

Subject: Wellington Street Transportation Study Update

File Number: ACS2024-PWD-TRF-0001

Report to Transportation Committee on 22 February 2024

**Submitted on February 12, 2024 by Philippe Landry, Director, Traffic Services,
Public Works Department**

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Ward: Citywide

Objet : Mise à jour sur l'Étude de la circulation sur la rue Wellington

Numéro de dossier : ACS2024-PWD-TRF-0001

Rapport présenté au Comité des transports

Rapport soumis le 22 février 2024

**Soumis le 12 février 2024 par Philippe Landry, Directeur, Services de la
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Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That Transportation Committee receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Comité des transports prenne connaissance du présent rapport.

BACKGROUND

On January 28, 2022, Wellington Street was closed because of an illegal occupation. The street remained closed for the duration of the protests/demonstrations. On

February 23, 2022, after the demonstration ended, Council approved the following motion:

The Director of Traffic Services be instructed to report back to Transportation Committee on the feasibility and cost of implementing a temporary closure of Wellington Street between east of Bank and west of Elgin Street until the end of 2022 (subject to review at the first Transportation Committee meeting in the new Term of Council), in consultation with federal officials, OC Transpo, STO, Ottawa Police Services, Ottawa Fire and Paramedic services and that the current closure of Wellington Street by the Ottawa Police Service not be re-opened until such a time that this report is brought forward to Transportation Committee.

On January 17, 2023, Traffic Services provided an update to Council ([ACS2023-PWD-TRF-0001](#)) on the status of the Wellington Street closure and planned transportation study on the impacts of closing Wellington Street.

At its [February 8, 2023](#) meeting, Council approved a motion which included that:

Wellington Street be re-opened no sooner than March 1, 2023 and that staff continue to work with Public Service and Procurement Canada on finalizing a traffic study and report back to Transportation Committee and Council in the first quarter of 2024 or as soon as the study is complete including an update on ongoing discussions, recommendations and any requests resulting from the negotiation framework.

On April 28, 2023, the physical barriers were removed, and the closed section of Wellington Street was re-opened featuring, in each direction, a single vehicle travel lane and a new low-cost on-road bicycle lane.

The Wellington Street Transportation Study, which is now complete, was undertaken in collaboration with PSPC and the National Capital Commission (NCC) to determine the impact of a proposed permanent closure of Wellington Street. Parsons Corporation, an engineering firm, was hired to deliver the study and to document its findings in a report. The executive summary of the Parsons' report is included as Document 1, while the entire final report is held on file with the City Clerk.

The City and PSPC continue to have regular meetings at both staff and executive levels. To date, the discussions were focused on the traffic impact study. Security for the Parliamentary Precinct, which includes the offices on the south side of Wellington Street, remains a primary concern for the PSPC.

The future of Wellington Street between Bank Street and Elgin Street (west) will hinge on City Council's directions for this corridor and other City priorities in the downtown.

PSPC and the City have discussed drafting a Memorandum of Understanding in the event that Council was to support a future transfer of ownership. It is staff's opinion that such discussions or negotiations will take time as there are many issues to consider, including network continuity, access to underground utilities and City infrastructure, public engagement, future design, and corridor valuation. There have been preliminary discussions on establishing a Terms of Reference for a Task Force, or a Round Table, to discuss city-federal interests and projects that could potentially lead to the transfer of Wellington Street (Bank Street to Elgin Street) to federal ownership, should this be the will of Council.

Traffic Services has been collecting traffic data since Wellington Street was re-opened in April 2023. The data has been shared with PSPC to help document and better understand traffic volumes along Wellington Street. The summary of the data collected is presented in tabular data further below and in bar graph format in Document 2. The traffic data collected compares July 2018 pre-pandemic traffic volumes on the segment of Wellington Street between Metcalfe and O'Connor Streets to July, September, and December 2023 volumes.

