

STO's Complementary Study:
Public Transit System in
Gatineau's West End

Technical Briefing to City of Ottawa
May 15, 2020

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Introduction

Need

- Gatineau's population has grown significantly, particularly in the west end. This **growth is expected to continue** (+33% towards 2051 for Gatineau's west end and 26% for Gatineau)
 - There are currently more than **200,000 interprovincial crossings** daily, including around **25% on public transit**.
 - The **need for public transit services is increasing**.
 - The **road system is operating at capacity**.
 - **Ottawa's plans and vision** aim to **reduce the number of buses** downtown
 - **Launch of the Confederation Line** of the O-Train in 2019
- ⇒ The **current road system and public transit services will not be sufficient** to meet the **needs of the growing population by 2051**
- ⇒ **A reliable and efficient public transit system is required.**

Evolution of the Need



Objectives of the Study

The transit solution must:

- Meet mobility requirements (current and projected to 2051);
- Support Gatineau's land use and development plan (SADR); and
- Support the region's economic and social development from a metropolitan perspective.

Partners :



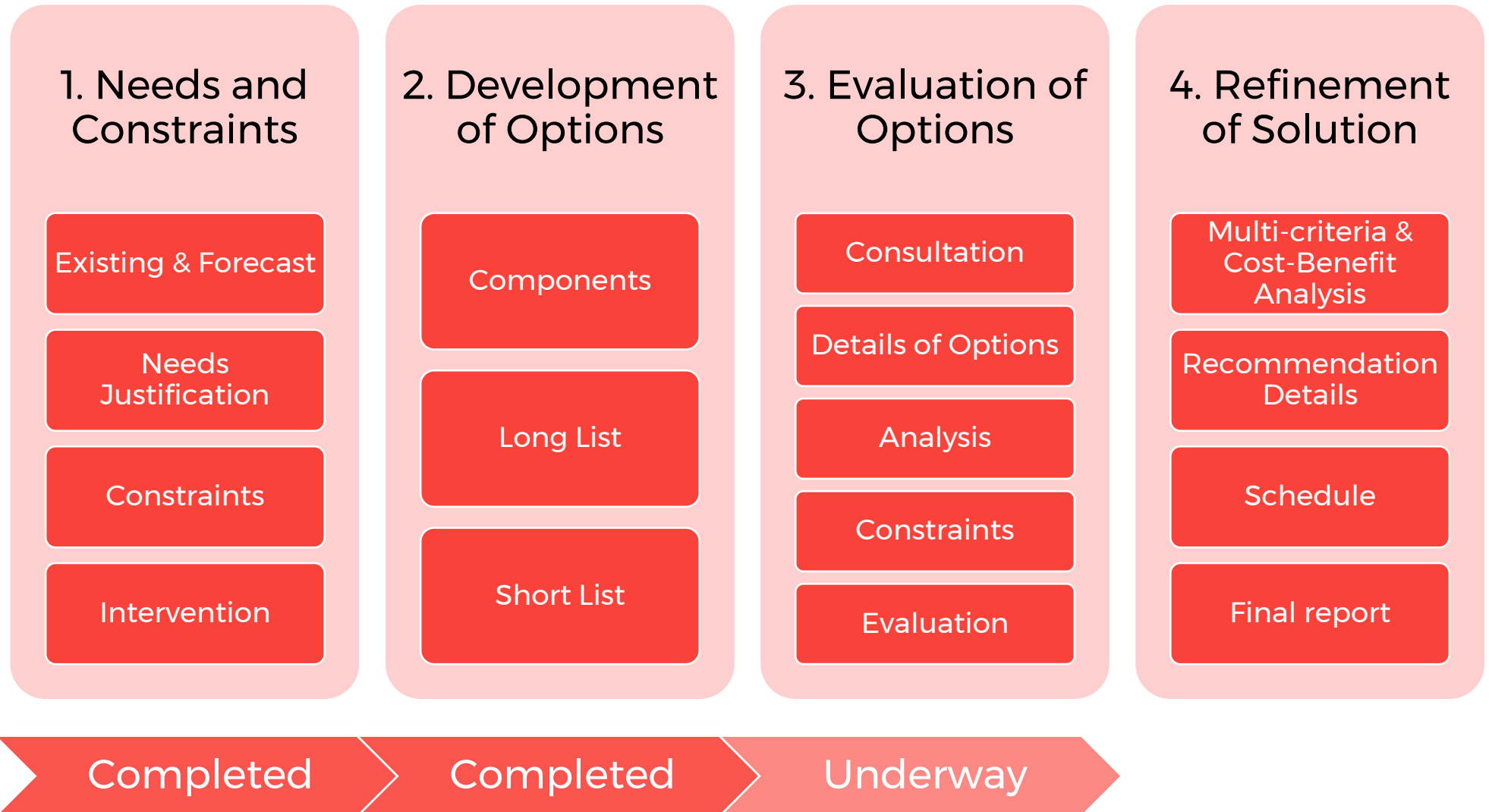
Consultant :



Background



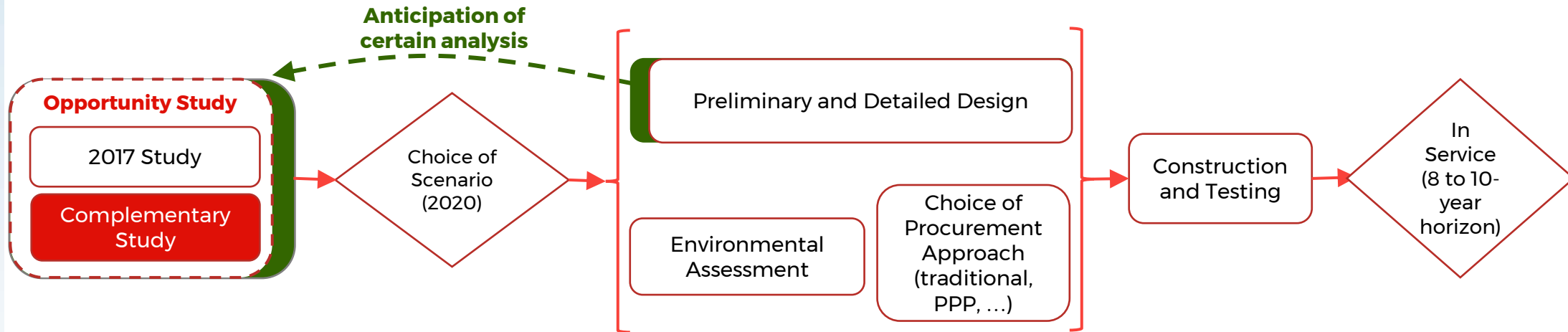
Complementary Study Stages



Project Main Phases

Current phase:
Opportunity Study

Next Phases:
The remainder of the Project includes the following:



