

**NOVA SCOTIA UTILITY AND REVIEW BOARD**

**THE HALIFAX-DARTMOUTH BRIDGE COMMISSION ACT**

- and -

**THE PUBLIC UTILITIES ACT**

- and -

**IN THE MATTER OF AN APPLICATION** by the **HALIFAX-DARTMOUTH BRIDGE COMMISSION** for approval of amendments to its existing Tariff of Rates, Tolls and Charges

**BEFORE:** Roland A. Deveau, Q.C., Vice Chair  
Steven M. Murphy, MBA, P.Eng., Member  
Jennifer L. Nicholson, CPA, CA, Member

**APPLICANT:** **HALIFAX-DARTMOUTH BRIDGE COMMISSION**  
Jeffrey D. Waugh, Counsel  
Jeremy P. Smith, Counsel

**BOARD COUNSEL:** S. Bruce Outhouse, Q.C.

**HEARING DATE:** June 14, 2021

**WRITTEN BRIEF:** July 22, 2021

**DECISION DATE:** **October 4, 2021**

**DECISION:** **Application approved. For the majority of customers (i.e., two axle passenger vehicles), the cash toll increases from \$1.00 to \$1.25 and the electronic toll (MacPass) increases from \$0.80 to \$1.00, effective January 3, 2022.**

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## 1.0 SUMMARY

[1] The Halifax-Dartmouth Bridge Commission (HDBC or Commission) applied to the Board for approval to amend its existing tariff of rates, tolls and charges, to incorporate a 25% increase for all classes of vehicles, except for Access-A-Bus vehicles and regular buses with a seating capacity of 16 persons or more. These vehicles would be exempt from the increase to promote mass transit. If the application is approved, the majority of customers (i.e., two axle passenger vehicles) will pay a cash toll increasing from \$1.00 to \$1.25 or an electronic toll (MacPass) increasing from \$0.80 to \$1.00. The proposed amendments are summarized as follows:

- \$0.20 increase per crossing for passenger cars using MacPass (\$0.80 to \$1.00);
- \$0.25 increase per crossing for cash customers (\$1.00 to \$1.25);
- An increase of 25% per axle for commercial vehicles using cash or MacPass; and
- An increase in the minimum payment from \$15 to \$20 to manually or automatically replenish a MacPass account. The \$1.00 monthly administration fee is eliminated.

[2] The Commission requested that the proposed increases become effective January 3, 2022.

[3] The Commission proposed the toll increase to finance its projected 10-year capital, rehabilitation and maintenance costs for both the Angus L. Macdonald and A. Murray MacKay Bridges and ancillary structures. In support of its application, it filed financial projections to the end of fiscal 2031, which were reviewed in a report by its

consultant, PricewaterhouseCoopers LLP (PwC). The Commission also engaged the engineering firm COWI North America Inc. (COWI) to assist it in the development of its capital, rehabilitation and maintenance plan for the Bridges and ancillary structures. COWI also filed a report in support of the application.

[4] Board Counsel engaged MNP, an accounting consulting firm, to review the Commission's application, including its financial projections and its traffic projections in light of the uncertain impact of the COVID-19 pandemic recovery.

[5] In addition to its responses to numerous Information Requests (IRs) respecting the application, the Commission also appeared at the hearing held by videoconference by the Board on June 14, 2021, to provide its reasons for the proposed toll increase.

[6] Having reviewed the application and all the evidence presented during the hearing process, the Board approves the application.

## **2.0 BACKGROUND**

[7] The Halifax-Dartmouth Bridge Commission applied to the Board for approval to amend its existing tariff of rates, tolls and charges, to incorporate a 25% increase for all classes of vehicles, with two exceptions, namely, Access-A-Bus vehicles in Class 1 and buses in Class 9 with a seating capacity of 16 or more persons, for which no increase is proposed. The Commission requested the exemptions to encourage mass transit. If the application is approved, the majority of customers (i.e., two axle passenger vehicles) will pay a cash toll increasing from \$1.00 to \$1.25 or an electronic toll (MacPass) increasing from \$0.80 to \$1.00. The Commission proposed the following increases:

- \$0.20 increase per crossing for passenger cars using MacPass (\$0.80 to \$1.00);
- \$0.25 increase per crossing for cash customers (\$1.00 to \$1.25);
- An increase of 25% per axle for commercial vehicles using cash or MacPass; and
- An increase in the minimum payment from \$15 to \$20 to manually or automatically replenish a MacPass account. The \$1.00 monthly administration fee is eliminated.

[8] The Commission requested that the proposed increases become effective January 3, 2022.

[9] The Commission's objectives are to construct, maintain and operate the Angus L. Macdonald Bridge and the A. Murray MacKay Bridge (collectively, the Bridges) and the necessary approaches and ancillary structures thereto across Halifax Harbour. Both Bridges are toll bridges and their uses are subject to the same rates, tolls and charges.

[10] HDHC stated that the increase in the tolls is necessary for the Commission to finance a 10-year capital, rehabilitation and maintenance plan (Major Works) for the Bridges and ancillary structures. On the advice of its external engineering consultants (i.e., COWI), the Commission decided to carry out extensive capital and rehabilitation work on the Bridges and their ancillary structures in the amount of \$253.1 million, together with \$33.7 million to cover general capital expenditures, including a new bridge toll collection system and the replacement of customer service software which is no longer

supported (collectively referred to as the Major Works). The total costs for the Major Works are projected to be \$286.9 million over the next 10 years (i.e., 2021 – 2030).

[11] The Commission's application was filed with the Board on January 29, 2021. The present rates, tolls and charges were approved by the Board to become effective April 1, 2011 (for cash tolls) and, for MacPass tolls, to become effective by being phased in over two equal steps on April 1, 2011, and April 1, 2012.

[12] Upon receipt of HDBC's application, the Board issued a Hearing Order on February 2, 2021, providing for various procedural requirements leading to the hearing, including the setting of a deadline for requesting intervenor status, as well as dates for the filing of IRs and IR responses. The Board did not receive any requests for intervenor status. However, it did receive five letters of comment from members of the public. The Notice of Hearing was published in the Chronicle Herald on February 6 and 10, 2021. Due to the COVID-19 pandemic, the application was heard by the Board in a hearing on the GoToWebinar videoconferencing platform on Monday, June 14, 2021.