Table 1 - Traffic Counts by Vehicle Type, July 2018 vs July/September/December 2023

	July 2018	July 2023	September 2023	December 2023
Light Vehicles and Motorcycles	12,362	7,882	9,457	11,969
Heavy Vehicles	1,913	277	234	190
Bicycles	99	849	810	94

The collected data indicates that light vehicle and motorcycle traffic volumes have been steadily increasing since the re-opening of Wellington Street. The December volumes are approaching pre-Covid volumes. The temporary cycling lanes were very well used by cyclists over the summer and fall months. In terms of heavy vehicles, the section of Wellington Street west of Elgin Street is no longer on the City's truck route; it was removed when Wellington Street was re-opened. The collected traffic data indicates a substantial decrease in truck volume from the pre-Covid period. The majority of the heavy vehicles recorded were heavy vehicles making daily deliveries on this section of road, as is permitted.

DISCUSSION

Wellington Street is designated as an arterial roadway within the City's Transportation Network and also forms part of the National Capital Commission's (NCC) Confederation

Boulevard, the Capital's symbolic ceremonial and discovery route. The current physical components of the street include vehicle travel lanes, on-road bicycle lanes, distinctive street lighting, wide sidewalks, and customized streetscape finishes.

Transportation Study

As directed by Council, and in partnership with PSPC and with the engagement of the NCC, the City undertook a transportation study that began in late 2022 to assess the impacts of a proposed permanent closure of Wellington Street between Bank Street and Elgin Street (West Leg). The study focused on identifying the network traffic impacts and associated mitigation. It also addressed the implications of the proposed closure on pedestrians, cyclists, transit, goods movement, emergency services, on-street parking, loading zones and maintenance in a general manner. It included an assessment of how forecasted vehicle traffic (auto mode) would be expected to divert following the proposed closure while remaining open to active modes. This involved assessing a range of potential implications of the traffic diversion on streets and intersections within the study area. Where the diverted traffic was determined as having operational impacts to vehicle traffic, mitigation measures were to be identified at the conceptual level and indicative cost estimates prepared.

Study Approach

The study area reflects much of the Downtown Core of Ottawa. It is bound by the Ottawa River to the north, Sussex Drive and Colonel By Drive to the east, Laurier Avenue to the south and Booth Street to the west.

The study reviewed pre-pandemic transportation conditions and transportation conditions throughout the pandemic to establish a baseline condition. Future downtown infrastructure projects were identified and incorporated into the analysis. Future traffic volumes were projected considering directions from the City of Ottawa Official Plan, a review of historical transportation trends, and ongoing changes in work-from-home and transit trends which occurred during the pandemic.

In conducting the analysis, three future traffic volume scenarios were identified. The scenarios included low, medium, and high traffic volume forecasts for the 2046 planning horizon, representing the weekday peak hours of travel demand. This scenario-based approach was taken to reflect the challenges of establishing a single traffic volume forecast in the absence of definitive data on the stabilization of post-pandemic place-of-work trends and transit ridership. It is also important to note that the study does not identify a preferred or "most likely" traffic volume forecast scenario.

Summary of Traffic Analysis Findings

The traffic analysis evaluated the following three long-term forecast traffic scenarios:

- **Low Vehicle Traffic Scenario:** Represents a 25% reduction in traffic volumes when compared to 2019 observed traffic, similar to conditions experienced in late 2022 and early 2023 in downtown Ottawa.
- **Medium Vehicle Traffic Scenario:** Represents no change in traffic volumes when compared to 2019 observed traffic volumes, representing a scenario where auto demand has returned to pre-COVID levels, and any additional growth has been negated.
- **High Vehicle Traffic Scenario:** Represents a 10% increase relative to 2019 observed traffic volumes, to represent a scenario where auto demand within the downtown core has returned to pre-COVID levels and incurred additional auto growth.

For vehicles diverting from the proposed Wellington Street closure, Albert Street and Slater Street would serve as the primary east-west detour routes, while Queen Street and Laurier Avenue would function as secondary detour routes. An increase in traffic is forecasted on these routes, and on important north-south roadways such as Bay Street, Lyon Street and Kent Street.

