

Re: Item No. 6

**HALIFAX**

# **2022-23 Multi-Year Capital Plan for Strategic Initiatives**

Budget Committee January 28, 2022

# Base Plan vs. Strategic Initiatives

## Base Plan

Reflects the rehabilitation and replacement asset activities required to continue municipal services being delivered as they exist today.

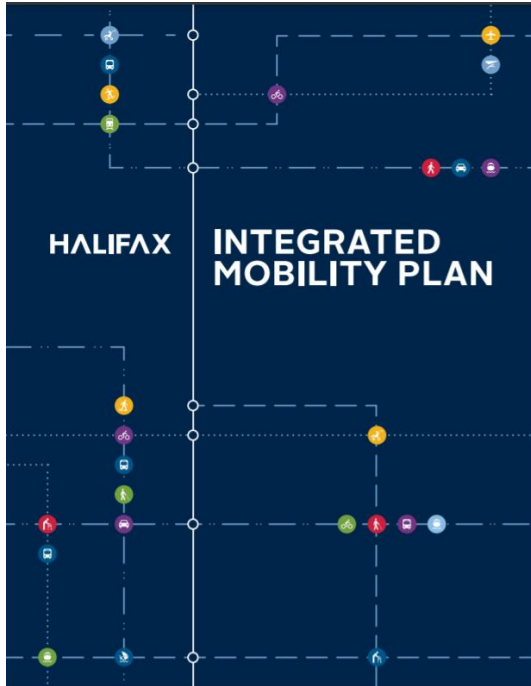
Value of HRM  
Infrastructure  
**\$3.9 Billion**

## Strategic Initiatives

Reflects multiple, large and complex projects integrating significant redesign or growth in assets required to achieve the goals of a key strategic plan.



# SI: Integrated Mobility Plan



The policies and actions of the IMP reflect the shift in how people want to live and travel today, building on recent work and existing initiatives to rethink and transform our mobility network. **The movement of people, rather than vehicles, is at the heart of this plan**

# SI: Integrated Mobility Plan

## 2031 REGIONAL PLAN TARGETS

at least **30%**  
of trips made by  
**TRANSIT & ACTIVE TRANSPORTATION**



at most **70%**  
of trips made by  
**PRIVATE VEHICLE**



## RECENT MOBILITY TRENDS

Trips made by  
**ACTIVE TRANSPORTATION/TRANSIT**

**25%**  
in 2006



**23%**  
in 2011

Trips made by  
**PRIVATE VEHICLE**

**75%**  
in 2006



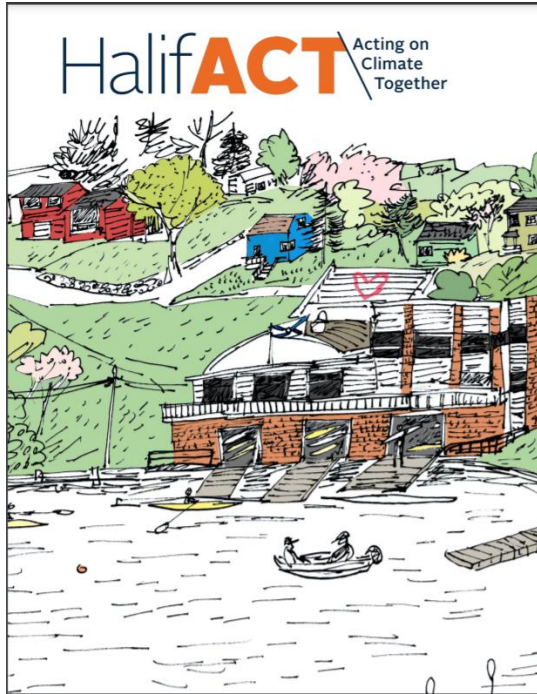
**77%**  
in 2011

SOURCE: STATISTICS CANADA

The 2014 Regional Plan includes a list of future road network projects that would cost an estimated \$750 million to construct.