Interprovincial Link

Analysis of Current Crossings

Legend:

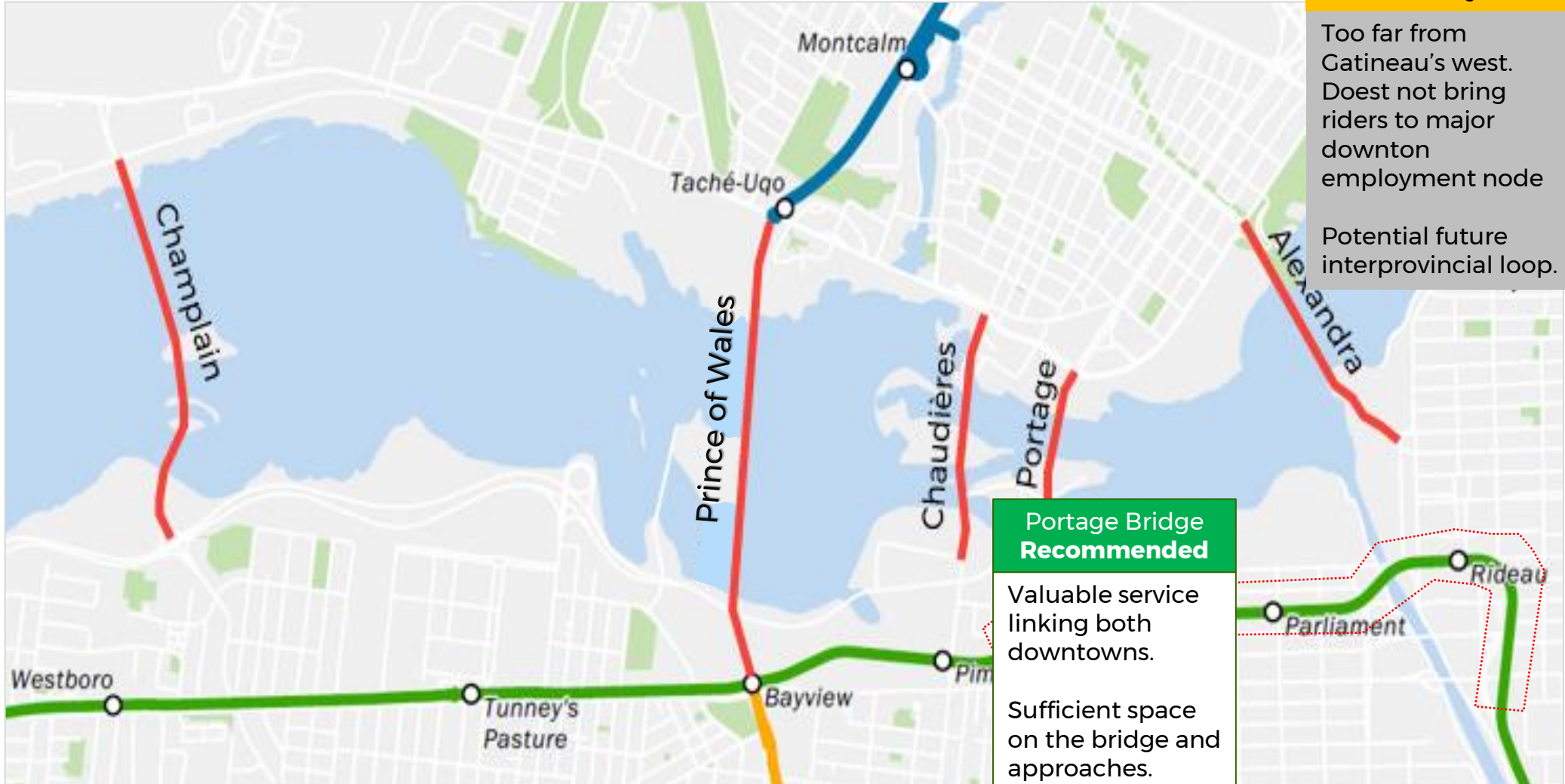
- Rapibus
- O-Train (Confederation Line)
- Underground portion
- O-Train (Trillium Line)



Analysis of Current Crossings

Legend:

- Rapibus
- O-Train (Confederation Line)
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**Alexandra Bridge
Eliminated for this study**

Too far from Gatineau's west. Does not bring riders to major downtown employment node
Potential future interprovincial loop.

**Portage Bridge
Recommended**

Valuable service linking both downtowns.
Sufficient space on the bridge and approaches.

Other Options Considered (but not retained)

NEW BRIDGE AND TUNNEL TO THE DOWNTOWN

- Impact on protected Ottawa River landscapes
- Ottawa stations would be very deep

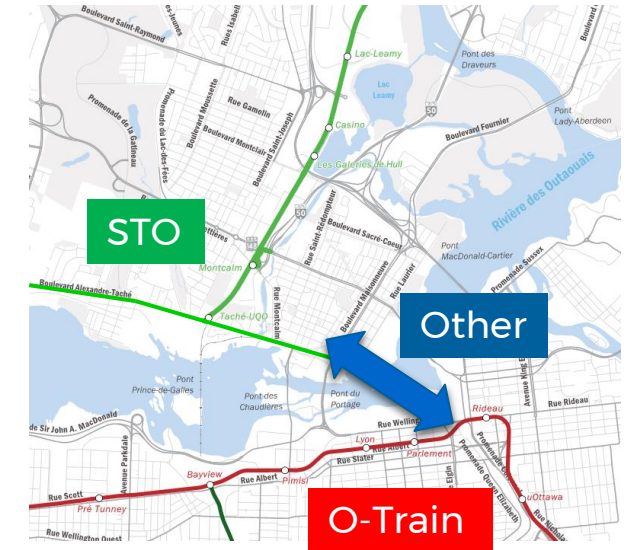
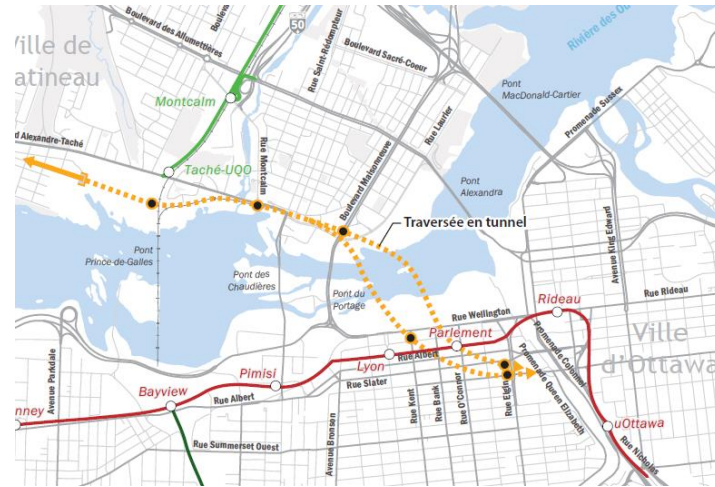
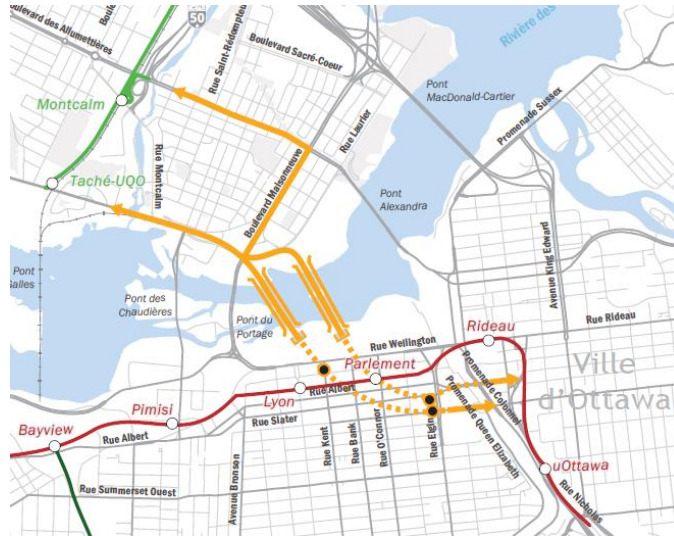
TUNNEL UNDER THE RIVER

