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Port Wallace Master Plan Area

Baseline Study

Transportation Analysis

February 5, 2018

Port Wallace Baseline Study

- Development Concepts
- Transportation Services
- Water Services
- Sanitary Sewer System
- Storm Drainage System



Figure 1 - Development Concept

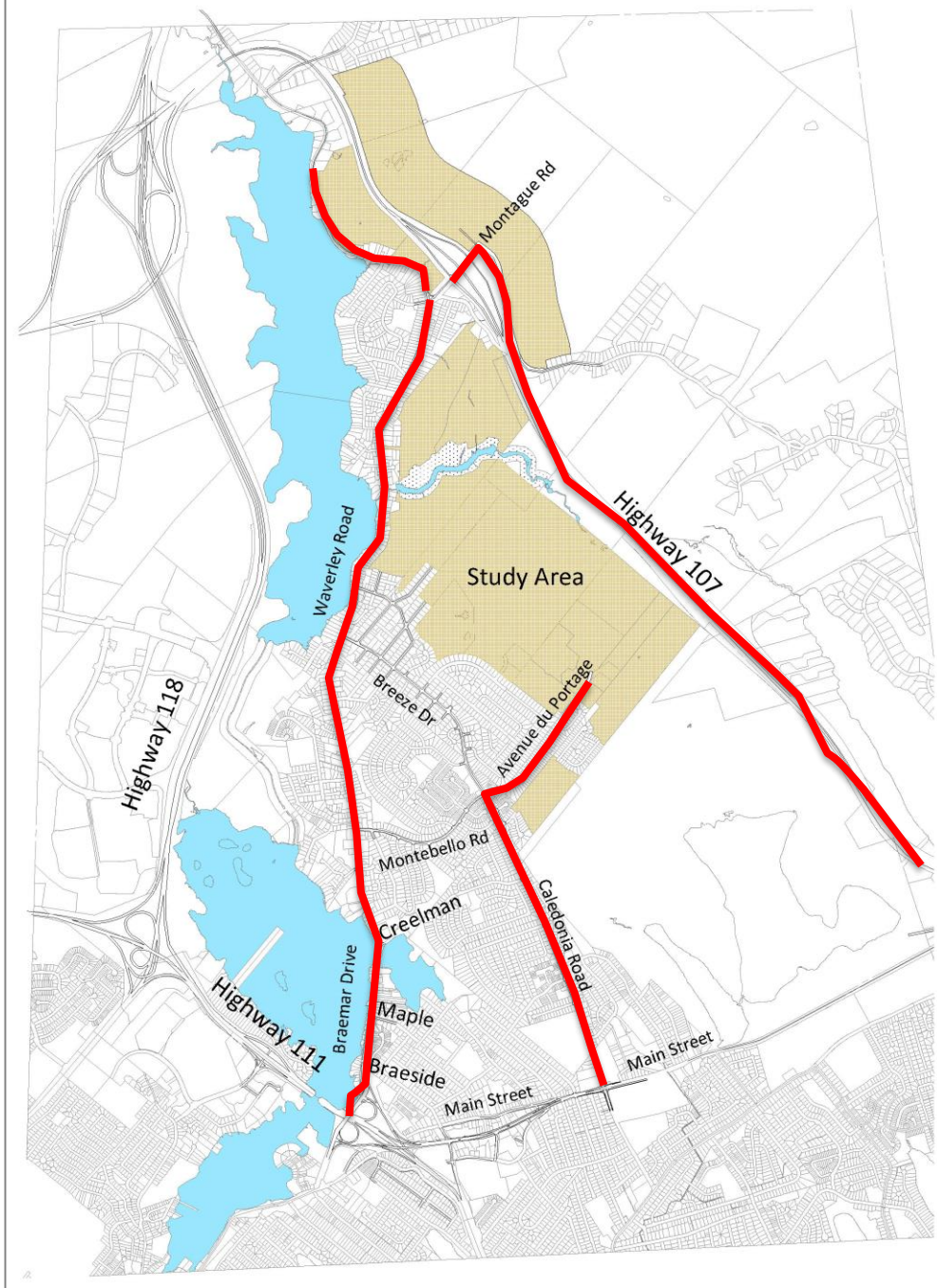
LEGEND	
	NEIGHBOURHOOD COMMERCIAL DEVELOPMENT
	PRIMARY DEVELOPMENT ACCESS
	SECONDARY DEVELOPMENT ACCESS
	TERTIARY DEVELOPMENT ACCESS

Transportation Services

- Access
- Development Assumptions
- Baseline Traffic Assumptions
- Trip Generation and Mode Choice
- Trip Distribution
- Results
- Infrastructure Plan