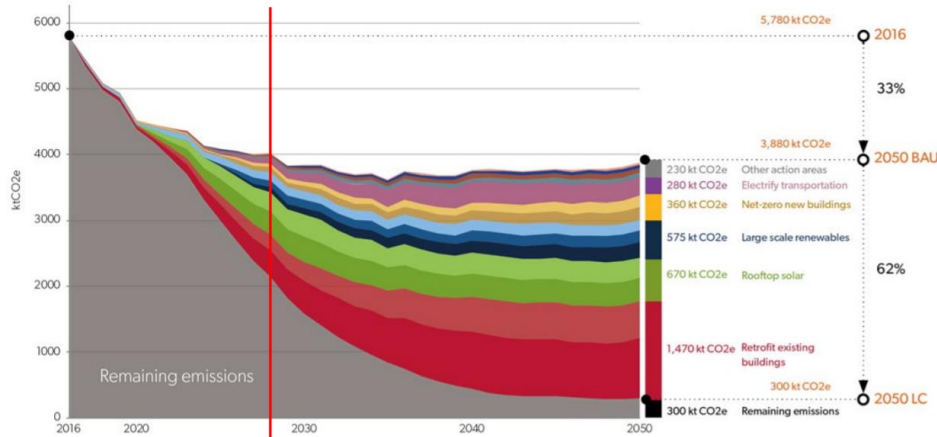
The IMP explores and **recommends more cost-effective mobility options** to meet the needs of residents across the region.

# SI: HalifACT Climate Action Plan



We are at a pivotal moment in human history. The next ten years will determine whether or not society can successfully address climate change. **This plan is Halifax's response to address the climate crisis, stimulate the economy, create new jobs, and build a more resilient future.**

# SI: HalifACT Climate Action Plan



Immediate action is required in the following seven priority actions that **enable Halifax to remain within the low carbon pathway**. These actions are as follows:

1. Retrofit and renewable energy programming
2. Retrofit municipal buildings to be net-zero ready and climate resilient
3. Electrification of transportation
4. Net-zero standards for new buildings
5. Framework for assessing and protecting critical infrastructure
6. Capacity building for climate adaptation; and,
7. Financing strategy to operationalize the HalifACT 2050 plan over 30 years.

## CLIMATE ADAPTATION MEASURES

**\$1 saves \$6**

Spent in preparation

In future impact costs

HalifACT is **20%** on track and **14%** adequately resourced

# Strategic Initiatives Projects

## General Rate 2.9%

1. Halifax Forum Redevelopment
2. Windsor Street Exchange
3. Multi-Modal Transportation Corridors
4. Mill Cove Ferry



## Climate Action Tax 3.0%

1. EV Buses Phase 1
2. EV, Critical Infrastructure, Deep Energy Retrofits

Halif**ACT** Acting on  
Climate  
Together

# SI Project: Halifax Forum Redevelopment

## Scope & Overview

- The Halifax Forum is nearing the end of its useful life and redeveloping the space will allow for continued service delivery and improved functionality and accessibility for the community
- **Service Outcomes: Active, involved and inclusive communities, reduction of greenhouse gas emissions**

## Total Cost

- \$81M; estimated conceptual cost

## Cost Sharing

- To be determined, pending sale of lands (\$24M)



# SI Project: Halifax Forum Redevelopment

## Lifecycle Impact

- New construction will result in reduced operating and maintenance costs as compared to the existing facility

## Delivery Risk

- Funding risks associated with inflationary factors, unknown building and site conditions as well as less than planned proceeds from land sale

# SI Project: Windsor Street Exchange

## Scope & Overview

- Redesign & reconstruction of Bedford Highway, Windsor Street and Lady Hammond Road intersections
- Improved Active Transportation connections, transit priority measures, access to the Fairview Cove Container Terminal, movement of vehicles through the area, and safety for all road users
- **Service Outcomes: Integrated mobility, affordable sustainable integrated mobility network**

## Total Cost

- \$45M from 2022/23 to 2025/26; High level of confidence

## Cost Sharing

- Contribution Agreement through the National Trade Corridors Fund (NTCF) (Transport Canada) provides 50% of eligible expenses up to \$23.5M
- Province of Nova Scotia contributed \$10.75M

