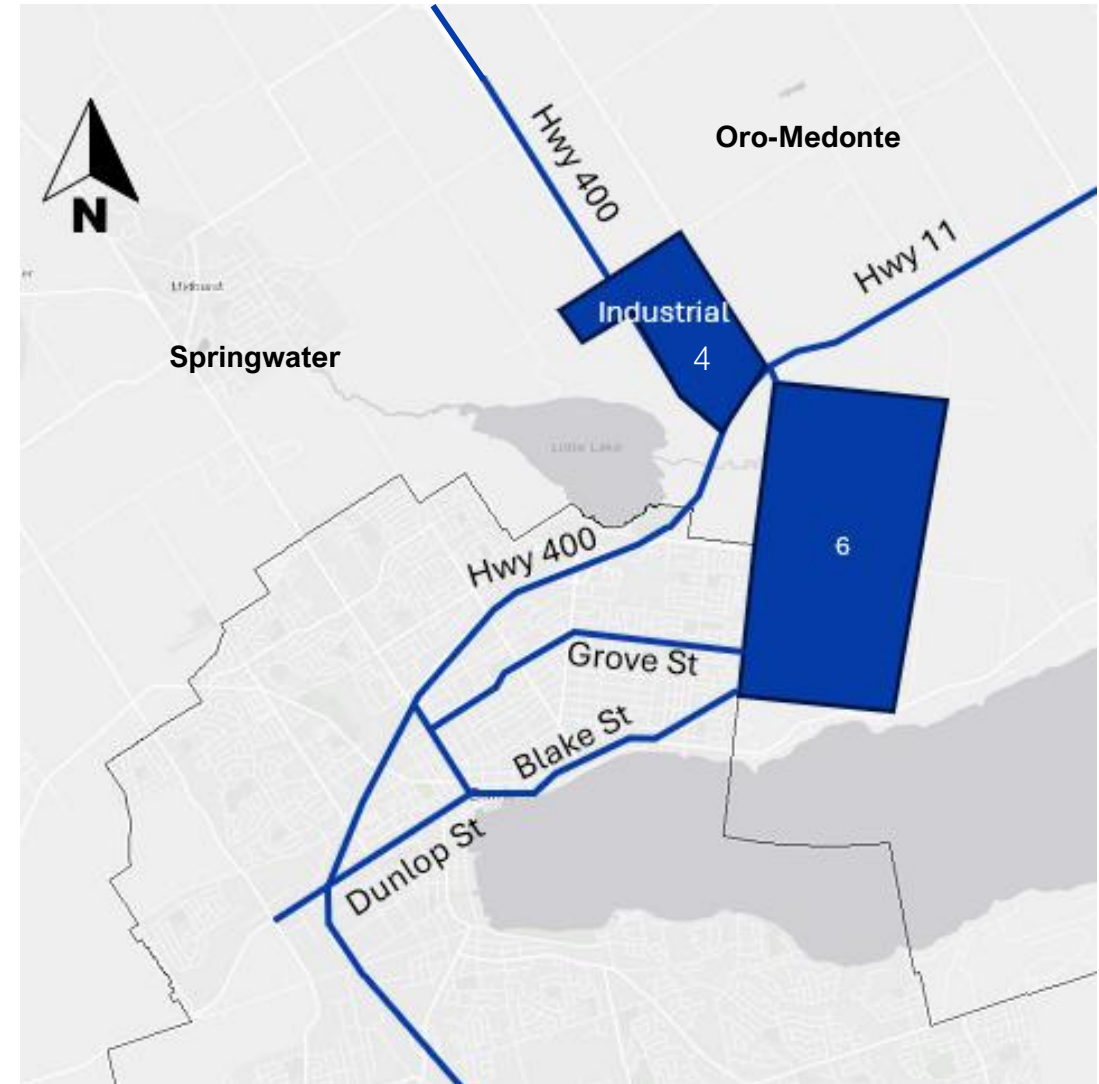
Legends



- Block Area



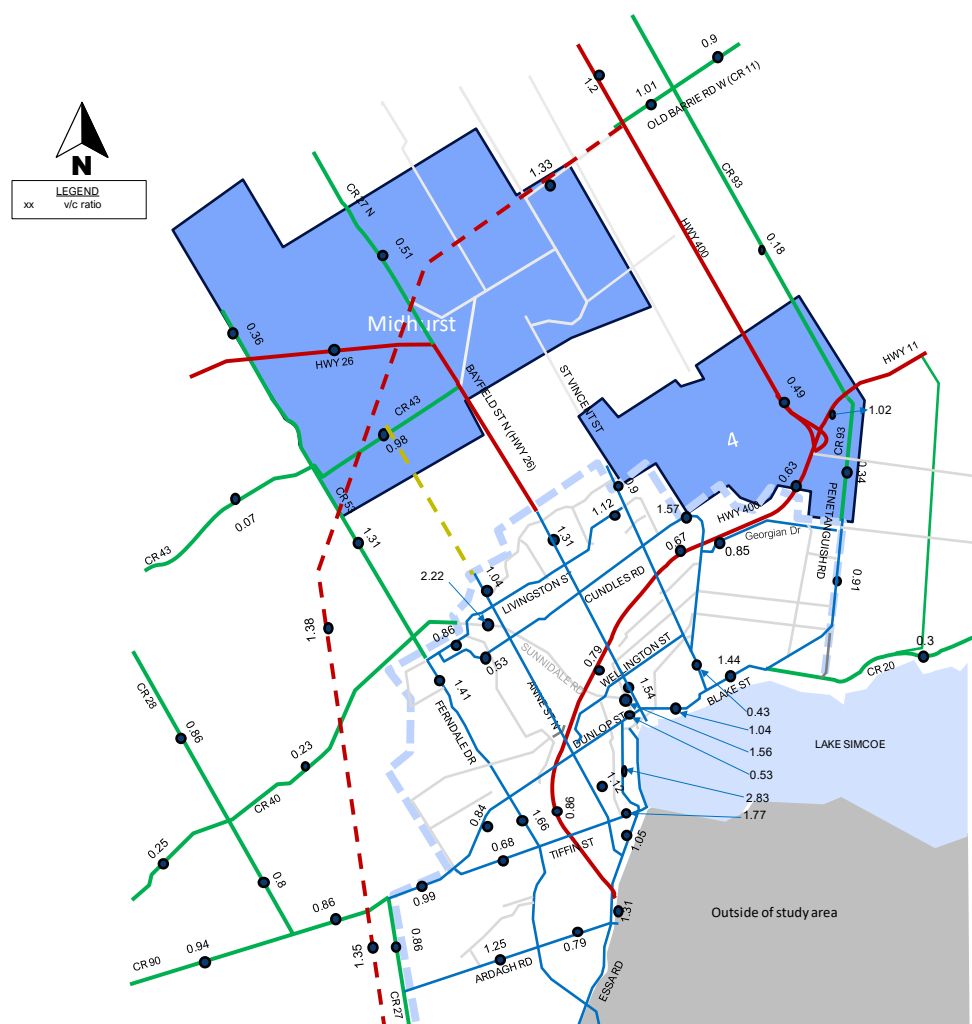