- Deep tunnel beginning in downtown Gatineau
- Ottawa stations would be very deep

INDEPENDENT TRANSPORTATION BETWEEN THE DOWNTOWNS

- Little value added
- Would still require an interface between the two systems
- Would require multiple transfers

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Assessed Scenarios

2 Transit Modes Studied:

BRT (bus rapid transit)



TRAM

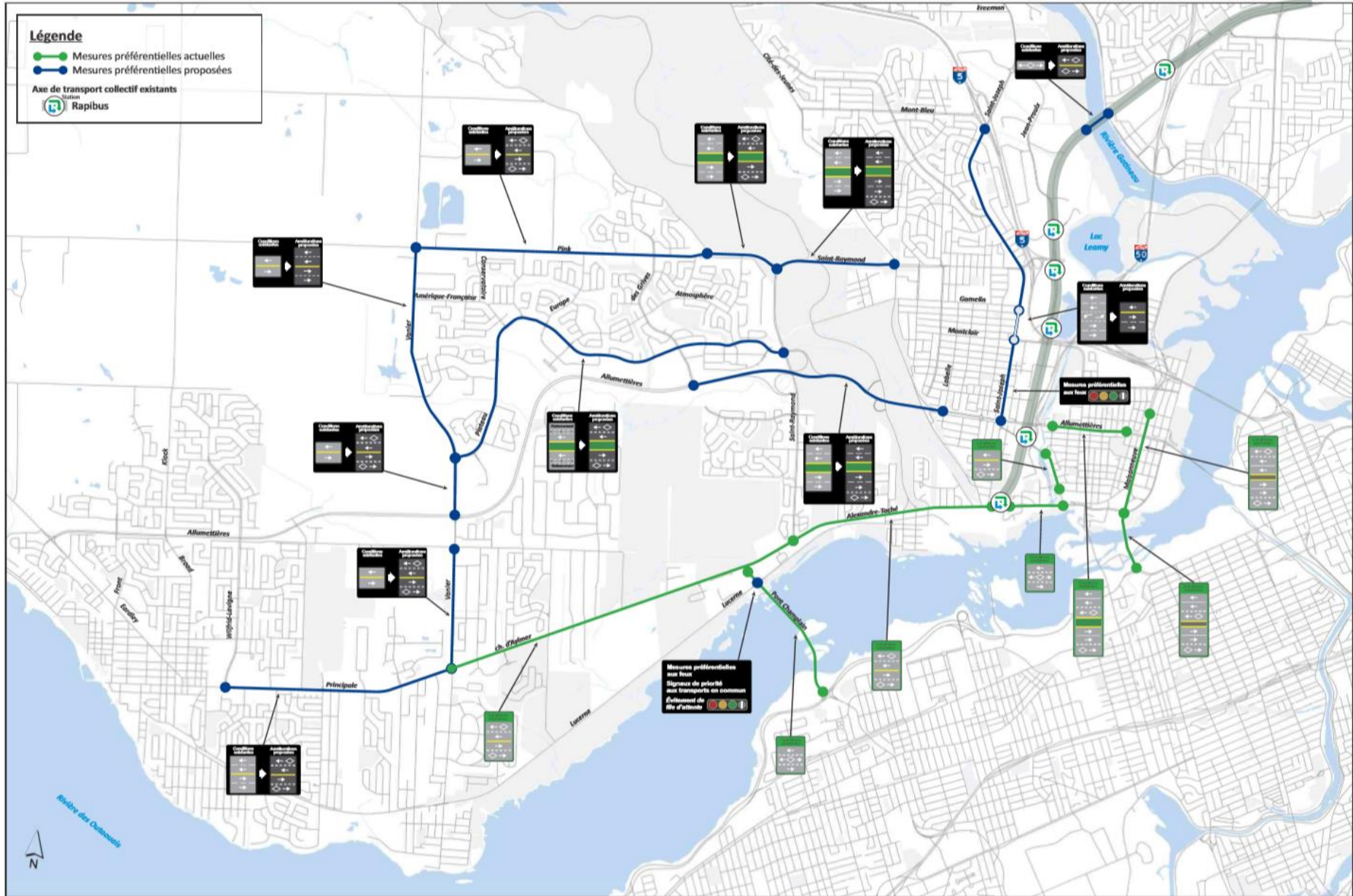


MAIN CHARACTERISTICS OF TRAMS

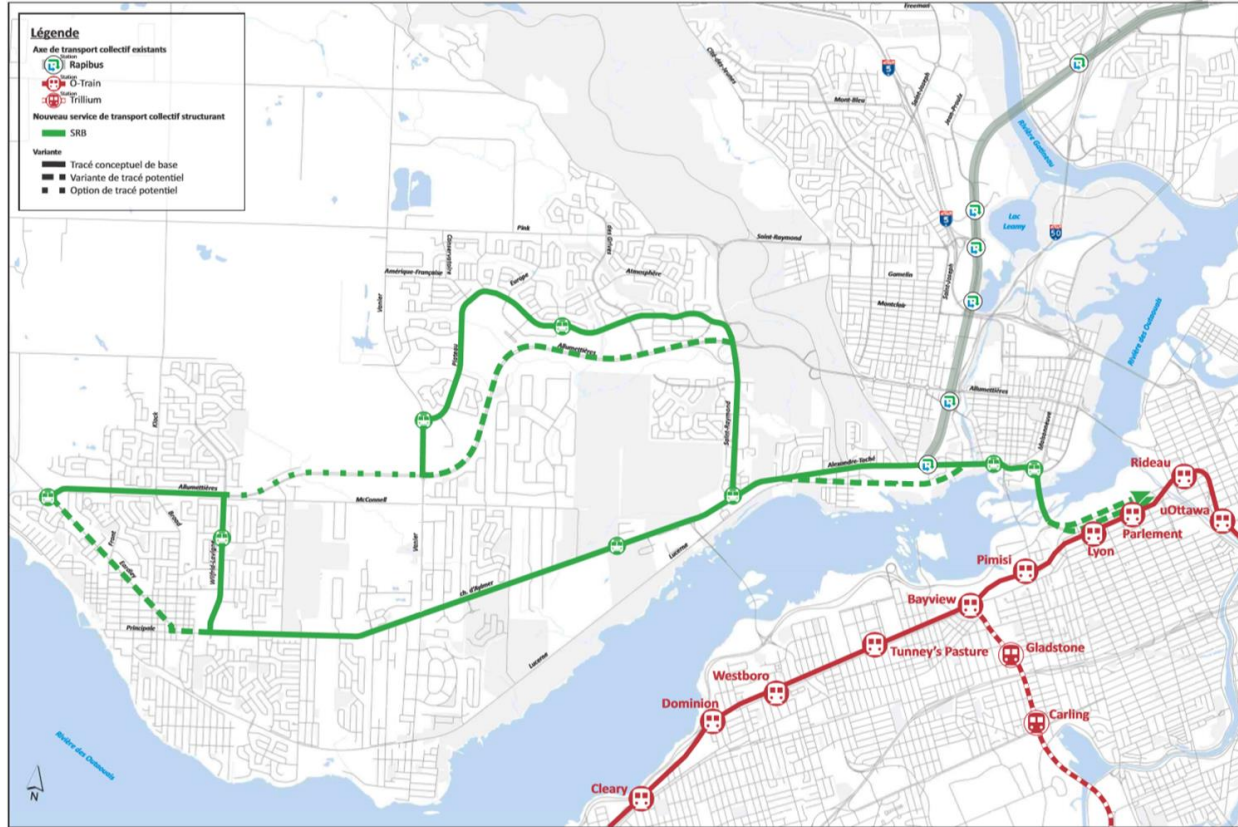
- Urban transit
- Generally at-grade crossings at intersections
- Can operate in mixed use or dedicated lanes