[13] The Commission called five witnesses: Steven Snider, its General Manager and CEO, and Michael McFeters, its CFO; Nikki Robar, CPA, and Matt Snow, CPA, of PwC; and Darryl Matson, P.Eng., of COWI. Ms. Robar and Mr. Snow were qualified by the Board as expert witnesses in professional accounting and financial analysis capable of giving opinion evidence on the reasonableness of the Commission's financial projections. Mr. Matson was qualified as an expert witness able to give opinion evidence on bridge engineering, including with regard to capital rehabilitation and maintenance works on suspension bridges and their approaches.

[14] Board Counsel retained MNP, an accounting consulting firm, to review the Commission's application. Jason Hails, MBA, and Danish Khaliq, MSc., MBA, both of MNP, were called as witnesses. They were qualified as expert witnesses to provide opinion evidence regarding financial modeling, financial analysis, cost allocation and cost projections.

### 3.0 STATUTORY PROVISIONS

[15] Section 19(1) of the *Halifax-Dartmouth Bridge Commission Act*, S.N.S. 2005, c. 7 (*Act*) deems HDBC to be a public utility within the meaning of the *Public Utilities Act*, R.S.N.S. 1989, c. 380.

[16] The relevant provisions of the *Act* provide as follows:

#### **Rules and regulations**

**7 (1)** The Commission may from time to time make, alter and repeal rules and regulations that in any manner relate to its schedule of rates, tolls, fees and charges and such rules and regulations come into force upon being approved by the Board.

#### **Public Utilities Act**

**19 (1)** The Commission is a public utility within the meaning of the *Public Utilities Act* and is subject to that Act, except that the provisions of that Act relating to

(a) new construction, improvements or betterments in, or extensions or additions to the property of a public utility and relating to the issuance of shares, stocks, bonds, debentures or any evidence of indebtedness issued by a public utility;

(b) the provision of proper and adequate annual depreciation of its property and assets and the setting up, maintaining, use and disposal of depreciation reserve funds; and

(c) the assessment, marketing, licensing, implementing and integrating of electronic collection systems that do not relate to either of the Bridges or a transportation project authorized by Section 27, including the earning of income and the incurring of expenses,

do not apply to the Commission nor may any such income or expense or any property of the Commission devoted to the activities set out in clause (c) be taken into account by the Board in regulating the Bridges, unless the Governor in Council otherwise directs.

### **Utility and Review Board**

**20 (1)** Notwithstanding Section 19 and the *Public Utilities Act*, the Board may, on any application of the Commission to the Board to set the tolls, rates, fees and charges to be paid to the Commission for services rendered and facilities provided, take into account any allowance for proper and adequate annual depreciation of its property and assets that the Commission wishes to provide, set aside and maintain.

**(2)** All orders and directions of the Board previously made under this Act and the *Public Utilities Act*, relating to the provision of proper and adequate annual depreciation of its property and assets and the setting up, maintaining, use and disposal of depreciation reserve funds or special depreciation reserves, cease to bind the Commission and the Commission may dispose of or use as it sees fit in its undertakings any funds or assets held in the depreciation reserve fund or the special depreciation reserve.

**(3)** In this Section and in Section 19, "property and assets" means the property and assets of the Commission used and useful in furnishing, rendering or supplying its services and facilities.

[17]           The relevant provisions of the *Public Utilities Act* are as follows:

#### **Supervision of utility by Board**

**18** The Board shall have the general supervision of all public utilities, and may make all necessary examinations and inquiries and keep itself informed as to the compliance by the said public utilities with the provisions of law and shall have the right to obtain from any public utility all information necessary to enable the Board to fulfil its duties.

#### **Orders by Board respecting rates and charges of utility**

**44** The Board may make from time to time such orders as it deems just in respect to the tolls, rates and charges to be paid to any public utility for services rendered or facilities provided, and amend or rescind such orders or make new orders in substitution therefor.

#### **Approval of schedule of rates and charges of utility**

**64 (1)** No public utility shall charge, demand, collect or receive any compensation for any service performed by it until such public utility has first submitted for the approval of the Board a schedule of rates, tolls and charges and has obtained the approval of the Board thereof.

**(2)** The schedule of rates, tolls and charges so approved shall be filed with the Board and shall be the only lawful rates, tolls and charges of such public utility until altered, reduced or modified as provided in this Act.

#### **Equal rates and charges for similar services**

**67 (1)** All tolls, rates and charges shall always, under substantially similar circumstances and conditions in respect of service of the same description, be charged equally to all persons and at the same rate, and the Board may by regulation declare what shall constitute substantially similar circumstances and conditions.

**(2)** The taking of tolls, rates and charges contrary to the provisions of this Section and the regulations made pursuant thereto is prohibited and declared unlawful.

## **4.0 ANALYSIS AND FINDINGS**

### **4.1 Major Works (Capital, Rehabilitation and Maintenance)**

[18] The HDBC's structures inventory is wide-ranging in age and complexity. This inventory is comprised of the MacKay Bridge, Macdonald Bridge, and the related ancillary structures.

[19] The MacKay Bridge opened to traffic in 1970 and carries four lanes of traffic over Halifax Harbour. It has no lanes for pedestrians or cyclists. The suspended spans are comprised of two side spans and a centre span measuring approximately 156.6 m and 426.7 m, respectively. The deck system of the suspended spans consists of a stiffening under-deck truss supporting transverse trusses. The floor beams, in turn, support an Orthotropic Steel Plate Deck (OSPD) and paving. Both the Halifax Main Tower and Dartmouth Main Tower are approximately 87.2 m tall. The approach spans have a concrete bridge deck supported on twin box girders and concrete piers. The Dartmouth and Halifax approach spans are approximately 114.3 m and 381.9 m long, respectively.

[20] The Macdonald Bridge opened to traffic in 1955 and carries three lanes of traffic over Halifax Harbour, and one lane each for a sidewalk and a bikeway on either side of the Bridge. The suspended spans comprise two side spans and a centre span measuring approximately 160.5 m and 441.1 m, respectively. The suspended spans' deck system is a below-deck stiffening truss supporting transverse floor beams, OSPD and paving. Both the Halifax Main Tower and Dartmouth Main Tower are approximately 91.6 m tall. The Dartmouth (truss and girder arrangements) and Halifax approach (truss arrangement only) spans are approximately 436.6 m and 148.2 m long, respectively.

[21] The Macdonald Bridge has undergone two major rehabilitation projects over its life: The Third Lane Project and the Big Lift Project. The Bridge's approach spans

were replaced with OSPD as part of the Third Lane project, completed in 1999, and are supported by trusses/girders and concrete piers. The Big Lift project, completed in 2018, replaced the Bridge's superstructure.

