

**Subject: Bank Street Cycling and Transit Improvements (Riverside Drive  
Westbound to Aylmer Avenue)**

**File Number: ACS2023-PRE-TP-0007**

**Report to Transportation Committee on 24 August 2023  
and Council 13 September 2023**

**Submitted on August 15, 2023 by Vivi Chi, Director, Transportation Planning  
Services, Planning, Real Estate and Economic Development Department**

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**Ward: Capital (17); Alta Vista (18)**

**Objet: Améliorations à l'infrastructure cyclable et au transport en commun  
sur la rue Bank (de la promenade Riverside en direction ouest à  
l'avenue Aylmer)**

**Dossier : ACS2023-PRE-TP-0007**

**Rapport au Comité des transports le 24 août 2023**

**et au Conseil le 13 septembre 2023**

**Soumis le 15 août 2023 par Vivi Chi, Directrice, Planification des transports,  
Services de la planification, des biens immobiliers et du développement  
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**Quartier : Capitale (17); Alta Vista (18)**

## **REPORT RECOMMENDATION(S)**

**That the Transportation Committee recommend Council:**

- 1. Approve the recommended plan to add cycling facilities to Bank Street over Billings Bridge between Riverside Drive westbound and Chesley Street as described in this report; and,**
- 2. Approve implementation of a northbound reserved bus lane on Bank Street between Chesley Street and Aylmer Avenue during the weekday afternoon peak period, including any by-law amendments required to implement this facility.**

## **RECOMMANDATION(S) DU RAPPORT**

**Que le Comité des transports recommande ce qui suit au Conseil :**

- 1. Approuver le plan recommandé consistant à ajouter des installations cyclables le long de la rue Bank, notamment sur le pont Billings, entre la promenade Riverside en direction ouest et la rue Chesley, comme le décrit le présent rapport; et**
- 2. Approuver la création d'une voie réservée aux autobus en direction nord sur la rue Bank, entre la rue Chesley et l'avenue Aylmer, pendant la période de pointe de l'après-midi en semaine, y compris toutes les modifications de règlement requises pour créer cette voie.**

## **EXECUTIVE SUMMARY**

### **Assumptions and Analysis**

The Bank Street Renewal will add cycle tracks to Bank Street between Ledbury Avenue and Riverside Drive westbound and is slated for construction over the next several years. The proposed Bank Street Cycling and Transit Improvements (Riverside Drive westbound to Aylmer Avenue) would be delivered in coordination with the Bank Street Renewal to address safety and connectivity issues for people cycling, as well as delay and reliability issues for transit customers.

The existing intersection of Bank Street and Riverside Drive westbound poses significant safety issues related to cycling. The Rideau River is a significant barrier to cycling connectivity and there are currently no cycling facilities on Bank Street across Billings Bridge. Just north of Billings Bridge, OC Transpo buses travel in mixed traffic, and experience significant delay and reliability issues northbound on Bank Street in the afternoon peak period.

The proposed project will add bike lanes on Bank Street across Billings Bridge as well as modifications to the intersections of Bank Street and Riverside Drive westbound and Bank Street and Riverdale Avenue. The scope of modifications to the bridge is limited to non-structural modifications, and therefore the current pedestrian facilities will remain as is. The project also proposes to add a northbound reserved bus lane on Bank Street through Old Ottawa South in the weekday afternoon peak period (2:30pm-5:30pm). Bikes would be permitted to use this facility. The northbound curb lane is currently used for parking during the afternoon peak period.

Approximately 14 parking spaces will be permanently removed on Bank Street south of Cameron Avenue with another 41 parking spaces on the east side of Bank Street restricted during the afternoon peak period.

Delays are expected during the peak periods, with relative delays on Riverside Drive versus Bank Street depending on the signal timing that is implemented. On Riverside Drive, in the westbound direction, delays could increase by 2.5 minutes in the morning (approximately two traffic signal cycles) and over one minute in the afternoon peak hour westbound (approximately one traffic signal cycle). Delays on Bank Street are expected to be much less significant.

The project will enhance safety for people walking and cycling through the implementation of intersection improvements and bike lanes, which will contribute to achieving the goals of the Strategic Road Safety Action Plan to reduce fatal and major injury collisions. Cycling connectivity will be significantly improved, providing better access to key destinations in the area. Transit delay and reliability issues will be reduced, which will improve customers' experience and improve access via transit. These improvements will provide more and better sustainable transportation options for a wider range of people, including residents of the Clementine Equity Priority Neighbourhood where people are less likely to have access to a motor vehicle and more likely to experience transportation-related barriers. The project aligns with key goals and policies in the Official Plan and Transportation Master Plan to create complete streets that improve sustainable transportation access and mobility.

### **Financial Implications**

Coordination of this project with the Bank Street Renewal will allow implementation at a significantly lower cost than if carried forward as a stand-alone project. Additional costs are in the range of \$1.5 million and will be funded through existing budget.