5 Scenarios:

1. Reference (Baseline)

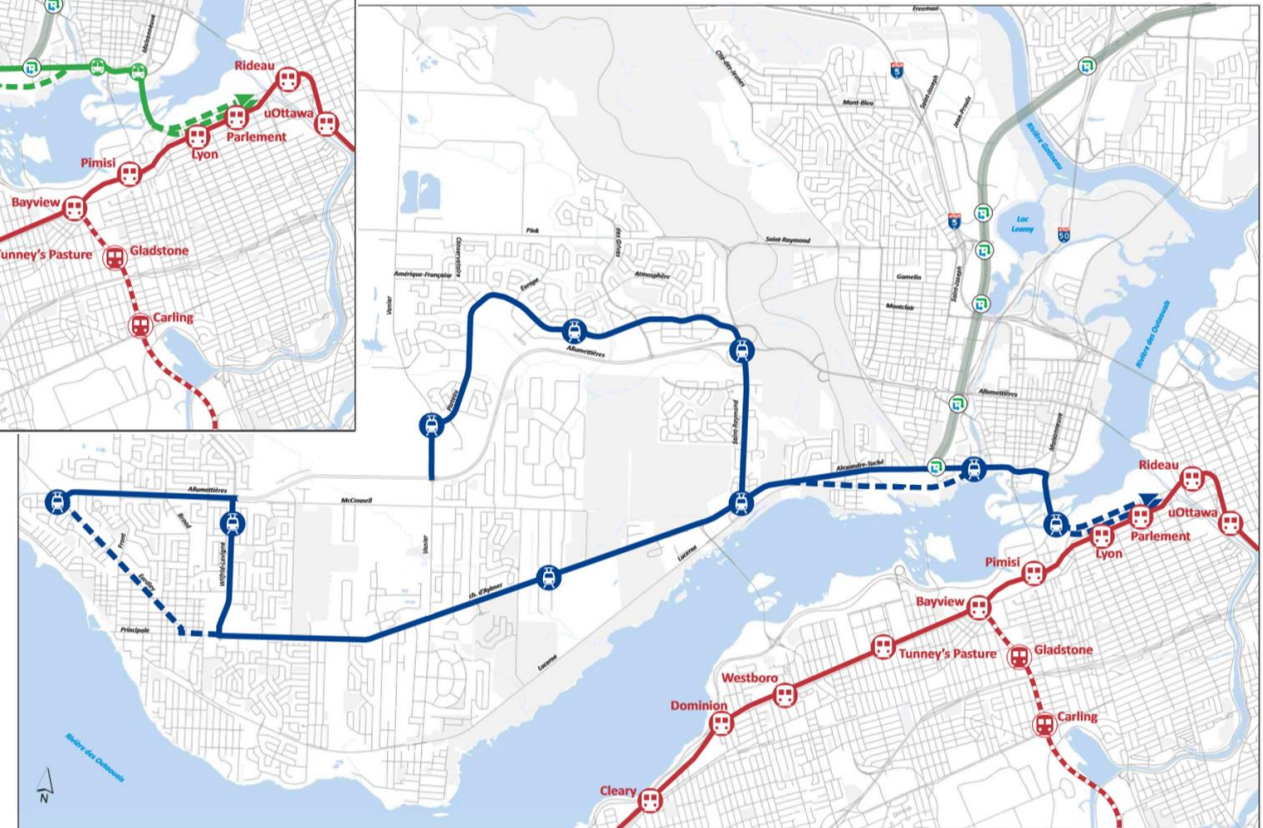


5 Scenarios:



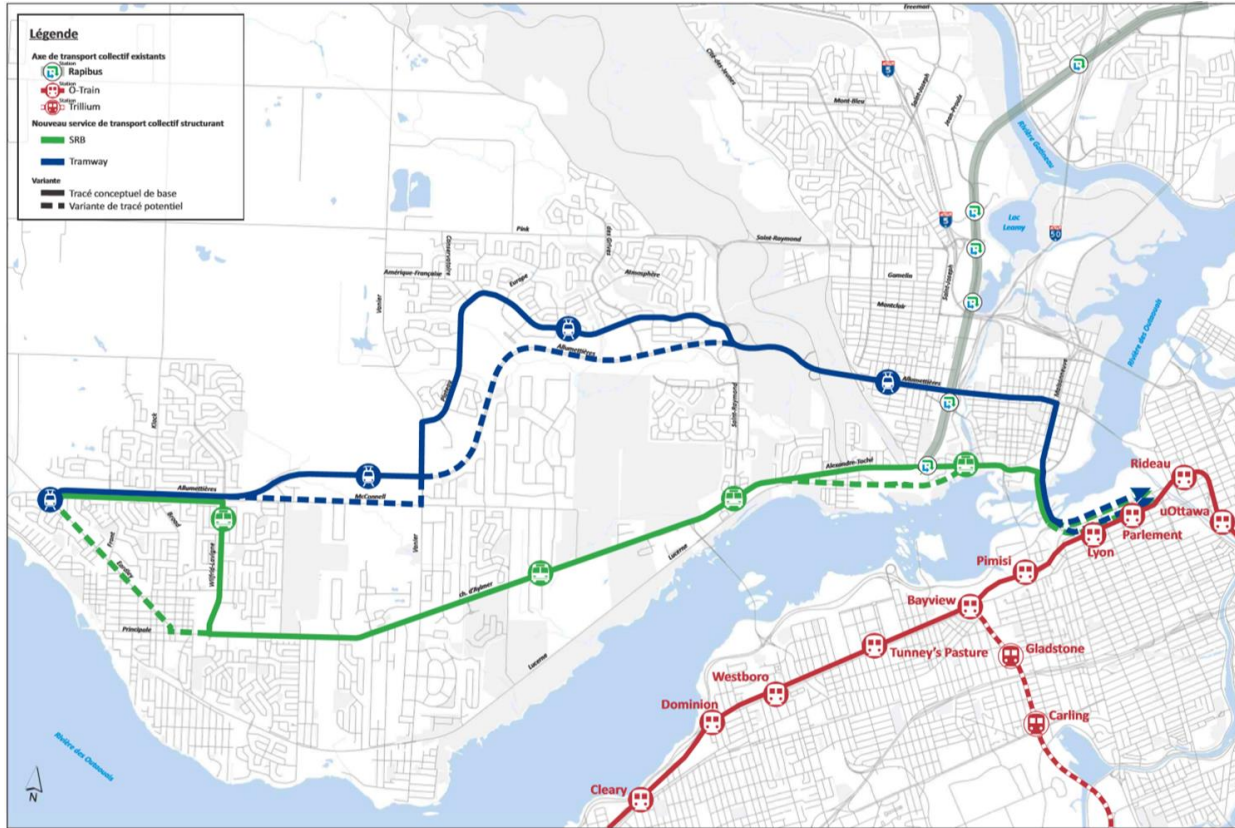
2. All Bus

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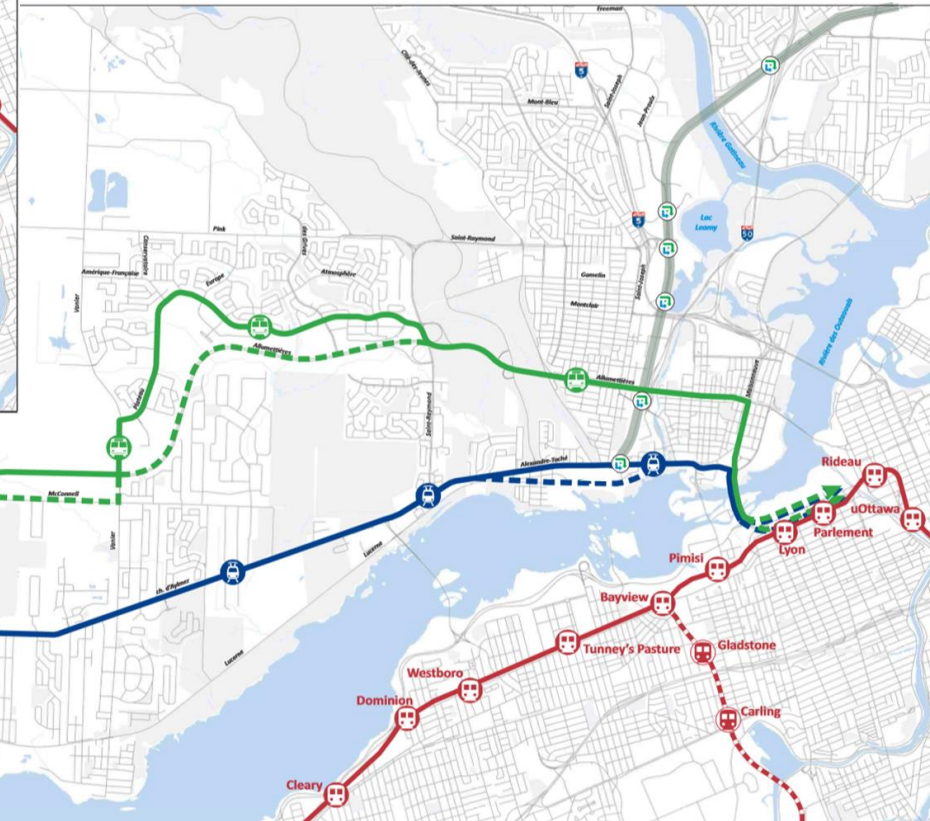


3. All Tram

5 Scenarios:



4. Hybrid: Tram on Allumettières/Plate



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5. Hybrid: Tram on Aylmer-Taché

Public Consultations (Gatineau)

Public Consultation at a glance

- Event held in June 2019, in Gatineau
 - 668 completed questionnaires

Highlights: What participants told us...

About the Need:

- A large majority of respondents considered it **necessary** to introduce rapid transit service to Gatineau's west end.

About the Transit Mode:

- Close to 2/3 of respondents **preferred the tram** as the mode of transportation, which they **consider the fastest, most reliable and most viable over the long-term**, due to its greater capacity.

About the Connection in Ottawa:

- A majority of respondents consider that the **system should extend beyond the Lyon Station of LRT**.

Rationale for Tram Component

Rationale

Currently, approximately 3,500 public transit riders use the Portage Bridge during the peak hour.

That number is expected to increase to approximately 7,000 – 7,500 riders per peak hour over the next 15 years.