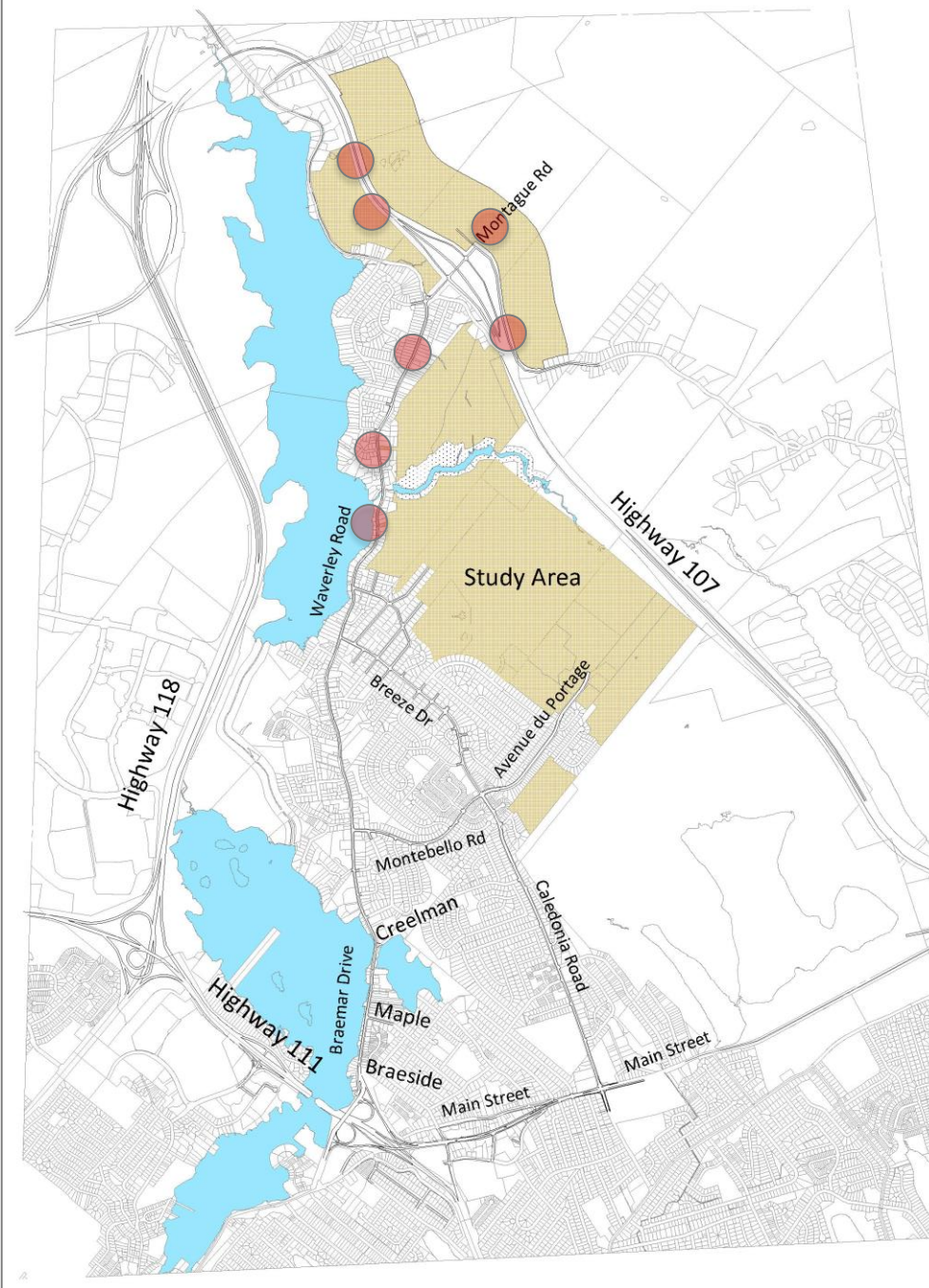
Existing Access Points

1. Waverley Road
2. Main Street via Avenue du Portage and Caledonia
3. Forest Hills Extension via Montague Road



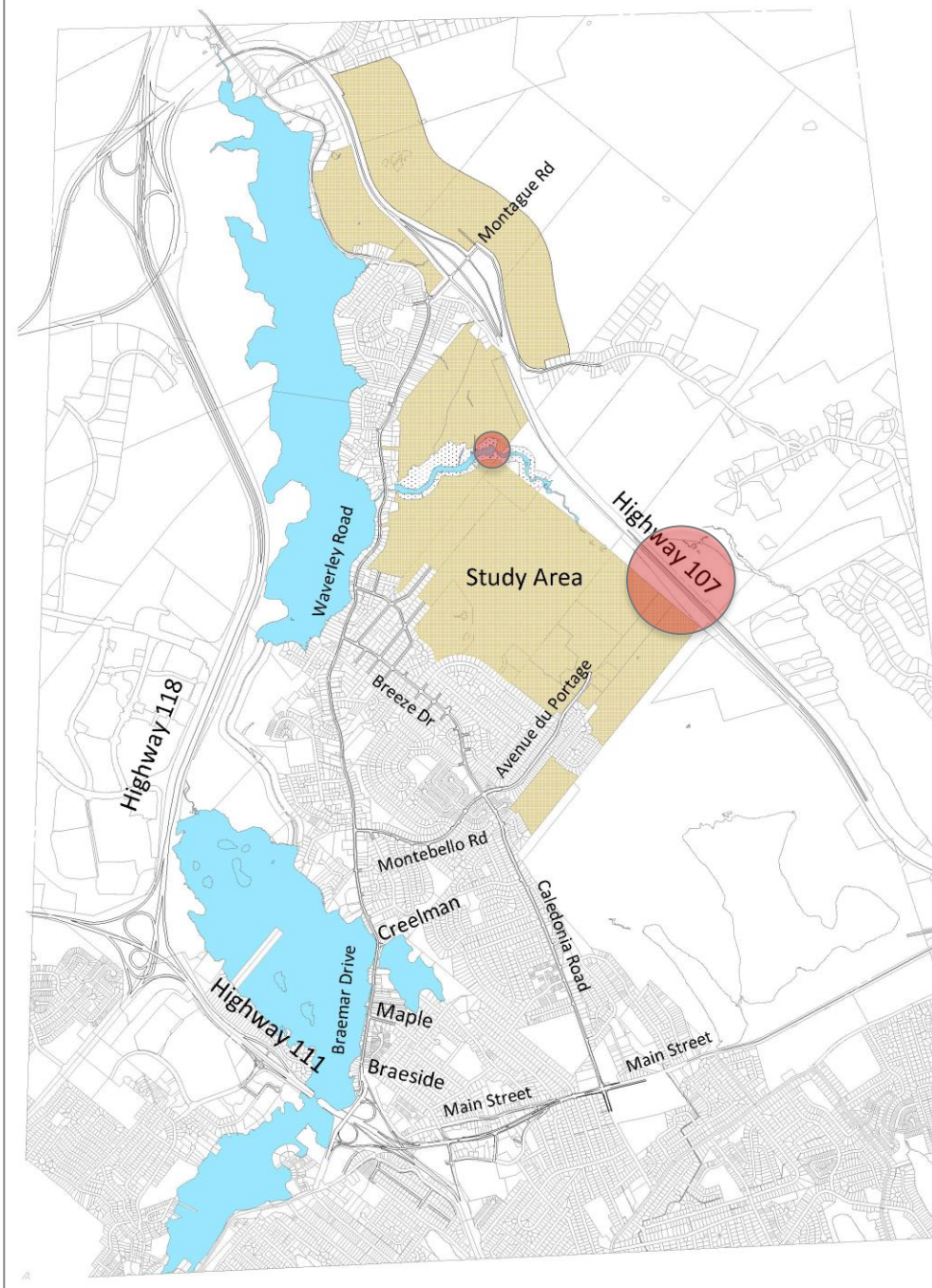
Proposed Access Points

1. Waverley Road
2. Montague Road



Proposed Access Points

- A new connection to Forest Hills Extension and a crossing of Barrys Run was also included in the analysis