### **Public Engagement**

There was a public engagement opportunity via Engage Ottawa from June 14 to June

30, 2023, which included a survey and a virtual public meeting. Over 300 survey responses were received with a majority expressing support for the project. Comments were received related to traffic impact, separation of the cycling facilities, the loss of permanent parking, and the period of restricted parking to allow for the northbound reserved bus lane. (The duration of restricted parking has been reduced as a result of public engagement).

## **RÉSUMÉ**

### **Hypothèses et analyse**

Le projet de réfection de la rue Bank consistera à ajouter des pistes cyclables entre l'avenue Ledbury et la promenade Riverside en direction ouest, des travaux qui s'échelonneront sur plusieurs années. Les améliorations proposées à l'infrastructure cyclable et au transport en commun sur la rue Bank (de la promenade Riverside en direction ouest à l'avenue Aylmer) seraient apportées en coordination avec ce projet de réfection et permettraient d'améliorer la sécurité et la circulation à vélo, tout en résolvant les problèmes de retards et de fiabilité du service de transport en commun.

La circulation à l'intersection de la rue Bank et de la promenade Riverside en direction ouest pose d'importants problèmes de sécurité aux cyclistes. La rivière Rideau est un obstacle majeur à la circulation à vélo et aucune installation cyclable n'est actuellement aménagée sur la rue Bank pour traverser le pont Billings. Juste au nord de ce pont, les autobus d'OC Transpo empruntent des voies de circulation mixtes. Ils y subissent d'importants retards et connaissent, pendant la période de pointe de l'après-midi, des problèmes de fiabilité en direction nord sur la rue Bank.

Le projet consistera à ajouter des voies cyclables sur le tronçon de la rue Bank jusque de l'autre côté du pont Billings et à apporter des modifications à l'intersection de la rue Bank et de la promenade Riverside en direction ouest ainsi qu'à celle de la rue Bank et de l'avenue Riverdale. La portée des modifications apportées au pont se limite à des éléments non structurels et, par conséquent, les installations piétonnières ne seront pas touchées. Le projet impliquera également l'ajout d'une voie réservée aux autobus en direction nord sur la rue Bank, dans le Vieil Ottawa-Sud, pendant la période de pointe de l'après-midi en semaine (de 14 h 30 à 17 h 30). Les vélos seraient autorisés à utiliser cette installation. La capacité des voies de circulation entre la rue Chesley et l'avenue Aylmer ne serait pas diminuée puisque la voie réservée aux autobus pendant la période de pointe de l'après-midi sert actuellement de voie de stationnement.

Environ 14 places de stationnement seront définitivement supprimées sur la rue Bank, au sud de l'avenue Cameron, et 41 autres places de stationnement du côté est de la rue Bank seront interdites en période de pointe de l'après-midi. Le projet devrait donner

lieu à des retards de la circulation de l'ordre de 60 à 90 secondes (un ou deux cycles de feux de circulation) et à la création de files d'attente pouvant atteindre 400 mètres sur la promenade Riverside aux heures de pointe en semaine. La durée de déplacement sur la rue Bank ne devrait pas être affectée par ce projet en raison de l'optimisation de la synchronisation des feux et de la déviation de la circulation vers d'autres itinéraires, notamment l'avenue Bronson et la rue Main. Cependant, la capacité aux intersections situées le long de ces itinéraires est suffisante.

Le projet permettra de renforcer la sécurité des piétons et des cyclistes grâce à l'amélioration des intersections et à l'aménagement de voies cyclables, et contribuera ainsi à l'atteinte des objectifs du Plan d'action stratégique pour la sécurité routière afin de réduire les collisions mortelles et les collisions causant des blessures majeures. Les liens cyclables seront grandement améliorés et offriront un meilleur accès aux principales destinations du secteur. Les retards et les problèmes de fiabilité dans le service de transport en commun seront atténués, améliorant ainsi l'expérience des usagers et l'accès au secteur par ce service. Grâce à ces améliorations, davantage de personnes disposeront d'options de transport plus nombreuses et plus durables, notamment les résidents du quartier prioritaire pour l'équité Clementine, qui sont moins susceptibles d'avoir accès à un véhicule motorisé ou qui affrontent d'autres obstacles liés au transport. Le projet correspond aux principaux objectifs et aux politiques du Plan officiel et du Plan directeur des transports, des documents qui visent à créer des rues complètes améliorant l'accès au transport durable et la mobilité.

### **Répercussions financières**

La coordination de ce projet avec les travaux de réfection de la rue Bank permettra une mise en œuvre considérablement moins coûteuse que si ce projet était mené de façon indépendante. Le budget existant couvrira les coûts supplémentaires, qui s'élèvent à environ 1,5 million de dollars.