- Potentially Impacted Corridors



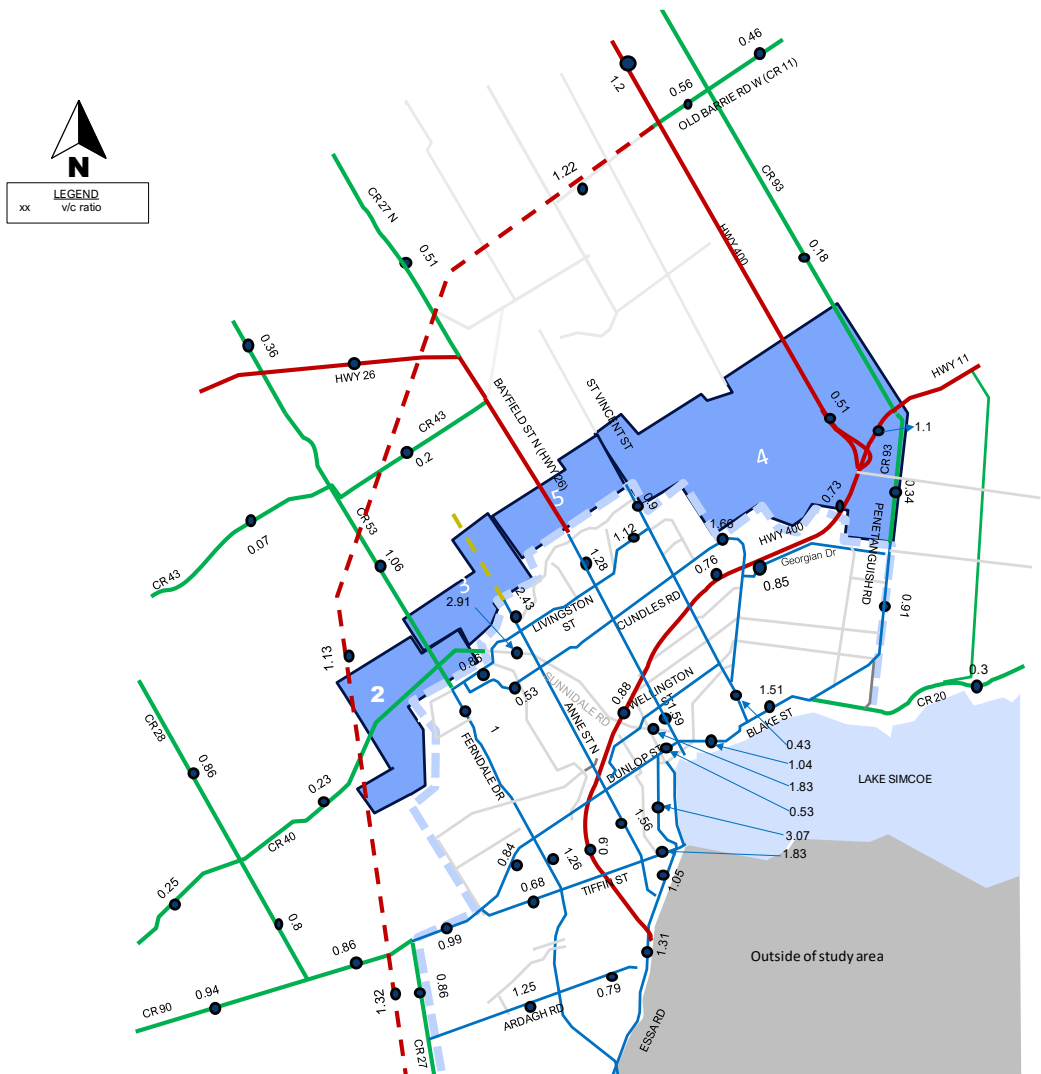
Scenarios 1 & 2 – Estimated Roadway Capacities



