# SAULT STE. MARIE BRIDGE AUTHORITY 

BUSINESS PLAN
2024-2028
December 31, 2023

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## ACKNOWLEDGMENTS

In accordance with the Intergovernmental Agreement for the International Bridge, the Sault Ste. Marie Bridge Authority (SSMBA) and the International Bridge Administration (IBA) have prepared this five-year business plan to guide the management and operations of the International Bridge, located in Sault Ste. Marie, Ontario, and Sault Ste. Marie, Michigan. This document describes the history, the mission, organizational structure, and operations of the International Bridge.

The plan documents the relationship SSMBA and IBA have with federal, state, provincial, local public and private agencies, that are critical to the successful achievement of governance and operational goals.

SSMBA and IBA wish to recognize the leadership, dedication, and expertise that have been provided by the International Bridge Authority, Joint International Bridge Authority, and bridge staff over more than sixty years. Through their efforts, the International Bridge continues as a successful venture in international cooperation, linking together the people of two great countries.

The IBA wishes to acknowledge and recognize the invaluable assistance received from both the Michigan Department of Transportation (MDOT) and The Federal Bridge Corporation Limited (FBCL) in administering the 2022 asset management programs.

The preparation of this report was accomplished with the dedication and cooperation of many people. We would like to express our sincerest appreciation for the assistance given by the SSMBA Board of Directors, as well as the many IBA staff who have contributed to its preparation. This is a living document that enables SSMBA, MDOT, and FBCL to plan for the future of the Bridge as a means to providing safe, pleasurable, affordable, and expedient passage between Sault Ste. Marie, Ontario, and Sault Ste. Marie, Michigan.

We would like to recognize the bridge administration team who participated in critical roles in developing this report: Peter Petäinen, Karl Hansen, Emily Jacques, Cheryn Sanford, Marcus Eidenier, Fiore Cappelli, and Suzanne Moreau.

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## GLOSSARY OF ACRONYMS AND ABBREVIATIONS

| SSMBA | Sault Ste. Marie Bridge Authority | CP | Canadian Pacific Railway |
| :--- | :--- | :--- | :--- |
| MDOT | Michigan Department of Transportation | CN | Canadian National Railway |
| FBCL | The Federal Bridge Corporation Limited |  |  |
| IBA | International Bridge Administration |  |  |
| DHS | Department of Homeland Security | USD | U.S. Dollar |
| CBP | U.S. Customs and Border Protection | CDN | Canadian |
| CBSA | Canada Border Services Agency | FAST | Free and Secure Trade |
| OPP | Ontario Provincial Police | NEXUS | Pre-approved joint Canada-United Stated <br> traveler program <br> Emergency Response Plan |
| FHWA | Federal Highway Administration | ERP | Harmonized Sales Tax |
| TC | Transport Canada | AMP | Asset Management Plan |
| MTO | Ontario Ministry of Transportation |  |  |
| FEDNOR | Federal regional development organization <br> in Ontario <br> Department of Technology, Management <br> and Budget |  |  |

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## EXECUTIVE SUMMARY

The SSMBA business plan is presented in accordance with the Intergovernmental Agreement for the International Bridge, September 1, 2009. The Authority's business plan, read in conjunction with the Authority's annual audited financial statements, and interim quarterly financial reports, represent the Authority's expected financial status during the fiscal period 2024-2028. Unless indicated otherwise, all dollar amounts are reported in US currency.

## EXECUTIVE SUMMARY

The information summarized below for the budgetary periods for the Sault Ste. Marie Bridge Authority are presented in detail beginning on page 42 . The complete five year business plan may be reviewed on page 41. Proposed 2024 budget is presented as a calendar fiscal year budget. Budgets are approved annually and expire at the end of each fiscal year.

The proposed 2024-2028 Business Plan is based on best current available data and used to prepare the estimated revenues and proposed expenditures.

Traffic and revenue estimates are based solely on a planning assumption of the restoration of an unrestricted reopening of the border to bridge customers in the shortterm or early in the planning period. These estimates are for planning and budgeting purposes only, and may be significantly reduced below operationally sustainable levels under any unplanned future border disruption.

The business plan includes the policy and governance, strategic objectives, partnerships, customer characteristics, asset management and capital projects planning, financial operations, the 30 -year capital plan, and 30 -year long range financial plan. Respective projected budgets by department and accounts, are included. The Authority's preventative asset management program had been drastically curtailed for three construction seasons due to border restrictions. Preventive maintenance and capital maintenance costs escalate with an aging bridge. The ability to uphold the previous plan deferment of the nearterm $\$ 33.7$ million in capital projects immediately outside the five-year business planning period remains entirely dependent on a proper preventative maintenance program. A failure to restore sufficient revenue to restart preventative maintenance may result in the requirement of these capital projects being rescheduled earlier than expected. With capital reserves depleted and revenue insufficient to replenish depleted future capital reserves, or sustain long-term operations, there is substantial risk the Authority will be financially unable to meet the capital needs without respective owner support per the Inter-
governmental Agreement from The Federal Bridge Corporation Limited and Michigan Department of Transportation.

The fund balance summary represents the Bridge Administration's minimum operating fund balances, reserved fund balances, and respective owner reserve account fund balances throughout the planning period. Owner reserve accounts for long-term capital maintenance have declined or been eliminated during the 2020-2022 fiscal periods in order to meet and sustain current operational needs of the bridge and related facilities.

This document provides a historical perspective on traffic and revenues since 1980 to help frame the organization's strategic objectives and implementation strategies for the next five years. SSMBA and IBA present financial projections for the five-year business plan period 2024-2028, and the 30-year 2024-2053 long-range financial plan period.

The financial position reported herein is presented in accordance with the terms and conditions established in the Intergovernmental Agreement of September 1, 2009.

|  |  | 2024 |  | $\underline{2025}$ |  | $\underline{2026}$ |  | $\underline{2027}$ |  | $\underline{2028}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue Fund |  | 477,759 |  | 474,200 |  | 470,514 |  | 466,700 |  | 462,752 |
| Capital Fund |  | 101,731 |  | 105,292 |  | 108,977 |  | 112,791 |  | 116,739 |
| MDOT Capital Fund (owner's reserve) |  | 540,733 |  | 715,603 |  | 1,750,207 |  | 3,211,171 |  | 4,878,518 |
| FBCL Capital Fund (owner's reserve) |  | - |  | 174,870 |  | 1,209,474 |  | 2,670,438 |  | 4,337,785 |
| Fund Balance - Ending | \$ | 1,120,223 | \$ | 1,469,964 | \$ | 3,539,171 | \$ | 6,461,101 | \$ | 9,795,795 |

## Planning Assumptions:

The 2024-2028 Business Plan is based on best available planning assumptions. Key variables as noted below were used for calculating the revenues and expenditures for the entire planning period. All variables are subject to external economic changes during the planning period, resulting in variances from budget to actual performance.

## Capital Construction:

- Construction Factor: 5.40\%
- Inflation Factor: 4.00\%


## Revenue Fund Sheet:

Interest Rate: 1.00\%

## Budget Summaries:

- Budget Inflation Rate: 2.00\%


## Crossing Rates:

- Exchange Rate: 0.7700
- Annualized Traffic: 1.38\%


## Toll Rate Changes:

Toll rate changes are discussed on page 35 .

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Policy \& Governance

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## Mission Statement

The mission statement is based on a vision and core set of values that will guide bridge operations and planning.
"The Sault Ste. Marie Bridge Authority and the International Bridge Administration are committed to the safe and efficient movement of people and goods across the International Bridge between Sault Ste. Marie, Ontario and Sault Ste. Marie, Michigan. The International Bridge is an asset which must be maintained and preserved to protect the mobility of local, state and provincial residents, and to promote U.S. and Canadian trade, tourism and regional economic development."

## Vision

We will meet our customers' most important needs by providing safe, pleasurable, affordable, and expedient passage between Sault Ste. Marie, Ontario and Sault Ste. Marie, Michigan.

## Values

Our mission is based on these values:
Quality Achieving our best within our resources.
Teamwork Effectively involving SSMBA, IBA, MDOT, FBCL, federal, state, provincial, local public officials, and our customers.

Customer focus Knowing our customers and understanding their needs.
Responsibility For the care of the International Bridge and its employees.
Integrity Doing the right thing.
Pride In the International Bridge and the importance of our work.

## POLICY \& GOVERNANCE

## Sault Ste. Marie International Bridge

The Sault Ste. Marie International Bridge connects the cities of Sault Ste. Marie, Ontario with Sault Ste. Marie, Michigan. The International Bridge is owned by MDOT and FBCL. The bridge is operated under the terms of an Intergovernmental Agreement (Agreement) between MDOT and FBCL, through the SSMBA. SSMBA, consisting of eight people, provides operational and policy oversight for the management of the bridge. The four U.S. members are appointed and serve at the pleasure of the Governor of Michigan. The four Canadian members are appointed by FBCL.

SSMBA's responsibilities include: approving bridge tolls, operating budgets and business plans, rules for the use of the bridge and related properties, approval of the acquisition of property, capital investments on the bridge and related properties, and oversight of the investment of the bridge reserve fund, and levels of insurance, as provided by the Agreement.

The International Bridge Administration (IBA), is responsible to SSMBA. IBA is a separate administrative entity within MDOT, whose staff is composed of both

Canadian and American residents. IBA performs the day -to-day operations necessary to keep the bridge open to traffic 24 hours per day, year-round, and carries out the business plans and budgets approved by the SSMBA. Operations includes toll collections, bridge maintenance, capital improvements, and infrastructure security. As well IBA provides a wide range of other customer services necessary to ensure the efficient and safe movement of people and goods between Michigan and Ontario.

Sault Ste. Marie is the only vehicular crossing between Ontario and Michigan within a 349 mile radius. The communities as served by the bridge include populations of 13,410 for the City of Sault Ste. Marie, Michigan, and 72,051 for the City of Sault Ste. Marie, Ontario.

SSMBA Board of Directors and officers in place at the time of Board adoption of this plan are as follows:

## Sault Ste. Marie Bridge Authority Board of Directors

## Canadian Representatives

Ms. Natalie Kinloch
(2023 Chair)
Apple Hill, ON
Mr. Thye Lee
Ottawa, ON
Mr. Rémi Paquette
Ottawa, ON

## Canadian Representatives

Mr. Thomas Buckingham Sr.

(2023 Vice Chair)
Newberry, MI
Ms. Linda Hoath
Sault Ste. Marie, MI
Mr. Scott Shackleton
Sault Ste. Marie, MI
Mr. Nicholas White
Petoskey, MI

## POLICY \& GOVERNANCE

## History of the Bridge

## International Bridge Authority

The International Bridge Authority (IBA) was created by the State of Michigan in 1935, and given approval for an international crossing by an Information Act of Congress in 1940, with subsequent Acts extending the deadline. In 1955, the Canadian Parliament created the St. Mary's River Bridge Company (SMRBC) and granted it rights to construct an international crossing.

In 1960, the SMRBC assigned its rights to IBA. The Michigan State Highway Department, now known as the Michigan Department of Transportation (MDOT), agreed to construct the Michigan approach to the bridge. The cost to construct the bridge was $\$ 16$ million and the approach, building and equipment was $\$ 5$ million for a total of $\$ 21$ million. The State funded bridge approach tied the bridge into the interstate freeway system, with federal funds financing $90 \%$ of the bridge approach project. The International Bridge was designed by Dr. Carl Gronquist of the consulting engineering firm Steinman, Boynton, Gronquist and London. The bridge was financed by two series of bonds. Series A bonds totaling $\$ 8.4$ million (USD) were sold to private investors and were retired in 1983. Series B bonds totaling $\$ 7.85$ million (USD) were bought by the Province of Ontario, and were retired on September 1, 2000. The International Bridge was officially opened to traffic on October 31, 1962.

Prior to 1962, the only forms of transportation across the St. Mary's River, that separates the two cities, were ferries and a railroad bridge built in 1887.

IBA had three members from Michigan and two representatives from SMRBC. The Authority served as the decision making body for the bridge until September 1, 2000, when the bonds were retired and ownership of the bridge reverted to the State of Michigan and the SMRBC.

## Joint International Bridge Authority

On September 1, 2000, a 40-year "Intergovernmental Agreement for the International Bridge," established a new operating framework for the bridge. The agreement between MDOT and SMRBC provided for an equal Ca nadian/American partnership in the governance, management, operations, and financing of the bridge. The operating model functioned under the governance of the Joint International Bridge Authority (JIBA) Board of Directors, consisting of three Michigan and three Canadian members.

In 2009, SMRBC became a wholly-owned subsidiary of The Federal Bridge Corporation Limited, a Canadian Crown corporation.

## Sault Ste. Marie Bridge Authority

The Intergovernmental Agreement revision of September 1,2009 , established a modified governance and financial accounting structure. SSMBA, an eight-member Board of Directors made equally of Michigan and Canadian representation, replaced JIBA.

On February 1, 2015, a new Canadian parent Crown corporation, also named The Federal Bridge Corporation Limited (FBCL), was established, including the amalgamation of its subsidiaries, including St. Mary's River Bridge Company (SMRBC). The amalgamation completed and relieved the duties of the SMRBC Board of Directors after 60 years of dedicated service.

The fundamental operating and management principles established in the Agreement include:

- The bridge will be operated on a not-for-profit basis and all revenues will be dedicated and used exclusively for the cost of operating, repairing, improving and administering the bridge and related facilities.
- The bridge will strive to be financially selfsupporting with all administrative, operating, maintenance, and capital improvements paid out of toll and other bridge revenues.
- Separate owner reserve accounts for MDOT and FBCL, for future maintenance and capital improvement projects.
- The tolls in the currency of Canada will be established so as to achieve equivalency with United States currency under prevailing official currency exchange rates. (Intergovernmental Agreement Article X ).
- Taxes or assessments paid directly to a Canadian local unit of government an equal sum will be paid by the bridge to the equivalent Michigan local unit of government.
- The bridge will strive for balance in awarding contracts to Michigan and Ontario firms.


## POLICY \& GOVERNANCE

## Partnerships

A wide range of Canadian and U.S. federal, state, provincial, and local public and private agencies partner with IBA in fulfillment of its responsibilities. These include, on the American side: U.S. Environmental Protection Agency, General Services Administration, U.S. Department of Homeland Security, U.S. Customs and Border Protection, U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Department of Agriculture, Michigan State Police, Michigan Occupational Safety and Health Administration, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, Michigan Department of Technology Management and Budget, Chippewa County, and the City of Sault Ste. Marie, Michigan.

On the Canadian side, IBA interacts with: Canada Border Services Agency, Canadian Environmental Assessment Agency, Environment Canada, Transport Canada, Parks Canada, Ontario Ministry of Transportation, Ontario Ministry of Economic Development and Trade, the Ontario Ministry of Labor, Ontario Ministry of Public Works, the Royal Canadian Mounted Police, the Ontario Provincial Police, and the City of Sault Ste. Marie, Ontario.

The bridge itself is located on easements over property owned by other agencies. These include: the U.S. Army Corps of Engineers, Parks Canada, and the cities of Sault Ste. Marie, Ontario and Michigan.

Safety for both customers and employees is a high priority for IBA. In this regard, IBA maintains positive relationships and emergency response coordination with local Ontario and Michigan agencies such as the police departments, fire departments, and ambulance services as outlined in the IBA "Emergency Response Plan".

IBA actively supports local activities and events to strengthen and unite the two communities. For example, annually on the last Saturday in June, IBA hosts a bridge walk sponsored by the Sault Ste. Marie Ontario and Michigan Chambers of Commerce, in conjunction with the U.S. Army Corps of Engineers "Engineer's Day" Locks Festival.

IBA also provides speakers to local civic and governmental groups to provide information on bridge operations, and seeks to support community events when asked to participate.

IBA helps to promote the local economy as well as have positive relations with the local communities. IBA is represented on the Sault Ste. Marie, Ontario and Michigan Chambers of Commerce, and the Sault Ste. Marie Ontario Transportation Infrastructure Task Force. IBA also conducts limited bridge tours for area civic, professional, and student groups.

The IBA Bridge Director is the current Bridge and Tunnel Operators Association elected President.

IBA leases access rights to the plazas for adjacent dutyfree stores and telecommunications conduit usage on the bridge.

## POLICY \& GOVERNANCE

## International Bridge Administration

IBA is managed by a Bridge Director, responsible for the MDOT employees assigned to IBA, under the supervision of the Chief Administrative Officer of MDOT. Under the terms of the Intergovernmental Agreement, all IBA personnel are MDOT employees. The staffing goal is to have balanced U.S. and Canadian resident employment. The staffing level for the International Bridge is typically 35 full-time employees, with additional seasonal employees as determined by the planned capital and routine maintenance projects.

Additionally, IBA receives supportive services from MDOT including: human resources, planning, payroll, contracting, engineering, information technology assistance, as well as assistance from the MDOT field crew. IBA determines current staffing levels based on the functions needed to deliver the annual construction and preventive maintenance program.

The management team for the IBA finance department includes the Chief Financial Officer, who is responsible for all the finance and budget functions.

The operations and services department includes the Operations Manager, who oversees the day-to-day toll and traffic management.

The Bridge Engineer is responsible for managing capital projects and all the maintenance functions. Day-to-day maintenance responsibilities are under the supervision of a Bridge and Facilities Asset Manager for the ongoing asset management of the bridge. This also includes the toll plaza, the Canada Border Services Agency (CBSA) plaza and the various building and inspection facilities for CBSA on the Canadian plaza. Facilities include: office buildings, maintenance buildings, CBSA traffic and commercial buildings, inspection booths, and all traffic movement areas.

The Office Manager is responsible for all personnel transactions and human resource coordination.

With severely depressed traffic volumes and revenue as traffic recovers from post-COVID border restrictions, IBA is filling staff vacancies only on an as-needed basis.





| Student Assistant's |
| :--- |
| VACANT |
| STUDASTEH1ON |


| VACANT <br> CALCASTEB84R <br> LT-Calculations Assistant5 |
| :--- |
| 1091253-Suzanne Moreau <br> ACCTCHAB91R <br> Accounting Tech 10 |



Strategic Objectives

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## STRATEGIC OBJECTIVES

## Strategic Areas of Focus

## Leadership

Align the organization to carry out SSMBA mission, achieve the vision and demonstrate the values.

- Establish clear, measurable and aligned performance goals and desired outcomes across the organization.
- Regularly evaluate organizational performance, adjust direction as necessary.


## Customer-Centered

Understand our customers' most important needs to achieve a more customer-focused agency that results in better service and lower cost.

- Align our programs and services to be responsive to customer feedback.
- Be accountable and transparent to our customers through tracking and reporting on key performance metrics.


## System Focus

Provide cost-effective, integrated and sustainable solutions in the maintenance of the bridge and plaza facilities.

- Apply asset management principles to prioritize and implement the most cost-effective investment strategies.
- Optimize the value of investments by employing solutions for how assets are used to move people, goods and services.


## Safety \& Security

Ensure the International Bridge structure is safely maintained, and ensure the safety of staff through incorporation of safety in all our maintenance and operational efforts.

- Foster communication, coordination and collaboration with our public and private safety partners.


## Innovative \& Efficient

Move people and goods through better customer-centered services and performance-driven decision-making.

- Pursue innovations, transformational changes and organizational efficiencies.
- Manage performance to provide value and better customer-centered results.


## Workforce

Recruit, develop, and retain a high-performing workforce.

- Target employee development to improve organizational performance, with a focus on customer service.
- Use workforce planning to increase flexibility in the workplace.
- Value, engage and empower our employees at all levels of the organization.


## Partners

Foster and sustain partnerships to optimize operations and achieve customer-centered results.

- Prioritize and strengthen partnerships that create organizational efficiencies.