### **Participation du public**

Les membres du public ont pu participer du 14 au 30 juin 2023 par l'intermédiaire de la plateforme Participons Ottawa, d'un sondage ainsi que d'une réunion publique virtuelle. Plus de 300 réponses au sondage ont été reçues, essentiellement favorables au projet. Les commentaires reçus avaient trait aux répercussions sur la circulation, à la séparation des voies cyclables, à la perte de places de stationnement permanentes et à la période d'interdiction de stationnement pour faire place à la voie réservée aux autobus en direction nord (la durée de cette interdiction de stationnement a par conséquent été modifiée).

## **BACKGROUND**

### **Transportation Master Plan and Official Plan**

The Transportation Master Plan (TMP) Part 1 ([ACS2023-PRE-TP-0001](#)), including policies and the active transportation projects and networks, was approved by City Council at the meeting of April 26, 2023. Bank Street across Billings Bridge and Bank Street through Old Ottawa South are identified as Feasibility Study Projects in the 2023 TMP. In addition, Bank Street south of Riverdale Avenue is a Cross-Town Bikeway in the 2023 TMP. Bank Street is a Transit Priority Corridor and an Arterial Road in the Official Plan (OP) and the 2013 TMP. Bank Street is a Mainstreet Corridor north of Riverside Drive westbound and a Hub south of Riverside Drive westbound, as well as a Design Priority Area in the OP. Bank Street is subject to the Bank Street South Secondary Plan south of the Rideau River.

### **Bank Street Renewal**

Bank Street between Riverside Drive and Ledbury Avenue is slated for renewal over the next several years, with advanced works having recently commenced. The renewal will include the addition of cycle tracks, protected intersections, and improvements to pedestrian safety. The existing intersection of Bank Street and Riverside Drive westbound poses significant safety issues related to cycling. There is an opportunity to address the safety and connectivity issues for people cycling and the delay and reliability issues for transit customers through an add-on to the Bank Street Renewal project.

### **Cycling Safety Review of High-Volume Intersections**

The intersection of Bank Street and Riverside Drive westbound was one of the 34 intersections studied as part of the Cycling Safety Review of High-Volume Intersections report ([ACS2020-TSD-TRF-001](#)), which was received by City Council at the meeting of October 14, 2020.

## **DISCUSSION**

### **Existing Conditions and Issues**

The study area includes Bank Street from Riverside Drive westbound to Aylmer Avenue, as shown on Figure 1. Bank Street is a four-lane roadway with no auxiliary turn lanes and no cycling facilities throughout the entire study area. There are six signalized intersections, and the posted speed is 40 kilometres per hour (km/h) north of Riverdale Avenue and 50 kilometres per hour (km/h) south of Riverdale Avenue.

OC Transpo provides two frequent transit routes through the corridor: Route 6 travels through the entire study area, while Route 7 travels northward from Grove Avenue and

southward to Sunnyside Avenue. In addition, local Route 5 serves Riverdale Avenue and connects to Billings Bridge Transitway Station via Billings Bridge.

There is on-street parking on both sides of Bank Street north of Riverdale Avenue. Parking and stopping is prohibited in the northbound direction during the morning peak period (7:00am-9:00am) and in the southbound direction during the afternoon peak period (3:30pm-5:30pm). Side streets in the area generally permit street parking between one and three hours on one side of the street.

The built form in the area is characterized by a traditional main street environment with low to mid-rise buildings that extend to the edge of the public right-of-way and sidewalk.



Figure 1: Aerial image showing study area in red, OC Transpo Route 5 in orange, Route 6 in blue, and Route 7 in yellow

### Cycling Safety

In the five years from 2017 to 2021, there were 70 reported collisions at the intersection of Bank Street and Riverside Drive westbound, including five involving a person cycling and three involving one or more pedestrians. Four out of the five cyclist-involved collisions involved a “right hook” between a driver southbound on Bank Street turning right onto Riverside Drive and a cyclist travelling southbound through the intersection. In addition, a cyclist was killed at this intersection in 2013 resulting from the same right hook conflict. These factors resulted in this intersection’s inclusion in the Cycling Safety Review and High-Volume Intersections report. In addition to this documented safety issue, the existing conditions on Bank Street over Billings Bridge are uncomfortable for cyclists, who are expected to share the lane with motor vehicles. This discomfort is demonstrated by the high volume of people cycling on the sidewalk - about 50 per cent. Recent counts (May 2023) revealed that there were more than 100 cyclists and 100 pedestrians using the bridge in the afternoon peak hour. The existing conditions pose a significant potential for conflict between people cycling and walking on the bridge sidewalks.