Scenario 1

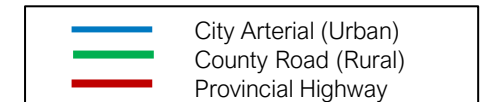
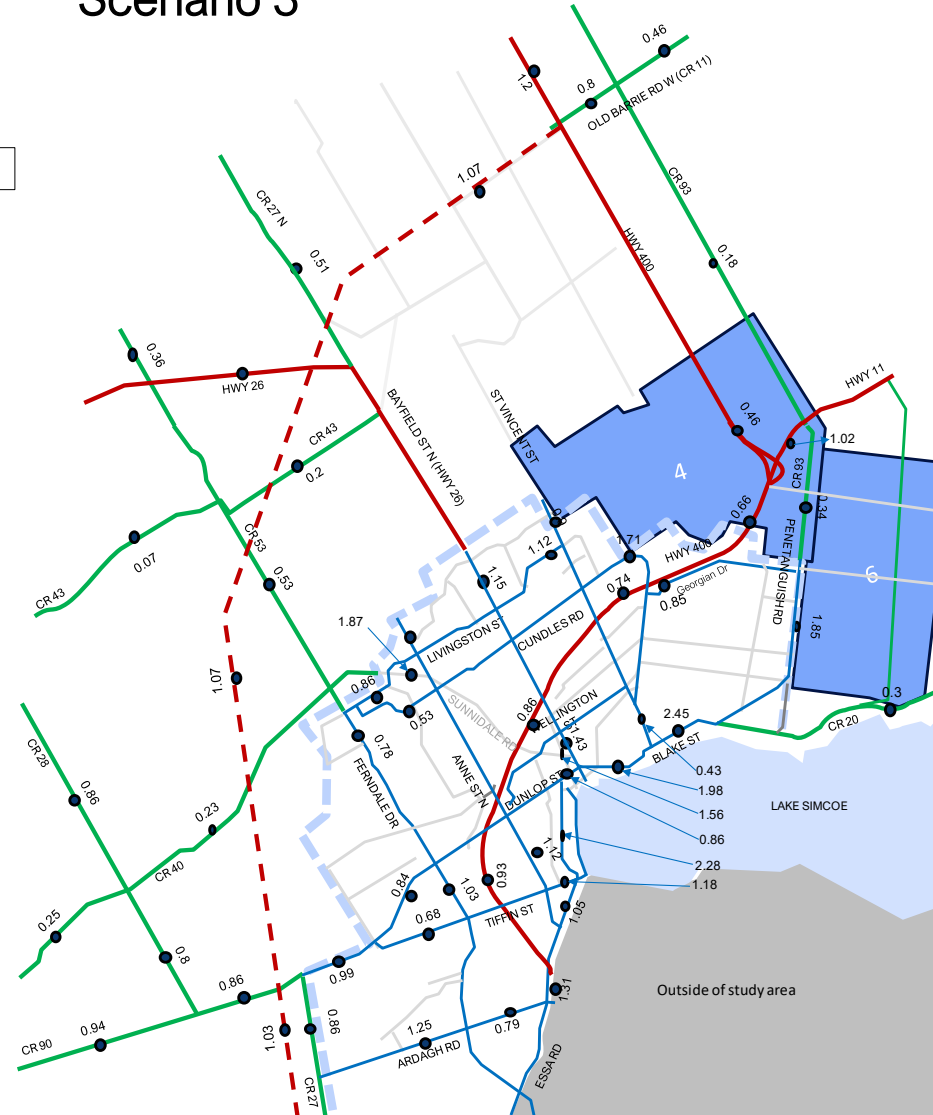
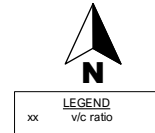


