

NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

No.	2021-P218
To	Board of Directors
Date	2021-01-21

For DECISION

Subject/Title

Société de transport de l'Outaouais (STO) public transit proposal to link Gatineau's West End to Ottawa

Summary

This submission follows the June 25, 2020 Board of Directors submission to seek support from the Board of Directors for the STO public transit proposal to connect Gatineau's West End to downtown Ottawa.

The STO study team requires a decision from the Board to assist their request for funding from the Province of Québec to undertake additional detailed studies.

Risk Summary

There are few risks associated with this submission as future Board approvals will be required upon completion of additional detailed studies by the STO.

Recommendation

- THAT the Board of Directors support in principle the STO at-grade tram option along Confederation Boulevard, via the Portage Bridge and Wellington Street in Ottawa, as the most closely aligned option with NCC Plans, subject to addressing Capital interests through additional detailed studies, including but not limited to:
 - a. Adherence to the Confederation Boulevard Design Guidelines;
 - b. Consistency with the Parliamentary and Judicial Precinct plans, including concerns about security and access;
 - c. The Interprovincial Transit Loop concept not be precluded in any way.
- THAT, alternatively, the Board of Directors support the tunnel option in Ottawa, if this is the proponent's preferred approach; and
- THAT a detailed proposal be submitted for Federal Land Use and Design Approval pursuant to section 12 of the *National Capital Act*, at the appropriate juncture of the project's development, and when conditions are met.

Submitted by:

Kalen Anderson, Vice President, Capital Planning Branch
Name

Signature

1. Strategic Priorities

Corporate Plan 2020-2021 to 2024-2025:

- Corporate Priority 4: Develop and communicate land use plans and provide timely and effective coordination of federal land use and design in the National Capital Region.
- Corporate priority 5: Provide leadership in achieving an environmentally sustainable and resilient National Capital Region and exemplary stewardship of federal lands and assets.

2. Authority

National Capital Act, Section 11 – Coordinate the development of public lands in the National Capital Region.

3. Context

The STO is conducting a study to address their future ridership growth projections with a rapid transit project that links Gatineau's West End (Aylmer) to downtown Ottawa to be implemented in the next 8 to 10 years (2028 to 2030).

According to STO estimates, the number of public transit users crossing the Portage Bridge into Ottawa during the morning peak period will increase from the current 3,500 passengers per hour to approximately 7,500 passengers per hour. Without a higher-order rapid transit system, the number of buses needed to accommodate this projected increase would saturate the existing designated bus-only lanes, even if the STO were to use articulated or even double-articulated buses.

The preliminary options that the STO intends to carry forward for further study includes either an all tramway or a hybrid tram-bus solution. Both alternatives impact NCC properties and assets, including Confederation Boulevard, and both require use of the Portage Bridge over the Ottawa River, as described in Appendix 1.

On November 25, 2020, Ottawa City Council approved an endorsement of the STO project for an all-tram solution in Gatineau with the Spark Street tunnel option as the optimal corridor. They also approved the Wellington Street (with traffic) option as a feasible alternative, should the Spark Street tunnel option be deemed unaffordable, along with several conditions.

4. Options Analysis

The STO options include the following, as illustrated and described in Appendix 1:

- Three options for the section in Gatineau, using all tram or hybrid bus and tram;
- Two options for the section in Ottawa, using at-grade on Wellington Street or a tunnel under Sparks Street;
- All options use the Portage Bridge.