### Cycling Connectivity

The Rideau River represents a major barrier for cyclists. There are major destinations on both sides of the Rideau River in the area, including: Rideau River pathways, Billings Bridge shopping centre, Billings Bridge transitway station, Confederation Heights, Old Ottawa South shopping district, and educational institutions. Billings Bridge is also abutted by the Clementine Equity Priority Neighbourhood, which is a neighbourhood that has a high concentration of socially and economically vulnerable residents who are likely to experience barriers to mobility. Both the Dunbar Bridge (Bronson Avenue) and the McIlraith Bridge (Smyth Road) have painted bike lanes; however, these bridges are over one kilometre from Billings Bridge. The new active transportation bridge across the Rideau River at Carleton University is over 1.5 kilometres away. Billings Bridge was identified by the public as a key missing link for cycling through the online engagement tool used for the 2023 TMP. With the new Bank Street cycle tracks extending to Riverside Drive westbound from the south, this missing link becomes more pronounced in importance.

### Transit Delay and Reliability

Bank Street is one of the most important transit corridors in the Inner Urban Transect, with nearly 5,000 passengers per day travelling through Old Ottawa South via transit on Bank Street. During most times of the day, a typical northbound transit trip from Riverside Drive to Aylmer Avenue takes between three and four minutes. However, between approximately 2:30pm and 5:30pm, the average northbound travel time



through the study area increases to between four and seven minutes per trip, representing a delay up to two to three minutes. These delays are largely the result of the lane configuration and presence of on-street parking, which requires transit vehicles to merge in and out of the through traffic lane to service stops along the corridor, resulting in reduced transit reliability for northbound afternoon peak period trips travelling through the study area.

### **Project Scope**

Structural renewal or replacement of Billings Bridge is not expected in at least the five-year planning horizon. Rehabilitation is likely in the six to ten-year horizon; but, even at that time, widening the bridge to add a cycling facility would be very challenging and the technical feasibility is uncertain because of structural and heritage challenges. The scope of this project is limited to modifications to the surface within the existing roadway on Billings Bridge, with some modifications to curbs and intersections beyond the bridge to address safety and connectivity for people cycling and walking. North of Billings Bridge, the Bank Street Cycling Feasibility Study through Old Ottawa South will be subject to a future study.

### **Options Considered**

Staff considered multiple options to address cycling safety at Bank Street and Riverside Drive westbound and to add cycling facilities on Billings Bridge. Three different three-lane options were considered and carried forward for traffic analysis. A two-lane option (one lane each direction) across Billings Bridge was not carried forward as it was unable to address the cycling safety issue at Bank Street and Riverside Drive westbound and was expected to have significant traffic impacts. Other possible options are beyond the scope and budget of this project and were not carried forward, including realigning both Riverside Drive eastbound and westbound legs to a single intersection with Bank Street, which would require significant changes to the road network beyond that intersection.

### **Proposed Design**

The proposed design of Bank Street from Riverside Drive westbound to Aylmer Avenue consists of the following characteristics:

- A three-lane cross-section between Riverside Drive westbound and Chesley Street. On Billings Bridge (Riverside Drive westbound to Riverdale Avenue), there will be one through traffic lane in each direction, a southbound right turn only lane approaching Riverside Drive westbound, and a northbound through/right lane approaching Riverdale Avenue.
- Bike lanes in each direction on Billings Bridge.

- Protected intersection elements and cycling improvements at Riverdale Avenue and Riverside Drive westbound.
- Northbound reserved bus lane from Chesley Street to Aylmer Avenue in the weekday afternoon peak (2:30pm to 5:30pm).

### Signalized Intersections

Additional traffic signal measures are proposed at Bank Street and Riverside Drive westbound to address cycling safety issues. This includes a fully protected right turn phase for southbound right-turning motor vehicles independent from the bicycle signal for cyclists southbound, meaning that right-turning vehicles will only be permitted to turn right when the green arrow is displayed. This will reduce the potential for the right hook conflict between cyclists and motor vehicles that has been identified as a top safety concern at this location. However, the fully protected right turn phase requires a dedicated right turn lane so that through vehicles do not block the right turn lane, or vice versa, as well as a southbound bike lane. This results in a three-lane cross-section on Billings Bridge.

Protected intersection elements are proposed at Bank Street and Riverdale Avenue to improve safety and comfort for people cycling and walking. This includes:

- Northbound bike lane that transitions to a separated cycle track in advance of the bus stop and intersection to provide a better interaction zone between cyclists and transit users boarding/alighting the bus, as well as to provide separation from the street
- Northbound crossride that is set back from Bank Street, which improves sightlines and visibility of people cycling as well as additional reaction time for drivers to stop
- Positioning the waiting area for cyclists ahead of the motor vehicle stop bar and protected by a raised curb to improve visibility, safety, and comfort
- Westbound bike box on Riverdale Avenue to facilitate left turns from Riverdale Avenue into the Bank Street bike lane
- Bike signals and bike and pedestrian “head start” signal phase to prioritize people walking and cycling and reduce potential for conflict with turning motor vehicles

A multi-use pathway connection between the Rideau River Western Pathway and the intersection of Bank Street and Riverdale Avenue will be considered, to formalize the existing desire line.