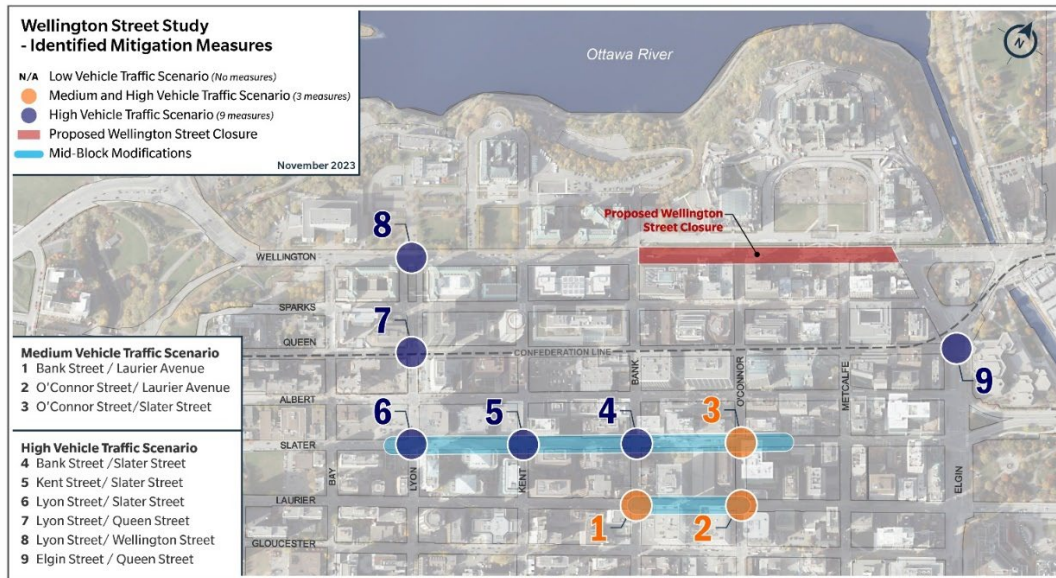
Should traffic volumes remain low or decrease over time (Low Vehicle Traffic Scenario), fewer operational or safety implications would be experienced. No notable mitigation measures would be required for this scenario.

In the case where traffic volumes return to pre-pandemic values (Medium Vehicle Traffic Scenario) or increase beyond historically observed traffic (High Vehicle Traffic Scenario), the vehicle traffic diverted from the proposed Wellington Street closure would have notable impacts on vehicle traffic flows, surface transit operations, and emergency service response on surrounding downtown streets and intersections.

The evaluation identified potential intersection mitigation measures to meet the City of Ottawa's Vehicle Level of Service Targets for downtown intersections for each forecasted scenario. Three intersection modifications were identified for the Medium Vehicle Traffic Scenario, while an additional six, for a total of nine, modifications were identified for the High Vehicle Traffic Scenario. These modifications are intended to mitigate impacts of traffic diverted from the proposed closure of Wellington Street and improve intersection level of service in the downtown area in alignment with City of Ottawa Multi-Modal Level of Service (MMLOS) Guidelines. A comprehensive study will be required to advance the design of each identified intersection modification, confirm feasibility, and develop refined cost estimates.

Figure 1 depicts the location of the identified mitigation measures to address the range of potential future traffic scenarios.

Figure 1: Identified Mitigation Measures



Summary of Multi-Modal Analysis Findings

A multi-modal assessment was completed using the City of Ottawa's Multi-Modal Level of Service (MMLOS) Guidelines as the basis. The current MMLOS Guidelines provide an objective measure of the quality of the active transportation facilities, but do not incorporate vehicle turning movements at intersections. Therefore, additional qualitative analysis was undertaken to identify underlying safety and other operational challenges related to exposure to additional/diverted vehicle traffic.

A general assessment of the transportation implications on pedestrians, cyclists, and transit was completed. The assessment considered the effects of the diverted vehicle traffic which is expected to be most prominent during weekday peak hours. It should be noted that the negative impact to vulnerable roads users of diverted traffic outside of a Wellington Street closure manifests itself to a greater degree as we move from the medium to high traffic scenarios.