NCC staff have identified the following points that need to be taken into account as the project proceeds:

- The importance of the overall design and symbolic link of Confederation Boulevard, including the Portage Bridge, Wellington Street, the Alexandra Bridge and Laurier Street in Gatineau.
- The need to adhere to the design guidelines for Confederation Boulevard which call for a wide (6m) pedestrian esplanade on the crown side of Wellington Street with rows of trees on each side and a cycling lane; along with a wide sidewalk (3m), and a row of trees on the civic side. The design guidelines also include a specific set of urban furniture along the boulevard that provides for a special Capital setting and must be kept and no over-head wires will be permitted.
- The update of the Long-term Vision and Plan for the Parliamentary Precinct is underway, with an assumption that the buildings located on the southside of Wellington Street will continue to accommodate some parliamentary functions. How the street would function in the future is still to be determined as part of the plan.
- A Master Plan for the Judicial Precinct will be initiated in 2021 by PSPC with the participation of the NCC. For now, the entirety of the property north of the Wellington Street section of Confederation Boulevard should be secured for Capital functions until the plan is complete.
- Crown lands adjacent to Confederation Boulevard require specific accesses for vehicular and material handling. Entering and exiting these sites require careful attention to ensure safety and security.
- Confederation Boulevard also serves as a public place for demonstrations and special events of national significance which must be maintained.
- Seamless interprovincial transit systems to facilitate the movement of federal employees is valued and encouraged.
- An interprovincial loop for transit, as identified in the 2013 integrated interprovincial transit strategy, is seen as a valued addition on Confederation Boulevard. The STO Tram should be planned as the first section of this eventual transit loop.

All these capital interests should be integrated within the STO proposal.

Since the last presentation to the Board, no new studies or technical information were produced by the STO.

In order to proceed to the next stage of the project, STO needs to secure funding to undertake more detailed studies. Due to the complexity of ownership and governance within the Core Area of the National Capital, the STO is hoping to receive clear signals from the NCC and the cities of Ottawa and Gatineau that the options within the study would be acceptable for additional study.

5. Financial Details

No cost to the NCC.

6. Opportunities and Expected Results

NCC support of the project will assist the STO in securing funding from the Quebec provincial government to move forward with the next steps for their tramway project.

7. Risks and Mitigation Measures

Risk	Likelihood	Impact	Planned Response
That the study does not sufficiently address capital planning interests.	Medium	Major	NCC staff will continue to communicate to the STO, and actively participate as part of their formal committees, to ensure that the integration of their transit options on and adjacent to NILM lands are addressed.

8. Consultations and Communications

- STO undertook public consultations in the fall of 2020.
- The project was presented to the Advisory Committee on Planning, Design and Reality in May 2020. Appendix 2 includes a summary of the committee comments

9. Next Steps

- STO secures provincial funding for additional studies.
- STO completes federal Impact Assessment.
- STO seeks federal land use and transaction approval.

10. List of Appendices

Appendix 1 – STO Options Summary and Staff Analysis

Appendix 2 – Excerpt of the ACPDR Minutes of May 2020

11. Authors of the Submission

Kalen Anderson, Vice President, Capital Planning Branch (CP)

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Appendix 1 – STO Options Summary and Staff Analysis

In reviewing and analyzing this major public transit project, the NCC must consider the extent to which the proposed solutions align with and conform to its plans, policies and guidelines, which provide the framework and direction to guide the development and use of federal lands, in addition to ensuring the preservation, environmental integrity and architectural and design quality of transportation-related projects on federal lands. These plans, policies and guidelines are central to the NCC's approval process, and they also lend assistance to other federal departments and agencies by providing a clear framework to ensure that development proposals support and advance federal interests.

3.1 Insertion of the proposed alignment scenarios on the Gatineau side

A number of federal properties and NCC areas of interest would be affected by the STO-proposed alignment scenarios in both the Des Allumettières and Aylmer/Alexandre-Taché corridors.

The three options that remain under study are scenarios H1 (hybrid with tram along Des Allumettières Blvd.), H2 (hybrid with tram along Aylmer Rd. and Alexandre-Taché Blvd.), and T1 (all-tram).