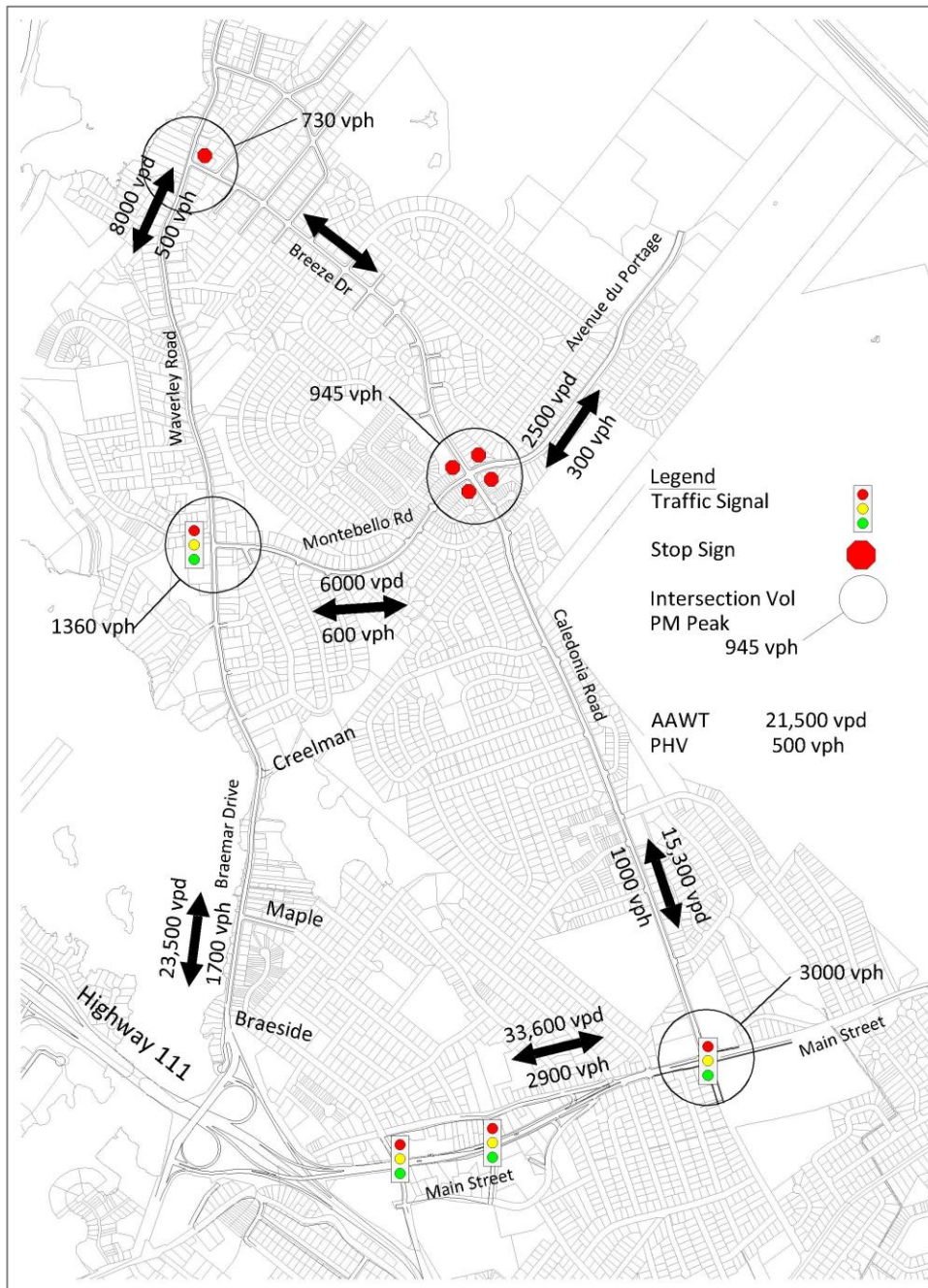


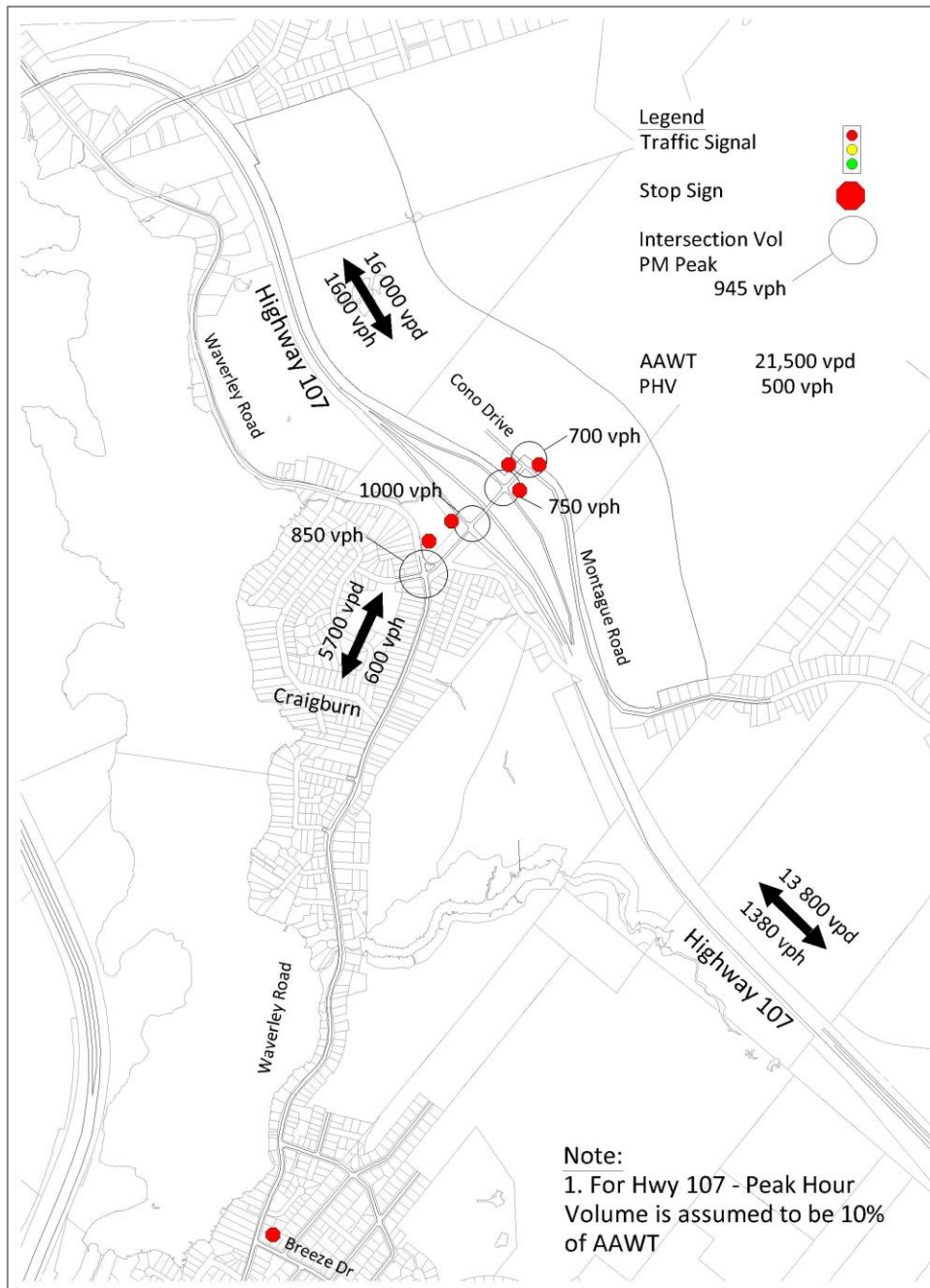
Development Assumptions

- 3744 residential units
- 184 acres of light industrial
- 150,000 square feet of commercial
- Buildout: 15-30 years

Baseline Traffic Conditions

- Background Traffic Growth:
 - 2017-2031: 1% per year
 - 2031-2047 0.75% per year
- Forest Hills Extension (Montague to Burnside) at or near capacity during rush hour periods