Pedestrians: The proposed closure of Wellington Street would offer an exceptional environment to those walking within the closed segment. For the remainder of the transportation network within the study area, there is an overall decrease in pedestrian comfort and safety due to an increase in vehicle-pedestrian conflicts at study area intersections which have limited mitigation opportunities.

Bicycles: A bi-directional cycling facility is currently being planned for the north side of Wellington Street, linking Mackenzie Avenue to the Parliamentary Precinct and beyond towards the Portage Bridge. The proposed closure of Wellington Street is therefore anticipated to provide a minimal additional benefit to cyclists on Wellington Street (relative to the planned bi-directional cycling facility), while having negative implications for the overall cycling network because of increased vehicle-cycling conflicts.

Transit: The proposed closure of Wellington Street would result in an overall decrease in transit level of service due to additional delays attributed to the diverted additional traffic volumes on key transit corridors. While mitigation measures have been identified, Queen Street is considered particularly vulnerable to any additional traffic volumes diverted from Wellington Street and there are few options to increase transit capacity within this corridor.

A general assessment of the impacts to the following activities was also considered:

Street Parking and Loading: There is no designated on-street parking or loading zones on the subject segment of Wellington Street. The proposed closure of Wellington Street would result in a decrease in the number of dedicated street parking stalls and loading stalls on Metcalfe Street and O'Connor Street (north of Queen Street) to accommodate changes to traffic flows on these streets as a result of the closure of Wellington Street. Loading vehicles destined to Sparks Street may have wayfinding challenges and be required to circulate around their destination and through the proposed closure area.

Tour Buses and Taxis: The proposed closure of Wellington Street would result in an overall increase in navigation and circulation challenges resulting in longer trips for pick-ups and drop-offs. There may be an opportunity to leverage the Wellington Street right-of-way (in the proposed restricted area) to offer dedicated spaces to improve tour bus and taxi operations.

Emergency Services: It is acknowledged that emergency vehicles would be able to access restricted areas of Wellington Street. However, the proposed closure of Wellington Street would result in an overall increase in traffic delays and reduction in network resiliency that can result in increased response times during emergencies.

Road Maintenance: The proposed closure of Wellington Street would result in an overall minor impact to road maintenance. Future agreements would need to be established for the proposed Wellington Street closure.

Goods Movement: The proposed closure of Wellington Street would result in additional challenges to navigate the downtown network, access the Urban Truck Network, and increased interactions with vulnerable road users.

Downtown Traffic Circulation: The proposed closure of Wellington Street would result in an overall increase in driver stress due to additional turn requirements, decrease in network resiliency and increase in challenges for vehicles when navigating the one-way street system within the Downtown Core.

Financial Implications of the Identified Mitigation Measures

The identified mitigation measures to accommodate diverted vehicular traffic were developed to a conceptual level. A high-level or indicative Class 'D' cost estimate was prepared for each mitigation measure according to City of Ottawa cost estimating guidelines to understand potential financial implications. The estimates provided as part of this study were based on unit rates for construction items experienced during 2023 and include other "soft costs" related to engineering, utilities, etc., as well as an appropriate overall contingency value of 50 percent. The cost estimates considered a variety of risks to represent a range of potential implementation costs, from "best case" to "worst case" conditions.

The cost estimates are summarized for each of the forecast traffic scenarios below:

- *Low Vehicle Traffic Scenario:* No intersection mitigation measures required.
- *Medium Vehicle Traffic Scenario:* The analysis identified three intersections which would warrant intersection modifications to mitigate traffic operation deficiencies. The total estimated cost of these intersection modifications amounted to approximately \$4.6M to \$10.6M.
- *High Vehicle Traffic Scenario:* The analysis identified six additional intersections which would warrant intersection modifications to mitigate traffic operation deficiencies. The total estimated cost of the nine identified intersection modifications amounted to approximately \$10.1M to \$26.0M.