3.1.1 Hybrid Scenarios

Figure 1: Hybrid Bus-Tram Option Concept (H1)

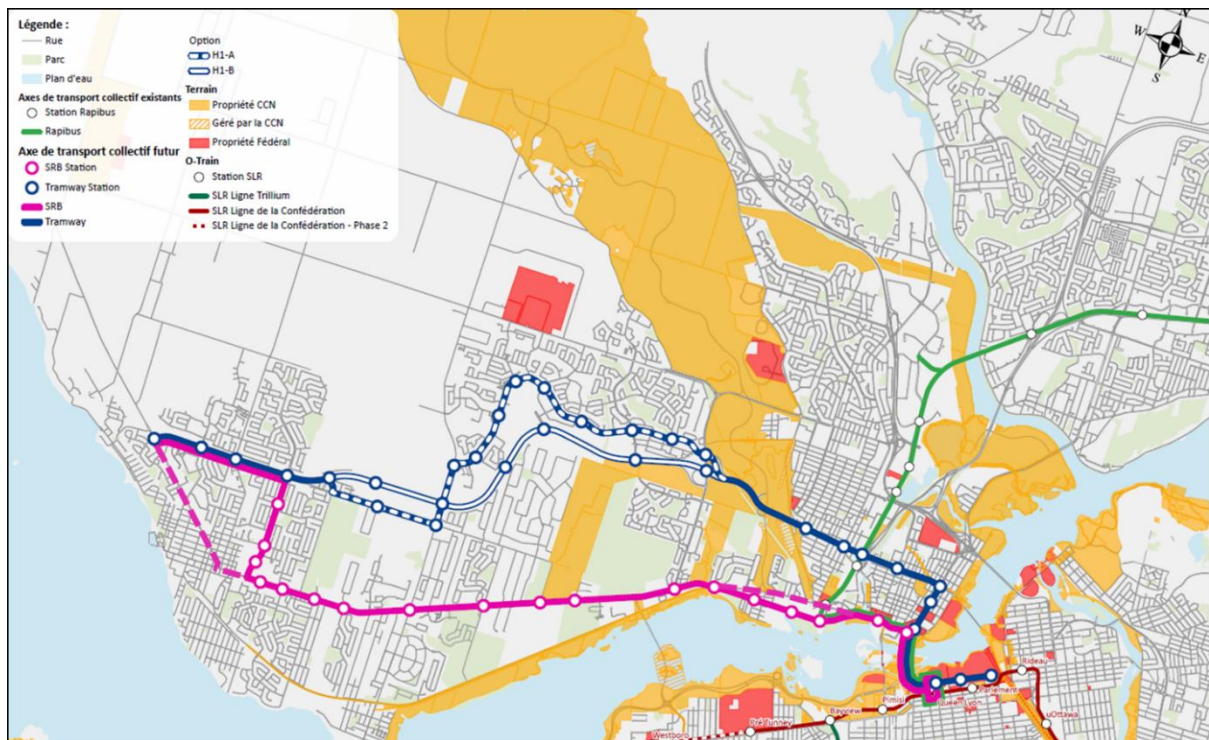
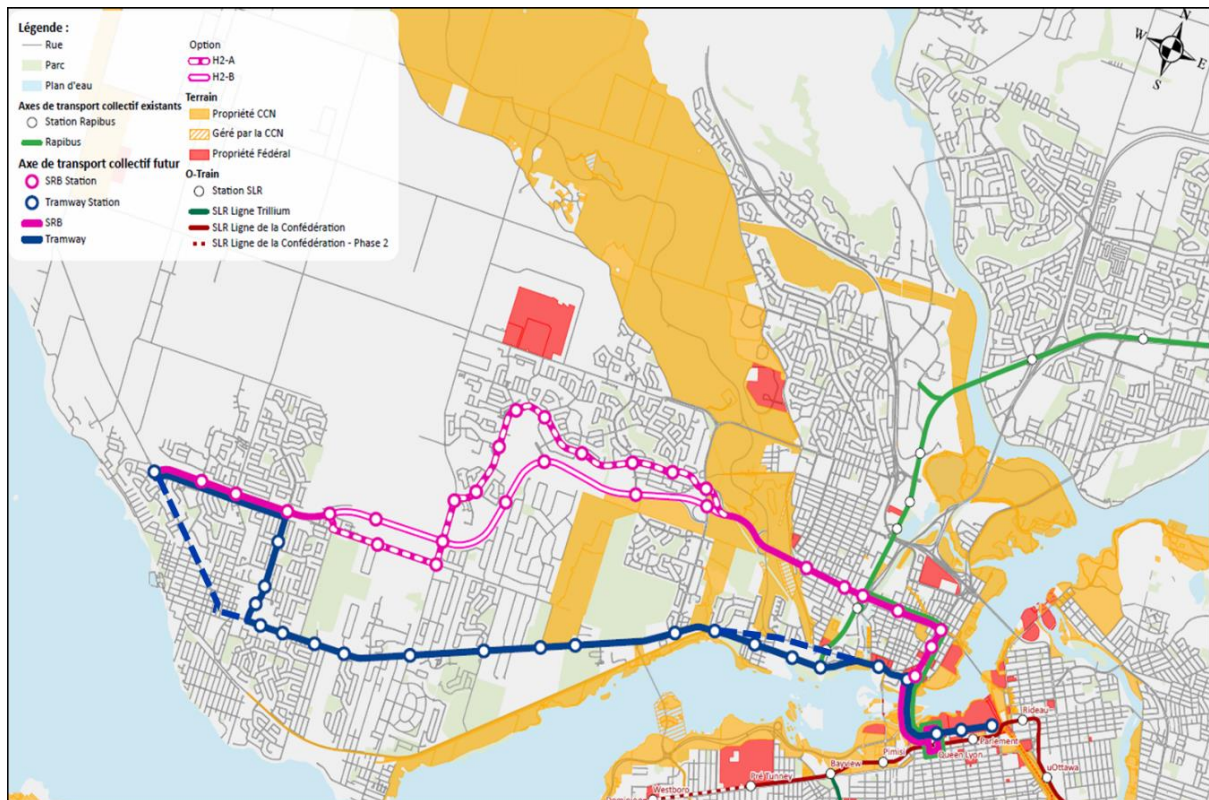