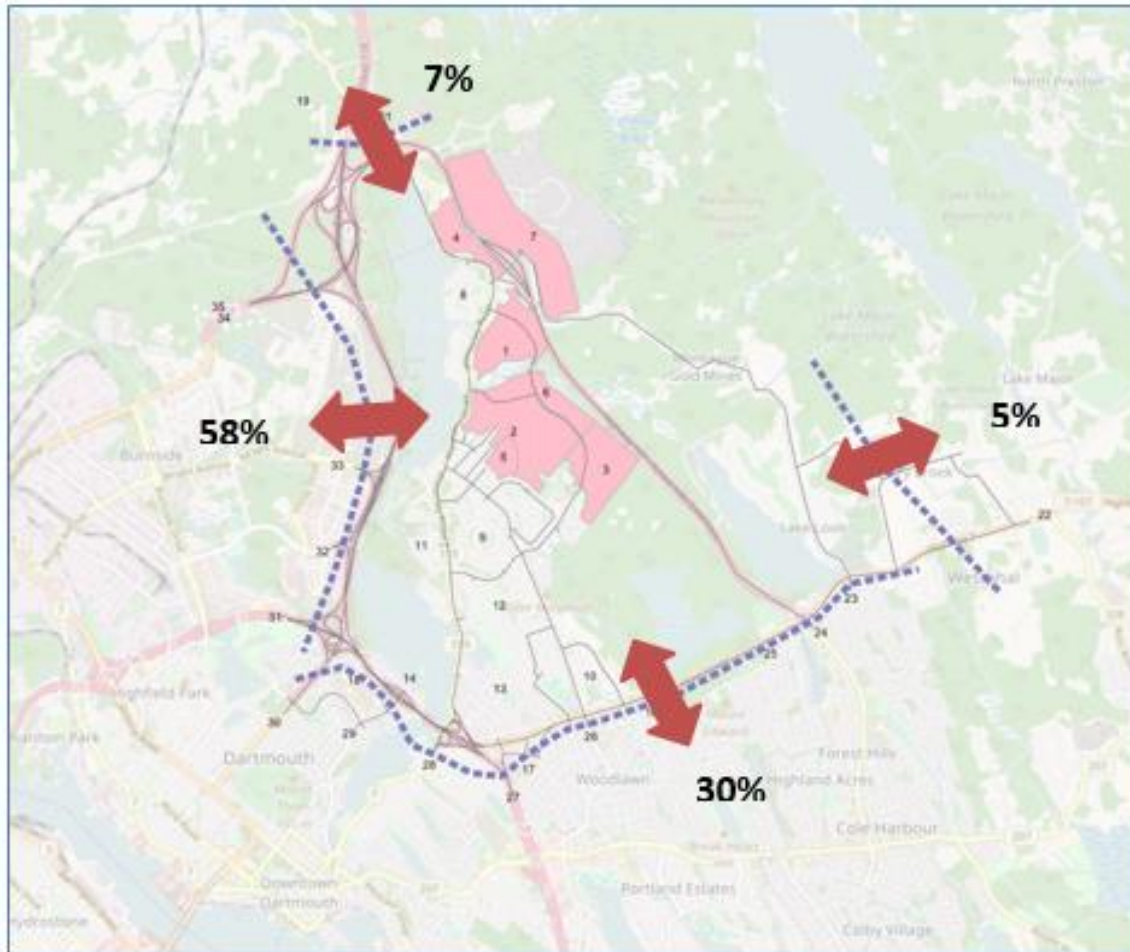




Trip Generation and Mode Choice

- AM Peak Hour: 3400 trips
- PM Peak Hour: 4200 trips
- Mode Choice: 10%

Trip Distribution

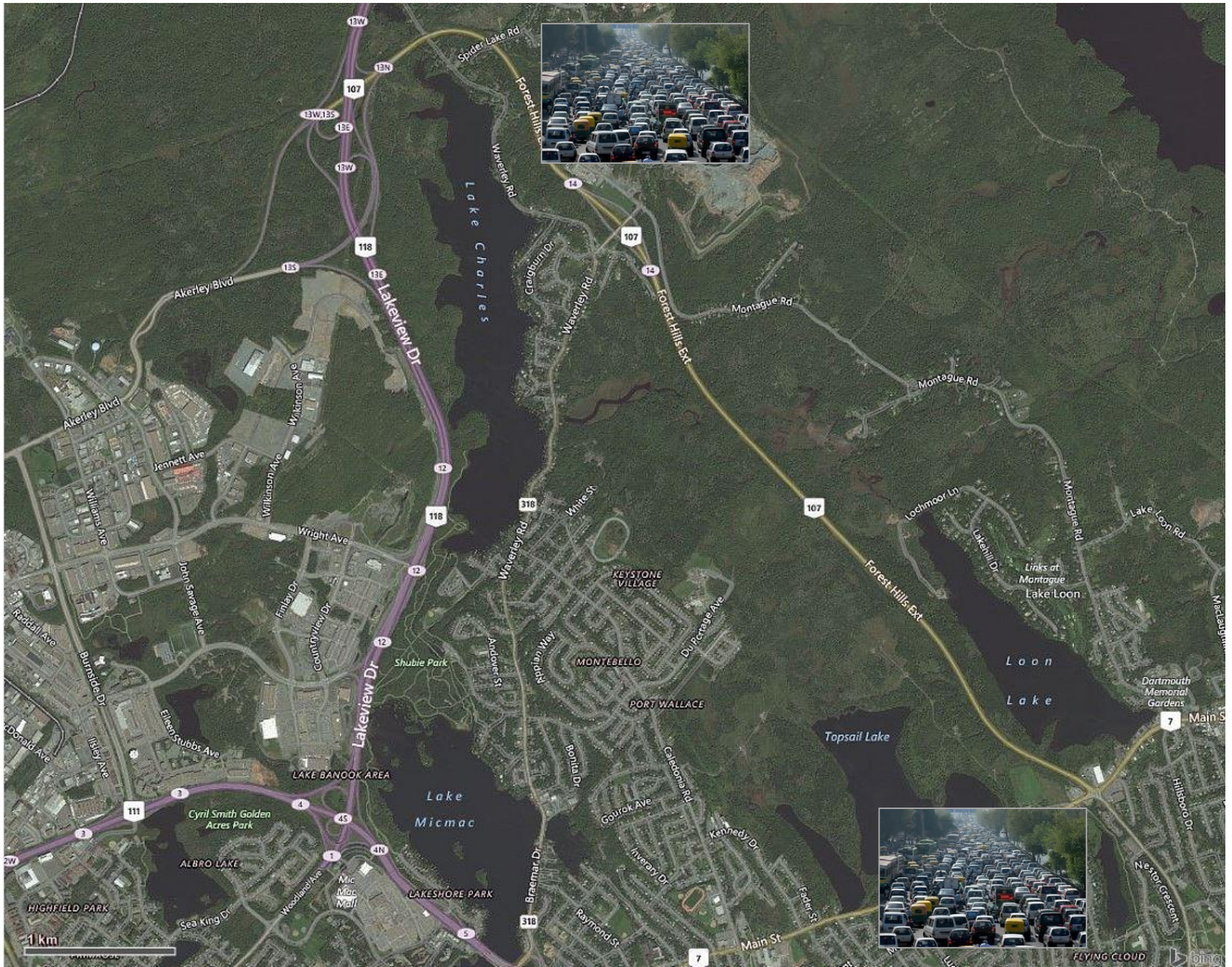


Results

- Limited development (400 units) can take place without the need to upgrade the transportation infrastructure.
- A new connection to Forest Hills Extension is not needed.

Why no connection to Forest Hills Extension?

- Right turn in – Right Turn Out connection
 - Only marginally improve Waverley Road congestion
- An at-grade roundabout is an improvement
 - Won't eliminate other intersection upgrades.
- NSTIR staff prefer an interchange
 - Will not approve an at-grade connection



Results

- Limited development (400 units) can take place without the need to upgrade the transportation infrastructure.
- A new connection to Forest Hills Extension is not needed.
- Forest Hills Extension will need to be widened with or without the Port Wallace development.

Forest Hills Extension Widening

- Two-lane section from Montague Road to Burnside is at or near capacity.



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Forest Hills Extension Widening

- Two-lane section from Montague Road to Burnside is at or near capacity.
- Modelling indicates that FHE will need to be widened to four-lanes to accommodate growth **outside** of the study area.
- Analysis assumes that FHE will be widened by 2031.
- No commitment by NSTIR.