Meeting that future need would require:

- 170 regular buses / hour
- or
- 105 articulated buses / hour,
- or
- 75 bi-articulated buses / hour,
- or
- 25 trams/hour

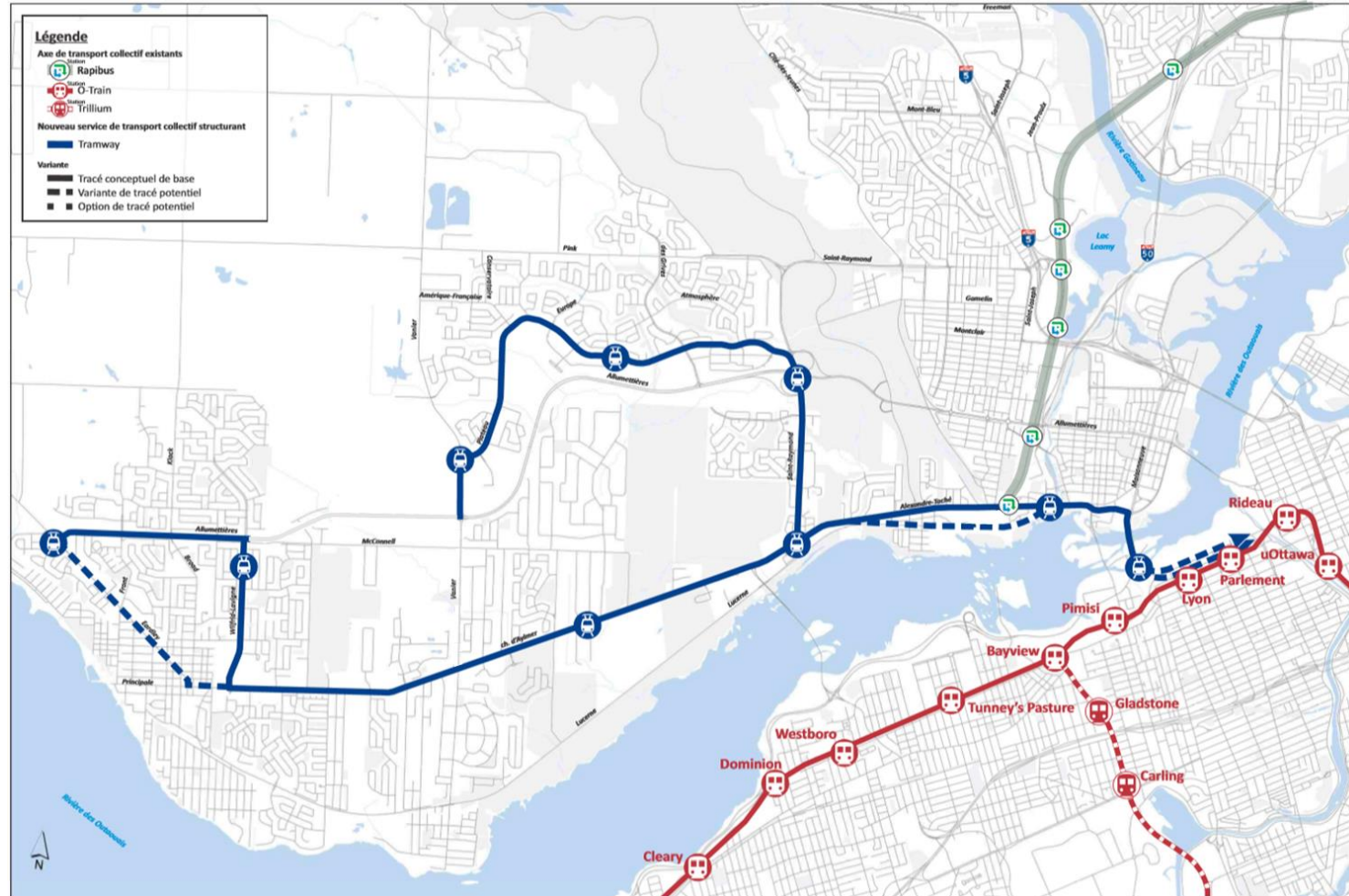


View of the Portage Bridge, morning congestion towards Ottawa

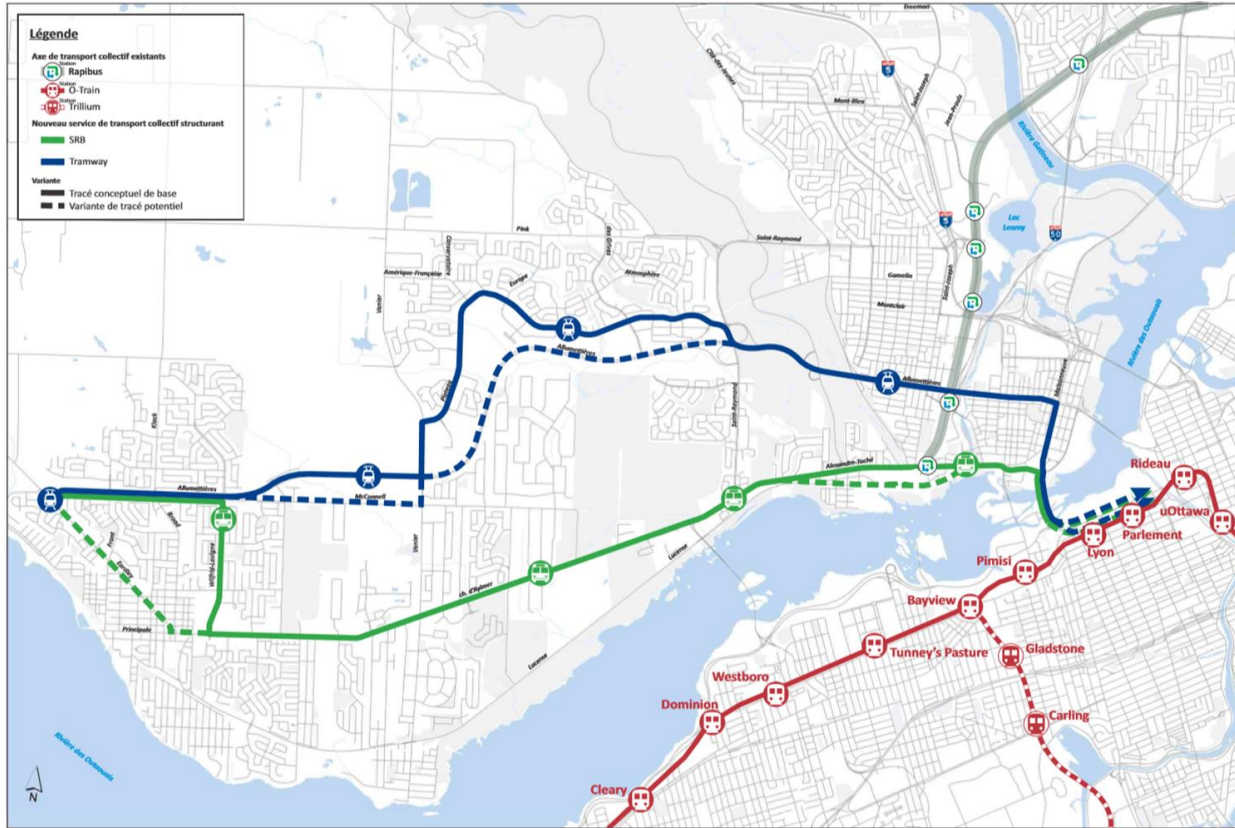
- Even with bi-articulated buses, the transit lane on the bridge and downtown streets would reach capacity (*max. capacity of a dedicated lane = 80 bus / hour*)
- As a result, **only scenarios with at least one tram component are carried forward** for further assessment.