[22] The ancillary structures consist of the following:

- Barrington Street On Ramp;
- Windsor/Robie Street Exit K Ramp;
- The Halifax Approach and Baffin Boulevard Retaining Walls; and
- Princess Margaret, Windmill Road, Canadian National Railway (CN), and Victoria Road Overpasses.

The ramps and overpasses are bridge structures, supported on concrete piers and abutments.

[23] The HDBC engaged an external bridge engineering consultant, COWI, in October 2020, to develop a list of major capital works that will be needed on the Bridges and the ancillary structures over the next 10 years. COWI was also tasked to prepare capital cost estimates for the associated works. COWI estimated the cost of each work item (in 2021 dollars) and built up an expected annual budget for each structure. Development of the cost estimates was based on historical trends and COWI's experience with similar structures.

[24] Based on the capital costs forecasted by COWI, the Commission prepared capital works financial projections in support of the current application. These projections also identified additional capital projects and costs, beyond those noted by COWI, which will be required over the next 10 years. The financial projections outline the future capital requirements of the Commission to the end of fiscal 2031 and are intended to provide

financial justification for the proposed toll increases. The Commission stated that the primary reason for the proposed toll increases is the 10-year capital, rehabilitation and maintenance plan to appropriately maintain and extend the useful life of the Bridges and ancillary structures.

[25] The total projected HDBC capital expenditure over the next 10 years, allowing for annual inflation of 1.5%, is estimated to be \$286.9 million. \$253.1 million of this amount is related to the work on the Bridges and the ancillary structures as projected by COWI. The remaining \$33.7 million was projected by the Commission to cover general capital expenditures. These include information technology, vehicles, buildings, and other equipment necessary to support the operations of the Commission. General capital expenditures also include the replacement of the bridge toll collection system and the customer service software which is no longer supported.

[26] The forecasted annual costs of the expected major capital works and general capital expenditures over the next 10 years are summarized as follows:

Year	Macdonald Bridge	MacKay Bridge	Ancillary Structures	Subtotal (2021 dollars)	General Capital	Subtotal (with annual inflation 1.5%)
2021	\$11,550,000	\$2,450,000	\$200,000	\$14,200,000	\$6,237,689	\$20,437,689
2022	\$20,350,000	\$19,400,000	\$1,650,000	\$41,400,000	\$7,344,760	\$49,368,940
2023	\$20,500,000	\$4,370,000	\$2,400,000	\$27,270,000	\$11,075,428	\$39,170,389
2024	\$15,500,000	\$8,550,000	\$2,900,000	\$26,950,000	\$1,126,985	\$29,309,113
2025	\$11,000,000	\$14,020,000	\$5,650,000	\$30,670,000	\$1,484,813	\$34,038,306
2026	\$12,700,000	\$10,050,000	\$3,880,000	\$26,630,000	\$1,155,016	\$29,844,943
2027	\$500,000	\$12,300,000	\$2,630,000	\$15,430,000	\$1,441,302	\$18,315,374
2028	\$3,750,000	\$12,390,000	\$930,000	\$17,070,000	\$1,165,145	\$20,112,834
2029	\$2,250,000	\$13,540,000	\$1,980,000	\$17,770,000	\$1,599,980	\$21,620,789
2030	\$0	\$19,360,000	\$1,250,000	\$20,610,000	\$1,109,516	\$24,678,225
<b>Total</b>	<b>\$98,100,000</b>	<b>\$116,430,000</b>	<b>\$23,470,000</b>	<b>\$238,000,000</b>	<b>\$33,740,632</b>	<b>\$286,896,602</b>

[Exhibit H-1, p. 5]

[27] As noted by COWI:

Much of the ten-year budget for the Macdonald is needed to complete the major rehabilitation for the bridge elements that were not replaced during the Big Lift Project. This includes steel and concrete repairs of the approaches and painting of the portions of the

bridge that were not replaced during the Big Lift, as well as regular resurfacing of the bridge deck.

The budget for the MacKay is primarily needed to maintain the ageing bridge. This includes deck repairs for the approach spans, resurfacing, main cable dehumidification, coatings, and repairs of anticipated fatigue cracks in the main span deck. Some additional funds are estimated for HHB to begin the process of the replacement of the MacKay for 2040...

[Exhibit H-1(iv), pdf p. 5 of 204]

Once the work on the Macdonald Bridge is complete, the HDHC expects the maintenance effort needed for that structure to level out for 30 or 40 years before another major rehabilitation is required. The ancillary structures are at a stage in their life that only regular maintenance is expected over the next 10 years.

[28] The following projects represent the bulk of anticipated capital costs over the 10-year projection period to 2031:

- **Macdonald Bridge Steel Repair and Paint Project:** The approach spans and the towers/bents/foundations of the Bridge need to be rehabilitated to extend their life to match that of the new superstructure installed as part of the Big Lift project. A significant amount of the expected maintenance cost the HDHC will need to spend over the next 10 years is related to steel repairs and painting of the structure's remaining steel.
- **Macdonald Bridge Approach Span Bearings and Pier Rehabilitation:** Some of the existing bearings are 65 years old, which is well beyond their expected typical service life of 35 to 40 years. Since 2015, the Commission has replaced the bearings at twelve of eighteen pier or abutment locations. The remaining bearings need to be replaced. Further, the majority of the concrete of the substructure and foundations is experiencing alkali-aggregate reactivity coupled with cycling freezing and thawing damage. As a result, the Commission has since

repaired 14 piers, along with portions of the Halifax and Dartmouth abutments. It is now targeting rehabilitation of the remaining high and medium priority piers by 2024 and the other piers by 2028.