Conclusion

The Wellington Street Transportation Study, led by the City of Ottawa in collaboration with PSPC and the NCC, focused on identifying the vehicular traffic impacts and potential mitigations associated with the proposed Wellington Street closure from just east of Bank Street to just west of Elgin Street. The implications of the closure on pedestrians, cyclists, transit, goods movement, emergency services, on-street parking, loading zones and maintenance were addressed in a general manner. The study evaluated a range of future traffic scenarios in the downtown core in order to reflect uncertainty in traffic growth at the 2046 planning horizon. The impact of the proposed closure and associated mitigation measures was found to be dependent on the level of traffic.

The study demonstrates that traffic impacts through all three scenarios can be mitigated through targeted intersection modifications. The range of potential costs to implement the identified conceptual mitigation measures is from no cost associated with the Low Vehicle Traffic Scenario, to \$26 million associated with the High Vehicle Traffic Scenario.

The current operation of Wellington Street, with one traffic lane and one bike lane in each direction, is working well from a traffic operations perspective. This aligns with the 2023 – 2026 Term of Council’s strategic priority of making Ottawa “A city that is more connected with reliable, safe, and accessible mobility options.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the report recommendation.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report for information.

COMMENTS BY THE WARD COUNCILLOR(S)

The modifications made to Wellington Street prior to its reopening in Spring 2023, including removing the truck route designation and adding temporary bike lanes, have been very successful. The use of the temporary cycling lanes in particular is a good fit for the tourism in the area in addition to providing an alternative to the Laurier Avenue bike lanes for commuters and helping to reshape travel habits ahead of the permanent lanes planned for the street.

While traffic data is obviously not yet available for 2024, the volumes seem to remain lower than pre-pandemic levels, and can hopefully be stabilized or even lowered as the City works towards its goal of the majority of trips within the city being made by sustainable transportation by 2046. A reduction of vehicle trips to 75% of pre-pandemic levels would make closing this section of Wellington Street feasible without modifications to the surrounding road network, though some modifications are already planned.

Finally, this potential for future traffic pattern changes due to a closure of Wellington Street and the recommended mitigation measures outlined in the report from Parsons should be incorporated into the discussion and planning for road renewals and active transportation projects in Centretown North moving forward.

CONSULTATION

No public consultation was completed for this information report. As directed by Council through the Wellington Street motion brought forward in file [No. ACS2023-OCC-CCS-](#)

[0021](#) on February 8, 2023, this report provides an update on ongoing discussions with Public Service and Procurement Canada and information on the findings of the Wellington Street Transportation Study.

ACCESSIBILITY IMPACTS

Staff from the Accessibility Office participated in discussions for the Wellington Street Closure Study. As noted in the study report, should the Street be permanently closed in the future, accessible pickup and drop off will need to be considered in any closed areas, including businesses or Parliament. Further, loss of parking spaces continues to be a concern for people with disabilities, as not all active modes of transportation and transit services, are accessible to all people with disabilities. This includes a loss of on-street parking spaces and no-parking spaces, which can be used by people with an Accessible Parking Pass. Should there be closures in the future, the parking impacts for people with disabilities will need to be further explored.

DELEGATION OF AUTHORITY IMPLICATIONS

Traffic operation activities are delivered by Traffic Services in accordance with Schedule “J” – Public Works Department of the Delegation of Authority By-law (By-law 2023-67). This same schedule also provides the authority to enter into service agreements such as the one referenced as part of this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk implications associated to this information report.

TERM OF COUNCIL PRIORITIES

The report aligns with the 2023 – 2026 Term of Council’s strategic priority of making Ottawa “A city that is more connected with reliable, safe and accessible mobility options”.

SUPPORTING DOCUMENTATION

- Document 1 – Executive Summary Wellington Street Transportation Study, Final Report (Parsons Corporation)
- Document 2 – Traffic Data by Type in Bar Graph Format

DISPOSITION

The current traffic controls in place along Wellington Street allow for the safe and effective movement of vehicles, people, and goods. The Public Works Department’s Traffic Services will continue to monitor traffic operations along Wellington Street.