3 Viable Scenarios

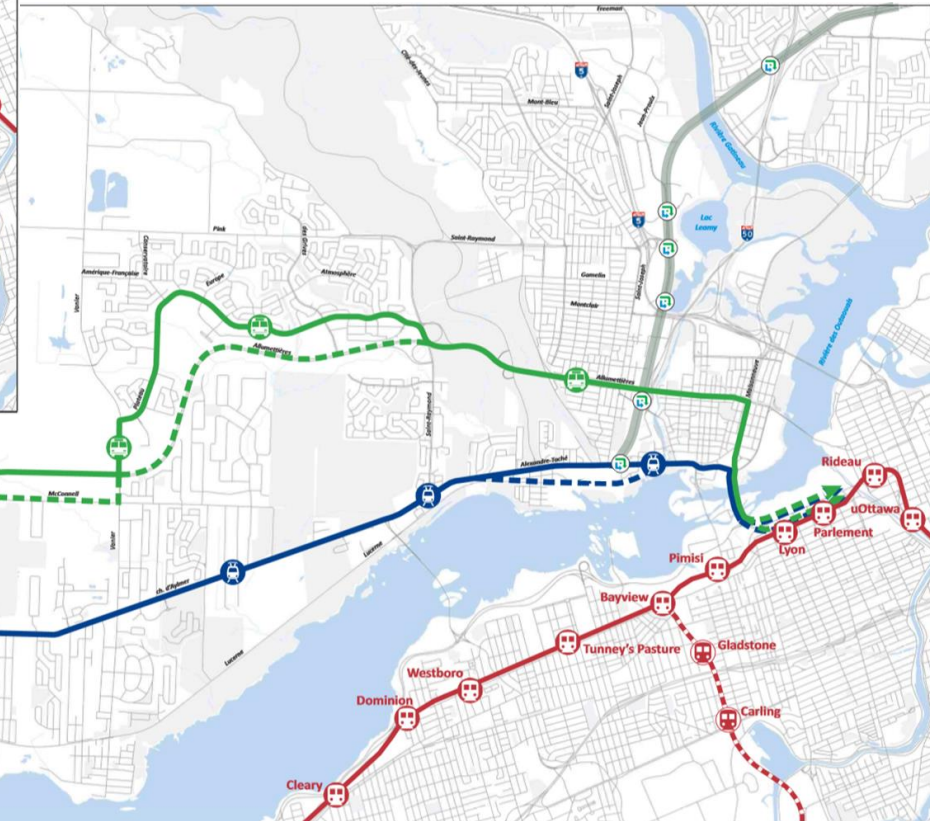
1. All Tram



3 Viable Scenarios



2. Hybrid: Tram on Allumettières/Plateau



3. Hybrid: Tram on Aylmer-Taché

Integration into Ottawa

Highlights of Options

Tram component from Gatineau, crossing the Portage Bridge



Buses crossing via Portage and MacDonald-Cartier, with combined use of three loops (in mixed traffic)



Main Design Considerations

- **System Requirements:**
 - Straightest possible route for a tram
 - Efficient connection with the O-Train stations
 - Attractive system for riders (reliable, stops close to places of interest)
 - Double tracked
- **City of Ottawa's Plans for Downtown Streets**
 - Queen Street redesigned as a complete street to accommodate more pedestrians
 - Sparks Street revival plans
 - Albert and Slater repurposed to include active transportation
 - Cycling projects on: Bay (Wellington to Laurier West), and Wellington (Portage to Elgin) – a joint NCC-City of Ottawa project (in accordance with the City of Ottawa Cycling Plan)