- **Macdonald Bridge Resurfacing:** The approach spans of the Bridge were not significantly impacted or modified during the Big Lift project. Therefore, the asphalt surfacing is approximately 20 years old, and is exhibiting longitudinal cracking near the wheel paths. The HDBC anticipates complete resurfacing of the approach spans in 2022 and 2023. In addition, the Commission expects to complete resurfacing sections of the existing sidewalk and bikeway along both approach spans by 2023, as well as some suspended span pavement resurfacing in 2028 and 2029.
- **MacKay Bridge Concrete Approach Span Deck Repairs:** The cast in place concrete approach span deck has been subject to increasing amounts of deterioration, including spalling concrete, exposed reinforcement, cracking and difficulty maintaining the paving bond. This is indicative of a concrete deck that is experiencing active corrosion of the steel reinforcement. As such, the HDBC anticipates two construction seasons in 2025 and 2027 of significant concrete repairs widespread across the deck, during which two lanes would be addressed each year. In the interim, the Commission expects to undertake localized repairs in 2023 and 2024.
- **MacKay Bridge Cable Dehumidification:** The main cable of the Bridge is currently showing signs of significant amounts of moisture, with corrosion occurring at the low points and some observed broken wires. With corrosion of the main cable

anticipated to continue if no action is undertaken, its capacity will continue to decrease. Further, the main cable is a critical component and one that is nearly impossible to strengthen or replace. Protection of its capacity is considered the most efficient and reasonable approach to maintaining it over the Bridge's life. Therefore, the HDBC considers it appropriate to preserve as much capacity in the main cable as possible through the installation of a cable dehumidification system in 2022.

- **MackKay Bridge Fatigue Repairs and Associated Component Replacement:** The MackKay Bridge was designed at a time when less was known regarding the fatigue life of OSPDs. The deck top plate is 9.5 mm thick, in comparison to the minimum 14 mm, which is currently specified by the Canadian Highway Bridge Design Code (CHBDC). This thin plate has resulted in a short fatigue life that cannot be corrected. The deck's flexibility has also led to an increased rate of deterioration and cracking of the wearing surface, allowing water and de-icing salts to penetrate through to the steel and cause corrosion. While not yet considered widespread, the rate of deck cracking is expected to accelerate. As such, COWI recommended that the HDBC prefabricate two sections of OSPD as a contingency to have on hand for emergency installations, possibly in 2026 and 2029.
- **MackKay Bridge Replacement:** The MackKay Bridge deck system is approaching the end of its expected service life. Consequently, the HDBC engaged COWI in 2020 to complete a feasibility study to develop and evaluate options to rehabilitate or replace the Bridge. The preferred option identified by the study is to replace

the existing Bridge with a 500 m long main span cable-stayed bridge, on an alignment parallel to the existing Bridge along its north side, complete with six traffic lanes and two Active Transportation lanes. The existing Bridge would then be demolished. The HDBC expects that the new bridge would be required by 2040. In order to replace the existing Bridge by 2040, COWI recommended that the Commission begin taking steps within the next several years to determine the scope of work, gather input and facilitate communication with the key stakeholders, and begin to communicate these plans to establish funding and support. Within the current 10-year capital plan, the Commission has allowed for costs associated with the early stages of the planning/design process between 2025-2030.

#### **4.1.1 Findings**

##### **4.1.1.1 Anticipated Capital Projects**

[29] A number of items related to the anticipated projects in the 2021-2031 capital plan arose during the IR process and during the hearing.

[30] The expected capital expenditure for the Macdonald Bridge over the 2021-2031 capital plan is \$98.1 million (in 2021 dollars). Board staff asked the Commission why this work is now required given the Big Lift project had recently been completed. The Commission responded:

The Big Lift Project focused on the main span of the Macdonald Bridge. The \$98.1 million total projected capital expenditures over the next 10 years for the Macdonald Bridge are needed for maintenance of the approach spans, Cable Bents and Main Towers. These items were not within the scope of the Big Lift Project.

...

Since the 2010 Application, the Commission has undertaken a Paint Pilot Project to evaluate the coating and any strengthening needs for the components of the Bridge that were not replaced with the Big Lift Project. This pilot project revealed the need for

significantly more steel repairs than anticipated and accelerated the schedule for the repainting. The steel repair and paint project represents \$69 million of the total \$98.1 million estimated for the Macdonald Bridge.

[Exhibit H-4, Response to IR-5]

[31] In IR-29c), Board staff questioned why Macdonald Bridge resurfacing is required in 2028 when the anticipated life of the existing epoxy asphalt paving system would typically be expected to last until sometime between 2030 and 2035. The HDBC responded that there is no experience with this type of paving system in the Maritimes. The Commission further noted that the life expectancy of epoxy asphalt is influenced by weather conditions, most significantly by temperature extremes and freeze thaw cycles, and, therefore, it is possible that the paving will need to be replaced prematurely. As such, COWI recommended the Commission plan for a replacement in 2028. The Board finds this to be a reasonable approach.

[32] With regards to the MacKay Bridge Fatigue Repairs and Associated Component Replacement, in IR-27b) Board staff asked the HDBC to provide background for the estimated costs and timing of the project. In response, the Commission stated that it is unlikely the emergency OSPD sections will be needed before the MacKay Bridge is replaced in 2040. Nevertheless, since it is possible that a failure fatigue could occur, the Commission has planned for the replacement of two sections (at a cost of \$3.5 million each (in 2021 dollars)) over the next 10 years as a contingency. This issue was canvassed further by the Board during the hearing:

**Q.** (Murphy) ...I did want to ask a couple of questions on -- and this was in response to Board IR-27b, and it relates to the proposed prefabrications and orthotropic steel decks to have on hand.

...

...COWI believes it is unlikely that the emergency OSPD segments will be needed before the MacKay Bridge is replaced in 2040.

So just a couple of questions.

If those sections were not pre-fabricated, what are the alternatives if, in fact, there was a -- I guess a fatigue failure?

(Matson) So I'll take that one, if that's all right.

I'll give a very brief little bit of engineering education here, if I can.

So fatigue is a very complicated and very difficult-to-predict behaviour in steel. So if you've ever taken a paperclip and bent it open, it still holds, but if you bend it a few times, it breaks. That's basically what fatigue is, so it's cycling the steel.

And it's strong enough, it's fine, it's fine, it's fine until after a certain number of cycles, it actually cracks and fails. So that's the behaviour that we're worried about with the orthotropic deck, is that the deck of the suspended spans on MacKay is a steel deck. Even though it looks the same as the rest of the bridge, it's actually a steel deck covered in -- with an asphalt surface.

And its original design is too thin compared to what we now know about fatigue, that it flexes too much, and, therefore, it causes that same paperclip effect, and it cracked.

So we started -- we predicted in 2010 that we should start to see cracks showing up about now, and that's what's driving the need to do some -- that's the significant driver of what's driving the need to do something with the bridge by 2040.

And so this year, we had four new cracks in the deck, and basically what that'll cause is those cracks will -- they're generally underneath the wheel paths of the vehicles, and so as the trucks -- the biggest one is, as the trucks come across the deck, it'll deflect underneath the wheel of it and, eventually, what that causes is more stress risers at the cracks and the cracks propagate, and it'll zipper.