Southbound left turns from Bank Street to Riverdale Avenue are proposed to be restricted to improve traffic operations on Bank Street. The low number of vehicles (fewer than 80 vehicles per day) that make this turn can do so at Cameron Avenue.

#### Physical Separation of Bike Lane

As this project is not modifying the Billings Bridge structure, the fixed bridge surface width governs the extent to which the road can be reconfigured. Because of the limited width, the need to provide vehicular lanes of sufficient width for trucks and buses, and the minimum width needed for bike lanes, full physical separation (i.e., raised curb) between the general traffic lanes and bike lanes is not possible. However, staff are investigating options to provide some level of physical separation, which will be confirmed through the detailed design process.

#### On-Street Parking

Approximately 14 on-street parking spaces on Bank Street are proposed to be permanently removed between Cameron Avenue and Riverdale Avenue (eight west side, six east side). In addition, approximately 41 parking spaces on the east side of Bank Street between Cameron Avenue and Aylmer Avenue are proposed to be prohibited during the afternoon peak (2:30pm to 5:30pm) to accommodate the bus lane.

#### Weekday Afternoon Peak Period Northbound Reserved Bus Lane

The introduction of a northbound bus lane from Chelsey Street to Aylmer Avenue during the PM peak period (2:30-5:30pm) will help to mitigate observed transit travel time delays, increase service reliability, and improve the experience for transit passengers. The proposed bus lane would be implemented using regulatory signage and pavement markings.

#### Cycling in Reserved Bus Lane

Cyclists will be permitted to use the bus lane, a configuration that has been used elsewhere in the City, such as on Rideau Street east of King Edward Avenue. This will reduce the potential conflict between cyclists and motor vehicles as buses are less frequent than other vehicular traffic. Cyclists are likely to be more comfortable riding up the long northbound hill in road space shared with comparatively less motor vehicle traffic. Dedicated cycling facilities in both directions on Bank Street will still be evaluated as part of the future Cycling Feasibility Study project identified in the 2023 TMP.

#### Transit Priority Measures

The potential for transit priority measures (e.g., queue jumps and transit signal priority) at select locations to improve performance of transit will be considered during the detailed design phase.

### Large Heavy Vehicle Movements

There are significant spatial constraints at the intersection of Bank Street and Riverside Drive westbound, making it challenging to accommodate large heavy vehicle westbound turning movements without impacting the ability to provide cycling facilities or encroaching on opposing traffic lanes. Based on current guidelines, regulatory signage to prohibit these turning movements is not possible, however, guide signage is proposed to direct large heavy vehicles to the ramp just west of Bank Street, which would allow them to make turns onto Bank Street from Riverside Drive eastbound. The trucking industry will be notified of the proposed route and driver compliance will be monitored for effectiveness after implementation to determine if additional measures are warranted. This is expected to have a minor impact on truck traffic as currently only six large heavy vehicles make these turns during a typical 8-hour window.

### **Project Implications**

#### *Pedestrian Benefits*

The proposed design will have shorter crosswalks at most crossings which will reduce exposure to conflict and make crossing more comfortable for pedestrians. Smaller corner radii will be used where possible to slow motor vehicle turns, which has the effect of increasing safety for all road users. Traffic signals will include a “head start” signal phase (leading pedestrian and bicycle interval), giving people walking and cycling priority. Dedicated space for cyclists on Billings Bridge is expected to reduce the number of people cycling on the sidewalk, improving comfort and safety for pedestrians.

#### Cycling Benefits

The proposed design improves safety for cyclists and drivers by providing dedicated space on Billings Bridge and by providing improvements to the intersections of Bank Street-Riverdale Avenue and Bank Street-Riverside Drive westbound (the latter being identified in the Cycling Safety Review of High-Volume Intersections report).

The proposed design will improve connectivity in the area by connecting directly with the future cycle tracks on Bank Street south of Riverside Drive as well as the Rideau River western pathway. At the same time, the proposed design is expected to make cycling across the Billings Bridge more comfortable and therefore open more opportunities for cycling in the area. This will connect people to key destinations in the area, including shopping, recreation, employment, and education. It will also provide people in the Clementine Equity Priority Neighbourhood with additional mobility options. Over 400 people are expected to cycle across Billings Bridge in the morning peak hour by 2031.

### Transit Impacts

The most significant transit improvements that would result from this project include travel time savings for the more than 600 transit customers that travel northbound along the corridor during the weekday afternoon peak period (2:30-5:30pm). These changes will also result in service reliability improvements for the 150-200 northbound transit passenger boardings and alightings in Old Ottawa South during the same period.

Route 6 travels through the entire project corridor and is anticipated to experience travel time savings of two minutes per trip on average during the afternoon peak, which translates to approximately 1,200 customer-minutes saved daily. These efficiency gains are also anticipated to result in operational savings.