Figure 2: Hybrid Bus-Tram Option Concept (H2)



These two scenarios would cross Gatineau Park. The rock outcrops located along Boulevard des Allumettières are very close to the developments planned by the scenarios and widening may become necessary if future more detailed analysis confirm that more space is required. In addition, the existing multi-purpose recreational pathway which is presently located on the bridge spanning the Des Fées Creek floodplain would need to be moved to a new separate parallel structure to make room for the transit lanes on the bridge. Additional detailed studies would be required to determine the actual impacts within Gatineau Park boundaries, including those related to the construction of the pilings for the new structures, followed by the identification of the requisite mitigation measures.

These scenarios would require the widening of certain sections of the Des Allumettières road allowance to make room for the bus or tram facilities, which would directly impact a number of NCC land parcels in Sentier de l'Île Park, in addition to possibly requiring to move the "Papa" public art installation which is currently located at the Des Allumettières / Maisonneuve Blvd. intersection.

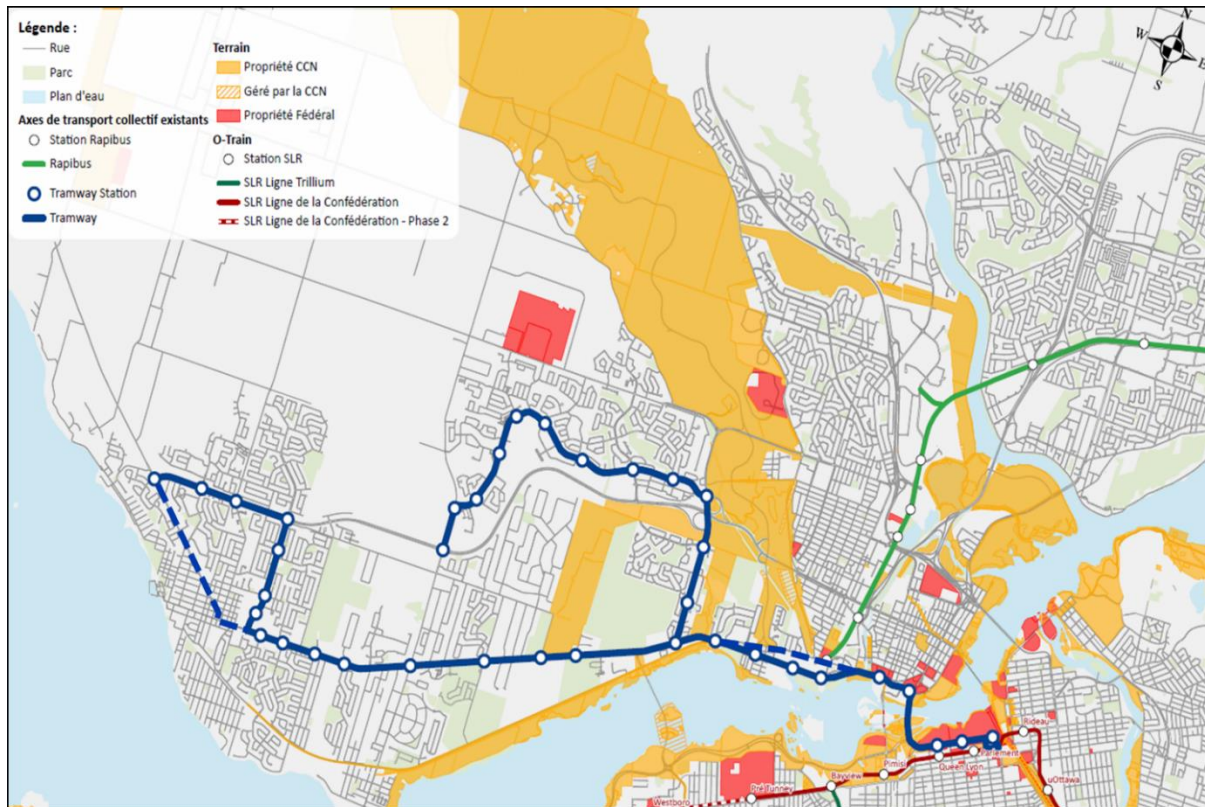
These same scenarios would have a similar impact along the Aylmer-/Alexandre Taché corridor, as the necessary road allowance widenings would encroach onto a number of NCC holdings, including a heritage property and building located at 1055 Aylmer Rd.

Either of the hybrid scenarios would reduce the number of the existing STO buses crossing into Ottawa by 30 to 45 percent (from 115 buses per peak hour to between 63 to 80 buses per peak hour).

3.1.2 All Tram Scenario

This Scenario does not cross Gatineau Park. It combines the two axes coming from Aylmer (Aylmer Road, Des Allumettières Boulevard) on a single alignment at St-Raymond Boulevard, west of Gatineau Park., at which point the Des Allumettières section would combine with the Aylmer Rd. section and flow into the Alexandre-Taché Blvd. axis.

Figure 1: All-Tram Concept (T1)



The all-tram scenario would reduce the greatest number of STO buses crossing into Ottawa by 70 per cent of the existing bus volumes (from 115 buses per peak hour to 35 buses per peak hour).

3.2 Proposed scenarios to connect with downtown Ottawa

The Ottawa River crossing by way of the Prince of Wales Bridge was not retained as a viable option as study results indicate insufficient reserve capacity at the Bayview O-Train station to accommodate the number of STO commuters needing to transfer onto the O-Train headed east into downtown Ottawa. The requisite reserve capacity is only available at the Lyon O-Train station.

The STO study has concluded that Portage Bridge is the most promising crossing solution into downtown Ottawa. However, using Portage Bridge would require the reconstruction of the bridge structure to accommodate the increased load requirements, along with a widening of the bridge to maintain the existing cycling and pedestrian features. According to the STO, these improvements would require a \$300M investment, which could be included in the

overall project cost. In addition, the bridge widening would impact Victoria Island, which would certainly spark the interest of Indigenous stakeholders.