## The IBA (MDOT) House

The House is a system of interconnected standards and processes, working together to ensure that IBA has employees that are equipped and ready to support IBA operations both now and into the future.

- Developing current and future leaders.
- Assessing and adjusting roles and staffing to address future needs.
- Capturing wisdom and information to equip our workforce.
- Recruiting, developing and maintaining top talent.
- Setting you up for success in your current position and future career opportunities.


## LEADERSHIP STANDARDS OF EXCELLENGE



## Our People \& Our Future

The Leadership Standards of Excellence (LSE) are the higher standard we expect from those who manage others. LSE clarifies what skills, competencies, and behaviors are essential for all leaders to demonstrate and provides guidance on the type of leaders we want to hire. This is important for performance and accountability to ensure our current and future success.

The LSE has five focus areas:
Visionary, Ensure Positive Outcomes, People First, Professional Excellence, and Character and Integrity.

Represents the skills, competencies and behaviors essential for all MDOT leaders to demonstrate, ensuring the Agency's current and future success.

The Role Assessment Model (RAM) focuses on positions, not the people performing them. The goal of RAM is to ensure IBA's positions are clearly defined, efficiently designed, and optimally utilized to meet the needs of the organization. Having a greater understanding of the skills, knowledge, and expertise required by each of our positions and how they contribute to the agency's success helps us understand how to recruit, develop employees, and use the right knowledge transfer tools to ensure we retain intellectual capital.

RAM looks at all roles within the department and organizes them into four categories:
Critical Roles, Specialty Roles, Operational Roles, and Professional Roles.


Talent Reviews (TRP) are held twice per year for leaders to collectively identify ways to strengthen and develop our workforce. Conversation, Consistency and Calibration produce intentional culture where employee development is positioned at its core.

The TRP has multiple benefits for the department:
TRP Benefits to Managers

- Better inventory of work unit skills, competencies, and needs.
- Framework for evaluating and communicating performance progress with employees.
- Ensures consistent expectations and measurement across the agency.

TRP Benefits to Employees

- More honest, open opportunity for dialogue.
- Managers provide guidance for professional growth and development.
- Performance and accomplishments acknowledged on a broader scale.

The Employee Life Cycle is where and how our employees experience one MDOT. Five cycles reflect the employee experience:

- Recruiting and Selection: how we go about bringing in the best people,
- Onboarding: what your early experiences are when you begin your career,
- Performance Management: creating a clear vision for you to succeed,
- Learning and Development: supporting you as you learn and grow as an employee,
- Disembarking: making sure all goes smoothly as you leave your position.

This cycle isn't just about your first position at MDOT. These phases are important for each new position you take in your career with the department. When you leave one job and move into another, we need to make sure you're well positioned to succeed and the person who takes your spot is in the same boat themselves.



Knowledge Management is the continuous practice of capturing, sharing, and applying information and wisdom. We want our intellectual capital to purposely flow within and across MDOT and be readily accessible to employees.

The Knowledge Management System (KMS) has three distinct types: Person to Person, Communities of Learning, and Processes and Information.

Each type has activities, systems, and procedures that support one another. The KMS will help manage knowledge in the department, help us eliminate singleperson dependencies and focus on employees as teachers and sharers of wisdom.

In addition, employees will experience new and fun ways to learn while having access to information needed to do their jobs well.

Customer Characteristics

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## CUSTOMER CHARACTERISTICS

## Customer Characteristics

## Customer Profile

The census population in 2021 for Sault Ste. Marie, Ontario, was $72,051^{1}$. Sault Ste. Marie, MI was $13,410^{2}$. An MDOT 2015 Origin/Destination study conducted, indicates approximately $80 \%$ of bridge users are Canadian. Local Sault Ste. Marie, Michigan retail outlets, through the Chamber of Commerce, estimate that greater than $30 \%$ of customer sales are Canadian.

## Traffic Summary

International Bridge traffic typically averaged 1.45 million crossings annually. Annual traffic volumes are heavily dependent on both changes in the economic conditions and populations of the local communities, as well as any significant currency fluctuation in the Canadian/U.S. exchange rate. Annual Percentage changes in traffic as compared to percentage changes in the Canadian/U.S. exchange rate are illustrated in Figure 2.

In fiscal year 2022, due to the border restrictions and COVID-19, 624,960 vehicles crossed the International Bridge. This included 558,063 cars and motorcycles, and 66,897 trucks and buses. Approximately $88 \%$ of the auto traffic took advantage of the discounts offered through the bridge's I.Q. Prox (RFID) commuter program. Account usage is comparable to the population of the respective communities, with $84 \%$ of active accounts being Canadian currency and $16 \%$ U.S. currency.

While commercial trucks represented $10.7 \%$ of the crossings, they accounted for $89.0 \%$ of toll revenue. The most prevalent were trucks with five axles and large rigs with nine or more axles, reflecting the regions reliance on timber, paper, steel, and other heavy industries.


Figure 2: Percent Change in Average Bridge Traffic \& Exchange Rate

1. Statistics Canada. 2022. (table). Census Profile. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released September 21, 2022. https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E (accessed October 25, 2022).
2. United States Census Bureau. Sault Ste. Marie [Population centre], Michigan. Census Profile. July 1, 2018. https://www.census.gov/ quickfacts/fact/table/saultstemariecitymichigan/PST045218

## CUSTOMER CHARACTERISTICS

## Passenger Vehicle Profile

IBA conducted bridge traffic Origin and Destination (O\&D) studies in 2009 and 2015. A new traffic study is due to be conducted. ${ }^{1}$

The 2009 survey was conducted in June during the peak traffic season of the bridge. The 2015 study was conducted during May, at traffic volumes consistent through 8 months of the calendar year.

The number of passengers per vehicle remained largely the same by trip purpose. The overall occupancy rate decreased slightly from 1.64 in 2009 , to 1.59 in 2015. This is consistent with the timing of the survey. The seasonal outdoor recreation trips raised the occupancy rate in 2009, while the greater representation of shopping trips lowered the overall average in 2015.

Trip ends remained largely the same; however, there was less trip diversity in 2015, as more trips were made between the U.S. and Canadian Sault Ste. Marie.

The frequency of shopping trips increased to 1,226 crossings from 630 shopping trips, accounting for $53 \%$

| Table X |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Passenger Vehicle Trip Destinations |  |  |  |  |
| NORTHBOUND | $\#$ | aadt* | pct | Avg trip <br> length |
| Home | 697 | 1897.75 | $80.27 \%$ | 48.00 |
| Work | 40 | 84.64 | $3.58 \%$ | 152.67 |
| School | 6 | 15.57 | $0.66 \%$ | 92.48 |
| Shopping | 22 | 50.62 | $2.14 \%$ | 16.03 |
| Personal Business | 24 | 61.29 | $2.59 \%$ | 254.06 |
| Outdoor Rec. | 37 | 86.91 | $3.68 \%$ | 331.55 |
| Indoor Rec. | 11 | 31.60 | $1.34 \%$ | 275.62 |
| Lodging | 16 | 42.47 | $1.80 \%$ | 415.62 |
| Social/Other | 29 | 77.59 | $3.28 \%$ | 218.43 |
| No Answer | 6 | 15.84 | $0.67 \%$ | 162.51 |
| TOTAL | $\mathbf{8 8 8}$ | $\mathbf{2 3 6 4 . 3 4}$ | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{8 3 . 2 9}$ |

*aadt-average annual daily traffic
of all passenger trips, as compared to the $29 \%$ in the 2009 survey. This is consistent with the timing of the survey comparing peak summer traffic to the average daily commuter bridge traffic.

In 2015, $63 \%$ of people indicated that they traveled less than in previous years attributed this to the exchange rate, as compared to only $9 \%$ in 2009. People were much less likely to cite backup and delay in 2015 (two percent compared to $10 \%$ ).

Passenger vehicle summaries are displayed in Tables X and Y .

## Nexus Card

In 2015, drivers were asked whether they possessed a Nexus Card and to explain why if they did not.

Of passenger vehicles surveyed $73 \%$ responded that they did not possess a Nexus Card and gave their explanation as no reason or other. Of these, many gave a verbal response to the surveyors that they did not have a card because they already have a passport. Additional reasons offered include: people see no reason to get the card, there are no major backups, and US Customs and Border Protection often open a Nexus lane for only a few hours.

| Table Y |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Passenger Vehicle Trip Destinations |  |  |  |  |
| SOUTHBOUND | $\#$ | aadt | pct | Avg trip <br> length |
| Home | 133 | 236.57 | $10.01 \%$ | 226.17 |
| Work | 102 | 200.57 | $8.48 \%$ | 109.06 |
| School | 15 | 26.96 | $1.14 \%$ | 89.21 |
| Shopping | 660 | 1174.90 | $49.69 \%$ | 23.69 |
| Personal Business | 116 | 206.32 | $8.73 \%$ | 114.13 |
| Outdoor Rec. | 42 | 79.09 | $3.35 \%$ | 218.87 |
| Indoor Rec. | 92 | 163.62 | $6.92 \%$ | 87.47 |
| Lodging | 6 | 11.05 | $0.47 \%$ | 184.11 |
| Social/Other | 76 | 135.19 | $5.72 \%$ | 159.15 |
| No Answer | 73 | 129.86 | $5.49 \%$ | 126.00 |
| TOTAL | $\mathbf{1 3 1 5}$ | $\mathbf{2 3 6 4 . 3 5}$ | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{8 7 . 5 2}$ |

${ }^{1}$ Previous studies were conducted by MDOT Planning Staff. However, MDOT no longer completes such studies, so IBA is evaluating other means to conduct a study.

## CUSTOMER CHARACTERISTICS

## Commercial Vehicle Profile

Sault Ste. Marie is the largest international trade crossing in northwestern Ontario. In 2016, the Sault Ste. Marie crossing ranked 19th of 79 among all U.S. and Canadian border crossings in terms of dollar value of trade volume. This equated to $\$ 1.483$ billion in U.S. dollars (USD) in total trade. Total trade value of the crossing consisted of $\$ 808.4$ million (USD) in Canadian exports and $\$ 674.7$ million (USD) in U.S. exports. Ontario accounted for the largest share of exports with $\$ 460.0$ million (USD), followed by Quebec at $\$ 333.4$ million (USD). Conversely, Wisconsin was the largest exporting state at $\$ 200.1$ million (USD), followed by Minnesota at $\$ 95.1$ million (USD) and Michigan at $\$ 73.5$ million (USD).

The International Bridge connects to the Trans-Canada Highway and is a convenient route for goods transported from northeastern and eastern Ontario, and from Quebec to the Upper Great Lakes states. The crossing is connected directly to the major north-south artery I-75 and to Michigan Highway 28, which runs south of Lake Superior into Wisconsin and Minnesota.

Long distance commercial trips are prevalent with an average trip distance of 591 miles. Common trip ends were Sault Ste. Marie and Quebec for Canadian cities and Sault Ste. Marie and Brimley in the United States.

Empty trucks accounted for $28 \%$ of all trucks, with $32 \%$ travelling empty into Canada, and $25 \%$ empty into the United States.

Table Z shows the top five commercial vehicle trip ends by direction for the International Bridge O\&D study. Commercial trip ends have greater diversity than passenger crossings. The top five northbound origins and southbound destinations account for around $39 \%$ and $28 \%$ respectively of their classifications. The top five southbound origins and northbound destinations account for $77 \%$ and $74 \%$ of their respective classifications.

Table Z: Top Five International Bridge Truck Trip Ends
NORTHBOUND—Avg. Trip Distance 617.31 miles

| ORIGINS | SURVEYS | AADT <br> EXPANDED | PERCENT |
| :--- | :---: | :---: | :---: |
| Sault Ste. Marie | 10 | 23.74 | $12.96 \%$ |
| Brimley | 7 | 14.81 | $8.08 \%$ |
| Minnesota (MN) | 5 | 13.99 | $7.64 \%$ |
| Dafter | 4 | 9.58 | $5.23 \%$ |
| Arcadia, WI | 3 | 8.44 | $4.61 \%$ |


| DESTINATIONS | SURVEYS | AADT <br> EXPANDED | PERCENT |
| :--- | :---: | :---: | :---: |
| Sault Ste. Marie | 37 | 89.01 | $48.59 \%$ |
| Quebec | 9 | 28.57 | $15.60 \%$ |
| Toronto | 2 | 6.04 | $3.30 \%$ |
| Thunder Bay | 2 | 6.04 | $3.30 \%$ |
| Ottawa | 2 | 6.04 | $3.30 \%$ |

SOUTHBOUND—Avg. Trip Distance 565.57 miles

| ORIGINS | SURVEYS | EXPADT | AADD |
| :--- | :---: | :---: | :---: | PERCENT | Sault Ste. Marie | 53 | 97.63 |
| :--- | :---: | :---: |
| Quebec | 15 | 29.35 |
| Dryden | 3 | 6.15 |
| Sudbury | 2 | 4.39 |
| Cornwall | 2 | 3.96 |


| DESTINATIONS | SURVEYS | AADT <br> EXPANDED | PERCENT |
| :--- | :---: | :---: | :---: |
| Sault Ste. Marie | 12 | 21.88 | $11.95 \%$ |
| Brimley | 6 | 11.00 | $6.00 \%$ |
| Port Huron | 4 | 8.35 | $4.56 \%$ |
| Dafter | 3 | 5.16 | $2.82 \%$ |
| Manistique | 3 | 4.95 | $2.70 \%$ |

## Crossings: Canada to the United States

The value of trade crossing in Sault Ste. Marie is equally represented by Ontario and Quebec, which are the largest components of trade at approximately $\$ 613.1$ million (USD) and $\$ 618.6$ million respectively. This is $48.6 \%$ and $49.1 \%$ of the value of goods crossing in 2022, to the United States.

| Source-Canada to U.S. | Value of <br> Trade | Percentage |
| :--- | ---: | ---: |
| Quebec | 618.6 | $49.1 \%$ |
| Ontario | 613.1 | $48.6 \%$ |
| Other Provinces | 29.0 | $2.3 \%$ |
| Total | $\$ 1,260.7$ | $100.0 \%$ |

The destinations for trade from Canada are: Michigan, Montana, Wisconsin, Minnesota and Indiana. These five States make up $65.7 \%$ of the total U.S. bound destinations.

| Destination—Canada. to US | Value of <br> Trade | Percentage |
| :--- | ---: | ---: |
| Michigan | 288.7 | $22.9 \%$ |
| Wisconsin | 183.9 | $14.6 \%$ |
| Minnesota | 149.0 | $11.8 \%$ |
| Montana | 140.0 | $11.1 \%$ |
| Indiana | 66.7 | $5.3 \%$ |
| Other States | 432.4 | $34.3 \%$ |
| Total | $\$ 1,260.7$ | $100.0 \%$ |

## Commodities - Canada to U.S.

The available cross-border commodities data for Sault Ste. Marie is available from U.S. Department of Transportation, Research and Innovative Technology Administration (USDOT/RITA) beginning in 2009, and thereafter. Presented on page 25 are the top nine commodities exported from Canada to the United States. The largest commodity is Wood and articles of wood which represented an average of $23.1 \%$ of the total southbound commodities crossing the bridge.


## CUSTOMER CHARACTERISTICS

Crossings: Canada to the United States (Continued)

| Type of Commodity | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wood and articles of wood | 160.9 | 181.9 | 187.5 | 180.1 | 191.6 | 310.4 | 318.3 |
| Iron and Steel | 129.6 | 152.8 | 193.2 | 187.6 | 161.7 | 277.6 | 223.0 |
| Nuclear reactors, boilers, machinery and mechanical appliances, computers | 103.2 | 105.8 | 106.5 | 94.1 | 84.3 | 104.9 | 137.8 |
| Vehicles, other than railway or tramway rolling stock, and parts | 77.3 | 67.1 | 60.1 | 79.9 | 87.7 | 98.1 | 116.2 |
| Natural or cultured pearls, precious or semiprecious stones and metals | 27.5 | 28.7 | 28.2 | 105.2 | 178.4 | 213.8 | 133.0 |
| Special Classification provisions | 75.1 | 73.8 | 71.0 | 77.7 | 57.3 | 53.6 | 50.2 |
| Paper and paperboard | 55.5 | 54.9 | 43.6 | 45.1 | 42.6 | 36.5 | 34.3 |
| Plastics and articles thereof | 26.5 | 24.4 | 25.0 | 22.2 | 28.6 | 38.0 | 30.2 |
| Aluminum and articles thereof | 25.8 | 17.3 | 11.8 | 14.1 | 21.5 | 57.4 | 46.2 |
| All other | 127.1 | 131.5 | 129.9 | 132.4 | 144.0 | 154.3 | 171.5 |
| Total \$ (in Millions) | \$808.5 | \$838.2 | \$856.8 | \$938.4 | \$997.7 | \$1,344.6 | \$1,260.7 |


| Q |
| :---: |
| Select Start Date January, 2022 |
| Select End Date <br> December, 2022 |
| Compare Time Period Previous Year |
| Select Measure Value (in Millions) |
| Go To the Last 12 <br> Months Trend |
| $\begin{aligned} & \text { Top } N \\ & 10 \end{aligned}$ |
| Trade Type Import |
| Port District All |
| Port /District Nec All |
| Port State All |
| U.S. Port <br> Sault Ste Marie - Michigan |
| Commodity Group All |
| Commodity Name All |
| Notes: Shipment weight for exports are only available for the air and vessel modes. |
| Customs and Border Protection separated the Ysleta Port of Ent. |

## Crossings: United States to Canada

Conversely, the trade value from the U.S. to Canada was $\$ 1,080.0$ million (USD). The top 5 States of origin in 2022, are illustrated in the following table:

| Source—U.S. to Canada | Value of <br> Trade | Percentage |
| :--- | ---: | ---: |
| Wisconsin | 187.8 | $17.4 \%$ |
| Michigan | 155.9 | $14.4 \%$ |
| Minnesota | 126.1 | $11.7 \%$ |
| Illinois | 118.1 | $10.9 \%$ |
| Idaho | 99.9 | $9.2 \%$ |
| Other | 392.2 | $36.4 \%$ |
| Total | $\$ 1,080.0$ | $100.0 \%$ |


| Destination--U.S. to Canada | Value of <br> Trade | Percentage |
| :--- | ---: | ---: |
| Ontario | $1,078.0$ | $99.8 \%$ |
| Quebec | 1.0 | $0.1 \%$ |
| Manitoba | 1.0 | $0.1 \%$ |
| Total | $\$ 1,080.0$ | $100.0 \%$ |

The overwhelming majority, $99.8 \%$ of the value of trade of $\$ 1,080.0$ million (USD), originating in the United States, was destined for Ontario.

## Commodities - U.S. to Canada

The top nine commodities for Sault Ste. Marie are shown in table and graph format for goods exported from the United States to Canada. The largest commodity is Nuclear reactors, boilers, computers and machinery which represented an average of $23.4 \%$ of the total northbound commodities crossing the bridge.