The northbound Route 7 would also benefit from the introduction of the PM peak period bus lane from Grove Avenue to Aylmer Avenue and is anticipated to result in travel time savings of up to one minute per trip.

Specific to the addition of bike lanes over Billings Bridge, in the morning peak hour, northbound Route 5 travel times across Billings Bridge are anticipated to increase because of expected congestion in the right turn lane at Riverdale Avenue. Route 5 during other time periods and in all directions, as well as Route 6 in all time periods and directions are not expected to be impacted crossing Billings Bridge, primarily due to diversion of traffic from the corridor. If the expected traffic diversion does not occur, there could be increased transit travel times and customer delay near the intersections of Bank and Riverside Drive.

### Parking Impacts

Recent parking data for the area shows that approximately 28, or 60 per cent, of parking spaces on the east side of Bank Street are occupied during the afternoon peak period. A previous parking study from 2012 shows that, at that time, there was sufficient parking available on adjacent streets to absorb parking removed from Bank Street during the afternoon peak period, however, this may result in an increase in traffic on nearby local streets. Several properties south of Cameron Avenue have off-street parking available for their patrons. Parking utilization can be monitored after implementation and adjustments made to parking restrictions on side streets can be considered in future to accommodate the diverse needs of businesses, such as short-term parking for food deliveries, passenger pick-up and drop-off, accessibility needs, and/or longer-term parking. The original proposal to restrict parking between 2:00pm to 6:30pm has been reduced to 2:30pm to 5:30pm to address some of the concerns from the business community.

The City of Ottawa does not mark dedicated on-street accessible parking spaces, and as such all parking proposed for removal are general parking spaces, which may or may not have been available when needed for someone with accessibility needs. The City's Traffic and Parking By-law (2017-301) allows vehicles with a valid accessible parking permit to stop within the bus lane to load or unload a person with a disability. Peak period parking restrictions are common on streets across the City to support the movement of people. Peak period parking restrictions are implemented, reviewed, and adjusted on a regular basis to meet the City's operational needs.

### Traffic Impacts

Traffic modelling was conducted to identify the potential impacts to traffic of implementing a three-lane cross-section on Billings Bridge. The model used traffic volumes from before the pandemic and has accounted for background traffic growth from nearby development proposals. Signal timing at all intersections will be based on operational needs of all movements and users and thus the actual conditions may differ from what the traffic model revealed.

There are expected to be longer traffic queues on Bank Street resulting from the single through lane arrangement. In the morning, the northbound queues are expected to extend past the northbound right turn lane and transit stop to the Billings Bridge Transitway access road. If drivers do not use both available lanes, the northbound queues could extend to Bank Street and Lamira Street/Belanger Avenue in the morning peak hour. In the afternoon, the southbound queues would extend past Riverdale Avenue. Traffic queues on Riverside Drive are expected to be over 400 m in each direction.

Delays are expected during the peak periods, with relative delays on Riverside Drive versus Bank Street depending on the signal timing that is implemented. Significant delays are expected on Riverside Drive during the peak periods, especially in the westbound direction. Delays could increase by 2.5 minutes in the morning (approximately two traffic signal cycles) and over one minute in the afternoon peak hour westbound (approximately one traffic signal cycle). Delays on Bank Street are expected to be much less significant. The traffic modelling optimizes traffic signal timing and phasing for Bank Street as Bank Street is a Transit Priority Corridor, resulting in greater traffic impacts to Riverside Drive than Bank Street. Signal timing at all intersections will be based on operational needs of all movements and users and thus the actual conditions may differ from what the traffic model revealed.

Based on transportation modeling, some traffic (approximately 50 to 100 vehicles in the peak hour) is expected to divert to other parallel routes, such as Bronson Avenue and Main Street. Key intersections along these alternate routes were examined and it was

found that they would still have capacity even after the diversion takes place. Increases to traffic volumes of up to 70 vehicles in the peak hour on nearby arterial and collector roads, such as Riverdale Avenue and Sunnyside Avenue, are expected.

The traffic analysis did not factor in possible reductions to peak hour traffic volumes because of people shifting to other modes (e.g., cycling, transit), or people shifting time of travel (e.g., working from home, adjusting travel schedules). In addition, traffic data from March 2023 show that traffic volumes at this location are approximately 20 per cent lower than before the pandemic. Improved cycling and transit connections combined with reduced post-pandemic traffic volumes could reduce the modeled traffic impacts, as described above.

North of Riverdale Avenue, the northbound curb lane is currently used for parking during the afternoon peak period and is currently not used as a general traffic lane except at intersections.

#### Multi-modal Level of Service (MMLOS)

MMLOS is used to inform trade-offs between different modes. The City's target level of service (LOS) for each mode, expressed as a letter grade, differs depending on the planned context of the area. At Bank Street and Riverside Drive westbound, the bicycle LOS would improve from F to A, which would meet the target, while automobile LOS would decrease from D to F, which would be below the target of E. Truck LOS would decrease from B to D, however, this would still be still within the target.