3.3 Proposed scenarios in Downtown Ottawa

Two options for the infrastructure and alignments in the City of Ottawa include a surface tramway along Wellington Street or a tramway tunnel under Sparks Street.

3.3.1 Wellington Street Option

The Wellington Street scenario includes a reserved two-way tram corridor up to Elgin Street, with up to three stations located at the Lyon-Bank and Elgin-Queen intersections. In this section, the tram would operate on batteries only and no overhead wires or structures would be necessary, in keeping with the aesthetic requirements along Confederation Boulevard.



Given the narrowness of the Wellington Street road allowance between Bank and Elgin, this scenario would have impacts, some of them deemed potentially major, on the symbolic and heritage qualities of Confederation Boulevard and Parliament Hill, on vehicular traffic and on the preservation of an existing row of mature trees along Wellington Street.

This scenario would involve the complete redevelopment of Wellington Street, including a 7-meter widening road allowance between Kent and Bay Streets, to be achieved by encroaching onto federally owned properties, as this would be the only possible solution to accommodate all transportation, active mobility and streetscape requirements. Studies have shown that this proposed widening of the roadway allowance would make room for the two-way bicycle path proposed by the NCC and the City of Ottawa and also meet the Confederation Boulevard minimum streetscape requirements. It would, however, require the removal of a number of mature trees and the elimination of existing vehicular access points into the Judicial and Parliamentary precincts.

Among all the options developed for the Wellington Street section between Bank and Elgin, the only option that would maintain all existing features and accommodate the new two-way bicycle path would require the removal of all motor vehicle traffic lanes. Only the Parliamentary Precinct Shuttle Service buses and emergency vehicles would be allowed access to this section of Wellington Street. In addition, as requested by the City of Ottawa, a traffic impact study analyzing the impact on 18 intersections in the downtown core is being conducted.

Removing the bulk of motor vehicle traffic on Wellington Street between Bank and Elgin would open up new urban design opportunities on Confederation Boulevard as a key emblematic space in front of Parliament Hill.

The first STO station on the Ottawa side would be located in the vicinity of Lyon Street. Given the number of pedestrians needing to cross Wellington Street, a new pedestrian tunnel would be required from the north side of Wellington to the Lyon O-Train Station.

NCC staff have indicated that rather than adding new underground structures at this location, it would be more appropriate to provide an at-grade pedestrian crossing, which would be more in keeping with the Confederation Boulevard design guidelines.

The second station would be located at the Bank Street intersection. Stations in front of Parliament Hill are not recommended for safety and urban design reasons.

The third station would be located on Elgin Street, next to the Queen Street intersection and the National War Memorial. This site would be somewhat challenging, as it is close to a number of buildings with enhanced security requirements. Moving the location of this station further east, along Rideau Street, would have a number of potential benefits, including a possible connection to the existing Rideau station and the possibility of extending the tram route all the way to Alexandra Bridge. Should the Elgin Street site proposed by the STO be retained, design quality will be of paramount importance and any terminal-type installations will be prohibited in order to avoid any negative impacts on the Confederation Boulevard visual landscape.

The STO is fully aware of the complex nature of any planning endeavour involving Wellington Street: Confederation Boulevard is a national symbol and Canada's Ceremonial Route, it delineates the southern edge of Parliament Hill and as such, is subject to heightened security requirements, and it is occasionally used for major events and subject to temporary closures. All of these factors must be taken into consideration in the scenario evaluation process.

3.3.2 Alternative scenario – a tunnel under Sparks Street



This scenario proposes a tunnel under Sparks Street, parallel to the O-Train tunnel, with an opening in the rocky outcrop at Commissioner Street. This tunnel scenario would include

only two stations, as the underground stops could be spaced and located in conjunction with the existing O-Train stations.

Just like the previous scenario, this option is not without its impact and presents a number of significant technical challenges. However, it has several advantages, especially given Ottawa's Nordic climate. It would be much easier to integrate with the O-Train system and would avoid all the issues associated with the use of Wellington Street.