Crossings: United States to Canada (Continued)

| Type of Commodity | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nuclear reactors, boilers, machinery, and mechanical appliances, computers | 164.6 | 180.5 | 195.0 | 207.3 | 200.3 | 249.0 | 252.2 |
| Inorganic chemicals, organic or inorganic compounds of precious metals and other | 21.8 | 10.4 | 32.6 | 112.7 | 220.8 | 153.2 | 28.5 |
| Paper and paperboard | 49.0 | 60.6 | 64.4 | 58.6 | 52.8 | 54.2 | 51.2 |
| Natural or cultured pearls, precious or semiprecious stones, precious metals | 0.8 | 0.4 | 0.8 | 1.7 | 97.1 | 129.5 | 96.1 |
| Vehicles, other than railway or tramway rolling stock, and parts and accessories thereof | 58.8 | 66.3 | 70.2 | 69.9 | 58.6 | 90.4 | 108.1 |
| Plastics and articles thereof | 36.8 | 58.4 | 52.1 | 52.2 | 50.8 | 63.4 | 73.4 |
| Ships, boats, and floating structures | 25.4 | 32.8 | 36.2 | 27.5 | 26.8 | 49.1 | 56.0 |
| Electrical machinery and equipment and parts thereof | 27.9 | 28.7 | 40.7 | 45.4 | 36.5 | 34.0 | 48.2 |
| Iron and steel | 20.4 | 25.3 | 44.5 | 41.1 | 29.8 | 47.3 | 63.2 |
| All Others | 269.3 | 330.8 | 326.0 | 335.1 | 275.5 | 314.2 | 303.1 |
| Total \$ (in Millions) | \$674.7 | \$794.1 | \$862.5 | \$951.5 | \$1,049.0 | \$1,184.3 | \$1,080.0 |


| Q |
| :---: |
| Select Start Date January, 2022 |
| Select End Date December, 2022 |
| Compare Time Period Previous Year |
| Select Measure Value (in Millions) |
| Go To the Last 12 <br> Months Trend |
| $\begin{aligned} & \text { Top } N \\ & 10 \end{aligned}$ |
| Trade Type Export |
| Port District All |
| Port /District Nec All |
| Port State <br> All |
| U.S. Port Sault Ste Marie - Michigan |
| Commodity Group All |
| Commodity Name All |
| Notes: Shipment weight for exports are only available for the air and vessel modes. |
| Customs and Border Protection separated the Ysleta Port of Ent. |

Performance of U.S.- North American Freight by Port, Commodity, and Mode - Value (in Millions)


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Financial Operations

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## FINANCIAL OPERATIONS

## Financial Operations

## Toll Collection

Bridge tolls are collected from both northbound and southbound traffic by toll staff booths located on the IBA toll plaza. The number of toll staff assigned at any time is dictated by traffic volumes, and may vary from one to four collectors on duty. Tolls collected are reconciled with the actual lane treadle counts on a daily basis.

Toll collection is a combination of manual and automated services. Effective August 10, 2022, IBA has successfully transitioned its toll software services under contract with IBI Group from the previous provider Conduent, including:

- IBI toll software suite (lane, online, back office components);
- touchscreen computers, mobile terminals, credit card terminals in each currency;
- treadle devices (which count the number of axles per vehicle - located in the road bed);
- loop detectors (which detect the physical mass of vehicles - located in the road bed);
- automated gates;
- internal RFID proximity card readers;
- laser vehicle profile detectors and 6 C vehicle tags and antenna;
- customer account secure web portal access, with vendor hosted credit card solutions.

The International Bridge Administration has maintained full toll lane automation since 2008, for account holders, first utilizing magnetic and HID Global proximity cards as a basis for the card programs. The IBA system utilizes a 125 kHz device proximity card, with a known range of $0-6$ inches. Cards issuance has been discontinued at IBI and existing cards in service will be phased out by the end of 2023. IBA now issues tags using the International Organization for Standardization ("ISO") 18000-63 (commonly known as " 6 C "). A tag fee of $\$ 2.00$ U.S. or $\$ 2.00 \mathrm{CDN}$ is assessed per tag.

Color Digital Message Signs (DMS) from Adaptive are installed on the toll canopy to inform customers which lanes are automated and which lanes are staffed for mixed transaction types.

Commercial carriers have the option of paying the toll in cash or by prepaid bridge account. Monthly activity and
balance statements are electronically issued to all debit account owners.

## Toll Equivalency

Article X of the Intergovernmental Agreement, effective September 1, 2009, states, "The tolls will be separately established in the currency of Canada so as to achieve equivalency with United States currency under prevailing official currency exchange rates. IBA shall make periodic adjustments to account for changes in the exchange rates as provided in Section 3 of this Article."

Section 3 states, "Effective on April 1 and October 1 of each year the IBA shall adjust the level of the toll in Canadian currency to achieve equivalence with currency of the United States as provided in this section. The adjustment will be based on the average daily official exchange rate for the six-month period preceding March 1 or September 1, respectively. Adjustments will be made if the toll rate inequality, between the average daily exchange rate, and the exchange rate then in effect, is equal to at least 5 cents for regular-fare passenger vehicles, in the currency of either Canada or the United States. The adjustment shall be made to the nearest nickel, rounded as may be necessary for administrative efficiency."

Canadian currency toll rates were adjusted accordingly on April 1, 2023. The weakened Canadian dollar resulted in a currency equity adjustment based on a currency equity factor of 0.7916 .

## Toll Rate Schedule

The most recent toll increase took effect on October 1, 2023 following public hearings held in July 2023 and SSMBA approval on August 17, 2023. The toll increase was based on a 10 -year declining bridge traffic trend. In 2006, total traffic was almost one half of the 1992 high of 3.6 million crossings. Financial fund balance forecasts were based on projected toll revenue as well as planned operational and capital improvement expenditures for the period 2014 through 2053, developed by IBA to aid in long-range financial planning.

The toll rate increase was based on significant capital improvement expenditures planned per SSMBA Capital Plan, for the 60 -year old bridge in the planning period.

The current toll rates for all vehicle classifications in U.S. and Canadian currency is listed on page 38.

Toll Trends - U.S.



Toll Trends - Canadian




FINANCIAL OPERATIONS

## Toll Rate Comparison

The following table shows rates effective April 1, 2023, for all crossings in the Bridge and Tunnel Operator Association (BTOA) plus the Mackinac Bridge. BTOA represents publicly owned border crossings between the province of Ontario and the states of Michigan and New York, including the International Bridge. (Please note that Niagara Bridge and Peace Bridge are only one way tolls. All other bridges in the comparison have tolls each way.)

|  | Auto | Commercial <br> Per Axle* |
| :---: | :---: | :---: |
| International Bridge | $\$ 4.00$ | $\$ 5.00$ |
| Ambassador Bridge | $\$ 7.00$ | $\$ 9.00$ |
| Blue Water Bridge <br> (FBCL) | $\$ 4.50$ | $\$ 4.50$ |
| Blue Water Bridge <br> (MDOT) | $\$ 3.00$ | $\$ 3.25$ |
| Detroit/Windsor Tunnel | $\$ 6.50$ | $\$ 3.50$ |
| Mackinac Bridge | $\$ 4.00$ | $\$ 5.00$ |
| Niagara Falls Bridges | $\$ 5.00$ | $\$ 6.40$ |
| Ogdensburg | $\$ 3.25$ | $\$ 2.40$ |
| Peace Bridge | $\$ 8.00$ | $\$ 8.00$ |
| Seaway <br> International | $\$ 3.00$ | $\$ 2.60$ |
| Thousand <br> Islands | $\$ 3.75$ | $\$ 3.35$ |

*Based on five axle commercial rate

## Toll Revenues

## Toll Rates effective April 1, 2023

Effective April 1, 2023, Canadian currency toll rates were adjusted to maintain currency equity per the intergovernmental agreement. American currency toll rates remain $\$ 4.00$. (See notes about vehicle classifications and currency exchange below toll rate table).

| IBA Toll Rates Vehicle Class |  | $\begin{aligned} & \hline \text { U.S. } \\ & \text { Toll } \end{aligned}$ | $\begin{aligned} & \hline \text { CDN } \\ & \text { Toll } \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Class \#1 | Passenger car or truck, van, motorcycle | \$4.00 | \$5.40 |
| Class \#2 | Class 1 vehicle w/1 axle trailer | \$6.00 | \$8.10 |
| Class \#3 | Class 1 vehicle w/2 axle trailer | \$8.00 | \$10.80 |
| Class \#34 | IQ Tag Class 1 vehicle only (See notes, below. | \$20.00 | \$20.00 |
| Class \#12 | Recreational vehicle (\$2.75/axle U.S. or \$4.45/axle Canadian) | \$6.50 | \$8.90 |
| Class \#11 | Buses (\$5.00/axle U.S. or \$6.80/ axle Canadian) | \$10.00 | \$13.60 |
| Non-passenger Vehicles |  |  |  |
| Class \#5 | Vehicle with 2 axles | \$10.00 | \$13.60 |
| Class \#7 | Vehicle with 3 axles | \$15.00 | \$20.40 |
| Class \#8 | Vehicle with 4 axles | \$20.00 | \$27.20 |
| Class \#9 | Vehicle with 5 axles | \$25.00 | \$34.00 |
| Class \#16 | Vehicle with 6 axles | \$30.00 | \$40.80 |
| Class \#17 | Vehicle with 7 axles | \$35.00 | \$47.60 |
| Class \#18 | Vehicle with 8 axles | \$40.00 | \$54.40 |
| Class \#19 | Vehicle with 9 axles | \$45.00 | \$61.20 |
| Class \#20 | Vehicle with 10 axles | \$50.00 | \$68.00 |
| Class \#21 | Vehicle with 11 axles | \$55.00 | \$74.80 |
|  | Per additional axle over 11 | \$5.00 | \$6.80 |
| Tag Fees |  |  |  |
| IQ Tag Fee (Discount Accounts) |  | \$2.00 | \$2.00 |
| Tag Fee (Commercial Accounts) |  | \$2.00 | \$2.00 |

## Notes about vehicle classifications

- IQ Tag minimum deposit of $\$ 20$, or more, at any time.
- Frequent Users: Autos, light duty trucks, motorcycles (no trailers allowed). Discount rate structure is based on Prox card use over the previous 30 days:
- Zero to two crossings: $10 \%$ discount
- Three to eight crossings: $20 \%$ discount
- Nine or more crossings: $30 \%$ discount
- Light duty trucks with a gross vehicle weight rating (GVWR) 10,000 pounds and less will be classified as a Class \#1 vehicle. All medium and heavy duty vehicles and not-for-hire passenger vehicles with a GVWR greater than 10,000 pounds will be recorded as a Class \#12 recreational vehicle.
- Note 2: Class \#1 passenger vehicles utilized for taxi, complimentary shuttle and equivalent services, do not qualify for bridge frequent user card program usage, but do qualify for commercial debit accounts.
- Note 3: RV Classifications include medium and heavy duty vehicles, not-for-hire passenger vehicles with a GVWR greater than 10,000 pounds, and recreational vehicles defined as type A, B, C and bus conversions as defined by the family motor coach association.

Proposed Toll Rate Schedule

|  | Auto |  | RV (USD per Axle) |  | Commercial (USD per Axle) |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | April 1 | October 1 | April 1 | October 1 | April 1 | October 1 |
| 2023 | $\$ 4.00$ | $\$ 4.10$ | $\$ 3.25$ <br> (current) | $\$ 3.30$ | $\$ 5.00$ <br> (current) | $\$ 5.25$ |
| 2024 | $\$ 4.20$ | $\$ 4.30$ | $\$ 3.35$ | $\$ 3.40$ | $\$ 5.50$ | $\$ 5.75$ |
| 2025 | $\$ 4.40$ | $\$ 4.50$ | $\$ 3.45$ | $\$ 3.50$ | $\$ 6.00$ | $\$ 6.25$ |
| 2026 | $\$ 4.60$ | $\$ 4.70$ | $\$ 3.55$ | $\$ 3.60$ | $\$ 6.50$ | $\$ 6.75$ |
| 2027 | $\$ 4.80$ | $\$ 4.90$ | $\$ 3.65$ | $\$ 3.70$ | $\$ 7.00$ | $\$ 7.25$ |
| 2028 | $\$ 5.00$ | $\$ 5.20$ | $\$ 3.75$ | $\$ 3.80$ | $\$ 7.50$ | $\$ 8.00$ |
| 2029 | $\$ 5.40$ | $\$ 5.60$ | $\$ 3.90$ | $\$ 4.00$ | $\$ 8.50$ | $\$ 9.00$ |
| 2030 | $\$ 5.80$ | $\$ 6.00$ | $\$ 4.10$ | $\$ 4.20$ | $\$ 9.50$ | $\$ 10.00$ |
| 2031 | $\$ 6.20$ | $\$ 6.40$ | $\$ 4.30$ | $\$ 4.40$ | $\$ 10.50$ | $\$ 11.00$ |
| 2032 | $\$ 6.60$ | $\$ 6.80$ | $\$ 4.50$ | $\$ 4.60$ | $\$ 11.50$ | $\$ 12.00$ |
| 2033 | $\$ 7.00$ | - | $\$ 4.70$ | - | $\$ 12.50$ | - |

## Proposed Commuter Program

|  | Discount | Crossings | Rate * |
| :---: | :---: | :---: | :---: |
| Tier 1 | $10 \%$ | $0-4$ | $\$ 3.69$ |

Tier $2 \quad 25 \% \quad 5-8 \quad \$ 3.08$

Tier $3 \quad 35 \% \quad 9$ or more $\quad \$ 2.67$
*These are based on a percentage of the base US dollar toll rate.
**Canadian currency toll rates are adjusted semi-yearly on April 1st and October 1 st to maintain currency equity per the intergovernmental agreement.

## FINANCIAL OPERATIONS

## Insurance

The International Bridge has traditionally maintained insurance coverage from the private sector for various risk exposures. These include:

Bridge Physical Damage<br>Blanket Property Damage for Buildings,<br>Equipment, etc.<br>Bridge Use \& Occupancy<br>Business Interruption<br>Boiler \& Machinery<br>Commercial General Liability<br>Primary \& Excess Umbrella Liability<br>Worker's Compensation<br>Public Officials' Liability<br>Commercial Crime<br>Cyber Security

SSMBA and IBA are committed to continuation of adequate coverage for the various risk exposures. The majority of coverage is obtained through an insurance brokerage firm with substantial experience and exposure to international bridge operations. Deductibles and limits are reviewed annually for acceptable risk coverages, and revised if deemed appropriate. Premiums are invoiced in either Canadian funds or US funds, dependent on when the exchange rate is most beneficial for further reducing realized currency exchange losses.

The 2022 premiums saw an increase from previous years at $\$ 345,153$. Premiums were $\$ 311,442$ in 2021, with no changes in deductions or levels of existing coverage.

## Payment of Taxes or in Lieu of Taxes

## Property Taxes

The bridge and related properties were exempt from property taxes in both Michigan and Ontario, until September 1, 2000. Ontario law establishes a formula to determine the level of taxes to be paid by the International Bridge to the city of Sault Ste. Marie, Ontario, on behalf of FBCL. Michigan State Law, 1954 PA 99 as amended, authorizes that, "if taxes are imposed in Canada, an equal amount may be expended in Michigan for purposes similar to those of taxes..." FBCL took over the responsibility for the tax payments for the properties in Canada, including the properties directly related to CBSA operations. IBA is responsible and invoiced by FBCL the prorated portion of the property tax payments to the city of Sault Ste. Marie, Ontario for portions of the Canadian plaza utilized specifically by IBA. This includes the maintenance garage and the under-bridge generator compound. IBA also issues a PILT payment to the City of Sault Ste. Marie, Michigan equivalent to what is paid for the IBA pro-rated portion of the Canadian plaza. Slight annual variances may result as Michigan payments are reduced in the current year for applicable property tax refunds and credits received for prior years.

## Sales Taxes

In Michigan, governmental agencies are exempt from all sales taxes. In Ontario, both provincial and federal sales taxes are applied to goods and services acquired by IBA, unless exported by IBA to Michigan. When export of goods and services is acquired, goods and services are zero-rated.

|  | 2024 |  | 2025 |  | COMPARATIVE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE ALL GOVERNMENTAL FUND TYPES <br> 2024-2053 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 2026 |  | 2027 |  | 2028 |
| REVENUES |  |  |  |  |  |  |  |  |  |  |
| Toll revenues | \$ | 4,872,783 |  |  | \$ | 7,322,705 | \$ | 9,965,356 | \$ | 10,601,203 | \$ | 11,243,627 |
| Interest income |  | 48,728 |  | 49,215 |  | 49,707 |  | 50,204 |  | 50,706 |
| Lease income |  | 100,000 |  | 101,000 |  | 102,010 |  | 103,030 |  | 104,060 |
| MDOT Owner Funds |  | 224,432 |  | 233,409 |  | 242,749 |  | 243,817 |  | 253,570 |
| BWB FBCL Funding |  | 287,922 |  | 299,439 |  | 311,416 |  | 312,436 |  | 324,934 |
| BWB MDOT Funding |  | 224,432 |  | 233,409 |  | 242,749 |  | 243,817 |  | 253,570 |
| Service fees |  | 53,456 |  | 55,594 |  | 57,818 |  | 60,131 |  | 62,536 |
| Total Revenues |  | 5,811,753 |  | 8,294,771 |  | 10,971,805 |  | 11,614,638 |  | 12,293,004 |
| EXPENDITURES |  |  |  |  |  |  |  |  |  |  |
| Current operations |  |  |  |  |  |  |  |  |  |  |
| Operations and services |  | 1,834,611 |  | 2,324,676 |  | 2,401,610 |  | 2,497,703 |  | 2,597,345 |
| Bridge maintenance |  | 2,602,020 |  | 2,533,244 |  | 2,873,633 |  | 2,770,923 |  | 2,957,606 |
| Administration |  | 605,360 |  | 629,654 |  | 655,294 |  | 681,429 |  | 708,611 |
| Other expenditures |  | 503,097 |  | 523,221 |  | 544,150 |  | 565,917 |  | 588,554 |
| Total current operations |  | 5,545,089 |  | 6,010,795 |  | 6,474,687 |  | 6,515,972 |  | 6,852,116 |
| MDOT capital fund expenditures |  | - |  | - |  | - |  | - |  | - |
| FBCL capital fund expenditures |  | - |  | - |  | - |  | - |  | - |
| Capital fund expenditures |  | 1,234,895 |  | 1,934,236 |  | 2,427,910 |  | 2,176,737 |  | 2,106,194 |
| Total capital expenditures |  | 1,234,895 |  | 1,934,236 |  | 2,427,910 |  | 2,176,737 |  | 2,106,194 |
| Total Expenditures |  | 6,779,984 |  | 7,945,031 |  | 8,902,597 |  | 8,692,709 |  | 8,958,310 |
| Excess (deficiency) of revenues over expenditures |  | $(968,231)$ |  | 349,740 |  | 2,069,208 |  | 2,921,929 |  | 3,334,694 |
| OTHER FINANCING SOURCES (USES) |  |  |  |  |  |  |  |  |  |  |
| FBCL Owner Funds |  | 484,115 |  | - |  | - |  | - |  | - |
| Total other financing sources and uses |  | 484,115 |  | - |  | - |  | - |  | - |
| Net change in fund balances |  | $(484,116)$ |  | 349,740 |  | 2,069,208 |  | 2,921,929 |  | 3,334,694 |
| Fund Balance-Beginning |  | 1,604,339 |  | 1,120,223 |  | 1,469,964 |  | 3,539,171 |  | 6,461,101 |
| Revenue fund |  | 477,759 |  | 474,200 |  | 470,514 |  | 466,700 |  | 462,752 |
| Capital fund |  | 101,731 |  | 105,292 |  | 108,977 |  | 112,791 |  | 116,739 |
| MDOT Capital fund (owner reserve) |  | 540,733 |  | 715,603 |  | 1,750,207 |  | 3,211,171 |  | 4,878,518 |
| FBCL Capital fund (owner reserve) |  | - |  | 174,870 |  | 1,209,474 |  | 2,670,438 |  | 4,337,785 |
| Fund Balance-Ending | \$ | 1,120,223 | \$ | 1,469,964 | \$ | 3,539,171 | \$ | 6,461,101 | \$ | 9,795,795 |

Notes:

1) Beginning and ending interfund budget appropriations will equal transfers according the transfer requirements outlined in the Intergovernmental Agreement, for maintaining positive capital fund and owner reserve capital fund balances.
SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
OPERATIONS AND SERVICES DEPARTMENT
DECEMBER 31, 2024

| Proposed Budgets |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2024 |  | 2025 |  | 2026 |  | 2027 |  | 2028 |  |
| \$ | 73,860 | \$ | 76,814 | \$ | 79,887 | \$ | 83,082 | \$ | 86,405 |
|  | 1,040 |  | 1,040 |  | 1,040 |  | 1,040 |  | 1,040 |
|  | 4,579 |  | 4,762 |  | 4,952 |  | 5,150 |  | 5,356 |
|  | 1,071 |  | 1,114 |  | 1,159 |  | 1,205 |  | 1,253 |
|  | 1,206 |  | 1,254 |  | 1,304 |  | 1,356 |  | 1,410 |
|  | 1,591 |  | 1,655 |  | 1,721 |  | 1,790 |  | 1,862 |
|  | 18,338 |  | 19,072 |  | 19,835 |  | 20,628 |  | 21,453 |
|  | 554 |  | 576 |  | 599 |  | 623 |  | 648 |
|  | 3,030 |  | 3,151 |  | 3,277 |  | 3,408 |  | 3,544 |
|  | 27,422 |  | 28,519 |  | 29,660 |  | 30,846 |  | 32,080 |

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Proposed Budgets

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| 120 | 701 | Salaries |
| :--- | :--- | :--- |
| 120 | 703 | Longevity |
| 120 | 715 | FICA |
| 120 | 716 | Medicare |
| 120 | 717 | LTD \& U.B. Life Insurance |
| 120 | 718 | Dental |
| 120 | 721 | Hospitalization |
| 120 | 722 | Workers Compensation |
| 120 | 724 | Retirement |
| 120 | 725 | OPEB |
|  |  |  |
| Total | $120-$ | Bridge Safety Supervisor 10 |
|  |  |  |
| 121 | 701 | Salaries |
| 121 | 703 | Longevity |
| 121 | 704 | Overtime |
| 121 | 715 | FICA |
| 121 | 716 | Medicare |
| 121 | 717 | LTD \& U.B. Life Insurance |
| 121 | 718 | Dental |
| 121 | 719 | Vision |
| 121 | 721 | Hospitalization |
| 121 | 722 | Workers Compensation |
| 121 | 724 | Retirement |
| 121 | 725 | OPEB |
|  |  |  |
| Total | 121 | - Bridge Safety Supervisor 9 |

SAULT STE. MARIE BRIDGE AUTHORITY REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
OPERATIONS AND SERVICES DEPARTMENT

DECEMBER 31, 2024 |  | DECEMBER 31, 2024 |
| :--- | ---: |
| Proposed Budgets |  |





| 2027 |
| ---: |
|  |
| 189,380 |
| 1,600 |
| 4,301 |
| 12,008 |
| 2,808 |
| 3,168 |
| 5,794 |
| 6,073 |
| 4,591 |
| 1,868 |
| 11,779 |
| 102,945 |


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 | 307,500 |
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$\begin{array}{lll}122 & 701 & \text { Salaries } \\ 122 & 703 & \text { Longevity } \\ 122 & 704 & \text { Overtime } \\ 122 & 715 & \text { FICA } \\ 122 & 716 & \text { Medicare } \\ 122 & 717 & \text { LTD \& U.B. Life Insurance } \\ 122 & 718 & \text { Dental } \\ 122 & 719 & \text { Vision } \\ 122 & 721 & \text { Hospitalization } \\ 122 & 722 & \text { Workers Compensation } \\ 122 & 724 & \text { Retirement } \\ 122 & 725 & \text { OPEB }\end{array}$
Total 122 - Bridge Safety Officer 8 $\begin{array}{lll}123 & 701 & \text { Salaries } \\ 123 & 703 & \text { Longevity } \\ 123 & 704 & \text { Overtime } \\ 123 & 715 & \text { FICA } \\ 123 & 716 & \text { Medicare } \\ 123 & 717 & \text { LTD \& U.B. Life Insurance } \\ 123 & 718 & \text { Dental } \\ 123 & 719 & \text { Vision } \\ 123 & 721 & \text { Hospitalization } \\ 123 & 722 & \text { Workers Compensation } \\ 123 & 724 & \text { Retirement } \\ 123 & 725 & \text { OPEB }\end{array}$

Total 123 - Bridge Safety Officer 7
SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
OPERATIONS AND SERVICES DEPARTMENT
DECEMBER 31, 2024


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| 2024 | 2025 | 2026 | 2027 | 2028 |
| :---: | :---: | :---: | :---: | :---: |
| 37,330 | 38,823 | 40,376 | 41,991 | 43,671 |
| 2,811 | 2,924 | 3,041 | 3,163 | 3,290 |
| 2,489 | 2,588 | 2,692 | 2,800 | 2,912 |
| 582 | 605 | 629 | 654 | 680 |
| 6,518 | 6,779 | 7,050 | 7,332 | 7,625 |
| 1,661 | 1,727 | 1,796 | 1,868 | 1,943 |
| 10,442 | 10,859 | 11,293 | 11,745 | 12,215 |
| 61,832 | 64,305 | 66,877 | 69,553 | 72,336 |
| 81,107 | 84,351 | 87,725 | 91,234 | 94,883 |
| 300 | 370 | 370 | 370 | 370 |
| 5,029 | 5,230 | 5,439 | 5,657 | 5,883 |
| 1,176 | 1,223 | 1,272 | 1,323 | 1,376 |
| 1,123 | 1,168 | 1,215 | 1,264 | 1,315 |
| 979 | 1,018 | 1,059 | 1,101 | 1,145 |
| 13,754 | 14,304 | 14,876 | 15,471 | 16,090 |
| 1,107 | 1,151 | 1,197 | 1,245 | 1,295 |
| 4,044 | 4,206 | 4,374 | 4,549 | 4,731 |
| 12,631 | 13,137 | 13,662 | 14,208 | 14,776 |
| 121,250 | 126,158 | 131,189 | 136,422 | 141,864 |


$\begin{array}{lll}125 & 701 & \text { Salaries } \\ 125 & 704 & \text { Overtime } \\ 125 & 715 & \text { FICA } \\ 125 & 716 & \text { Medicare } \\ 125 & 720 & \text { Unemployment } \\ 125 & 722 & \text { Workers Compensation } \\ 125 & 725 & \text { OPEB } \\ \text { Total } 125 & \text { - State Worker 4 } \\ & \\ 126 & 701 & \text { Salaries } \\ 126 & 703 & \text { Longevity } \\ 126 & 715 & \text { FICA } \\ 126 & 716 & \text { Medicare } \\ 126 & 717 & \text { LTD \& U.B. Life Insurance } \\ 126 & 718 & \text { Dental } \\ 126 & 721 & \text { Hospitalization } \\ 126 & 722 & \text { Workers Compensation } \\ 126 & 724 & \text { Retirement } \\ 126 & 725 & \text { OPEB } \\ \text { Total } & 126 & \text { - Account Tech. \& Office Assistant }\end{array}$
SAULT STE. MARIE BRIDGE AUTHORITY REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT

OPERATIONS AND SERVICES DEPARTMENT |  | DECEMBER 31, 2024 |
| :--- | ---: |
| Proposed Budgets |  |

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2024 \quad 2025 \quad \begin{array}{ll}
\hline
\end{array}
$$




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 27,401
 $\begin{array}{r}4,867 \\ 433 \\ 1,622 \\ 4,056 \\ 2,704 \\ 12,979 \\ 31,947 \\ 2,163 \\ 1,082 \\ 919 \\ 379 \\ 2,704 \\ 2,271 \\ 7,057 \\ 2,163 \\ 5,711 \\ 2,228 \\ 5,000 \\ 438,756 \\ \hline\end{array}$ $\left\lvert\, \begin{gathered}\text { ت } \\ \text { à } \\ \text { in } \\ \\ \end{gathered}\right.$ $\begin{array}{r}17,306 \\ 363 \\ 8,678 \\ \hline 26,347 \\ \hline\end{array}$


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\] $\begin{array}{r}4,500 \\ 400 \\ 1,500 \\ 3,750 \\ 2,500 \\ 12,000 \\ 29,537 \\ 2,000 \\ 1,000 \\ 850 \\ 350 \\ 2,500 \\ 2,100 \\ 6,525 \\ 2,000 \\ 5,280 \\ 2,060 \\ 19,800 \\ 5,250 \\ \hline\end{array}$ | $\stackrel{\rightharpoonup}{2}$ |
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| $\stackrel{\rightharpoonup}{2}$ |
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Account

| Dept Acct | Name |
| :--- | :--- |


| 128 | 728 | Supplies |
| :--- | :--- | :--- |
| 128 | 729 | Postage |
| 128 | 741 | Cleaning Allowance |
| 128 | 749 | Uniforms |
| 128 | 807 | Advertising |
| 128 | 809 | Cash Transportation Services |
| 128 | 816 | Salary Administration MDOT |
| 128 | 820 | Commutation Debit Accts |
| 128 | 838 | Medical Exam |
| 128 | 865 | Travel \& Meeting Expense |
| 128 | 914 | Liability / Auto Insurance |
| 128 | 923 | Telephone |
| 128 | 931 | Building Maintenance |
| 128 | 933 | Equipment Repair |
| 128 | 962 | Training |
| 128 | 964 | Software Purchase |
| 128 | 965 | Miscellaneous |
| 128 | 966 | Software Support |
| 128 | 990 | Service Contract MDIT |
| Total 128 - Departmental Expenditures |  |  |
|  |  |  |
| 129 | 979 | Equipment |
| 129 | 980 | Office Furniture |
| 129 | 989 | Computer Equipment |
| Total 129 - Departmental Capital Outlays |  |  |
| Total Operations and Services expenditures |  |  |

SAULT STE. MARIE BRIDGE AUTHORITY REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT MAINTENANCE DEPARTMENT DECEMBER 31, 2024


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Proposed Budgets



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| 2024 |  |
| ---: | ---: |
|  |  |
| $\$$ | 117,030 |
|  | 370 |
| 6,200 |  |
| 1,697 |  |
|  | 1,664 |
|  | 490 |
|  | 6,113 |
| 554 |  |
| 6,420 |  |
| 37,421 |  |

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$\begin{array}{lll}130 & 701 & \text { Salaries } \\ 130 & 703 & \text { Longevity } \\ 130 & 715 & \text { FICA } \\ 130 & 716 & \text { Medicare } \\ 130 & 717 & \text { LTD \& U.B. Life Insurance } \\ 130 & 718 & \text { Dental } \\ 130 & 721 & \text { Hospitalization } \\ 130 & 722 & \text { Workers Compensation } \\ 130 & 724 & \text { Retirement } \\ 130 & 725 & \text { OPEB }\end{array}$ Total 130 - Bridge Engineer $\begin{array}{lll}131 & 701 & \text { Salaries } \\ 131 & 703 & \text { Longevity } \\ 131 & 704 & \text { Overtime } \\ 131 & 715 & \text { FICA } \\ 131 & 716 & \text { Medicare } \\ 131 & 717 & \text { LTD \& U.B. Life Insurance } \\ 131 & 718 & \text { Dental } \\ 131 & 721 & \text { Hospitalization } \\ 131 & 722 & \text { Workers Compensation } \\ 131 & 724 & \text { Retirement } \\ 131 & 725 & \text { OPEB }\end{array}$

[^0]SAULT STE. MARIE BRIDGE AUTHORITY REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT MAINTENANCE DEPARTMENT DECEMBER 31, 2024

|  |  | Proposed Budgets |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dept Acct | Name | 2024 | 2025 | 2026 | 2027 | 2028 |



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$\infty$ $\begin{array}{r}129,915 \\ 1,037 \\ 8,119 \\ 1,899 \\ 1,962 \\ 3,434 \\ 3,599 \\ 2,721 \\ 1,107 \\ 10,636 \\ 29,087 \\ \hline\end{array}$ $n$
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 | Account |  |
| :--- | :--- | :--- |
| Dept Acct | Name | $\begin{array}{lll}132 & 701 & \text { Salaries } \\ 132 & 704 & \text { Overtime } \\ 132 & 715 & \text { FICA } \\ 132 & 716 & \text { Medicare } \\ 132 & 717 & \text { LTD \& U.B. Life Insurance } \\ 132 & 718 & \text { Dental } \\ 132 & 719 & \text { Vision } \\ 132 & 721 & \text { Hospitalization } \\ 132 & 722 & \text { Workers Compensation } \\ 132 & 724 & \text { Retirement } \\ 132 & 725 & \text { OPEB }\end{array}$ Total 132 - Electrician $133 \quad 701$ Salaries $\begin{array}{lll}133 & 703 & \text { Longevity } \\ 133 & 704 & \text { Overtime } \\ 133 & 715 & \text { FICA } \\ 133 & 716 & \text { Medicare } \\ 133 & 717 & \text { LTD \& U.B. Life Insurance } \\ 133 & 718 & \text { Dental } \\ 133 & 719 & \text { Vision } \\ 133 & 721 & \text { Hospitalization } \\ 133 & 722 & \text { Workers Compensation } \\ 133 & 724 & \text { Retirement } \\ 133 & 725 & \text { OPEB }\end{array}$

Total 133 - Bridge Workers
SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
MAINTENANCE DEPARTMENT
DECEMBER 31, 2024

| Proposed Budgets |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 2024 | 2025 | 2026 | 2027 | 2028 |



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Proposed Budgets

| 2028 |
| ---: |
| 150,014 |
| 300 |
| 2,324 |
| 9,445 |
| 2,210 |
| 2,499 |
| 3,057 |
| 36,327 |
| 1,943 |
| 12,152 |
| 46,717 |

2026



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 | Account |  |  |
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| Dept | Acct | Name | $\begin{array}{lll}134 & 701 & \text { Salaries } \\ 134 & 703 & \text { Longevity } \\ 134 & 704 & \text { Overtime } \\ 134 & 715 & \text { FICA } \\ 134 & 716 & \text { Medicare } \\ 134 & 717 & \text { LTD \& U.B. Life Insurance } \\ 134 & 718 & \text { Dental } \\ 134 & 721 & \text { Hospitalization } \\ 134 & 722 & \text { Workers Compensation } \\ 134 & 724 & \text { Retirement } \\ 134 & 725 & \text { OPEB }\end{array}$ $\begin{array}{lll}\text { Total } & 134 & \text { Janitorial } \\ 135 & 701 & \text { Salaries } \\ 135 & 704 & \text { Overtime } \\ 135 & 715 & \text { FICA } \\ 135 & 716 & \text { Medicare } \\ 135 & 720 & \text { Unemployment } \\ 135 & 722 & \text { Workers Compensation } \\ 135 & 725 & \text { OPEB }\end{array}$

Total 135 - State Worker 4
SAULT STE. MARIE BRIDGE AUTHORITY REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT MAINTENANCE DEPARTMENT DECEMBER 31, 2024
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\end{aligned} \right\rvert\,
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| 14,000 |
| ---: |
| 1,000 |
| 1,500 |
| 6,644 |
| 155,940 |
| 129,000 |
| 800 |
| 29,267 |
| 2,000 |
| 4,500 |
| 2,000 |
| 30,000 |
| 6,000 |
| 12,360 |
| 38,000 |
| 20,000 |
| 40,000 |
| 5,000 |
| 175,000 |
| 12,051 |
| 4,800 |
| 22,366 |
| 8,000 |
| 5,305 |
| 541 |
| 15,500 |
| 10,609 |


| Account |  |
| :--- | :---: |
| Dept Acct | Name |

$$
\begin{array}{lll}
138 & 728 & \text { Supplies } \\
138 & 729 & \text { Postage } \\
138 & 741 & \text { Cleaning Allowance } \\
138 & 749 & \text { Uniforms } \\
138 & 776 & \text { Ground Maintenance } \\
138 & 777 & \text { Janitor Supplies } \\
138 & 807 & \text { Advertising } \\
138 & 816 & \text { Salary Administration MDOT } \\
138 & 820 & \text { Commutation Debit Accts } \\
138 & 838 & \text { Medical Exam } \\
138 & 852 & \text { Radio Repair } \\
138 & 863 & \text { Vehicle Gas \& Oil } \\
138 & 865 & \text { Travel \& Meeting Expense } \\
138 & 867 & \text { Vehicle Maintenance } \\
138 & 914 & \text { Liability / Auto Insurance } \\
138 & 921 & \text { Water \& Sewer } \\
138 & 922 & \text { Fuel \& Heating } \\
138 & 923 & \text { Telephone } \\
138 & 924 & \text { Electricity } \\
138 & 931 & \text { Building Maintenance } \\
138 & 932 & \text { Refuse Disposal } \\
138 & 933 & \text { Equipment Repair } \\
138 & 934 & \text { Heating \& Plumbing Repair } \\
138 & 935 & \text { Service Contract MDOT } \\
138 & 965 & \text { Miscellaneous } \\
138 & 970 & \text { Leases \& Rentals } \\
138 & 975 & \text { Building Improvement }
\end{array}
$$

Total 138 - Departmental Expenditures
SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
MAINTENANCE DEPARTMENT
DECEMBER 31, 2024 DECEMBER 31, 2024

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Proposed Budgets





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 $\begin{array}{lll}139 & 852 & \text { Radio Replacement } \\ 139 & 853 & \text { Security System } \\ 139 & 854 & \text { Safety Equipment } \\ 139 & 981 & \text { Paint / Sandblast Materials } \\ 139 & 982 & \text { Sand \& Ice Melter } \\ 139 & 983 & \text { Small Tools Purchase } \\ 139 & 992 & \text { Bridge Maint. \& Repair } \\ 139 & 994 & \text { Road Maint. \& Repair } \\ \text { Total 139-Departmental Capital Outlays } \\ 148 & 990 & \text { Service Contract MDIT } \\ \text { Total } 148 \text { - Departmental Support } \\ 149 & 980 & \text { Office Furniture } \\ 149 & 989 & \text { Computer Equipment } \\ \text { Total } 149 \text { - Departmental Capital Support }\end{array}$

[^1]SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
ADMINISTRATION DEPARTMENT Łz0z ‘ı $\varepsilon$ yヨg\&ajag
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| 2024 | 2025 |  | 2026 |  | 2027 |  | 2028 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 148,487 | \$ | 154,426 | \$ | 160,603 | \$ | 167,027 | \$ | 173,708 |
| 480 |  | 610 |  | 610 |  | 610 |  | 610 |
| 6,200 |  | 6,448 |  | 6,706 |  | 6,974 |  | 7,253 |
| 2,153 |  | 2,239 |  | 2,329 |  | 2,422 |  | 2,519 |
| 1,664 |  | 1,731 |  | 1,800 |  | 1,872 |  | 1,947 |
| 1,717 |  | 1,786 |  | 1,857 |  | 1,931 |  | 2,008 |
| 1,799 |  | 1,871 |  | 1,946 |  | 2,024 |  | 2,105 |
| 1,360 |  | 1,415 |  | 1,472 |  | 1,531 |  | 1,592 |
| 554 |  | 576 |  | 599 |  | 623 |  | 648 |
| 8,097 |  | 8,421 |  | 8,758 |  | 9,108 |  | 9,472 |
| 48,330 |  | 50,263 |  | 52,274 |  | 54,365 |  | 56,540 |
| 220,841 |  | 229,786 |  | 238,954 |  | 248,487 |  | 258,402 |
| 82,869 |  | 86,184 |  | 89,631 |  | 93,216 |  | 96,945 |
| 5,138 |  | 5,343 |  | 5,557 |  | 5,779 |  | 6,010 |
| 1,202 |  | 1,250 |  | 1,300 |  | 1,352 |  | 1,406 |
| 1,356 |  | 1,410 |  | 1,466 |  | 1,525 |  | 1,586 |
| 1,591 |  | 1,655 |  | 1,721 |  | 1,790 |  | 1,862 |
| 18,338 |  | 19,072 |  | 19,835 |  | 20,628 |  | 21,453 |
| 554 |  | 576 |  | 599 |  | 623 |  | 648 |
| 5,183 |  | 5,391 |  | 5,607 |  | 5,831 |  | 6,064 |
| 37,354 |  | 38,848 |  | 40,402 |  | 42,018 |  | 43,699 |
| 153,584 |  | 159,729 |  | 166,378 |  | 173,022 |  | 179,933 |


| Account |  |  |
| :--- | :--- | :--- |
|  |  | Name |
| Dept | Acct |  |
|  |  |  |
| 150 | 701 | Salaries |
| 150 | 703 | Longevity |
| 150 | 715 | FICA |
| 150 | 716 | Medicare |
| 150 | 717 | LTD \& U.B. Life Insurance |
| 150 | 718 | Dental |
| 150 | 719 | Vision |
| 150 | 721 | Hospitalization |
| 150 | 722 | Workers Compensation |
| 150 | 724 | Retirement |
| 150 | 725 | OPEB |
|  |  |  |
| Total | $150-$ | General Manager |
|  |  |  |
| 151 | 701 | Salaries |
| 151 | 715 | FICA |
| 151 | 716 | Medicare |
| 151 | 717 | LTD \& U.B. Life Insurance |
| 151 | 718 | Dental |
| 151 | 721 | Hospitalization |
| 151 | 722 | Workers Compensation |
| 151 | 724 | Retirement |
| 151 | 725 | OPEB |
|  |  |  |
| Total $151-A c c o u n t a n t ~$ |  |  |