Main Design Considerations

City of Ottawa's Plans for Downtown Streets

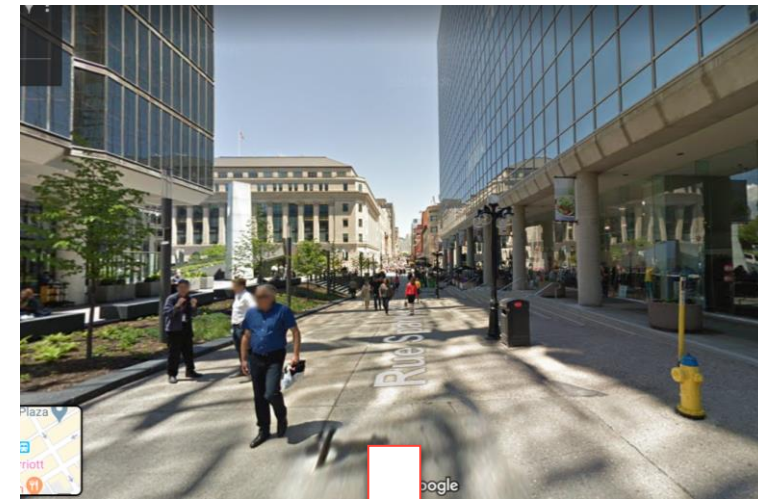
Queen - A complete street



Albert & Slater - Increased active transportation



Sparks - Revival plans



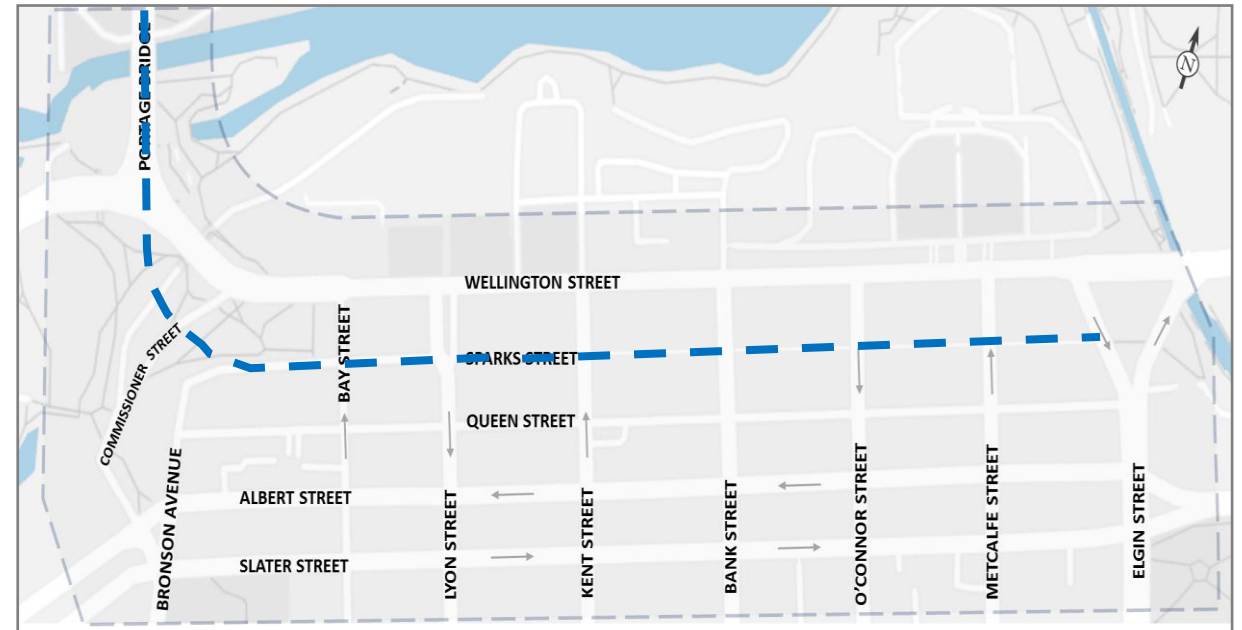
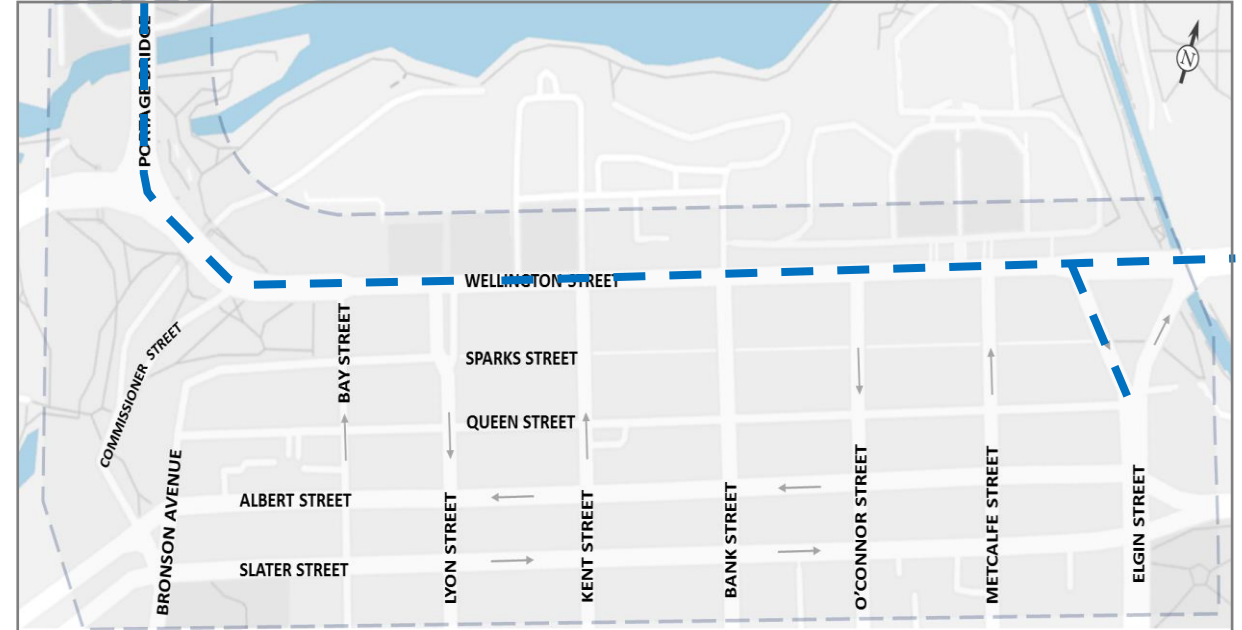
Options for Tram Component

Two options:

- **Surface** integration on **Wellington Street**
- **Tunnel** integration **under Sparks Street**

The Study will assess:

- Feasibility of options
- Alignment
- Station locations



Options: Pros and Cons

SURFACE INTEGRATION ON WELLINGTON

PROS

- Ground level stations make it easier to access
- Easier to construct
- Potential component of an interprovincial loop with the Alexandra Bridge

CONS

- Corridor has several uses competing for space, requiring compromises to be made:
 - north esplanade
 - partial widening of the south sidewalk
 - planned two-way bike facility
 - vehicular traffic lanes
- Security concerns around the parliamentary complex and at stations
- Possible disruptions due to demonstrations and events on Wellington Street (alternative arrangements required to ensure service continuity)
- Disruption to current traffic and transit service during construction (will require detour planning and traffic management)
- Option will lead to a significant increase in the number of pedestrians crossing Wellington to reach the stations

TUNNEL INTEGRATION UNDER SPARKS

PROS

- Light impact on traffic and surface amenities
- Allows for more direct connection with the O-Train
- Weather protected environment for transferring passengers
- Less vulnerable to service interruptions from external events such as demonstrations

CONS

- Higher cost than surface option
- Complex and lengthier construction with higher risks
- Significant underground constraints (utilities and foundations)
- Portal will significantly impact the open space west of Commissioner Street
- Possible security concerns of adjacent federal institutions

Next Steps

Analysis of Options for Integration in Ottawa

- Key issues to be addressed for the 2 options:
 - vehicular traffic impact in the downtown;
 - number of stations required and their locations;
 - boarding and disembarking issues at the platforms;
 - quality of connections with the O-Train;
 - security issues;
 - trade-offs and mitigation plan;
 - order of magnitude costs; and
 - public consultation

Upcoming Events in Ottawa

- On-line public consultation June 2020 for Ottawa and Gatineau
 - present evaluation progress
 - seek public feedback
- Transportation Committee and Council – July 2020
 - present recommended plan for integration in Ottawa