This option would not facilitate the implementation of the interprovincial Transit Loop that is proposed in the *Plan for Canada's Capital (2017-2067)*, and in the *Integrated Interprovincial Transit Strategy 2013*. The Transit Loop is proposed to promote transit along Confederation Boulevard, using Chaudières or Portage Bridges and Alexandra Bridge.

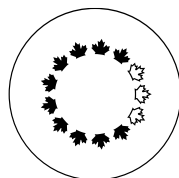
The tunnel scenario would impact the green spaces and the recreational pathway west of Commissioner Street, along with the entrance to the Cliff Street Heating Plant. At this stage, it is impossible to assess the extent of these anticipated impacts.

The construction costs for the tunnel scenario would be three to five times higher than the Wellington Street scenario. The tunnel scenario scored higher in all other criteria except for the cost.

3.4 Environment

The STO Draft Planning Study, currently in progress, will include an inventory and analysis of existing environmental features (natural areas, wetlands, forest areas, wildlife, contaminated soils, air quality, noise), as well as an inventory of heritage buildings in the vicinity of the proposed alignments. In most cases, the proposed route alignments follow existing road allowances, although a number of road allowance widenings would be required.

Detailed environmental and archaeological studies will be conducted in compliance with the Impact Assessment Act requirements during the next phase of the project, once the current study has been completed and the final alignment has been chosen.



NATIONAL CAPITAL COMMISSION COMMISSION DE LA CAPITALE NATIONALE

Excerpt of the Minutes of the

Advisory Committee
on Planning, Design and Realty

Meeting of May 21, 2020

2020-P218 - Société de transport de l'Outaouais (STO) public transit system linking Gatineau's West End to Ottawa – Scenarios under review (C)

Members received a presentation on the STO's public transit system project linking Gatineau's West End to Ottawa. They provided the following comments:

This is a highly desirable project that will improve life in the capital for visitors and residents. Ideally, the timeframe should be advanced.

Integration

- This project presents an opportunity to unify the two cities.
- The new transit system must be integrated with the existing systems on both side of the river. It should be coordinated with the new bridge crossing and the Alexandra Bridge replacement studies. The NCC is encouraged to facilitate the integration.
- Visual unification of the system including tramway colours and logos is important to allow users to easily recognize it as part of the region's overall transit network.
- Pedestrian space and accommodation as well as other active transportation modes

ACPDR / CCUDI

Extrait du procès-verbal du

Comité consultatif
de l'urbanisme, du design et de l'immobilier

Séance du 21 mai 2020

2020-P218 - Système de transport collectif de la Société de transport de l'Outaouais (STO) reliant l'ouest de Gatineau à Ottawa – Scénarios à l'étude (C)

Les membres reçoivent une présentation sur le système de transport collectif de la STO reliant l'ouest de Gatineau à Ottawa. Ils font les commentaires suivants :

C'est un projet extrêmement souhaitable qui va améliorer la vie des visiteurs et des résidents de la capitale. Idéalement, l'échéancier devrait être devancé.

Intégration

- Ce projet présente une opportunité d'unifier les deux villes.
- Le nouveau système de transport en commun doit être intégré avec les systèmes actuels des deux côtés de la rivière. Il doit être coordonné avec le nouveau pont et les études de remplacement du pont Alexandra. Le comité encourage la CCN à faciliter l'intégration.
- L'unité visuelle du système, y compris les couleurs et les logos du tramway, est importante pour permettre aux usagers de le reconnaître facilement comme faisant partie de l'ensemble du réseau de transport en commun de la région.
- Les espaces et les installations pour piétons ainsi que les autres modes de transport actif

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2020-P218 - Société de transport de l'Outaouais (STO) public transit system linking Gatineau's West End to Ottawa – Scenarios under review (C)

should be enhanced and integrated with the tramway network, particularly along the Wellington Street Confederation Boulevard segment.

Pre-eminence of Transit

- The Wellington Street option is preferred and offers good opportunities to enhance the quality of the streetscape character and pedestrian environment.
- Wellington Street should be dedicated to tramway and pedestrians in view of future changes to work environment.
- The Alexandra Bridge could be designed to accommodate the tramway and not vehicular traffic.