#### Property Requirements

Property may be required on the southwest corner of Bank Street and Riverside Drive westbound to accommodate the cycling safety improvements and southbound right turns for large vehicles. Discussions about property requirements and acquisition for the Bank Street Renewal, including this project, are in progress with adjacent landowners.

#### **Policy Rationale**

This project will advance multiple OP and TMP goals related to sustainable transportation. This project should be viewed as a single sustainable transportation improvement project, consisting of improvements to both cycling and transit.

#### Sustainable Transportation, Intensification, and Equity

The provision of cycling facilities and transit and pedestrian safety improvements supports sustainable transportation and intensification. The TMP seeks to accommodate intensification through more space-efficient modes, such as walking, cycling, and transit, and "destination accessibility and multimodal mobility will therefore be the priority over peak period vehicular capacity; this will require additional investments in walking, cycling, transit, and complete streets". The TMP "seek[s]

opportunities to repurpose peak road capacity to provide additional space for pedestrians, cyclists, transit and/or placemaking”. While some motor vehicle drivers will experience some delays during a few hours of the week, there will be gains for current and future users of sustainable transportation. This is especially important for residents of the adjacent Clementine Equity Priority Neighbourhood.

#### Mainstreet Corridor and Design Priority Area

The OP Mainstreet Corridor and Design Priority Area policies as well as the Bank Street South Secondary Plan policies seek to make Bank Street a human-scaled environment that acts as a “connection for sustainable mobility between other parts of the City and as a destination in itself.” Adding cycling facilities across Billings Bridge will eliminate a major missing link for the Bank Street Cross-Town Bikeway and improve cycling connectivity.

The OP promotes Mainstreet Corridors and Transit Priority Corridors, such as Bank Street, as areas with higher level of street transit service to serve the greater intensity and mix of uses along those corridors. The TMP includes a policy that directs the City to use parking restrictions or conversion of vehicles lanes to bus lanes to address congestion and bottlenecks that contribute to bus delays. This project presents an opportunity to achieve significant benefit for transit users at very low cost, as the bus lanes would be implemented through pavement markings and signage.

#### Safety of Vulnerable Road Users

The addition of bike lanes on Bank Street and modifications to intersections along Bank Street will improve safety for people walking and cycling. The bike lanes and associated traffic signal operations will directly address a known safety concern for people cycling at Bank Street and Riverside Drive westbound and contribute to the Strategic Road Safety Action Plan objective of reducing fatal and major injury collisions.

### **FINANCIAL IMPLICATIONS**

Coordination of this project with the Bank Street Renewal will allow implementation at a significantly lower cost than if carried forward as a stand-alone project. Additional costs are in the range of \$1.5 million for modifications to the intersection of Bank Street and Riverdale Avenue, as well as pavement markings and signage along the corridor. Modifications to the Bank Street and Riverside Drive westbound intersection is already in scope for the Bank Street Renewal. The additional cost is funded through existing account 2023 Major AT Structures Program account (Capital Account 910958).

### **LEGAL IMPLICATIONS**

There are no legal impediments to the adoption of the recommendations in this report.





## **COMMENTS BY THE WARD COUNCILLOR(S)**

Councillor Menard is aware of the project.

Councillor Carr is aware of the project.

## **ADVISORY COMMITTEE(S) COMMENTS**

The Accessibility Advisory Committee was consulted on this project and submitted the following comments:

- consider how a person with a mobility device and person with a vision disability was considered in this proposal, noting that there can be conflicts on narrow sidewalks between users.
- concerns about the impacts on parking, specifically parking available for people with accessible parking permits, and whether the time savings for transit justifies the impact on parking.
- ensure consultation with the Parking Stakeholder Consultation Group was consulted about the removal of parking spaces.
- construct a pathway underpass at Bank Street and Riverside Drive westbound so cyclists and pedestrians traversing on the path along the water don't have to cross this busy intersection.

## **CONSULTATION**

There was a public engagement opportunity via Engage Ottawa from June 14 to June 30, 2023, which included a survey and a virtual public meeting. The virtual public meeting was held on June 21, 2023 that consisted of a staff presentation and a question-and-answer period. Over 300 survey responses as well as email and phone responses were received with a majority expressing enthusiastic support for the cycling and transit components of the project. However, there were comments related to traffic impacts and separation of the cycling facilities. Staff met with representatives from the business community to solicit feedback: concerns were expressed about the loss of on-street parking on Bank Street. As a result, the proposal has been modified, reducing the restricted parking period between 2:00pm to 6:30pm to 2:30 pm to 5:30pm. Details of the public engagement as well as staff responses to questions and comments are included in Document 1.