So once we see those cracks showing up, the bridge will be unable to carry the truck loading, so the short answer to the question, if we don't have the orthotropic deck panels pre-fabricated and ready, we'll have to close the lane that that crack is affected by until we can design, fabricate, and install a new deck section or strip the paving and weld the crack.

The problem with fatigue is when you weld a crack, it causes additional tensions as the weld cools, that that weld will crack again very soon. It doesn't repair the problem, it just band-aids it.

And that's the difficulty with fatigue as well. You can't effectively, long term, repair it. You can short-term repair it, but then you get a weld on a weld on a weld, and it becomes something you just can't do. It'll crack within a week of fixing it, and so the real problem -- and this is why we've recommended the Commission look at getting some emergency panels available. The real problem is the downtime of the bridge.

It's possible -- right now what we're seeing is the cracks are longitudinal, so what that would mean is if we get a significant crack in one -- at one location that it closes a lane.

Another problem with fatigue cracks is they tend to wander, so instead of it just being longitudinal, it could start slicing across the bridge deck and close multiple lanes and actually fail the entire top of the deck.

**Q.** So would it be fair to say, I guess, if these sections weren't prefabricated and there was an issue with cracking that needed to be addressed that the cost would be more than the \$7 million that's projected in -- I guess through 2029?

**A.** (Matson) The cost -- the actual construction cost would probably be the same. The downtime is -- the downtime of the bridge and the lost revenue of the tolls -- it's the downtime of the bridge more than the lost revenue -- is the bigger issue.

**Q.** Okay.

**A.** (Matson) So what we're proposing is to have some deck sections in place to mitigate the time lost and the impact to the public if there is a problem.

**Q.** It's a -- I guess a risk mitigation sort of alternative.

**A.** (Matson) Exactly.

[Transcript, pp. 115-121]

[33] Based on Mr. Matson's testimony, the Board finds that pre-fabrication of the proposed OSPD replacement sections is an appropriate risk-mitigation strategy to address potential fatigue failures of the MacKay Bridge OSPD decking.

[34] The HDBC currently expects that the MacKay Bridge will need to be replaced by 2040. Nonetheless, the Commission's 10-year capital plan includes spending of \$116.4 million (in 2021 dollars) to extend the life of the existing Bridge. In IR-9b), Board staff asked the Commission to explain why it has decided that it is better to spend this amount rather than replace the Bridge sooner. The Commission responded by stating that the cost of maintaining the structure is less than the borrowing costs of a new construction. At an estimated \$1 billion total project cost for a new bridge, the estimated annual carrying costs of borrowing this money could be assumed to be approximately \$25 to \$30 million per year, or approximately \$250 to \$300 million over the 10-year period. This estimated carrying cost is more than the \$116.4 million needed to maintain the Bridge. The Commission also noted that there are approximately 13 years

required for planning, design, and construction of the replacement bridge, during which time maintenance of the existing MacKay Bridge will still be required.

[35] MNP assessed HDBC's contention and analyzed a number of different carrying cost scenarios associated with variable tranches of capital spending associated with a replacement for the MacKay Bridge. Based on this analysis, MNP stated that it is confident the magnitude of the carrying costs is expected to be more than the \$116.4 million required to maintain the Bridge as stated by the Commission. The Board agrees.

[36] Due to the uncertainty in the MacKay Bridge's remaining life, the HDBC has included the cost of some preliminary design work related to the replacement bridge in the 2021-2031 capital plan. This work is included in the capital plan since the replacement of the Bridge will take approximately 10 years from start to finish. Further, the Commission indicated that there is a risk that the fatigue issues of the Bridge deck could happen sooner than expected and that the replacement bridge could be needed before 2040. The early preliminary design work will, therefore, allow the HDBC to be prepared for an earlier than anticipated replacement if required.

[37] The Board agrees with this approach, but expressed concern that the decision to replace the Bridge may not have been fully vetted to confirm it is the most cost-effective solution to address MacKay Bridge issues:

**Q.** (Murphy) Well, my last line of questioning, really, is related to, I guess, the work that's involved associated with the -- at this point, the replacement let's call it, if you will, of the MacKay Bridge. And Mr. Outhouse did touch on this earlier. And within the COWI report, there's roughly, by my math, 13 -- roughly \$13.5 million between 2022 and 2030 associated with, if you will, design work and consultation and some environmental assessments, I guess, related to addressing the aging MacKay Bridge.

I guess my question is; are those costs based on the assumption that the Bridge Commission is going to be proceed with option 2A, which was the cable-stayed bridge, I think the six lanes, and the AT lanes? Is that 13.5 million, is that based on the assumption that that option will proceed?

**A.** (Snider) These funds are built into the 10-year model because we do expect that - we would plan on the replacement of the bridge. That's the option that we would be looking at at this point in time. Whether it's four lanes or six lanes or has a bike lane or sidewalk is not built into this, just the fact that we're expecting that it would be a replacement bridge, so...

**Q.** So as part of this work between 2022 and 2030, will there be additional work done to confirm that that is the preferred option? I recognize that I think the COWI report was labelled as a feasibility study, but regardless, as this design work and associated work moves forward, is part of that work going to be to confirm that, I guess, if replacement is the preferred approach, that option 2A is the preferred option? And, additionally, will that work also confirm that rehab is not the preferred option?

**A.** (Snider) Yes, that's correct. We'd look at engaging our stakeholders, both the Province and the City, to determine -- to try to identify what the desired replacement would look like, but we'd further take a look at all options, a deeper examination.

**Q.** And that work would presumably include also how many lanes would be required, whether it's four, six; whether the active transportation lanes would be included, and the like. Is that correct?

**A.** (Snider) Yes, it would. That's correct.

[Transcript, pp. 124-126]

[38] During his testimony, Mr. Snider also confirmed that the HDBC has not approved the construction of a replacement for the MacKay Bridge. The Board is, therefore, satisfied that it is appropriate to include preliminary planning and design work associated with MacKay Bridge replacement/rehabilitation in the 2021-2031 capital plan.

[39] In its Closing Submission, the Commission noted that there is no engineering or other evidence in this proceeding that opposes the necessity of the capital works as described in the application. Overall, the Board finds that the projects included in the HDBC's 2021-2031 capital plan are necessary and appropriate to maintain the Bridges and ancillary structures to ensure they are kept in good operating condition.