SAULT STE．MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
ADMINISTRATION DEPARTMENT ADMINISTRATION DEPARTMENT
DECEMBER 31， 2024

| － |  | － |  | $\stackrel{\sim}{\circ}$ | $\xrightarrow{2}$ | $\stackrel{\sim}{3}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| त⿹⿺𠃑入－ |  | $\stackrel{n}{\underset{\sim}{f}}$ |  | $\begin{aligned} & \text { n } \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\stackrel{\infty}{\infty}$ | $\stackrel{\circ}{\circ}$ | ¢ |
| － |  |  |  | $\begin{aligned} & \infty \\ & \stackrel{\infty}{6} \\ & \stackrel{8}{2} \end{aligned}$ | 영 | $\stackrel{\text { 웅 }}{\sim}$ |  |
|  |  | $\begin{aligned} & \underset{N}{\mathrm{~N}} \\ & \underset{\mathrm{~g}}{ } \end{aligned}$ |  | $\begin{array}{\|c} \substack{0 \\ \stackrel{\rightharpoonup}{\circ} \\ \hline} \end{array}$ | 8. | $\stackrel{8}{8}$ |  |
| － |  | － |  | ぶ | §ু｜ | \％ | － |

Account

| Dept | Acct | Name |
| :--- | :--- | :--- |
|  |  |  |
| 153 | 701 | Salaries |
| 153 | 703 | Longevity |
| 153 | 715 | FICA |
| 153 | 716 | Medicare |
| 153 | 717 | LTD \＆U．B．Life Insurance |
| 153 | 718 | Dental |
| 153 | 721 | Hospitalization |
| 153 | 722 | Workers Compensation |
| 153 | 724 | Retirement |
| 153 | 725 | OPEB |
|  |  |  |
| Total | $153-$ | Executive Secretaries |
|  |  |  |
| 158 | 728 | Supplies |
| 158 | 729 | Postage |
| 158 | 733 | Periodicals |
| 158 | 734 | Memberships |
| 158 | 807 | Advertising |
| 158 | 816 | Salary Administration MDOT |
| 158 | 820 | Commutation Debit Accts |
| 158 | 856 | Audit Fees |
| 158 | 858 | Accounting Fees |
| 158 | 865 | Travel \＆Meeting Expense |
| 158 | 902 | Printing |
| 158 | 914 | Liability／Auto Insurance |
| 158 | 923 | Telephone |
| 158 | 936 | Contract Service Purchased |
| 158 | 964 | Software Purchase |
| 158 | 965 | Miscellaneous |
| 158 | 966 | Software Support |
| 158 | 979 | Equipment |
| 158 | 989 | Computer Equipment |
| 158 | 990 | Service Contract MDIT |
|  |  |  |
| Total | $158-$ | Departmental Expenditures |
|  |  |  |
| 159 | 980 | Office Furniture |
| Total | $159-$ | Departmental Capital Outlays |
|  |  |  |
| Total Administration Expenditures |  |  |
|  |  |  |

SAULT STE. MARIE BRIDGE AUTHORITY
REVENUE FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT
OTHER EXPENDITURE
DECEMBER 31, 2024
Proposed Budgets

| 2024 |  | 2025 |  | 2026 |  | 2027 |  | 2028 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 197 |  | 205 |  | 213 |  | 222 |  | 231 |
| 50,000 |  | 52,000 |  | 54,080 |  | 56,243 |  | 58,493 |
| 50,000 |  | 52,000 |  | 54,080 |  | 56,243 |  | 58,493 |
| 2,400 |  | 2,496 |  | 2,596 |  | 2,700 |  | 2,808 |
| 27,500 |  | 28,600 |  | 29,744 |  | 30,934 |  | 32,171 |
| 370,000 |  | 384,800 |  | 400,192 |  | 416,200 |  | 432,848 |
| 2,000 |  | 2,080 |  | 2,163 |  | 2,250 |  | 2,340 |
| 1,000 |  | 1,040 |  | 1,082 |  | 1,125 |  | 1,170 |
| \$ 503,097 | \$ | 523,221 | \$ | 544,150 | \$ | 565,917 | \$ | 588,554 |

[^2]SAULT STE. MARIE BRIDGE AUTHORITY
CAPITAL FUND
ANNUAL BUDGET SCHEDULE BY DEPARTMENT

|  | DECEMBER 31, 2024 |
| :--- | :--- |
| Proposed Budgets |  |


| Department |  | 2024 |  | 2025 |  | 2026 |  | 2027 | 2028 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 220 - Operations and Services department expenditure؛ | \$ | 736,786 | \$ | 766,257 | \$ | 796,908 | \$ | 800,070 | \$ | 832,074 |
| 230 - American plaza expenditures | \$ | 53,071 | \$ | 40,362 | \$ | 273,420 | \$ | 61,435 | \$ | 127,596 |
| 232 - Bridge deck expenditures |  | - |  | 723,051 |  | 958,241 |  | 809,844 |  | 47,523 |
| 236 - Bridge maintenance and studies |  | 203,106 |  | 164,792 |  | 142,724 |  | 178,240 |  | 154,370 |
| 238 - Capital expenditures |  | 27,822 |  | 17,100 |  | 25,036 |  | 86,304 |  | 694,154 |
| Total Capital Expenditures | \$ | 1,234,895 | \$ | 1,934,236 | \$ | 2,427,910 | \$ | 2,176,737 | \$ | 2,106,194 |

SAULT STE. MARIE BRIDGE AUTHORITY
CAPITAL FUND
ANNUAL BUDGET SCHEDULE BY ACCOUNT

|  | DECEMBER 31, 2024 |
| :--- | :--- |
| Proposed Budgets |  |

\(\left.$$
\begin{array}{c}2028 \\
\hline\end{array}
$$ \begin{array}{r} <br>
\$ <br>
1,526,228 <br>
281,966 <br>

47,523\end{array}\right]\)| \$ $2,106,194$ |
| :--- |

| त্̀ |  |
| :---: | :---: |
|  | $\infty$ |


| 2026 |  |
| :--- | ---: |
|  |  |
| $\$$ | 821,944 |
|  | 416,144 |
|  | 958,241 |
|  |  |



Account
979- Equipment
936 - Contract Service Purchased
258 - Capital administration expenditures
Total Capital Expenditures

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# SAULT STE. MARIE BRIDGE AUTHORITY 

ASSET MANAGEMENT PLAN
2024-2028

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## ASSET MANAGEMENT PLAN

## Asset Management Plan

## Program Overview

The International Bridge Administration (IBA) utilizes an Asset Management Plan (AMP) to strategically manage the bridge in a cost-effective and efficient manner.

Asset Management as defined in Michigan is "an ongoing process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment." [MCL 247.659a(1) (a)] It consists of five major tasks:

1. Developing policy goals and objectives
2. Data collection
3. Planning and programming
4. Program delivery
5. Monitoring and reporting results

The IBA AMP document is a comprehensive formalized process guidance document used for generating the annual Asset Management Report of maintenance performed on assets maintained by IBA.

The annual Asset Management Report is an executive summary report generated from program delivery data, and is presented to the Sault Ste. Marie Bridge Authority Board each November following the previous year's activities. The annual report is compiled by the Bridge Engineer and Asset Manager.

The Asset Management Plan (AMP) consists of the following components:

- Operational Model
- Inspections \& Studies
- Bridge Asset Elements
- Facilities Asset Elements
- Administrative Asset Elements
- Safety \& Security
- Long Range Capital Plan

Bridge Asset Elements include:

- Bridge Deck
- Expansion Joints
- Pedestrian Rail
- Curb Rail
- Catwalk Plates
- Structural Paint Systems
- Utilities

Facilities Asset Elements Include:

- Building Roofs
- Paved Surfaces
- Flooring
- Heating, Ventilation \& Air Conditioning (HVAC)
- Furniture, Fixtures, \& Equipment (FFE)

Administrative Asset Elements include:

- Capital Equipment
- Non-Capital Equipment
- Information Technology

The Asset Management process involves four steps:

1. Evaluate element condition and prioritize repairs
2. Plan the work and create a program budget
3. Complete the work
4. System monitoring and performance evaluation

## Operational Model

## Asset Management Flow Chart

The asset management flow chart depicts the organization and interactive relationships between the Bridge Asset Elements and the Administrative Asset Elements.


# ASSET MANAGEMENT PLAN 

## Planning "P'

The Planning " P " details the IBA's cyclical asset management process. Developed in-house by IBA staff, the planning " P " is modeled on the US Department of Homeland Security Incident Response system.

The tail of the " $P$ " begins with the yearly inspections, which are the catalyst for entering the cyclical loop. Once in the loop, asset management principles such as data gathering, planning, analysis of products and processes, and implementation are followed around the loop until goals are reached. The loop ends with the annual asset management report to the SSMBA Board.

## Legend (Phases)

Red - Maintenance Activity Period
Purple - Review \& Method Evaluation
Yellow - Reporting Period
Green - Assessment Period


## Inspections \& Studies

## COVID-19 Impact

As the 2024 Business Plan is submitted for consideration, many factors have been taken into account in its preparation. While several of these have been factors seen each year such as revenue, capital needs, and maintenance needs, the plan remains affected by the recent global pandemic.

The impacts of the COVID-19 pandemic to bridge operations and maintenance have been significant from 2020 through 2023. While maintenance and asset management efforts were negatively impacted, the overall strategy of the Asset Management Plan (AMP) and Capital Plan $(\mathrm{CP})$ remains the deferral of contracted capital projects through the application of asset management principles. A short and long-term risk assessment for a projected ten-year period was prepared in 2020 following the onset of COVID-19. This assessment showed negative long-term impacts to the capital planning schedule should pandemic operational constraints remain in place over the ten-year period. Since these constraints remain in the short term for the current fiscal year, the current AMP and CP have been prepared to again reflect continuance of the strategic plan in place prior to COVID-19.

This being the case, it must be noted that we are in year four of the risk assessment. During this time, bridge revenue has remained low. Decreased staffing levels and decreased attention to regular maintenance items has resulted. Should this continue into upcoming years five through ten, unchecked degradation of certain bridge elements (especially paint systems and the concrete bridge deck) will occur. Should this degradation occur, it may be necessary to accelerate paint and deck capital projects (which were deferred in 2018) in upcoming Business Plans.

## 2021-2024 Indefinite Delivery of Services Contract

IBA has an IDS contract in place with the firm of Hardesty and Hanover (H\&H), from Okemos, Michigan, to provide professional engineering services. The contract has a three-year term and was awarded for the fifth time for the period 2021-2024. The professional services in past years included an element level annual condition inspection and a partial Fracture Critical Member (FCM) inspection each year. The purpose of the inspections are to ensure the continued safe structural condition of the bridge as required by federal law, and to identify

## ASSET MANAGEMENT PLAN

prioritized bridge maintenance needs and capital project recommendations.

The inspections include written reports which document the inspection findings and recommendations.

In addition to inspection services, the IDS contract may provide for structural engineering services for emergency incidents, design oversight of other consultants engaged in bridge projects, and design services for maintenance projects identified by the regular inspections. The total IDS contract authorization is not to exceed $\$ 1,000,000$ (US), with necessary individual service authorizations issued on a cost plus fixed-fee basis.

Hardesty and Hanover has teamed with WSP, to perform annual and FCM inspections in Canada, and provide the required Engineer licensed in the province of Ontario. In addition, Hardesty \& Hanover is performing the U.S. FCM inspections during the term of the contract.

The current IDS expires in March, 2024. It is anticipated that the term for the next contract will be a multi-year contract.

## Biennial Inspection

In past years, the condition inspections performed by the bridge's Engineer-of-Record were performed annually. The annual, routine-detailed inspections have exceeded both US and Canadian guidelines, which mandate that these inspection be performed every two years minimum. Over the years, costs for these inspections have increased substantially. It is also worth noting that the bridge continues to be rated as good condition and wellmaintained. Given the bridge's condition and inspection costs, a decision was made to adjust the inspection frequency to the minimum mandate of every two years, with the next inspection scheduled for 2023. In addition, the FCM inspection will revert back to having the entire bridge inspected every two years. The routine-detailed and FCM inspections will be performed in staggered years, such that the Authority will continue to receive a report each year at its regularly scheduled November meeting. The implementation of the inspection frequency adjustment will result in savings in excess of $\$ 500,000$ US over a ten-year period, with continued conformance to US and Canadian federal inspection guidelines.

## ASSET MANAGEMENT PLAN

## Fracture Critical Member (FCM) Inspection

FCM inspections are defined as examination of these bridge elements whose failure could compromise the structural integrity of the bridge, or a portion of the bridge. The FCM inspection was initially done every two years; however, beginning in 2010 the inspection frequency was changed to staggered inspection of halves of the bridge each year. This was done for cash flow concerns present at that time. As previously stated, the FCM inspection reverted to its two-year frequency beginning in 2020, with the next scheduled inspection in 2024.

## IBA Annual Walkthrough Inspection

IBA maintenance staff conduct an annual spring walkthrough inspection to visually identify any other maintenance concerns that need to be addressed. The annual IBA walkthrough inspection is a general inspection of the bridge deck, substructure, and superstructure.

## Underwater Inspection

Underwater inspections of bridge piers is mandated for completion every five years. Fourteen of the bridge's 62 bridge piers are located in the St. Mary's River.

The inspection must be performed by a pre-qualified underwater engineering inspection firm. The 2019 underwater inspection was completed in June of that year.

The next required inspection will be in 2024.

## Deck Study Update and Infrared Inspection

An updated deck and infrared thermography study in 2018, determined negligible change in deck deterioration conditions have occurred between 2013 and 2018. Updated deck/infrared studies will be performed every five years. The next deck infrared study will be conducted in 2023.

## Storm Sewer Inspection

During the original bridge construction, storm sewer mains were installed underground immediately contiguous to and running parallel to the bridge. These mains, which collect runoff from the bridge through drains, scuppers, and downspouts, are present on both the Canadian and US sides under the respective bridge approaches. These sewer mains, to the knowledge of current bridge staff, have never been inspected for wear and structural integrity. In light of the amount and weight of rain water and snow melt the bridge sees, ensuring that this drainage system is functioning properly is very important in protecting the bridge.

The storm sewer inspections are being planned in two phases, Phase 1 on the US side and Phase 2 on the Canadian side. Prior to the actual inspection the mains must be cleaned of any sand or other debris which may have entered the drainage system from the bridge deck. Following this cleaning, professional services will be procured to perform fine cleaning and Closed-Circuit Television (CCTV) video inspection of the mains. These professional services will include an inspection report of findings and recommendations for remediation or repairs if necessary.

Phase 1 on the US side entails inspection of two storm sewer mains which collect bridge runoff and outfall the drainage from the sewer main into the Cloverland power canal.

Phase 2 on the Canadian side will entail similar inspection of the Canadian storm sewer, which is believed to be routed directly into the City sewer system via the Customs plaza storm sewer.

## Engineering Studies

Engineering studies are the first phase of major capital improvements and operational assessments. The study phase is typically followed by the design phase and ultimately the construction phase.

## ASSET MANAGEMENT PLAN

Management of Bridge elements continues to be adversely affected by the recent pandemic.

## Bridge Deck

The Bridge Deck serves as the platform for traffic to cross the International Bridge. The deck is currently on a schedule that requires the maintenance crew to maintain the bridge deck until its complete replacement in the late 2040's.

Flood coats were performed in 2016, 2018, and 2019 covering a total of 123,256 sq. ft. of bridge deck. The flood coat has a life span of approximately 10 years and will eliminate the need of individual crack sealing during that time.

Future flood-coating will be performed on the north and south bridge approaches, which will complete the entire bridge.

## Expansion Joints

There are 137 expansion joints located in the deck of the International Bridge. There are seven different types of joints: Sliding Plate, Finger, Open, Poured, Compression Seal Diaphragm, and EMSEAL.

No EMSEAL expansion joint seals were installed in 2022, however, three cold poured joints were sealed with a polyurethane self-leveling sealant. The self-leveling sealant is being tested due to the reduced cost.

To date, a total of 10 expansion joints have been fitted with the EMSEAL system.

## Pedestrian Rail

Both the pedestrian and curb rails are on a preventative maintenance schedule until complete deck replacement in the late 2040's.

The bridge pedestrian rail provides the outer barrier on the bridge deck, and provides a secondary means to redirect an out-of-control vehicle back into the driving lane. Structural components such as posts that transfer crash force to the deck are critical to its functionality and are of particular importance.

IBA maintenance staff did not replace any green rail uprights in 2022 on the pedestrian rail. The long-term goal is to continue monitoring all posts, making repairs on posts and spindles as needed.

The future goal is to maintain the average productivity rate of 5 posts per week, for a yearly goal of 20 posts, as work schedule permits.

A $\$ 3 \mathrm{M}$ (CDN) HRCSA coating project provided by the Canadian Federal Government in 2022 resulted in improvements to the coatings of the Green Pedestrian Rail. A total of 5,584 linear feet of green rail was successfully cleaned and coated.

## Curb Rail

The bridge curb rail provides the primary means to redirect an out-of-control vehicle. The curb rail's structural components also transfer crash force to the deck and are critical to proper functionality of the curb rail. The biennial inspection has reported that the curb rail needs repairs to continue its proper function.

A $\$ 3 \mathrm{M}$ (CDN) HRCSA coating project provided by the Canadian Federal Government in 2022 resulted in significant improvements to the ivory curb rail. A total of 5,584 linear feet of ivory curb rail was cleaned and coated. Steel repairs were also made to the ivory curb rail supports as part of the Canadian Federal Government funded project. A total of 170 repairs were made to the ivory curb rail. Since 2018, a total of 9,876 linear feet of curb rail has been painted.

## Catwalk Plates

The bridge catwalk provides maintenance crew access to the underside of the bridge. Without proper maintenance the plates will rust or heave and become unsafe for the crew to walk on. Plate repair entails plate removal, pack rust removal, cleaning/recoating, and reinstallation. There are three different types of fasteners used on the catwalk plates: rivets, carriage bolts and hex bolts. In extreme cases, plates are entirely replaced.