Results

- Waverley Road does not need to be widened.
- There should be a crossing of Barrys Run.

Why cross Barrys Run?

- Better transit routing
- Improved AT connections
- Better development integration

Results

- Waverley Road does not need to be widened.
- There should be a crossing of Barrys Run.
- The Main at Forest Hills Extension is at or near capacity.

What can be done with the Main at Forest Hills Extension intersection?

- Currently the intersection operates at or near capacity during peak hour periods.

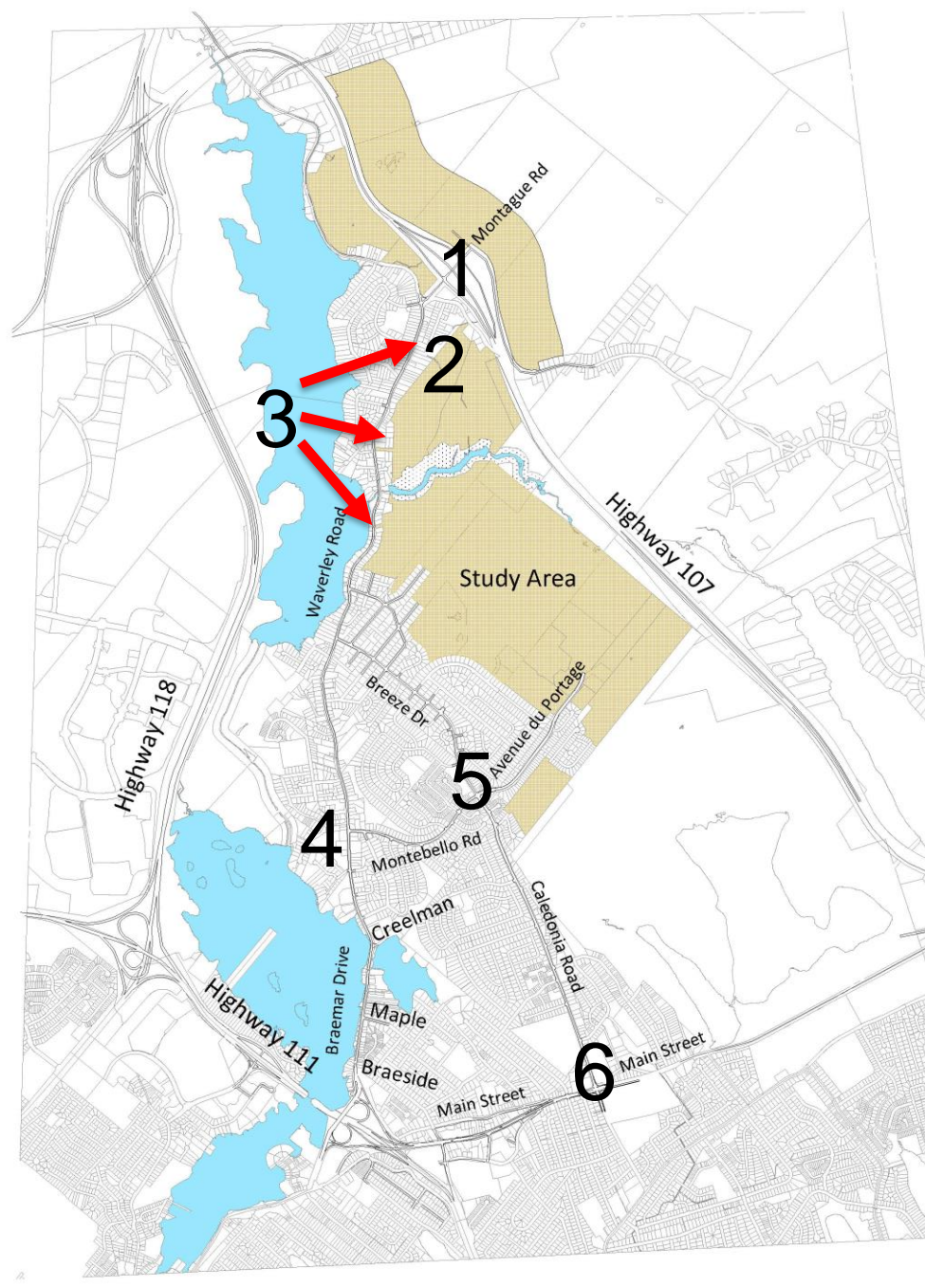
What can be done with the Main at Forest Hills Extension intersection?



What can be done with the Main at Forest Hills Extension intersection?