#### **4.1.1.2 Projected Capital Costs**

[40] The HDBC's 2021-2031 capital plan cost estimates were developed by COWI. COWI estimated the cost of each capital work item in 2021 dollars and built up an expected annual budget for each structure. An annual inflation rate of 1.5% was then

applied to each annual budget to develop the estimated total capital expenditure that is expected for each year from 2021 to 2031. The estimated annual expenditures were reviewed by PwC, who concluded that the inclusion of inflation-adjusted capital expenditures in the Financial Projections appear to be consistent with the projected capital expenditures for the Projection Period.

[41] In IR-22, Board staff questioned the HDBC about using a 1.5% rate of inflation to develop annual capital cost estimates rather than using historical increases in relevant construction cost indices. The Commission responded that the 1.5% annual inflation rate represents the 10-year average increase in the Consumer Price Index (CPI) for Halifax, Nova Scotia. The Commission also stated a construction index that directly correlates to the type of construction projects that are performed on the Bridges does not exist. For comparative purposes, the Commission reviewed the Building Construction Price Index issued by Statistics Canada for Non-Residential Buildings in Halifax, Nova Scotia and found the average annual change over the 10 years to 2020 for that index was 1.9%.

[42] The issue of using a 1.5% annual inflation adjustment to develop annual capital cost estimates was canvassed further during the hearing:

**Q.** (Murphy) ... So my first question is, really, I guess, I just want to get some clarification as to why the Bridge Commission feels the 1.5 percent inflation factor that's based on CPI, which my understanding of the CPI is it includes cost increases related to such things as food and clothes and gasoline and whatnot, why that's a more relevant number to use to inflate costs as opposed to a construction cost index, recognizing that, you know, the non-residential index that was provided in the IR may not be directly related to, you know, similar, I guess, tasks relevance that would be included in bridge construction? But why does the Bridge Commission believe that that might not be as -- a more relevant way to increase costs relevant used -- rather than using the CPI Index?

**A.** (McFeters) Even though it was used in the COWI report -- perhaps I could answer it, because in this aspect the Bridge Commission gave the inflation factor to COWI to use in the numbers. And I would say the short answer to your question, Mr. Murphy, is that we didn't really drill in and study the components of the CPI and the non-residential construction cost to determine what was more relevant. Based on the last couple of years,

the 1.5 percent that CPI was producing felt reasonable, and so that's what we used in the projections. There was really nothing more – further than that.

**Q.** Okay. Well, maybe I could -- well, let me ask this to Mr. Matson first, then. Mr. Matson, what's your experience, I guess, as it relates to bridge construction costs over the past, say, 10 years, in terms of increases in, let's say, capital -- unit capital cost and labour costs, the like? Have they tended to be around that 1.5 percent number?

**A.** (Matson) So Mr. Murphy, I'm sorry, I don't have the history in my head, but for the most part, what we've found is that construction costs have actually been relatively stable, so whether it's 1.5 or 1.9 or it's -- you know, it's certainly not in the 3, 4, 5, 6 percent range.

We felt like the 1.5 that, as Mr. McFeters had said, is that the Commission gave us to use as an inflation rate, we felt that was reasonable for the bridge construction industry for what we were doing. You could easily argue it could be 1.9, but the 1.5 felt reasonable.

[Transcript, pp. 108-112]

[43] The Board finds that the use of a 1.5% inflation rate adjusted to develop capital costs estimates for the HDBC's 2021-2031 capital plan is appropriate.

[44] In response to Board staff IR-73b), the Commission indicated that the capital projects included in the 2021-2031 capital plan are the Commission's best estimate of the works that are required to maintain the Bridges. As such, the Commission does not believe that it is possible to defer any of the projects. The Commission did, however, note that some of the projects may shift from one year to the other within the 10-year period. In addition, in response to Board staff IR-10, the HDBC stated that smoothing efforts were undertaken to address peaks and valleys in the 10-year capital expenditure profile. The Board finds that this smoothing effort is appropriate.

[45] In its Closing Submission, the HDBC stated:

The Commission submits that there is less uncertainty in the cost projections for the Major Works given that they are not unique projects in the way that the Big Lift Project was. The Commission has experience with many of the Major Works, and there is less uncertainty associated with the cost projections for that reason. Further, some of the projects are currently underway, including the Macdonald Bridge paint and steel repair project, and have helped produce more reliable cost estimates.

[Exhibit H-10, p. 25]

The Board agrees. Overall, the Board finds that the capital cost estimates in the HDBC's 2021-2031 capital plan are appropriate and reasonable.

## **4.2 Financial Projections (Revenue Requirement)**

### **4.2.1 Evidence**

[46] In support of the application for a toll increase, HDBC provided statements of income and deficit, cash flows and trust funds. These statements included the actual results for 2020, a forecast for the year ending March 31, 2021, and a budget for the year ended March 31, 2022. Projected statements of income, cash flows and trust funds along with significant supporting assumptions were also provided for the nine-year period of April 1, 2022 to March 31, 2031. As discussed earlier, the projected costs of \$286.9 million over this period include \$253.1 million for projected work on the Bridges and ancillary structures and \$33.7 million for general capital expenditures.

[47] Projections over the next 10 years are based on a \$0.25 cash toll and \$0.20 MacPass toll increase for Class 1 customers and a 25% increase for all other currently approved tolls, with a few exceptions, effective January 3, 2022. A second toll increase, which would be effective April 1, 2026, has been factored into the projections but is not being considered at this time and will be the subject of a future application to the Board.

[48] The Commission will also be required to borrow additional funds in the coming years to finance Major Works. Along with the proposed toll increases there will

be an estimated \$155 million in debt financing, in five tranches, from the Province of Nova Scotia to fund capital costs and associated debt servicing costs. This additional debt financing is included in the projections.

[49] PwC was engaged by the Commission to provide an opinion about the reasonableness of the financial projections. PwC also performed sensitivity analyses with respect to the six key assumptions in the projections. These include:

- Projected traffic growth;
- Method of payment and vehicle type;
- Operations and Management expenses;
- Capital expenditures;
- Long-term debt financing and debt servicing; and
- Toll revenue increases.

#### **4.2.2 Projected Traffic Growth**

[50] PwC noted that traffic growth assumptions are the most critical assumptions underlying the financial projections. The Commission noted in its application that the COVID-19 pandemic had a significant impact on traffic volumes on the Bridges. Traffic volumes between April 1, 2020, and December 31, 2020, decreased on average by 24.5%. The Commission noted that it does not expect traffic to return to pre-pandemic levels until 2024. The Commission projects that after 2024 traffic is expected to increase by 0.5% per year based on the cumulative average increase in bridge traffic over the 24-year period ended March 31, 2020.