There are no repairs or replacements scheduled for 2023, as IBA maintenance staff will be focused on other projects. No repairs were made in 2022.

## Structural Paint Systems

During each biennial inspection, the bridge's coating systems are inspected. Protective paint coatings are crucial to maintaining the structure and functionality of the structural steel elements.

The yearly plan is to continue the preventative maintenance strategy of spot painting. The area of focus will also continue to be the US arch and curb rail. HRCSA spot painting will commence on the lower half of the Canadian arch, and the pedestrian rail.

## Utilities

Bridge utilities consist of four components:

- Electric
- Fiber Optic
- Dry Risers
- Storm Sewer

The electrical system on the International Bridge consists of three nodes (platform mounted power equipment) that provide power to the bridge lighting, security system, and power supply for bridge maintenance activities. These nodes are inspected every fall and spring, checking for failed cable connections, dirt and grime, camera operability, and operability of various ancillary components. The entire bridge has been upgraded to LED lighting. While security system software and related system hardware upgrades are routinely performed; the conduits, boxes, and other various hardware are original to the bridge's construction and nearing end of life. In-house monitoring of this hardware is on-going, with replacements made as necessary.

Fiber optic lines on the bridge currently consist of 24 strands, 20 of which service the bridge's security system, and four of which are owned by Great Lakes Interlink (GLI) for private use. GLI leases the airspace provided by IBA, which provides a small revenue stream to the bridge.

The bridge's dry risers are stand pipes which are at pier 18 R on the US side and pier 40 on the Canadian side. The risers are in effect dormant water mains which may be actuated by opening a valve at ground level at each location. The risers, which are fed to city water main, may thus be utilized to bring water up the bridge's deck in the event of a fire, or for use in construction activities. The Canadian riser was last used by contracted services during the Canadian arch deep overlay in 2009. Each riser is inspected and tested yearly by bridge

## ASSET MANAGEMENT PLAN

staff and the respective city's fire departments.
The bridge's deck is drained through a system of curb drains and scuppers. Drainage flows through this system and down via a series of vertical spouts which then feed a series of dedicated storm sewer mains built in 1962 as a component of the bridge's construction. Outfalls from the storm sewer mains then empty into the St. Mary's River at various points in the crossing canals. Periodic maintenance of these mains includes vactoring (cleaning) of sand and debris from the mains and associated manholes. While this treatment has been adequate, these mains are approaching 60 years old and a video inspection utilizing a remotely operated vehicle (ROV) is currently recommended, and subject to scheduling.

## Facilities

The necessity for facilities asset management as a component of a bridge asset management plan was made apparent during several recent facilities upgrade projects.

In 1962, the International Bridge was built at a cost of approximately $\$ 21$ million. It is roughly estimated that the cost of the supporting facilities built at the time was $\$ 500 \mathrm{~K}$, or $2.4 \%$ of total assets.

Facilities now account for approximately 32 percent of the total assets, up considerably from original construction. The US Toll Plaza upgrade was a cost of $\$ 9 \mathrm{M}$ in 2016, and the CBSA Plaza upgrade in 2018 was approximately $\$ 45 \mathrm{M}$ in US funds. The 2021 bridge replacement cost is estimated at $\$ 138 \mathrm{M}$.

In light of this substantial shift in asset values in 2016, IBA created and filled a full-time position for a Bridge and Facilities Asset Manager. The position is not only responsible for managing bridge asset elements, but also facility elements such as scheduled maintenance, warranties, and upkeep of the following facilities:

- Toll Plaza Administration Building
- Toll Plaza Maintenance Building
- Canadian Plaza Maintenance Building
- CBSA Traffic Building
- CBSA Commercial Building


## Facilities Asset Elements

## Building Roofs

All building roofs are inspected yearly and are on a 30year replacement cycle.

## Paved Surfaces

Asphalt paved surfaces are on a 20 -year replacement cycle, and will be given preventative maintenance treatments including crack sealing, chip sealing, and mill/ replace. Concrete paved surfaces are on a 50 -year replacement cycle, and will be given preventative maintenance treatments including crack sealing, flood-coating, and overlay treatment.

## Flooring

Facility flooring is on a 20 -year replacement cycle.

## Furniture, Fixtures, Equipment (FFE) \& Heating, Ventilation, \& Air Conditioning (HVAC)

FFE is on a 20-year replacement cycle. FFE includes office furniture, lighting fixtures, millwork, and appliances.

HVAC building components and associated hardware are on a 20 -year replacement cycle. Three buildings located in Canada will require replacement in 2036, and one building located in the US will require replacement in 2038.

## Administrative Asset Elements

## Capital Equipment

Capital equipment is defined as any piece of equipment which required a capital outlay in excess of $\$ 5,000$ (US funds). Capital equipment is typically characterized by vehicles and construction equipment.

A schedule of this equipment is maintained and includes assigned equipment number, year purchased, and projected year of replacement. As the projected year of replacement approaches, the equipment is evaluated and either continues in service (with an updated year of replacement), or it is replaced. The old equipment is then typically auctioned.

The capital equipment schedule is updated in each year's business plan.

## ASSET MANAGEMENT PLAN

## Non-Capital Equipment

Non-capital equipment may be defined as any equipment which does not cost in excess of $\$ 5,000$, but which must still be maintained and replaced on a scheduled basis. Some examples of this include safety equipment, communications equipment such as but not limited to handheld radios, and smaller maintenance equipment such as mowers, snow blowers.

## Information Technology (IT)

IT elements consist of the bridge's toll equipment, servers/computers, the Security Observation Center (SOC), and the bridge's www.saultbridge.com website.

The toll bridge software upgrade was completed in 2023 under a 5-10 year contract with Arcadis IBI Group, and a Memorandum of Agreement with FBCL and MDOT. Conduent Vector 4 software was decommissioned from service in December of 2022.

## Safety and Security

## Safety

- Safety is the top priority at the bridge, and in 2022 bridge staff received several training opportunities. Three staff members attended operational training for the IBA owned UB50 at the Aspen Aerials facility in Duluth, MN and all IBA staff attended year 2 Hazmat training. In 2023, planned training includes UB50 operational training for three additional staff members and one staff member attending the spring state safety conference. Working at heights training will occur during the spring of 2024. In engaging all employees on enhancing a safe work environment, a number of accomplishments were noted.
- The IBA in-house safety committee continues to meet on a regular basis to advance IBA culture of safety.
- The IBA continues to be represented with a seat on MDOT's state wide safety committee.

Management will continue to partner with employees via our IBA safety committee to improve and enhance the culture of safety at the bridge.

## Security

The security of the International Bridge and support facilities continues to be of utmost importance in the face of continued threats to domestic infrastructure.

The bridge security system is utilized to engage bridge security stakeholders and first responders, such as U.S. Customs and Border Protection offices, the U.S. Army Corps of Engineers, and both U.S. and Canadian local and regional law enforcement and emergency response staff, by providing full remote monitoring capability of the bridge security system.

All IBA operational staff are trained to operate the security system and are on a semi-annually recurring training program.

Annual routine maintenance, servicing, and equipment replacement is included in the asset management plan for the IBA. Cost to maintain the system is dependent on the life cycle of the system components and fluctuates with an average annual maintenance cost of $\$ 54,000$.

System software patches and updates are performed monthly, system servicing is contracted semi-annually, and equipment replacement is averaging approximately three cameras annually.

## Critical Infrastructure Protection and Emergency Response Activities

Critical infrastructure protection and emergency response by bridge staff is tested every year. IBA works closely with federal, state, provincial, and local border security stakeholder agencies, as well as emergency response law enforcement agencies on both side of the border, on a number of initiatives to enhance the ability to deter, detect, and mitigate risk and response to a terrorist threat.

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## CAPITAL PROJECT DESCRIPTIONS

## Capital Plan Executive Summary

The International Bridge has retained the firm of Hardesty and Hanover, Engineering Consultants, to conduct biennial inspections of the bridge on both the U.S. and Canadian sides, and to make recommendations on bridge maintenance and capital improvements to ensure the continued structural integrity and safety of the bridge.

Recommendations for maintenance and capital projects have been documented by the International Bridge Administration in the annual Business Plan, specifically within the Asset Management Plan and the Long Range Capital Plan, which are components of the Business Plan. Revisions, additions, or other changes to prior capital plans have been identified and detailed with the use of footnotes in applicable sections. All revisions, additions, or changes are based upon recommendations coming from the biennial inspection report, or based upon input from bridge owners, and have been implemented in a continuing effort to manage capital expenditures and cash flow in the best interests of the bridge and it's owners.

It should be noted that 2017 marked a major shift in strategy for certain capital projects. IBA in-house maintenance efforts have begun to increase focus on preventative maintenance strategies in order to defer major capital projects. IBA staff have previously employed these preventative maintenance strategies with regard to the bridge deck with yearly crack sealing efforts. These efforts have resulted in significant deferral of deck overlay and replacement projects, and it is expected that future crack sealing and flood coating will continue to defer these projects.

Similarly, maintenance staff in 2017 began employing preventative maintenance strategies with regard to coatings systems. With concurrence from Hardesty \& Hanover, spot painting of the bridge's coatings systems are done in order to defer capital paint projects. In particular, the U.S. arch will be spot painted in order to defer the planned capital contract and spot painting will be employed on other coatings systems as well.

The IBA maintenance department performs a wide range of tasks throughout the course of the year. These include:

- Bridge repairs: including repairs to the bridge deck, bridge rails, curb rails, and drainage systems;
- Winter maintenance; snow plowing, sanding bridge and plazas, shoveling sidewalks;
- Maintenance and janitorial services on IBA and CBSA facilities;
- Janitorial maintenance of both U.S. toll plaza and Canadian CBSA plazas including grounds and buildings;
- Maintenance of all IBA equipment;
- Bridge and facility electrical and lighting maintenance;
- Touch-up painting;
- Minor road maintenance and repairs;
- Bridge security patrols.

The International Bridge Administration (IBA) continues to expand in-house asset management systems.

The activity-based cost accounting system plays an important role in tracking costs and schedules for maintenance projects and activities performed by IBA maintenance staff. The maintenance recommendations in the Biennial Inspection Report, such as bridge joint replacement, spot painting, and deck patching, form the basis for the project list in the system.

As a component of the asset management effort underway at the bridge, process improvement in scheduling and tracking of projects have been implemented which will result in greater efficiency in completing all projects. While the activity-based system will be used for tracking project labor and equipment costs, completion of projects will continue to be tracked with the biennial inspection report itself. As projects are completed, completion dates and final costs will be denoted within the table of projects and reported back to the engineer-of-record, as well as SSMBA.

GASB 34 defines infrastructure assets as long-lived capital assets that normally are stationary in nature and can be preserved for a significantly greater number of years than most other capital assets. Capital plan projects are grouped based upon projects designed to maintain the existing infrastructure (maintenance projects and asset management projects), or improvements that are permanent and add significantly to the site or structure that extends the life of the asset (construction projects).

At this time, the following projects are presented within the 40 -year, long-range capital plan:

## Maintenance Projects

Contractual Bridge Painting
Acquisition of New Equipment
Rocker Link Monitoring

## Construction Projects

Electrical System Upgrade

## Inspections and Studies

Biennial Inspection
Fracture Critical Inspection
Underwater Inspection
Deck Study and Infrared Inspection
Storm Sewer Inspection
Redundant Fiber System Study
Capital Plan Update(s)

## Asset Management Projects

Bridge Expansion Joint Replacement
Bridge Deck Overlay
Bridge Deck Replacement
Curb Rail and Bridge Rail Repair
Catwalk Plates
Buildings and Plazas
Bridge Security System
Toll Lane Software Replacement

## CAPITAL PROJECT DESCRIPTIONS

## MAINTENANCE PROJECTS

## Contractual Bridge Painting ${ }^{1}$

## Project Description

Full containment coating removal and repainting of all bridge superstructures and substructure elements.

## Project Background

The bridge requires regular cleaning and coating of the structural steel components. The work is typically done by contracted vendors who perform full cleaning and coating paint services utilizing a MDOT/FBCL approved paint system. The original lead paint system has been removed from most of the structure except for the following: Span 1 and Span 2 (US Approach Spans), the upper portion of the Canadian Arch, and the bridge rails.

## Project Status

Next scheduled project: US Arch 2029

## Timeline and Cost

Design Engineering
Included in Cost

## Construction Engineering

Included in Cost

## Construction Cost (2022 US Dollars)

| Bridge Component | Construction | Amount |  |
| :--- | :---: | ---: | ---: |
|  | Year | 3 Coat Zinc | HRCSA |
| US Arch Spans 20-23 | $2029-32$ | $\$ 20.2 \mathrm{M}$ | $\$ 11.3 \mathrm{M}$ |
| US Power Canal Span 12 | 2033 | $\$ 5.7 \mathrm{M}$ | $\$ 3.4 \mathrm{M}$ |
| US Arch Approach Spans 13-19 | 2041 | $\$ 9.5 \mathrm{M}$ | $\$ 5.4 \mathrm{M}$ |
| US Approach Spans 1-11 | 2041 | $\$ 6.1 \mathrm{M}$ | $\$ 3.5 \mathrm{M}$ |
| US Central Girder Spans 24-30 | 2042 | $\$ 18.0 \mathrm{M}$ | $\$ 10.0 \mathrm{M}$ |
| CAN Central Girder Spans 31-38 | 2043 | $\$ 16.5 \mathrm{M}$ | $\$ 9.2 \mathrm{M}$ |
| CAN Approach Spans 42-63 | $2044-45$ | $\$ 24.0 \mathrm{M}$ | $\$ 13.3 \mathrm{M}$ |
| CAN Arch Spans 39-41 | 2047 | $\$ 17.5 \mathrm{M}$ | $\$ 8.7 \mathrm{M}$ |
|  |  | $\mathbf{\$ 1 1 7 . 5 M}$ | $\mathbf{\$ 6 4 . 8 M}$ |

## Acquisition of New Equipment

## Project Description

Regular replacement of equipment is required. This includes trucks, snow plows, generators, street sweeper, toll equipment, electric generators, bridge lighting, welding equipment, computers, and other planned equipment in excess of $\$ 5,000$ per asset.

## Project Background

Major equipment expenses (greater than $\$ 5,000$ ) are borne by the Capital Reserve Maintenance Fund rather than the operations budget. A variable yearly budget based upon a replacement schedule created from the expected equipment service lives has been established. As time progresses it is possible to provide a more accurate approximation on a 10 -year basis based upon contemporaneous equipment costs.

## Project Status

Capital equipment replacement schedule is established and reviewed/updated yearly.

## Timeline and Cost

## Equipment Cost

| $2022-2031$ | $\$ 1,533,555$ |
| :--- | ---: |
| $2032-2041$ | $\$ 2,681,538$ |
| $2042-2051$ | $\$ 2,569,912$ |
|  |  |
| Total Cost |  |
| $\$ 6,785,005(2022-2051)$ |  |

## CAPITAL PROJECT DESCRIPTIONS

## Rocker Link Monitoring

## Project Description

Monitoring rotational movement of two remaining rocker links at Pier 22 on the north end of the US Arch and the four remaining rocker links at Pier 37 and Pier 40 on the south and north ends of the Canadian arch.

## Project Background

Rocker link pin and link arm movement in eight locations on the bridge arch ends have been monitored since 2008. The rocker links allow the arches to move longitudinally with fluctuations in seasonal temperature.

Monitoring initially consisted of seasonal field measurements of arm movement. In 2010, all eight link pins were ultrasonically tested, and strain gauges were placed on the link arms at the south end of the US arch. Gauges were placed at this location after field measurements indicated decreasing rotational capability of the links there. The other six locations showed (and continue to show) normal rotational capacity. Ultrasonic testing determined all pins to be structurally sound.

In 2015, the strain gauges on the US arch south link arms indicated that stresses were beginning to approach maximum allowable limits. The two link arms at this location were accordingly replaced with high load disc bearings in 2017, at a cost of approximately $\$ 500,000$.

The remaining six link arms and pins will now continue to be monitored through seasonal field measurements. When stresses begin to increase, it will be due to the inability of the arm to rotate on the pin. This will be evident in the field measurements gathered, at which point strain gauges will again be placed on arms in question for more precise monitoring.

## Project Status

The remaining six links will be monitored by taking steel tape measurements at summer and winter temperature extremes. This data is typically gathered with use of a Reachall. New data is then compared to past data at each link arm to monitor changes.

The high load disc bearings will also be monitored during the biennial detailed routine inspections.

## Timeline and Cost (Future Link Replacement in Six Lo-

 cations)
## Design Engineering

\$0 (plans completed in 2015)

## Construction Engineering

\$325,000

## Construction Cost

\$3,270,000
Total Cost
\$3,595,000

## CONSTRUCTION PROJECTS

## Bridge Electrical System Upgrade

## Project Description

Updates and additions to the original electrical system study were prepared by EPOH in 2007. This includes a change in title to Electrical System Upgrade, as the scope of work now includes additional components of the utility system; fixtures, junction boxes, breaker panels, electrical panels, transformers, N -lighting systems, camera location hardware, nodes/electrical hardware, and other appurtenances.

## Project Background

The EPOH study was originally prepared with a scope which consisted of upgrades to the bridge's lighting and related appurtenances. This has been carried forward each year with appropriate updates and adjustments to costs based upon Construction Price Index (CPI). Also, since the original study, the bridge's deck, arch, and other lighting have all been upgraded to LED lights. With the length of time that has passed since the original plan was prepared, major scope changes make a full update to the electrical system necessary.

## Project Status

Planning Stage and being reused with the capital plan update

## Timeline and Cost

## 2023-2033

## US Side <br> Design Engineering

 10\%$$
\$ 53,996
$$

## Construction Engineering

## Construction

\$539,694Total Cost (US Side) ..... \$647,957

| CDN Side <br> Design Engineering <br> $10 \%$ | $\$ 56,972$ |
| :--- | ---: |
| Construction Engineering <br> $10 \%$ | $\$ 56,972$ |
| Construction | $\$ 569,724$ |
| Total Cost (CDN Side) | $\$ \mathbf{6 8 3 , 6 6 9}$ |
| Grand Total (2022 US Dollars) | $\mathbf{\$ 1 , 3 3 1 , 6 2 6}$ |

## CAPITAL PROJECT DESCRIPTIONS

## INSPECTIONS \& STUDIES

Biennial Routine Detailed Inspection and Report

## Project Description

Biennial inspection (every other year) and reporting of the superstructure, substructure, deck/roadway and other related entities. The inspection consists of sufficient observations and /or measurements to determine the physical and functional condition of the bridge. Observations of the bridge are compared to previously recorded conditions to identify any developing problems and/or advancement from previously recorded conditions and to ensure that the structure continues to satisfy the present and long-term service requirements.

## Project Background

An annual inspection of the bridge was conducted from 1962 through 2019. The inspection cycle was then converted to a biennial inspection alternating with the fracture critical member inspection. The latest (2021) Routine Detailed Inspection reports that "the bridge is in good condition." Maintenance items are prioritized and identified in the inspection report. Maintenance items are addressed by IBA crews while other findings are recommended for contracted forces.

## Project Status

Biennial inspections are scheduled for future odd numbered years 2023, 2025, 2027...

## Timeline and Cost

Design Engineering N/A

## Construction Engineering <br> N/A

## Inspection Cost

Biennial \$144,662
Total Cost (40 Year Outlook)
\$2,893,240 (2023 US Dollars)

## Biennial Fracture Critical Member (FCM) Inspection and Report

## Project Description

Biennial inspection (every other year) and reporting on the fracture critical member elements of the bridge. Observations of the fracture critical members are compared to previously recorded conditions to identify any developing problems and/or advancement from previously recorded conditions and to ensure that the structure continues to satisfy the present and long-term service requirements.