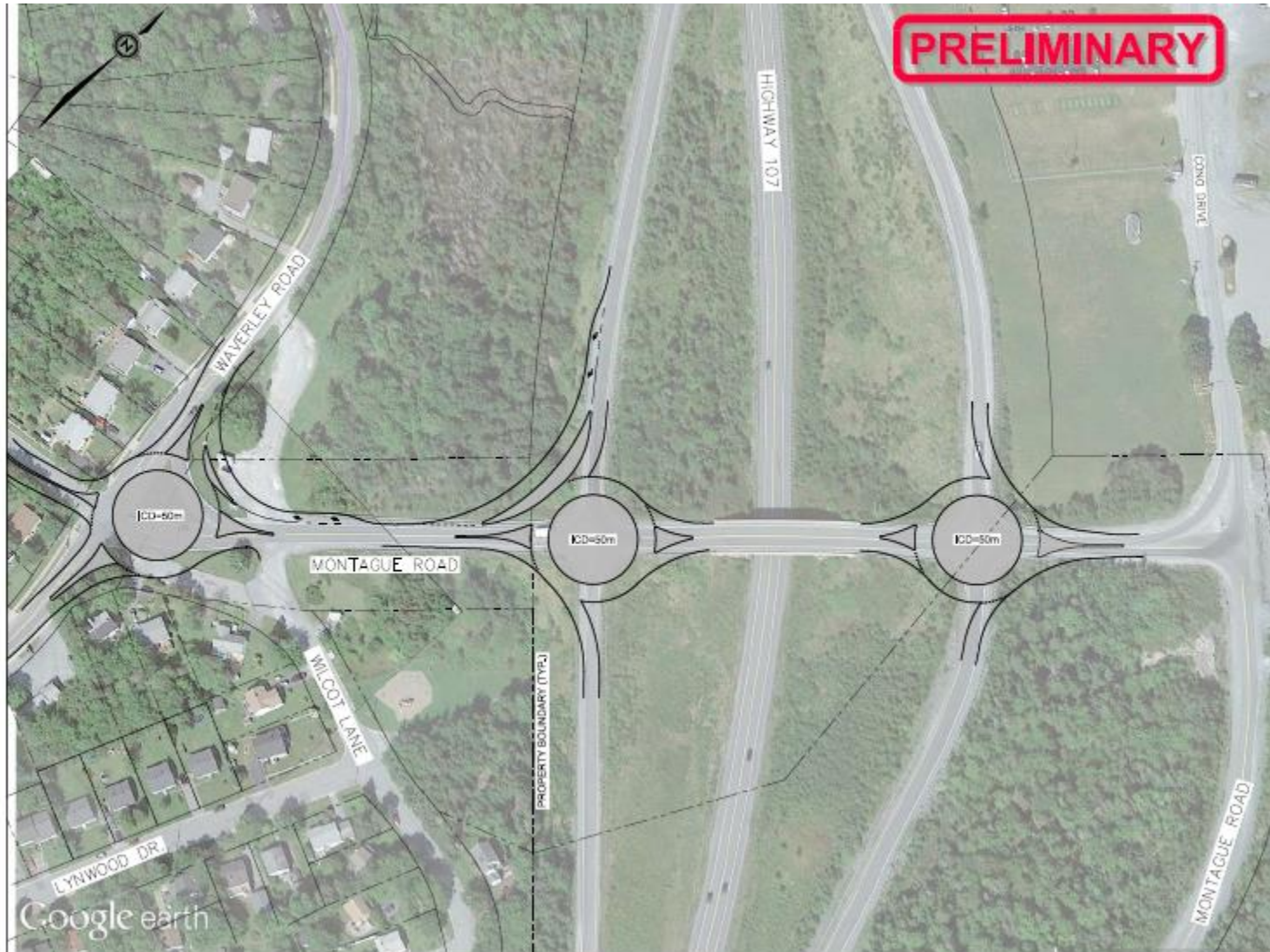
- Currently the intersection operates at or near capacity during peak hour periods.
- Top 5 busiest intersection in HRM
- The cost to upgrade the intersection is \$7 – 10 million.
- Long term solution is the Cherrybrook Bypass

Infrastructure Plan



1. Montague Road Interchange Upgrades
2. New Signals (Access Road A at Waverley Road)
3. Left turn lanes Access Points A, B, and C
4. Northbound Left turn lane: Waverley at Montebello
5. New Signals: Montebello at Caledonia
6. Traffic signal upgrades: Main at Caledonia