# SI Project: Windsor Street Exchange

## Lifecycle Impact

- Expected to reduce travel-time, vehicle operating costs, GHG emissions and collision-related costs
- Project avoids \$2.3M in major rehabilitation, otherwise required

## Delivery Risk

- Risk to NTCF funding if the project is not completed by the date in the contribution agreement (currently Dec 2024)
- Project plan developed to meet completion date, with project risks & opportunities monitored on an ongoing basis
- Budget determined pre-COVID thus a risk of escalating construction costs delaying the project

# SI Project: Multimodal Transportation Corridors

## Scope & Overview

- Construction of 13 strategic transportation corridors identified in Integrated Mobility Plan (IMP) for multimodal upgrades to improve transit and active transportation (AT)
- **Service Outcomes: Integrated mobility, affordable sustainable integrated mobility network**

## Total Cost

- \$144.2M; Class D, Low level of confidence
- Additional \$42M Land Acquisition (for Robie/Young) already captured in SI Reserve

## Cost Sharing

- No cost sharing assumed
- Existing and future federal or provincial programs will be leveraged where possible

# SI Project: Multimodal Transportation Corridors

Includes planning, functional / preliminary / detailed design, land acquisition, and construction for the following corridors:

- Alderney Drive
- Barrington Street
- Bayers Road
- Bedford Highway
- Dunbrack Street
- Dutch Village Road
- Herring Cove Road
- Highway 7 (Magazine Hill)
- Lower Water Street
- Portland Street
- Robie Street / Young Street
- Trunk 7 (Main Street)
- Windmill Road

# SI Project: Multimodal Transportation Corridors

## Lifecycle Impact

- Negligible short-term impact to operating budget
- Significant long-term cost savings from avoided costs

## Delivery Risk

- High confidence work can be delivered within the 10-year window
- Delays with land acquisition, staff shortages, and construction supply chain issues may impact cost and schedule
- Inability to deliver the work would mean that HRM will not meet Integrated Mobility Plan (IMP) and HalifACT objectives and compromise HRM's ability to accommodate population growth in a sustainable manner

# SI Project: Mill Cove Ferry

## Scope & Overview

- Vessels/Transportation Services
- **Service Outcomes: Climate change mitigation, environmental health**

## Total Cost

- Conceptual level cost estimate of \$125M
- Phase 1 studies continue for Class D cost estimates
- Cost is included in 5.9% tax increase

## Cost Sharing

- ICIP funding may provide 73% of the eligible costs
- Land acquisition is not eligible for cost sharing
- Funding confirmation anticipated in late 2022/23
- Project would be delayed if cost shared funding is not secured

# SI Project: Mill Cove Ferry

## Lifecycle Impact

- Potential operating increase of \$5M per year
- Work on Phase 1 studies continues to refine the operating costs

## Delivery Risk

- Project still in a conceptual stage
- Leading edge technologies introduces significant uncertainty
- To mitigate this risk, the project is being approached in two phases
  - Phase 1 developed to inform Phase 2 timelines and final budget
  - Phase 1 of this project is currently in flight
  - No sequencing or interdependencies with other projects



# SI Project: EV Buses Phase 1

## Scope & Overview

- 60 EV-buses & equipment; retrofit & expand facilities; install 500kW solar array
- **Service Outcomes: Climate change mitigation, environmental health**

## Total Cost

- \$112M; Class A estimate

## Cost Sharing

- Nova Scotia: 33.33% up to a max of \$37,329,600
- Canada: 40% up to a max of \$44,800,000
- HRM: 26.67% of the total cost of the project up to \$ 29,870,400

# SI Project: EV Buses Phase 1

## Lifecycle Impact

- Reduced maintenance
- Energy and environmental savings are expected with expected amounts refined as experience with EV buses increases

## Delivery Risk

- High confidence to be delivered on time without any significant delays pending COVID and funding
- Failure to implement would result in exceeding carbon budget due to continued reliance on diesel buses