## Project Background

An annual inspection of the FCM elements of the bridge was conducted from 1962 through 2019. The FCM inspection cycle was then converted to a biennial inspection of all FCM elements alternating with the routine detailed.

## Project Status

Biennial FCM inspections are scheduled for future even numbered years 2024, 2026, 2028...

## Timeline and Cost

Design Engineering
N/A
Construction Engineering
N/A
Inspection Cost
Biennial \$ 122,000
Total Cost (40 Year Outlook)
\$2,440,000 (2022 US Dollars)

## CAPITAL PROJECT DESCRIPTIONS

## Underwater Inspection

## Project Description

Underwater inspections are required every five years (60 months) for bridge substructures if they cannot be inspected visually via wading or probing at low water levels. Generally underwater inspections are warranted for water depths greater than four feet or in waterways with swift currents and/or obstructions.

## Project Background

The last bridge underwater inspection was performed in 2019.

## Project Status

The next scheduled underwater inspection is in 2024.

## Timeline and Cost

## Design Engineering N/A

Construction Engineering N/A

Inspection Cost (Estimated for 2024)
\$65,782
Total Cost (40 Year Outlook)
\$526,256 (2019 Dollars)

## Deck Study \& Infrared Inspection

## Project Description

Follow-up deck study and Infrared Thermography (IR) survey which will compare contemporaneous deck data to prior IR/deck studies and routine inspection chain drag soundings.

## Project Background

Updated deck and IR studies completed since the initial 2008 study give a five-year comparative analysis to data gathered since 2008, thus quantifying the change in deck deterioration conditions which have occurred during that time frame. The data analysis continues to validate the ability to move the deep overlay deck resurfacing to 2031-2034, and possibly further.

## Project Status

The most recent deck and IR study was performed in 2018 and is subsequently scheduled in five-year increments. The 2018 study was performed in conjunction with the 2018 annual inspection and showed negligible increases in deck deterioration since 2008.

## Timeline and Cost

Design Engineering N/A
Construction Engineering N/A
Inspection Cost (Estimated for 2023)
\$50,120
Total Cost (40 Year Outlook)
\$400,960 (2022 US Dollars)

## Storm Sewer Inspection

## Project Description

Perform inspection of the bridge storm sewer main on the US and Canadian approaches. This is a specialty inspection.

## Project Background

The bridge's runoff collection built during the original bridge construction includes underground storm sewer main which has never been inspected. Inspections are being planned in two phases: Phase 1 on the US side, and Phase 2 on the Canadian side.

## Project Status

Planning for Phase 1 is underway. The main was cleaned of sand in 2020 by MDOT's St. Ignace garage Vactor unit. MDOT also currently has a state procurement contract in place which was previously awarded on a competitive basis, and which would allow the IBA to take advantage of state contract pricing for the inspection services. The state contract will be in place until 2023.

Phase 2 remains in early planning stages.

## Timeline and Cost

Phase 1 - US Side
Design Engineering
Not Necessary
Construction Engineering
Not Necessary

## Inspection Cost

2023 \$36,000
Phase 1 - Canadian Side
Design Engineering
Not Necessary
Construction Engineering
Not Necessary

## Inspection Cost

Year and Cost Currently Unknown

## CAPITAL PROJECT DESCRIPTIONS

## ASSET MANAGMENT PROJECTS

## Bridge Expansion Joint Replacement

## Project Description

Develop an effective seal for the various expansion/ contraction pour joints on the bridge to prevent water and contaminants from the deck to collect on underlying structural steel. The work consists of removing old, deteriorated material in the bridge's joints and installing the new joint sealant.

## Project Background

Each pour joint on the bridge is approximately 1-2 inches wide and allows for the bridge's minor expansion and contraction. The joint openings must be filled with a flexible material (EMSEAL) to prevent water from running through the joint and onto the steel below. Water on the steel contributes to corrosion. The EMSEAL joint seal replacement strategy incorporates repair/replacement prioritization of each joint, and is a component of the overall asset management plan.

## Project Status

Asset Management prioritized repair/replacement commenced in 2010. During the spring of each year a joint condition inventory is completed and the service life of different joint types is evaluated and trends identified. Replacement and repairs are completed in the summer/ fall based on a prioritized rating system.

## Timeline and Cost

## Design Engineering

Not Necessary

| Construction Engineering <br> Not Necessary |  |
| :--- | :--- |
| Construction Cost |  |
| $2020-2024$ | $\$ 47,500$ |
| $2025-2029$ | $\$ 47,500$ |
| $2030-2024$ | $\$ 47,500$ |
| $2035-2039$ | $\$ 47,500$ |
| $2040-2044$ | $\$ 47,500$ |
| $2045-2049$ | $\$ 47,500$ |
| $2050-2054$ | $\$ 47,500$ |
| $2055-2059$ | $\$ 47,500$ |

## Bridge Deck Overlay

## Project Description

Remove the upper portion of the bridge deck to just below the upper mat of reinforcement steel. Then cast a special low permeable concrete overlay. Only the portion of the deck slab between the curb rails will receive an overly. The curb and bridge rail will not be impacted.

## Project Background

The IBA has the 2008, 2013, and 2018 Bridge Deck Infrared Inspection Reports on file. The studies have historically shown that prior crack sealing efforts, primarily thin epoxy overlays, have provided a remaining service life of approximately $10-15$ years, after which a deep deck overlay may be required. A deep deck overlay would delay a full deck replacement for approximately 25 years.

## Project Status

Financial planning phase is in progress, and project has been moved to 2031-2034.

## Timeline and Cost

Design Engineering
Included in Cost

## Construction Engineering

Included in Cost

## Construction Cost (2022 US Dollars)

| Bridge Component | Contruction Year | Amount |
| :--- | :---: | :---: |
| US Approach Spans 1-19 | 2033 | $\$ 4.8 \mathrm{M}$ |
| US Arch \& Central Girder |  |  |
| Spans 20-30 | 2034 | $\$ 6.1 \mathrm{M}$ |
| CAN Central Girder \& Arch | 2031 | $\$ 5.1 \mathrm{M}$ |
| Spans 31-41 <br> CAN Approach Spans 42-63 | 2032 | $\$ 5.4 \mathrm{M}$ |
| Total Cost |  | $\$ 21.4 \mathrm{M}$ |
|  |  |  |

[^3]
## CAPITAL PROJECT DESCRIPTIONS

## Bridge Deck Replacement

## Project Description

The project involves the removal and replacement of the bridge deck, bridge maintenance walks, curb rails, and barrier railings. Deck replacement in various girder spans may require the installation of a new center girder to support the deck in part-width construction staging.

## Project Background

The bridge deck is 60 years old and received an overlay in the 1998. Bridge decks historically have a service life of $50-60$ years. The 2008, 2013, and 2018 bridge deck infrared studies have shown that the bridge deck is in good condition, and that a bridge deck replacement will not be needed for $20-25$ years. In keeping with asset management and planning principles, the existing deck will be monitored every other year during the detailed routine inspection.

## Project Status

Financial planning phase is in progress.

## Timeline and Cost

Design Engineering
Included in Cost

## Construction Engineering

Included in Cost

## Construction Cost (2022 US Dollars)

| Bridge Component | Construction Year | Amount |
| :--- | :---: | :---: |
| US Bridge Deck Spans 1-30 | 2050 | $\$ 35.5 \mathrm{M}$ |
| CAN Bridge Deck Spans 31-63 | 2049 | $\$ 33.7 \mathrm{M}$ |
| Total Cost |  | $\$ 69.2 \mathrm{M}$ |

## Curb Rail and Bridge Rail Repair

## Project Description

Repair/replace all structurally deficient bridge railing components.

## Project Background

Bridge curb rail (ivory) and bridge rail (green) are 60 years old.

The goal of the bridge rail asset management plan is to extend the service life of the rails until the mid-2040's, at which time the rail will be removed as part of the bridge deck replacement, with deferred replacement costs below.

The bridge and curb rail condition assessment survey has been completed. The rail inventory is in fair structural condition considering its age and corrosion susceptible location.

## Project Status

Repair of rail deficiencies are ongoing.

## Timeline and Cost

Design Engineering
Included in Cost
Construction Engineering
Included in Cost
Construction Cost (2022 US Dollars)

| Bridge Component | Construction Year | Amount |
| :--- | :---: | :---: |
| US Curb Rail | 2045 | $\$ 0.6 \mathrm{M}$ |
| CAN Curb Rail | 2045 | $\$ 0.6 \mathrm{M}$ |
| Total Cost |  | $\mathbf{\$ 1 . 2 M}$ |
|  |  | $\$ 1.1 \mathrm{M}$ |
| US Bridge Rail | 2045 | $\$ 1.1 \mathrm{M}$ |
| CDN Bridge Rail | 2045 | $\mathbf{\$ 2 . 2 M}$ |
| Total Cost |  |  |

## CAPITAL PROJECT DESCRIPTIONS

## Catwalk Plates

## Project Description

Inspect and inventory all bridge catwalk plates, with each plate to be rated and replaced as necessary.

## Project Background

Catwalks were installed underneath the bridge deck in various areas of the bridge at the time of the bridge's original construction. The steel plate catwalks are used by maintenance staff to access the bridge's sub-structure and perform maintenance activities. There are a total of 2,523 plates which comprise the catwalk system, and as moisture rusts the plates they must be replaced. The catwalk asset management plan incorporates repair/ replacement prioritization of each plate.

## Project Status

All catwalk plates were initially inspected in 2013. Condition monitoring is on-going each year.

## Timeline and Cost

## Design Engineering

Not Necessary

## Construction Engineering

Not Necessary

## Construction Cost

| $2020-2024$ | $\$ 1,500$ |
| :--- | :--- |
| $2025-2029$ | $\$ 1,500$ |
| $2030-2024$ | $\$ 1,500$ |
| $2035-2039$ | $\$ 1,500$ |
| $2040-2044$ | $\$ 1,500$ |
| $2045-2049$ | $\$ 1,500$ |
| $2050-2054$ | $\$ 1,500$ |
| $2055-2059$ |  |

## Bridge Security System

## Project Description

Maintain the security system equipment, hardware, software, and upgrade remaining analog cameras.

## Project Background

The Bridge security system was installed in 2005 on the International Bridge. Major server and software replacements have been performed in 2012 and 2020.

This system incorporates several advanced features, including automated camera systems, motion-detecting sensors, firewalled, web-based traffic cameras, building access and security. The current system is an effective tool to monitor bridge traffic and security. Maintenance of the system along with system improvement is now a recurring preventative maintenance expenditure.

## Project Status

Maintenance yearly. Maintenance of the security system is presented as an asset management project in the 20222060 Capital Plan.

## Timeline and Cost

## Construction Cost

20267 Year Upgrade Project \$ 273,420

## Total Cost

\$273,420

## Buildings and Plazas

## Project Description

Regular replacement of building and plaza elements in accordance with assigned life cycles.

## Project Background

The CDN plaza was redeveloped in 2016-2017, including new CBSA Traffic/Commercial buildings, maintenance garage, Duty Free, and all paved surfaces. The US IBA Plaza was redeveloped in 2015-2016 and included new Administration building, toll plaza and canopy, and paved surfaces. Major elements that will need to be maintained and replaced include roofs, electrical system, HVAC equipment, and paved surfaces.

## Project Status

Capital facilities replacement schedule is established and reviewed/updated annually.

## Timeline and Cost

## Design Engineering

| 2023-2044 | US Buildings/Plaza | $\$ 280,573$ |
| :--- | :--- | :--- |
| 2023-2044 | CDN Buildings and Plaza | $\$ 701,040$ |

## Construction Engineering

| 2023-2044 | US Buildings/Plaza | $\$ 280,573$ |
| :--- | :--- | :--- |
| 2023-2044 | CDN Buildings and Plaza | $\$ 701,040$ |

## Construction Cost

| 2024-2045 | US Buildings/Plaza | $\$ 2,805,732$ |
| :--- | :--- | :--- |
| 2024-2045 | CDN Buildings and Plaza | $\$ 7,010,400$ |

Total Cost
\$11,779,358 (2022 US Dollars)

## CAPITAL PROJECT DESCRIPTIONS

## Toll Lane Software Replacement

## Project Description

The IBA is partnered with the Blue Water Bridge (MDOT) and The Federal Bridge Corporation Limited on a public software procurement and contracted IBI Group for a new toll system replacement to the Conduent Vector 4 software contract that expired in 2022. The software accommodates current and future projected traffic and funds management as a fully supported tolling software package.

## Project Background

The software in the toll booths is a critical and nonredundant part of the toll collection process that allows the IBA to function effectively.

The IBA partnered through a Memorandum of Agreement (MOA) with FBCL, BWB (MDOT), upon completion of a Toll Study Assessment, which included a scope of requirements, lean process improvement, and cost benefits analysis. The partners, in cooperation with SSMBA, approved a 5-year contract to replace the previous vendor prior to contract end in 2022.

## Project Status

The IBA is partnered with BWB (MDOT), DTMB, FBCL, and other stakeholders and has completed scoping for toll replacement software package. IBA is the contracting authority for all three partners in the MOA, and the inflows and outflows of the financial share from each partner is reflected in the presented annual budgets.

## Timeline and Cost

## Design Assistance <br> \$239,000 USD (Estimated)

2021-2022 Design Engineering, Construction, Deployment
\$1,915,500 USD (each: IBA, BWB-MDOT, FBCL)

## 2021-2026 Operations and Maintenance

\$1,078, 100 USD (each: IBA, BWB-MDOT)
$\$ 1,383,000$ CDN (FBCL only)

Total Project Contract Cost (All Partners)
\$5,746,800 USD (Total Design, Construction, Deployment)
\$2,156,200 USD (Total Operations \& Maintenance)
Totals
\$7,903,000 USD (Total USD)
\$1,383,000 CDN (Total CDN)

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International Bridge Administration
Canadian/U.S. Exchange Rate
2012-2022


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EXPENDITURES, AND CHANGES IN FUND BALANCE
ALL GOVERNENTAL UND TYPES
CAPITAL PROJECT SCHEDULE - BASELINE PLAN X
$2024-2053$

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| REVENUES |
| :---: |
| Toll revenues |
| Interest income |
| Lease income |
| MDOT Owner Funds |
| BWB FBCL Funding |
| BWB MDOT Funding |
| Service fees |
| Total revenue |
| EXPENDITURES |
| Operational expenditures |
| Operations and Services |
| Maintenance |
| Administration |
| Other expenditures |
| Total operational expenditures |
| Capital Expenditures |
| Capital fund expenditures |
| Total capital expenditures |
| Total expenditures |
| Excess (deficiency) of revenues over expenditures |
| OTHER FINANCING SOURCES(USES) |
| Sources |
| FBCL Owner Funds |
| Total other financing sources and uses |
| Net change in fund balances |
| Fund Balance |
| Fund Balance-Beginning |
| Revenue fund (unreserved) |
| Capital fund |
| MDOT Capital fund (owner reserve) |
| FBCL Capital fund (owner reserve) |
| Fund Balance-Ending |

COMLLT STE MARIE BRIDGE AUTHORITY
COMPARATIVE STETEMENE OF REVENUES,
EXPENDITURES, AND CHANGES IN FUND BALANCE
ALL GVERNMNTAL UND TYPES
CAPITAL PROJECT SCHEDULE - BASELNE PLAN X
$2024-2053$

|  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 |  | 2034 |  | 2035 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| REVENUES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Toll revenues | \$ | 12,450,011 | \$ | 13,679,400 | \$ | 14,926,824 | \$ | 16,203,189 | \$ | 17,498,174 | \$ | 18,822,906 | \$ | 19,011,134 |
| Interest income |  | 51,213 |  | 51,726 |  | 52,243 |  | 52,765 |  | 53,293 |  | 53,826 |  | 54,364 |
| Lease income |  | 105,101 |  | 106,152 |  | 107,214 |  | 108,286 |  | 109,369 |  | 110,462 |  | 111,567 |
| MDOT Owner Funds |  | 263,713 |  | 279,188 |  | 290,356 |  | - |  | - |  |  |  |  |
| BWB FBCL Funding |  | 337,931 |  | 358,018 |  | 372,338 |  | - |  | - |  |  |  |  |
| BWB MDOT Funding |  | 263,713 |  | 279,188 |  | 290,356 |  |  |  |  |  |  |  |  |
| Service fees |  | 65,037 |  | 67,639 |  | 70,344 |  | 73,158 |  | 76,085 |  | 79,128 |  | 82,293 |
| Total revenue | \$ | 13,536,720 | \$ | 14,821,310 | \$ | 16,109,675 | \$ | 16,437,398 | \$ | 17,736,920 | \$ | 19,066,322 | \$ | 19,259,358 |
| EXPENDITURES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operational expenditures |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operations and Services |  | 2,701,862 |  | 2,809,844 |  | 2,921,993 |  | 3,038,581 |  | 3,160,084 |  | 2,870,510 |  | 2,985,070 |
| Maintenance |  | 2,928,702 |  | 3,154,352 |  | 3,237,098 |  | 3,336,978 |  | 3,805,032 |  | 3,735,286 |  | 3,900,664 |
| Administration | \$ | 737,060 | \$ | 766,497 | \$ | 797,322 | \$ | 829,119 | \$ | 862,188 | \$ | 896,656 | \$ | 932,424 |
| Other expenditures |  | 612,097 |  | 636,580 |  | 662,044 |  | 688,526 |  | 716,066 |  | 744,710 |  | 774,499 |
| Total operational expenditures |  | 6,979,721 |  | 7,367,273 |  | 7,618,457 |  | 7,893,204 |  | 8,543,370 |  | 8,247,162 |  | 8,592,657 |
| Capital Expenditures |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Capital fund expenditures |  | 7,828,331 |  | 8,622,690 |  | 13,740,558 |  | 18,314,710 |  | 23,992,891 |  | 9,543,551 |  | 7,113,950 |
| Total capital expenditures |  | 7,828,331 |  | 8,622,690 |  | 13,740,558 |  | 18,314,710 |  | 23,992,891 |  | 9,543,551 |  | 7,113,950 |
| Total expenditures |  | 14,808,052 |  | 15,989,963 |  | 21,359,015 |  | 26,207,914 |  | 32,536,261 |  | 17,790,713 |  | 15,706,607 |
| Excess (deficiency) of revenues over expenditures | \$ | $(1,271,332)$ | \$ | $(1,168,652)$ | \$ | $(5,249,340)$ | \$ | (9,770,516) | \$ | $(14,799,341)$ | \$ | 1,275,609 | \$ | 3,552,751 |
| OTHER FINANCING SOURCES(USES) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FBCL Owner Funds |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Total other financing sources and uses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Net change in fund balances | \$ | $(1,271,332)$ | \$ | (1,168,652) | \$ | (5,249,340) | \$ | (9,770,516) | \$ | (14,799,341) | \$ | 1,275,609 | \$ | 3,552,751 |
| Fund Balance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fund Balance-Beginning | \$ | 9,795,795 | \$ | 8,524,462 | \$ | 7,355,810 | \$ | 2,106,470 | \$ | (7,664,047) | \$ | $(22,463,387)$ | \$ | (21,187,778) |
| Revenue fund (unreserved) |  | 458,666 |  | 454,438 |  | 450,061 |  | 445,530 |  | 440,842 |  | 435,990 |  | 430,966 |
| Capital fund |  | 120,825 |  | 125,054 |  | 129,430 |  | 133,961 |  | 138,649 |  | 143,502 |  | 148,524 |
| MDOT Capital fund (owner reserve) |  | 4,242,852 |  | 3,658,526 |  | 1,033,856 |  | $(3,851,402)$ |  | $(11,251,073)$ |  | ( $10,613,268$ ) |  | $(8,836,893)$ |
| FBCL Capital fund (owner reserve) |  | 3,702,119 |  | 3,117,793 |  | 493,123 |  | $(4,392,135)$ |  | $(11,791,806)$ |  | (11,154,001) |  | (9,377,626) |
| Fund Balance-Ending |  | 8,524,462 | \$ | 7,355,810 | \$ | 2,106,470 | \$ | $(7,664,047)$ | \$ | $(22,463,387)$ | \$ | (21,187,778) | \$ | $(17,635,028)$ |