[51] PwC prepared a sensitivity analysis looking at cash balances based on various traffic volumes post-COVID-19. If traffic does not recover to pre-pandemic levels

by 2024, the Commission may be required to draw on its outstanding \$60 million revolving line of credit facility with the Province of Nova Scotia to fund short-term cash needs.

[52] Based on its observations and analysis, PwC concluded that the assumed increase in traffic growth appears consistent with related independent forecasts, historical trends and supporting data provided by management. MNP, Board Counsel's consultant, also conducted sensitivity analysis, which included testing for a further delay in the return to normal traffic levels beyond 2024, with some scenarios also having no toll increases. Most scenarios showed that if traffic levels did not return by 2024 the Commission may need to draw on its credit facility, or with no toll increases that the existing credit facility would not be sufficient. Accordingly, both PwC and MNP concluded the traffic projections were reasonable. The Board agrees. Among the factors to be considered at the time of the proposed 2026 toll increase will be how traffic volumes recovered after the pandemic.

#### **4.2.3 Method of Payment and Vehicle Type**

[53] The projected traffic was estimated by vehicle type and method of payment, either cash or MacPass. All classes of traffic were projected to increase by 5.0% a year through 2024, and 0.5% a year thereafter. The percentage of Class 1 customers using MacPass is projected to increase from 76.1% of users in 2020 to 80% in 2024; then the Commission expects it to stabilize. The remaining classes of customers are expected to remain at the same percentage of cash and MacPass use as was experienced during 2020.

[54] HDHC stated that although electronic tolling is easy and less expensive for customers, it is unlikely that MacPass usage will exceed 80% of tolls while cash is still an option. This is based on industry data and historical experience.

[55] PwC determined through its sensitivity analysis that if the proportion of MacPass users increases beyond what is projected to the maximum seen in the industry of 88%, the Commission will be required to draw on its revolving line of credit in 2022, 2029 and 2031 to meet cash flow needs.

#### **4.2.4 Operations and Maintenance (O&M) Expenses**

[56] The Commission forecasted O&M expenses on a detailed, line-by-line basis. Unionized wages are expected to increase by 1.9% annually and non-unionized wages by 1.5%. Maintenance expenses are expected to increase 3.5% per year and toll, IT and MacPass expenses are expected to increase by 4.0% a year. Other miscellaneous expenses are expected to increase by 1.0% per year.

[57] PwC determined through its sensitivity analysis that if expenses increase significantly above the forecasted amounts, the Commission may need to draw on its line of credit.

#### **4.2.5 Capital Expenditures**

[58] The projected capital expenditures are addressed in detail earlier in this decision.

#### **4.2.6 Long-Term Debt Financing and Debt Servicing Costs**

[59] HDBC currently has \$160.0 million of serial debenture financing through the Province of Nova Scotia that is being repaid at an average rate of \$8 million per year until 2038. The Commission also has access to \$60 million through its revolving line of credit. The Commission requires additional debt financing to fund projected capital expenditures. HDBC is forecasting the need for \$155.0 million in additional long-term debt, issued in five tranches from the Province of Nova Scotia, assuming that the currently proposed toll

increase is approved by the Board, followed by the projected toll increase in 2026. If the toll increase is not approved, PwC estimated that the required long-term debt amount would increase to \$365 million.

[60] PwC reviewed the interest rate assumptions and amortization terms of the proposed new debt. It researched interest rates using the latest Bloomberg Evaluated Pricing data available for the Province for all relevant amortization terms. Based on this analysis, the projected interest rates of 2.7% for 20-year serial debentures and 3.0% for 30-year debentures are higher than the rates provided by the Bloomberg Evaluated Pricing data and therefore are reasonable.

[61] PwC performed sensitivity analysis on the long-term debt interest rate assumptions. If rates were to increase significantly before new long-term debt was secured, the Commission may have to draw on its revolving line of credit to meet short-term cash flow needs.

#### **4.2.7 Toll Revenue Increases**

[62] The financial projections include two toll increases. The first one is the subject of this application and is proposed to come into effect January 2022, with the second proposed to come into effect in April 2026. The Commission advised that the first toll increase of 25% is the minimum that can be implemented considering the limitations of the current cash tolling system. The second projected increase is 20%, approval of which will be subject to Board approval of a future application by the HDBC.

[63] The Commission's financial models show that along with the new \$155.0 million in long-term debt, these increases are required to maintain positive cash flow through the subject period.

[64] PwC performed sensitivity analysis on the Commission's assumptions and determined that if the tolls were increased by a smaller amount, HDBC would exceed the limits of its \$60 million revolving line of credit and would require additional long-term debt.

[65] As discussed earlier, if the toll increase is not approved the Commission would need to borrow approximately \$365 million to fund capital expenditures.

#### **4.2.8 Debt Service Coverage Ratio**

[66] The Commission monitors two Debt Service Coverage Ratios (DSCRs); the DSCR under the Commission's existing loan agreement with the Province, and a benchmark minimum from guidelines issued by Standard & Poor (S&P) for the minimum DSCR required for an S&P rating of "Strong". The S&P benchmark is an internally monitored DSCR which is a more demanding standard as it includes both principal and interest payments, while the loan covenant with the Province only includes interest.

[67] The Province requires an additional debt covenant to test HDBC's ability to service its debt. This covenant requires that when the Commission obtains any additional debt, its revenues must not be less than the combined O&M and administrative expenses, plus two times the gross interest amount.

#### **4.2.9 MNP**

[68] The Board retained MNP to assess the reasonableness of the financial projections. MNP's report covered all the major issues and supports the Commission's position on the application.

#### **4.2.10 Findings**

[69] The Board accepts the Commission's projections as a reasonable representation of the future cash flow requirements for the operations of HDBC. The

Board is satisfied that the requested toll increase is required to cover capital expenditures for both the MacKay and Macdonald Bridges and that the timing of the proposed initial increase is appropriate.

[70] As noted by Mr. McFeters in his testimony, the second projected toll increase, and timing of that increase, was built into the financial model to match the additional revenue required for the projected capital expenditures. That proposed increase will be the subject of a future application to the Board.