Scenario 2



Scenarios 3 – Estimated Roadway Capacities

Scenario 3



Capacities for Key Roadways / Potential Improvements

1/2



Roadway	Existing/Planned Number of Lanes Per Direction	Background Estimated Capacity	Scenario 1 Estimated Capacity	Scenario 2 Estimated Capacity	Scenario 3 Estimated Capacity	Potential Improvements
Highway 11	3	0.95	1.02	1.1	1.02	No Improvements
Anne Street North	1 lane + TWLTL	1.04	-	2.43	-	Scenario 2 - Two lanes in each direction (Anne St southerly extension maybe required)
Anne Street South	2 lanes + TWLTL	1.12	-	1.56	-	Scenario 2 - One lane in each direction ((Anne St southerly extension maybe required)
Barrie Bypass	2	1.03	1.33-1.38	1.13-1.32	1.07	Scenario 1 – One lane in each direction
Bayfield Street North	3 lanes + TWLTL	1.15	1.31	1.28	-	Scenarios 1 and 2 – One lane in each direction
Bayfield Street South	2 lanes + TWLTL	1.15	1.54	1.59	1.43	Scenarios 1 and 2 – One lane in each direction
Blake Street	1	1.44	-	1.51	2.45	Scenario 3 – One lane in each direction
Bradford St	1 lane + TWLTL	1.64	2.83	3.07	2.28	Scenario 1 – One lane in each direction Scenario 2 – Two lanes in each direction Scenario 3 – One lane in each direction
County Road 11 East	1	0.56	1.01	-	0.8	Scenario 1- One lane in each direction
County Road 11 West	1	0.46	0.90	-	-	NA
County Road 43	2	0.20	0.98	-	-	NA

Capacities for Key Roadways / Potential Improvements

2/2



Roadway	Existing/Planned Number of Lanes Per Direction	Background Estimated Capacity	Scenario 1 Estimated Capacity	Scenario 2 Estimated Capacity	Scenario 3 Estimated Capacity	Potential Improvements
County Road 53 South	2	0.53	1.31	1.06	-	Scenario 1 – One lane in each direction
County Road 90 E	3	0.81	0.86	-	0.86	NA
County Road 90 W	2	0.87	0.94	-	0.94	NA
Cundles Road East	2 lanes + TWLTL	1.49	1.56	1.66	1.71	Scenario 3 – One lane in each direction
Dunlop Street East	1	1.04	-	-	1.98	Scenario 3 – One lane in each direction
Ferndale Drive North	2	0.78	1.41	1.00	-	Scenario 1 – One lane in each direction
Ferndale Drive South	2	1.03	1.66	1.26	-	Scenario 1 – One lane in each direction
Pentaguish Road	1	0.91	-	-	1.85	Scenario 3 – One lane in each direction
Sunnidale Road West	1	1.46	2.22	2.91	1.87	All Scenarios – One lane in each direction
Sunnidale Road East	1	1.46	1.56	1.83	1.56	All Scenarios – One lane in each direction
Tiffin Street East	2 lanes + TWLTL	1.18	1.77	1.83	-	Scenarios 1 and 2 – One lane in each direction

Roads Capacity Upgrades - Opinion of Probable Cost

Description	Development Scenario 1	Development Scenario 2	Development Scenario 3
Total Road Length (Km)	44.4	17.5	13.8
Approximate Cost (Mil)	\$387	\$155	\$120

Notes/Assumptions:

- No detailed modelling was completed
- Cost estimates assume an urban roadway cross section with AT facilities, streetlighting, landscaping and servicing
- Cost estimates do not include cost associated with Land acquisition, Potential Tariff Variations
- Cost estimates assume overhead and contingencies.

Summary of Total Probable Cost



Infrastructure	Scenario 1	Scenario 2	Scenario 3
Water and Wastewater	\$446 M	\$152 M	\$138 M
Stormwater Management	\$71 M	\$67 M	\$56 M
Roads	\$387 M	\$155 M	\$120 M
Grand Total (as per inclusions and exclusions indicated in the associated costing slides of each component)	\$904 M	\$374 M	\$314 M

Next Steps



- Public release of presentation material by September 25, 2025
- End of October 2025: Prepare and Deliver Servicing Technical Memo detailing the methodology, assumptions and design considerations, calculations and findings of today's presentation