CAULT STE MARIE BRIDGE AUTHORITY
COMPARATIVE STATEMENT FF REVENUES,
EXPENDITURES, AND CHANGES IN FIND BALANCE
ALL GOVERNMENTAL FUND TYPES
CAPITAL PROJECT SCHEDULE - BASELLNE LLAN X
$2024-2053$

|  | 2036 |  | 2037 |  | 2038 |  | 2039 |  | 2040 |  | 2041 |  | 2042 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| REVENUES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Toll revenues | \$ | 19,201,247 | \$ | 19,393,258 | \$ | 19,587,191 | \$ | 20,750,643 | \$ | 20,958,151 | \$ | 21,167,731 | \$ | 21,379,411 |
| Interest income |  | 54,908 |  | 55,457 |  | 56,011 |  | 56,571 |  | 57,137 |  | 57,709 |  | 58,286 |
| Lease income |  | 112,683 |  | 113,809 |  | 114,947 |  | 116,097 |  | 117,258 |  | 118,430 |  | 119,615 |
| MDOT Owner Funds |  |  |  | - |  | - |  | - |  | - |  | - |  | - |
| BWB FBCL Funding |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BWB MDOT Funding |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Service fees |  | 85,585 |  | 89,008 |  | 92,568 |  | 96,271 |  | 100,122 |  | 104,127 |  | 108,292 |
| Total revenue | \$ | 19,454,422 | \$ | 19,651,532 | \$ | 19,850,718 | \$ | 21,019,583 | \$ | 21,232,668 | \$ | 21,447,997 | \$ | 21,665,603 |
| EXPENDITURES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operational expenditures |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operations and Services |  | 3,104,186 |  | 3,228,455 |  | 3,357,674 |  | 3,491,970 |  | 3,631,324 |  | 3,776,819 |  | 3,928,071 |
| Maintenance |  | 3,882,071 |  | 4,014,491 |  | 4,351,130 |  | 4,378,420 |  | 4,871,221 |  | 4,801,971 |  | 5,254,738 |
| Administration | \$ | 969,623 | \$ | 1,008,309 | \$ | 1,048,649 | \$ | 1,090,488 | \$ | 1,134,007 | \$ | 1,179,265 | \$ | 1,226,465 |
| Other expenditures |  | 805,479 |  | 837,698 |  | 871,206 |  | 906,053 |  | 942,295 |  | 979,987 |  | 1,019,187 |
| Total operational expenditures |  | 8,761,359 |  | 9,088,953 |  | 9,628,659 |  | 9,866,931 |  | 10,578,847 |  | 10,738,042 |  | 11,428,461 |
| Capital Expenditures |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Capital fund expenditures |  | 4,530,673 |  | 3,298,197 |  | 1,471,516 |  | 3,431,161 |  | 4,302,414 |  | 13,918,327 |  | 23,658,532 |
| Total capital expenditures |  | 4,530,673 |  | 3,298,197 |  | 1,471,516 |  | 3,431,161 |  | 4,302,414 |  | 13,918,327 |  | 23,658,532 |
| Total expenditures |  | 13,292,032 |  | 12,387,150 |  | 11,100,175 |  | 13,298,092 |  | 14,881,261 |  | 24,656,369 |  | 35,086,993 |
| Excess (deficiency) of revenues over expenditures | \$ | 6,162,390 | \$ | 7,264,382 | \$ | 8,750,543 | \$ | 7,721,491 | \$ | 6,351,407 | \$ | $(3,208,372)$ | \$ | $(13,421,389)$ |
| OTHER FINANCING SOURCES(USES) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sources |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FBCL Owner Funds |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Total other financing sources and uses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Net change in fund balances |  | 6,162,390 | \$ | 7,264,382 | \$ | 8,750,543 | \$ | 7,721,491 | \$ | 6,351,407 | \$ | $(3,208,372)$ | \$ | $(13,421,389)$ |
| Fund Balance |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fund Balance-Beginning | \$ | $(17,635,028)$ | \$ | $(11,472,638)$ | \$ | $(4,208,255)$ | \$ | 4,542,287 | \$ | 12,263,778 | \$ | 18,615,185 | \$ | 15,406,814 |
| Revenue fund (unreserved) |  | 425,768 |  | 420,388 |  | 414,819 |  | 409,056 |  | 403,090 |  | 396,917 |  | 390,526 |
| Capital fund |  | 153,723 |  | 159,103 |  | 164,672 |  | 170,435 |  | 176,400 |  | 182,574 |  | 188,965 |
| MDOT Capital fund (owner reserve) |  | $(5,755,698)$ |  | ( $2,123,507$ ) |  | 2,251,765 |  | 6,112,510 |  | 9,288,214 |  | 7,684,028 |  | 973,333 |
| FBCL Capital fund (owner reserve) |  | $(6,296,431)$ |  | (2,664,240) |  | 1,711,032 |  | 5,571,777 |  | 8,747,481 |  | 7,143,295 |  | 432,600 |
| Fund Balance-Ending |  | $(11,472,638)$ | \$ | $(4,208,255)$ | \$ | 4,542,287 | \$ | 12,263,778 | \$ | 18,615,185 | \$ | 15,406,814 | \$ | 1,985,424 |

CAULT STE MARIE BRIDGE AUTHORITY
COMPARATIVE STTATEMENT OF REVENUES,
EXPENDITURES, AND CHANGES IN FUND BALANCE
ALL GOVERNMENTAL FUND TYPES
CAPITAL PROIECT SCHEDULE - BASELINE PLAN X
$2024-2053$


| 112,624 | 117,129 | 121,814 | 126,686 | 131,754 | 137,024 | 142,505 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  | $\begin{array}{lllllllllll}\$ & 21,885,506 & \$ & 23,124,679 & \$ & 23,359,439 & \$ & 23,596,689 & \$ & 23,836,456 & \$\end{array}$ $5,167,967$

$6,702,639$


| $11,509,970$ | $11,972,139$ | $12,573,373$ | $13,159,611$ | $13,868,978$ | $14,130,714$ | $14,825,304$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | | $3,636,692$ | $17,197,143$ | $28,622,178$ | $45,349,525$ | $25,013,041$ | $26,197,792$ | $120,716,466$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $17,19,143$ |  |  |  |  |  | | $3,636,692$ | $17,197,143$ | $28,622,178$ | $45,349,525$ | $25,013,041$ | $26,197,792$ | $120,716,466$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $15,146,662$ | 29,16928 | $41,195,551$ | $58,509,136$ | 38,882019 | $40,328,506$ | 135,541770 | |  | $15,146,662$ | $29,169,282$ | $41,195,551$ | $58,509,136$ | $38,882,019$ | $40,328,506$ | $135,541,770$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\$$ | $6,738,844$ | $\$$ | $(6,044,603) \$$ | $(17,836,112)$ | $\$$ | $(34,912,447) \$$ | $(15,045,563) \$$ |

 REVENUES
Toll revenues
Interest income
Lease income
MDOT Owner Funds
BWB FBCL Funding
BWB MDOT Funding
Service fees
Total revenue
EXPENDITURES
Operational expenditures
Operations and Services
Maintenance
Administration
Other expenditures
$\quad$ Total operational expenditures
Capital Expenditures
Capial fund expenditures
Total capital expenditures
Total expenditures
Excess (deficiency) of revenues over expenditures $\underset{\text { Sources }}{\text { OTHER FINANCING SOURCES(USES) }}$ Sources
FBCL Owner Funds
Total other financing sources and uses Net change in fund balances
Fund Balance

$$
\begin{aligned}
& \text { Fund Balance } \\
& \text { Fund Balance-Be }
\end{aligned}
$$

Fund Balance-Beginning
Revenue fund (unreserved) Capital fund
MDOT Capital fund (owner reserve)
FBCL Capital fund (owner reserve) Fund Balance-Ending
CAULT STE MARIE BRIDGE AUTHORITY
COMPARATIVE STATEMENT OF REVENUES,
EXPENDITURES, ALD CHANGEE IN FND BALANE
ALL GOVERNENTAL FUND TYPES
CAPITAL PROJECT SCHEDULE - BASELINE PRAN X
$2024-2053$

 REVENUES
Toll revenues
Interest income
Lease income
MDOT Owner Funds
BWB FBCL Funding
BWB MDOT Funding
Service fees
Total revenue
EXPENDITURES
Operational expenditures
Operations and Services
Maintenance
Administration
Other expenditures
Total operational expenditures
Capital Expenditures
Capital fund expenditures
Total capital expenditures
Total expenditures
Excess (deficiency) of revenues over expenditures
OTHER FINANCING SOURCES(USES)
Sources
FBCL Owner Funds
Total other financing
Total other financing sources and uses
Net change in fund balances

> Fund Balance
Fund Balance-Beginning
Revenue fund (unreserved)
Capital fund
MDOT Capital fund (owner
MDOT Capital fund (owner reserve)
FBCL Capital fund (owner reserve)
Fund Balance-Ending
International Bridge Administration Toll Revenue Forecast 2023-2052

Sault Ste. Marie Bridge Authority
Combined Fund Balance 2024-2052

Sault Ste. Marie Bridge Authority
MDOT and FBCL Owners' Reserve Account
100\% Shared Owner Funded Capital Projects
$2023-2052$
 Year

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SAULT STE MARIE BRIDGE AUTHORITY

|  | 2024 |  | 2025 |  | 2026 |  | 2027 |  | 2028 |  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 1,604,339 | \$ | 1,322,404 | \$ | 1,052,137 | \$ | 1,595,810 | \$ | 1,416,279 | \$ | 2,082,660 | \$ | 2,547,678 | \$ | 1,130,446 | \$ | 749,631 | \$ | $(17,034,038)$ |
|  | 5,916,090 |  | 8,450,951 |  | 11,191,369 |  | 11,846,485 |  | 12,537,230 |  | 13,803,969 |  | 15,112,017 |  | 16,424,152 |  | 16,776,224 |  | 18,100,417 |
|  | 5,916,090 |  | 8,450,951 |  | 11,191,369 |  | 11,846,485 |  | 12,537,230 |  | 13,803,969 |  | 15,112,017 |  | 16,424,152 |  | 16,776,224 |  | 18,100,417 |
|  | 5,548,335 |  | 6,014,169 |  | 6,478,195 |  | 6,519,621 |  | 6,855,910 |  | 6,983,669 |  | 7,371,378 |  | 7,622,725 |  | 7,897,641 |  | 8,547,984 |
|  | 1,234,895 |  | 1,934,236 |  | 2,427,910 |  | 2,176,737 |  | 2,106,194 |  | 7,828,331 |  | 8,622,690 |  | 13,740,558 |  | 18,314,710 |  | 23,992,891 |
|  | 6,783,230 |  | 7,948,405 |  | 8,906,105 |  | 8,696,358 |  | 8,962,104 |  | 14,812,000 |  | 15,994,068 |  | 21,363,283 |  | 26,212,351 |  | 32,540,875 |
|  | $(867,140)$ |  | 502,546 |  | 2,285,264 |  | 3,150,126 |  | 3,575,126 |  | (1,008,031) |  | $(882,051)$ |  | $(4,939,131)$ |  | $(9,436,128)$ |  | (14,440,458) |
|  | 578,850 |  | 728,096 |  | 940,466 |  | 1,164,849 |  | 1,401,334 |  | 1,660,548 |  | 1,942,922 |  | 2,248,754 |  | 2,578,612 |  | 2,932,807 |
|  | 101,731 |  | 105,292 |  | 108,977 |  | 112,791 |  | 116,739 |  | 120,825 |  | 125,054 |  | 129,430 |  | 133,961 |  | 138,649 |
|  | 591,278 |  | 842,551 |  | 1,985,183 |  | 3,560,246 |  | 5,347,809 |  | 4,843,793 |  | 4,402,768 |  | 1,933,202 |  | ( $2,784,861$ ) |  | $(10,005,090)$ |
|  | 50,545 |  | 301,818 |  | 1,444,450 |  | 3,019,513 |  | 4,807,076 |  | 4,303,060 |  | 3,862,035 |  | 1,392,469 |  | $(3,325,594)$ |  | ( $10,545,823$ ) |
| \$ | 1,322,404 | \$ | 1,977,757 | \$ | 4,479,075 | \$ | 7,857,400 | \$ | 11,672,957 | \$ | 10,928,227 | \$ | 10,332,778 | \$ | 5,703,856 | \$ | (3,397,883) |  | $(17,479,458)$ |

SAULT STE MARIE BRIDGE AUTHORITY
TRAFFIC AND EXCHANGE RATE SENSITIVITY ANAYLSIS
2032 - 2033

| 2032 |  | 2033 |  |
| :---: | :---: | :---: | :---: |
| \$ | 16,983,308 | \$ | 18,321,114 |
|  | 9,050,910 |  | 8,630,880 |
|  | 9,050,910 |  | 8,630,880 |
|  | 7,897,641 |  | 8,547,984 |
|  | 18,314,710 |  | 23,992,891 |
|  | 26,212,351 |  | 32,540,875 |


|  | 1,488,671 |  | $(826,764)$ |  | (1,272,012) |  | $(842,948)$ |  | $(902,669)$ |  | (6,727,375) |  | $(7,361,677)$ |  | $(12,577,062)$ |  | $(17,161,441)$ |  | $(23,909,994)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4,466,119 |  | 6,915,815 |  | 7,269,285 |  | 7,641,646 |  | 8,033,050 |  | 8,459,880 |  | 8,922,800 |  | 9,422,297 |  | 9,959,239 |  | 10,534,131 |
|  | 101,731 |  | 105,292 |  | 108,977 |  | 112,791 |  | 116,739 |  | 120,825 |  | 125,054 |  | 129,430 |  | 133,961 |  | 138,649 |
|  | 2,534,912 |  | 3,936,411 |  | 5,149,592 |  | 6,798,645 |  | 8,663,667 |  | 8,243,459 |  | 7,892,707 |  | 5,519,974 |  | 905,452 |  | $(6,204,428)$ |
|  | 1,994,179 |  | 3,395,678 |  | 4,608,859 |  | 6,257,912 |  | 8,122,934 |  | 7,702,726 |  | 7,351,974 |  | 4,979,241 |  | 364,719 |  | $(6,745,161)$ |
| \$ | 9,096,942 | \$ | 14,353,196 | \$ | 17,136,713 | \$ | 20,810,994 | \$ | 24,936,390 | \$ | 24,526,890 | \$ | 24,292,534 | \$ | 20,050,943 | \$ | 11,363,372 | \$ | (2,276,808) |

2025
$\stackrel{\substack{4 \\ \hline}}{\square}$
2027
준

$$
\begin{array}{r}
8,786,221 \\
\hline 8,786,221 \\
7,622,725 \\
13,740,558 \\
\hline 21,363,283
\end{array}
$$

กิ

> Nò

$$
\$ 16,617
$$


$7,161,441) \quad(23,909,994)$
$\begin{array}{rr}9,959,239 & 10,534,131 \\ 133,961 & 138,649\end{array}$

* Based upon $1,450,868$ crossings
సิ̀ $\begin{array}{lllllll}6,257,912 & 8,122,934 & 7,702,726 & 7,351,974 & 4,979,241 & 364,719 & (6,745,161)\end{array}$



Fund Balance-Ending Median Traffic
Excess (deficiency) of revenues over
operational expenditures
Revenue fund balance (ending) Capital fund balance (ending) MDOT capital fund (ending) FBCL capital fund (ending)
SAULT STE MARIE BRIDGE AUTHORITY

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | FFIC AND EX SENSITIV | IT | ANGE RATE ANAYLSIS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  | 2024 |  | 2025 |  | 2026 |  | 2027 |  | 2028 |  | 2029 |  | 2030 |  | 2031 |  | 2032 |  | 2033 |
| Beginning Fund Balance | \$ | 10,966,436 | \$ | 12,107,982 | \$ | 12,764,602 | \$ | 13,463,923 | \$ | 14,250,205 | \$ | 15,695,923 | \$ | 17,186,358 | \$ | 18,683,556 | \$ | 19,224,976 | \$ | 20,741,284 |
| Toll Revenue |  | 10,966,436 |  | 12,107,982 |  | 12,764,602 |  | 13,463,923 |  | 14,250,205 |  | 15,695,923 |  | 17,186,358 |  | 18,683,556 |  | 19,224,976 |  | 20,741,284 |
| Total Revenue |  | 10,966,436 |  | 12,107,982 |  | 12,764,602 |  | 13,463,923 |  | 14,250,205 |  | 15,695,923 |  | 17,186,358 |  | 18,683,556 |  | 19,224,976 |  | 20,741,284 |
| Total Expenditures |  | 5,548,335 |  | 6,014,169 |  | 6,478,195 |  | 6,519,621 |  | 6,855,910 |  | 6,983,669 |  | 7,371,378 |  | 7,622,725 |  | 7,897,641 |  | 8,547,984 |
| Capital Expenditures |  | 1,234,895 |  | 1,934,236 |  | 2,427,910 |  | 2,176,737 |  | 2,106,194 |  | 7,828,331 |  | 8,622,690 |  | 13,740,558 |  | 18,314,710 |  | 23,992,891 |
| Total Expenditures |  | 6,783,230 |  | 7,948,405 |  | 8,906,105 |  | 8,696,358 |  | 8,962,104 |  | 14,812,000 |  | 15,994,068 |  | 21,363,283 |  | 26,212,351 |  | 32,540,875 |
| Excess (deficiency) of revenues over operational expenditures |  | 4,183,207 |  | 4,159,577 |  | 3,858,496 |  | 4,767,565 |  | 5,288,101 |  | 883,923 |  | 1,192,290 |  | $(2,679,727)$ |  | $(6,987,375)$ |  | $(11,799,591)$ |
| Revenue fund balance (ending) |  | 5,629,197 |  | 9,435,474 |  | 11,221,076 |  | 13,062,898 |  | 15,012,359 |  | 17,163,527 |  | 19,520,241 |  | 22,085,477 |  | 24,864,088 |  | 27,859,149 |
| Capital fund balance (ending) |  | 101,731 |  | 105,292 |  | 108,977 |  | 112,791 |  | 116,739 |  | 120,825 |  | 125,054 |  | 129,430 |  | 133,961 |  | 138,649 |
| MDOT capital fund (ending) |  | 3,116,451 |  | 5,196,240 |  | 7,125,488 |  | 9,509,271 |  | 12,153,321 |  | 12,595,283 |  | 13,191,428 |  | 11,851,564 |  | 8,357,876 |  | 2,458,081 |
| FBCL capital fund (ending) |  | 2,575,718 |  | 4,655,507 |  | 6,584,755 |  | 8,968,538 |  | 11,612,588 |  | 12,054,550 |  | 12,650,695 |  | 11,310,831 |  | 7,817,143 |  | 1,917,348 |
| Fund Balance-Ending High Traffic | \$ | 11,423,097 | \$ | 19,392,512 | \$ | 25,040,296 | \$ | 31,653,498 | \$ | 38,895,007 | \$ | 41,934,184 | \$ | 45,487,417 | \$ | 45,377,302 | \$ | 41,173,068 | \$ | 32,373,228 |






[^0]:    Total 131 - Transportation Maintenance Supervisor

[^1]:    Total Maintenance Expenditures

[^2]:    Total Other Expenditures

[^3]:    Total Cost
    \$380,000 (2019 Dollars)