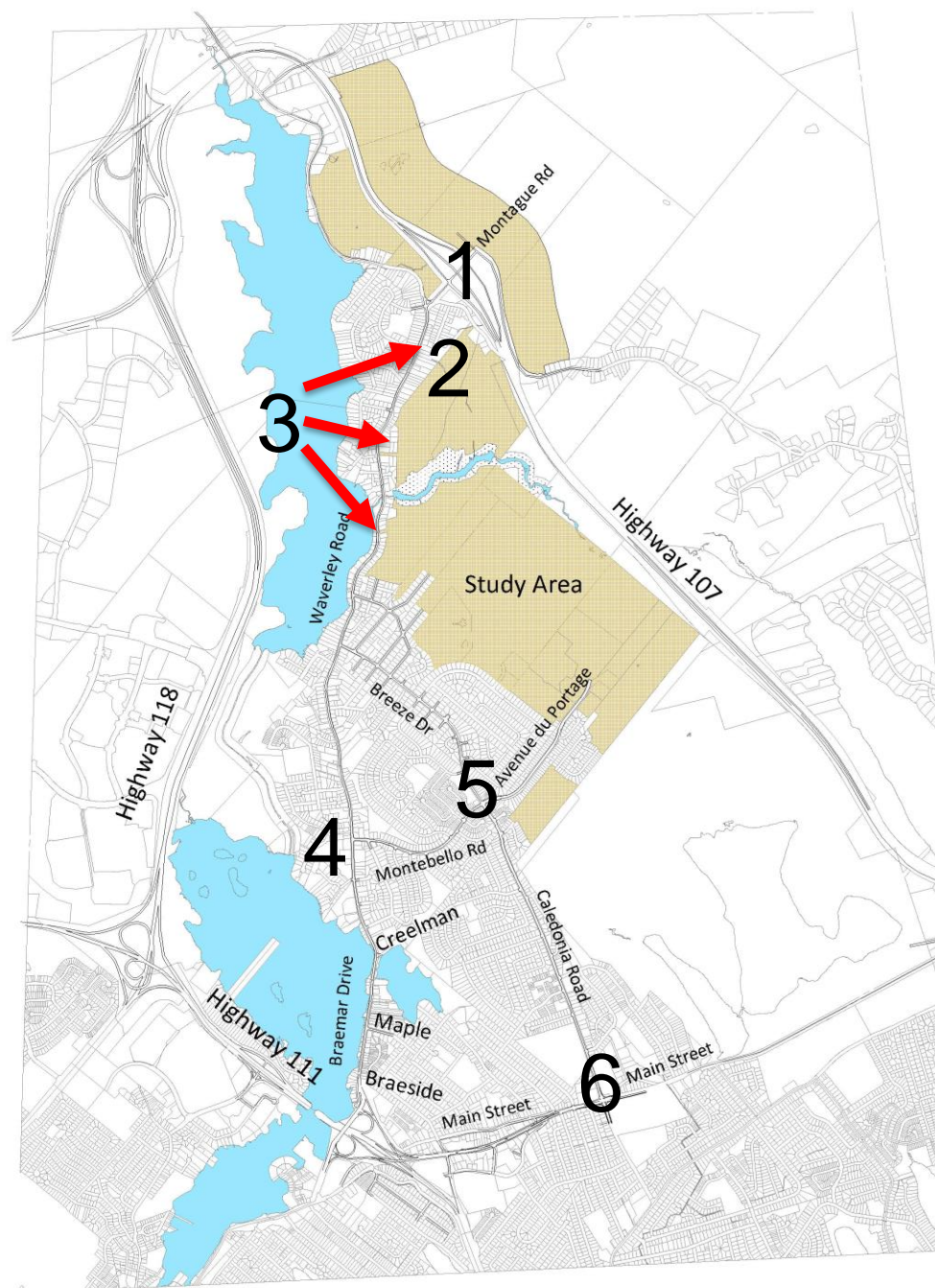
Montague Road Interchange Upgrades



Infrastructure Plan

- Does not include upgrades at the Main at Forest Hills Extension intersection.
- Site traffic volumes are forecast to be less than 5% of total traffic volume.

Infrastructure Plan



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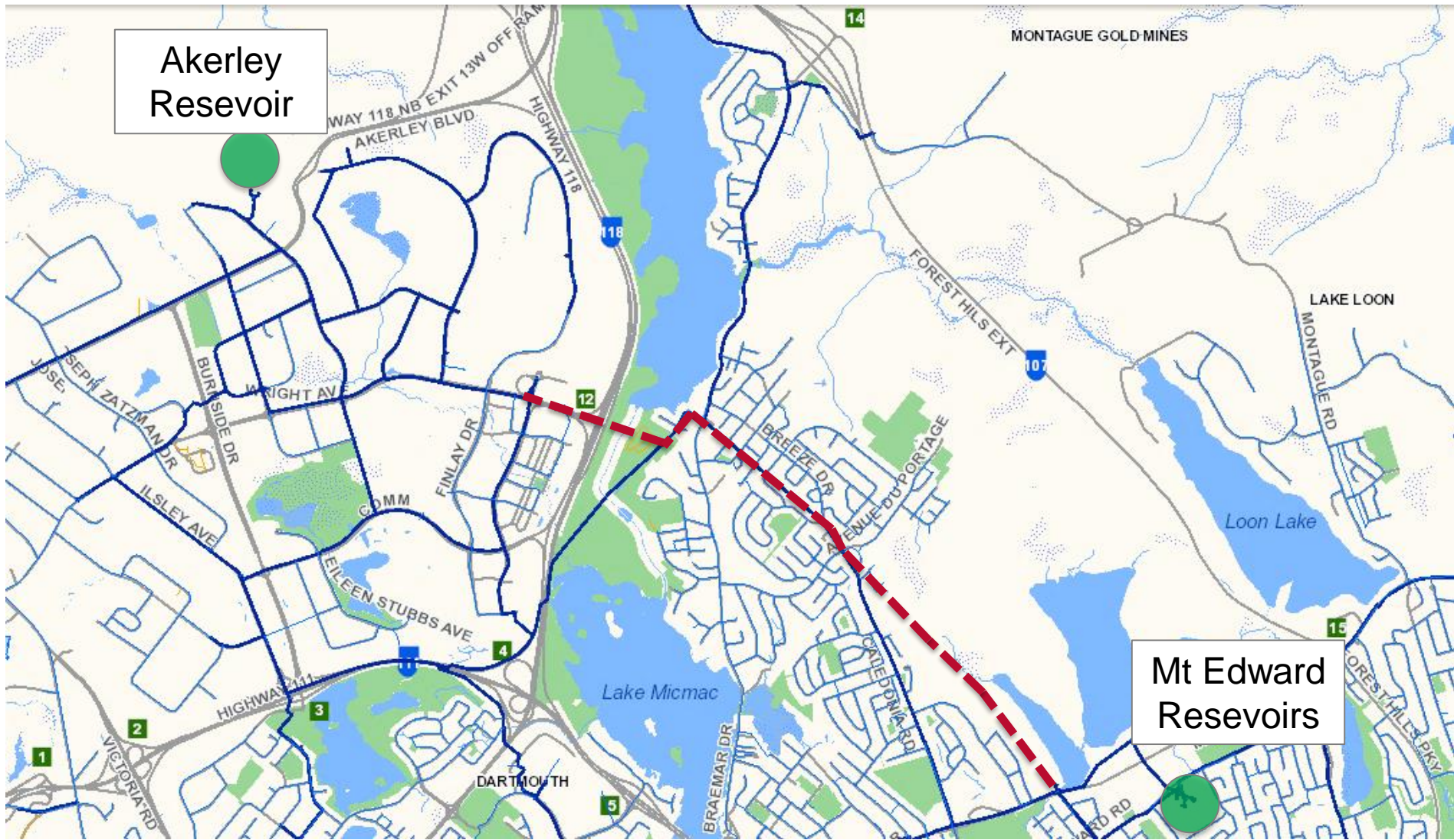
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Water System

- The existing water transmission system has sufficient capacity to service the Port Wallace area.
- There are development restrictions within the Conrad Lands north of the Forest Hills Extension
- The development can be adequately serviced with a 400mm diameter primary watermain

Sanitary Sewer

- Upgrades are needed Day 1.
- A new sanitary forcemain is required thru Shubie Park and under the Shubie Canal. There is an opportunity for other utilities to cost share.



Akerley Reservoir

Mt Edward Reservoirs

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Storm Drainage

- The stormwater system will be a local developer responsibility.
- Stormwater management is critical and will require specific plan to address quantity and quality issues.
- Further investigation of Barrys Run is needed to determine contamination risks.



Questions?

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