Public Realm and User Experience

- The tramway should be attractive and perceived as a new way to discover and explore the capital region by visitors and residents.
- Security bollards, walls or planters make sidewalks unattractive for pedestrians. This project should be planned in a way which could reduce the need for perimeter security along federal buildings.
- Retractable bollards should be used to control vehicular entry points and make the public space safer (e.g. Europe).
- From an accessibility perspective, an at-grade tramway will make the crossing of Wellington Street more difficult for people with mobility issues, due to exposed rail tracks.
- Should the tunnel option be retained, trees could be planted directly in the ground rather than in planters.
- There should be no sacrifice of pedestrian space and landscaped boulevard to accommodate vehicular traffic along an at-

2020-P218 - Système de transport collectif de la Société de transport de l'Outaouais (STO) reliant l'ouest de Gatineau à Ottawa – Scénarios à l'étude (C)

doivent être améliorés et intégrés avec le réseau du tramway, en particulier le long du segment du boulevard de la Confédération de la rue Wellington.

Prééminence du transport en commun

- L'option privilégiée est celle de la rue Wellington en ce qu'elle offre de bonnes occasions d'améliorer la qualité du paysage de rue et de l'environnement piétonnier.
- La rue Wellington doit être consacrée au tramway et aux piétons compte tenu des changements futurs des milieux de travail.
- Le pont Alexandra pourrait être conçu pour accueillir le tramway, et non la circulation des véhicules.

Espace public et expérience des usagers

- Le tramway doit être attirant et perçu comme une nouvelle façon pour les visiteurs et les résidents de découvrir et d'explorer la région de la capitale.
- Les bornes de sécurité, murets ou bacs rendent les trottoirs inintéressants pour les piétons. Ce projet doit être planifié de façon à réduire le besoin de périmètres de sécurité le long des édifices fédéraux.
- On devrait utiliser des bornes escamotables pour contrôler les points d'accès des véhicules et assurer la sécurité du public (ex. Europe).
- Du point de vue de l'accessibilité, un tramway en surface va rendre la traversée de la rue Wellington plus difficile pour les gens ayant des problèmes de mobilité, en raison des rails à découvert.
- Si l'option du tunnel était retenue, les arbres pourraient être plantés directement dans le sol plutôt que dans des bacs.
- On ne doit pas sacrifier l'espace piétonnier ni l'occasion d'avoir un boulevard aménagé au profit la circulation automobile en

2020-P218 - Société de transport de l'Outaouais (STO) public transit system linking Gatineau's West End to Ottawa – Scenarios under review (C)

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grade tramway solution on Wellington Street.

parallèle avec un tramway en surface sur la rue Wellington.

Consultations

- As this project will affect the public in both cities, extensive consultations should be conducted as part of the project.

Consultations

- Puisque ce projet va affecter le public des deux villes, le projet doit inclure des consultations exhaustives.

Future

- The pandemic has opened discussions on the way people work and may reduce travel demands. With a 10-year timeframe, changes should be accommodated.
- Impact on traffic should be expected and the reduction of travel lanes should be encouraged to reduce single occupant vehicles in the downtown core.
- There is a need to ensure that transit projects are not detrimental to the function and symbolism of the Parliamentary Precinct. Good integration is required.

Avenir

- La pandémie a ouvert les discussions sur la façon dont les gens travaillent et pourrait réduire la demande en transports. Avec un échéancier de 10 ans, les changements devront être pris en compte.
- On doit s'attendre à un impact sur la circulation et on devrait encourager la réduction des voies de circulation pour diminuer le nombre de véhicules à un seul occupant au centre-ville.
- Il faut s'assurer que les projets de transport en commun n'aient pas d'incidence négative sur la fonction et le symbolisme de la Cité parlementaire. Une bonne intégration est nécessaire.

Committee Secretary

Secrétaire des comités

Caroline Bied

CAROLINE BIED