### **4.3 Approval of Proposed Increases to Tolls, Rates and Charges**

#### **4.3.1 Tolls**

[71] As noted earlier in this decision, the Commission has applied to incorporate a 25% increase for all classes of vehicles, with two exceptions, namely, Access-A-Bus vehicles in Class 1 and buses in Class 9 with a seating capacity of 16 or more persons, for which no increase is proposed. The Commission requested the exemptions to encourage mass transit. For the majority of customers (i.e., two axle passenger vehicles), the cash toll would increase from \$1.00 to \$1.25, and the electronic toll (MacPass) would increase from \$0.80 to \$1.00. If approved, the proposed toll increases would become effective January 3, 2022.

[72] Unlike electric, water and natural gas utilities, the Board does not approve capital expenditures for the Commission. It only approves the tolls, rates and charges. However, the Board must be satisfied that any increases are necessary, just and reasonable.

[73] In support of the application, the Commission filed 10-year Financial Projections representing \$286.9 million in expenditures. As noted earlier, the Board finds

that the capital cost estimates in the Commission's 2021-2031 capital plan are reasonable and appropriate. The Commission's financial models show that along with new \$155.0 million in long-term debt, the toll increases are required to maintain positive cash flow throughout the subject period. PwC performed sensitivity analysis on the Commission's assumptions and determined that if the tolls were increased by a smaller amount, the Commission would exceed the limits of its \$60 million revolving line of credit and would require additional long-term debt. If the toll increase is not approved, the Commission would need to borrow approximately \$365 million to fund capital expenditures.

[74] Taking all of the above into account, the Board is satisfied that the requested toll increases are required to cover capital, O&M and general expenditures of the Commission and that the timing of the proposed initial increase is appropriate. The Board approves the proposed toll increases as outlined in Schedule A attached to this decision (Section I), effective January 3, 2022.

#### **4.3.2 Rates and Charges**

[75] The Commission also proposed amendments to Section II of its Schedule of Rates, Tolls and Charges respecting Electronic Toll Collection. It sought an increase in the minimum payment from \$15 to \$20 to manually or automatically replenish a MacPass account. It submitted this will assist in reducing the frequency of customer visits to the MacPass customer service centre and decrease the volume of transactions required to be processed. Further, it proposed to eliminate the \$1.00 monthly administration fee for those manually replenishing their MacPass account.

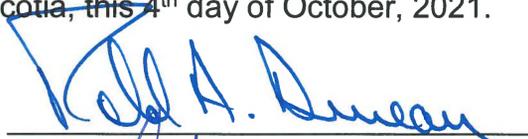
[76] The Commission also asked to eliminate photocopy charges of \$0.50 per page (minimum of \$3.00 per statement) for customers who request a printed account

statement because the account statements are available online, and requests for paper statements are infrequent. Finally, the Commission also proposed to eliminate the \$25 charge for returning an electronic toll transponder which is not in good operating condition. This charge was previously implemented in relation to reusable hardcase transponders, but currently the Commission is issuing sticker tags that are non-reusable and need not be returned.

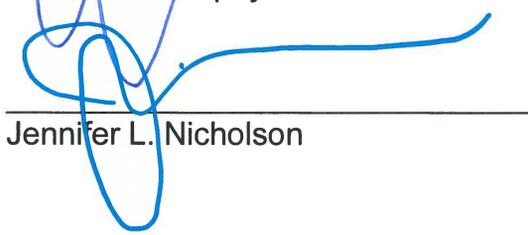
[77] The Board approves the proposed increase in the minimum payment from \$15 to \$20 to manually or automatically replenish a MacPass account. It also approves the elimination of the \$1.00 monthly administration fee, the photocopy charges, and the \$25 charge relating to the return of the hardcase transponders. The approved changes are reflected in Schedule A attached to this decision (Section II), also effective January 3, 2022.

[78] An Order will issue accordingly.

**DATED** at Halifax, Nova Scotia, this 4<sup>th</sup> day of October, 2021.

  
\_\_\_\_\_  
Roland A. Deveau

  
\_\_\_\_\_  
Steven M. Murphy

  
\_\_\_\_\_  
Jennifer L. Nicholson

**SCHEDULE A**

**HALIFAX-DARTMOUTH BRIDGE COMMISSION  
TARIFF OF RATES, TOLLS AND CHARGES  
SECTION I – SINGLE TRIP**

<b>Class 1</b>	<b>CASH</b>	<b>MACPASS</b>
Vehicles with two axles and single rear wheels (including motor cycles)	\$1.25	\$1.00
- when towing a single axle trailer	\$1.50	\$1.34
- when towing a dual axle trailer	\$2.25	\$1.66
- when towing a tri-axle axle trailer	\$2.50	\$2.00
<b>Class 2</b>		
Vehicles with two axles and dual rear wheels or equivalent	\$3.50	\$2.91
<b>Class 3</b>		
Vehicles with three axles	\$5.00	\$4.36
<b>Class 4</b>		
Vehicles with four axles	\$6.50	\$5.83
<b>Class 5</b>		
Vehicles with five axles	\$8.50	\$7.28
<b>Class 6</b>		
Vehicles with six axles	\$10.00	\$8.73
<b>Class 7</b>		
Vehicles with seven axles	\$11.50	\$10.19
<b>Class 8</b>		
Vehicles with eight axles	\$13.50	\$11.64
<b>Class 9</b>		
Buses having a seating capacity of 16 or more persons (including driver)	\$2.50	\$1.20
<b>Class 10</b>		
Access-A-Bus Vehicles	\$0.75	\$0.60

NOTE: Vehicles in Classes 2 and 3 when hauling a trailer will move into the appropriate class for toll purposes based on total number of axles, including the trailer.

## **SECTION II – ELECTRONIC TOLL COLLECTION**

1. Transponders shall be provided to MACPASS customers free of charge upon receipt of the appropriately completed application form, Customer Agreement and an initial payment of \$20.00 per transponder into their Prepaid Account.
2. MACPASS customers replenishing their Prepaid Account manually when their prepaid balance falls below the Low Account Level shall be required to make a payment in a minimum amount of \$20.00.
3. MACPASS customers who select automatic replenishment for their Prepaid Account will be automatically charged the Replenish Amount when the account balance is less than one third of the current Replenish Amount. An account with a \$30 replenishment will be charged \$30 when the account balance is less than \$10.
4. MACPASS customers requesting re-activation of a Prepaid Account which has been de-activated as a result of having insufficient funds in their Prepaid Account shall pay a reactivation fee of \$10.00 as set out in the Customer Agreement.
5. MACPASS customers' Prepaid Account will be charged \$10.00 for non-sufficient funds ("NSF") fees related to preauthorized debit/electronic funds transfer accounts and \$30.00 for a NSF cheque.