## **ACCESSIBILITY IMPACTS**

This project proposes that the intersections of Bank Street and Riverdale Avenue and

Bank Street and Riverside Drive westbound be reconstructed to add accessible traffic signals and to add other accessible features such as tactile walking surface indicators (TWSIs). In addition, the design of these intersections will reduce pedestrian crossing distances, reduce corner radii, and implement leading pedestrian intervals (i.e., pedestrian “head start” signals), which will give pedestrians priority and improve pedestrian safety.

The addition of bike lanes on Billings Bridge will reduce the number of people cycling on the sidewalk, which will in turn reduce the potential for conflict and improve comfort for people walking.

Approximately 41 general on-street parking spaces on the east side of Bank Street between Cameron Avenue and Aylmer Avenue are proposed to be restricted during the afternoon peak period (2:30pm to 5:30pm). In addition, approximately 14 parking spaces (6 east side, 8 west side) are proposed to be permanently removed between Riverdale Avenue and Cameron Avenue. The parking to be removed are general parking spaces and are not dedicated accessible spaces. Parking on side streets will not be impacted and can provide an alternative to parking on Bank Street. The City’s Traffic and Parking By-law (2017-301) allows vehicles with a valid accessible parking permit to stop within the reserved bus or bike lane to load or unload a person with a disability.

The City of Ottawa recognizes that the loss of 55 parking spots is of particular concern for persons with disabilities and staff will continue to look for opportunities to relocate these spaces, where possible.

## **ASSET MANAGEMENT IMPLICATIONS**

The recommendations documented in this report are consistent with the City’s Comprehensive Asset Management (CAM) Program objectives. The implementation of the Comprehensive Asset Management program enables the City to effectively manage existing and new infrastructure to maximize benefits, reduce risk, and provide safe and reliable levels of service to community users. This is done in a socially, culturally, environmentally, and economically conscious manner.

The Bank Street Billings Bridge Cycling Feasibility Study includes the addition of new infrastructure that will support an increase level of transportation service. Capturing the expectations of the service an asset provides during the design stage supports asset management principles. In this case ensuring the asset is renewed to meet current cycling needs by adding cycling network scope within the existing structure is beneficial and the report states can be accommodated in existing budgets. Having construction

encompass that scope, if possible, is more efficient than attempting a retrofit. Subsequent planning and design must address drainage impacts, if any.

When the City commits to the acquisition of new assets, consideration must also be given to the City's commitment to fund future operations, maintenance and renewal costs. It must also account for future depreciation when reviewing long term financial sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value and lifecycle costing of the acquired assets being taken on by the City.

### **CLIMATE IMPLICATIONS**

This project will provide improved cycling facilities and will reduce delay and reliability issues for transit, which will provide people with more sustainable transportation options. This will support mode shift and the reduction of greenhouse gas emissions from the transportation system.

### **ECONOMIC IMPLICATIONS**

Improving cycling and transit access to the area has the potential to support local business success. Studies carried out in other jurisdictions, such as before and after economic impact study for the Bloor Street bike lanes in the City of Toronto, show that removal of parking in favour of sustainable transportation can increase customers and commercial activity and decrease vacancy rates. Improving transit service and moving more people along this corridor supports both local and regional economic prosperity. A sustainable transportation system contributes to an improved quality of life, which attracts and retains a skilled workforce.

### **ENVIRONMENTAL IMPLICATIONS**

This project will realize cycling and transit improvements, which will encourage more people to use sustainable transportation and thereby reduce energy use and greenhouse gas emissions.

### **INDIGENOUS, GENDER, AND EQUITY IMPLICATIONS**

This project will improve access to the Clementine Equity Priority Neighbourhood. It will improve sustainable transportation modes, increasing transportation options for a wider range of people and creating a more equitable transportation system. This includes improving transportation choices for those who rely on walking, cycling, or transit. It also improves safety for people using the sidewalks on Billings Bridge, such as caregivers with strollers, or people using mobility devices.

## **RISK MANAGEMENT IMPLICATIONS**

There are no risk implications associated with this report.

## **RURAL IMPLICATIONS**

There are no rural implications associated with this report.

## **TECHNOLOGY IMPLICATIONS**

There are no technological implications associated with this report.

## **TERM OF COUNCIL PRIORITIES**

This project supports the following 2023-2026 Term of Council Priorities:

A city that is more connected with reliable, safe, and accessible mobility options - This project improves active transportation and transit creating a more equitable, inclusive, and healthy city.

A city that it is green and resilient – Improving travel times and reliability for transit reduces greenhouse gas emissions from the City fleet.

## **SUPPORTING DOCUMENTATION**

Document 1: Public engagement summary

Document 2: Recommended plan of Bank Street

## **DISPOSITION**

Following the approval of the report, staff from the Infrastructure and Water Services Department, Planning, Real Estate, and Economic Development Department and Transit Services Department will action the directions from Transportation Committee and Council.