# SI Project: Electric Vehicle (EV) Strategy

## Scope & Overview

- Outlines public infrastructure, policy and education to accelerate the adoption of electric vehicles, including a municipal light duty fleet transition plan to achieve a net zero light-duty fleet by 2030
- **Service Outcomes: Climate change mitigation, environmental health**

## Total Cost

- \$21.5M; High level of confidence

## Cost Sharing

- No major cost sharing assumed
- Existing and future federal or provincial programs will be leveraged where possible

# SI Project: Electric Vehicle (EV) Strategy

## Lifecycle Impact

- Current cost of EVs and accelerated transition required, there is a cost premium in the early years of this project when compared to business-as-usual
- Will be fully offset within ten years by annual operating savings, primarily by lower fuel and maintenance costs

## Delivery Risk

- Human resource capacity to deliver is low risk
- Current lack of electric vehicle supply poses a risk to the full light-duty fleet transition
- Project delays would result in exceeding the municipal carbon budget

# SI Project: Critical Infrastructure

## Scope & Overview

- Actions to protect and strengthen critical infrastructure to withstand more extreme and frequent storm events; protecting lives and property; and decreasing disruptions of essential services
- **Service Outcomes: Climate adaptation, public safety, community resilience**

## Total Cost

- \$30.6M; Low level of confidence
- Expected to increase as local hazard mapping and inventory of critical infrastructure is carried out

## Cost Sharing

- HRM applied to the Federal Natural Infrastructure Fund for \$3M, waiting on decision
- Anticipated start date is April 1, 2022

# SI Project: Critical Infrastructure

## Lifecycle Impact

- By improving the resilience of infrastructure now, the resources needed for emergency response to repair or rebuild from future events are reduced
- Every dollar invested proactively on critical infrastructure now can save as much as six dollars in reactive costs\*

## Delivery Risk

- Delaying this project will result in increased reactive costs to repair or replace critical infrastructure and could result in longer downtime for these services
- Staff shortages and construction supply chain issues may impact cost and schedule

\*<https://data.fcm.ca/documents/reports/investing-in-canadas-future-the-cost-of-climate-adaptation.pdf>

# SI Project: Deep Energy Retrofits

## Scope & Overview

- In 2020, energy usage in buildings produced 65% of corporate emissions
- Deep energy retrofits on all existing buildings is required to achieve net-zero municipal operations by 2030 and ensure corporate buildings are more resilient to future climate impacts (severe storms, flooding and extreme heat)
- **Service Outcomes: Climate mitigation & adaptation, environmental health**

## Total Cost

- \$59.5M; Medium level of confidence
- Estimate based on HalifACT analysis - being refined by staff in partnership with Efficiency Nova Scotia

## Cost Sharing

- No cost sharing assumed in estimate
- Known cost sharing (ICIP and ENS) will be included in the roadmap and future year funding requests will be adjusted accordingly

# SI Project: Deep Energy Retrofits

## Lifecycle Impact

- Buildings that have undergone a deep energy retrofit provide long term savings through reduced operating and maintenance costs
- Estimated that the 10-year lifecycle operating savings will total \$26M

## Delivery Risk

- Human resource capacity to deliver is low risk
- Current lack of building materials and increased pricing poses risk to project success
- Project delays would result in exceeding the municipal carbon budget



# SI Project: Small Initiatives Bundle

## Scope & Overview

- Support Climate Action across the Municipality
- Previous projects: Prince Albert Rd. rain garden, the cost difference for medium-heavy duty electric vehicles, e-bike purchase, tree planting, municipal solar installations and a refrigerated truck
- **Service Outcomes: Climate mitigation & adaptation, resilient communities**

## Total Cost

- \$8M; Medium level of confidence

## Cost Sharing

- No cost sharing assumed
- Existing and future federal or provincial programs will be leveraged where possible

## Lifecycle Impact

- Varies by project however the lifecycle costs for many climate related projects are typically positive

## Delivery Risk

- High level confidence of delivery