

HALIFAX

Pedestrian Push-Buttons

February 25, 2021

HALIFAX INTEGRATED MOBILITY PLAN



halifax.ca/integratedmobility

HALIFAX

Introduction



On December 5th, 2017, Halifax Regional Council unanimously adopted the Integrated Mobility Plan (IMP).

The IMP is a strategic priorities plan that will integrate with upcoming revisions to the Regional Plan and be implemented through budget and business planning.

The IMP will support growth, development and the transportation of goods and people of all ages and abilities, using all modes including walking, cycling, transit, and motor vehicles, consistent with the Regional Plan.

2014 Regional Plan Mobility Targets

By **2031**, at least **30%** of all trips will be made by walking, cycling and transit



23%
2006
Census



22%
2011
Census



21%
2016
Census



30%
2031
Target

Non-Auto Mode Share Targets by Region:

Regional Centre	50% 2011 Census	+10%	60% 2031 Target
Inner Suburban	20% 2011 Census	+6%	26% 2031 Target
Outer Suburban	11% 2011 Census	+3%	14% 2031 Target



COVID-19 MOBILITY INDICATORS

SUMMARY REPORT

Prepared by Strategic Transportation Planning – February 8, 2021

TRAFFIC VOLUMES



↓ **3%**

Up by **12%** from previous week

Daily traffic volumes for the Macdonald and Mackay bridges. Comparing January 2021 to January 2019. Bridge traffic data provided by Halifax Harbour Bridges.

↓ **15%** AM PEAK

↓ **13%** PM PEAK

↓ **18%** OFF PEAK

TOTAL WEEKDAY BOARDINGS



↓ **52%**

Up by **16%** since December 2020

Comparing average in January 2021 to January 2020.

BOARDINGS PER HOUR

↓ **46%**

Up by **13%** since December 2020

Boardings per hour were down from 33:1 pre-COVID to 18 in January 2021.

PEDESTRIAN VOLUMES



↓ **56%**

Up by **9%** since December 2020

Average pedestrian volumes in Downtown Halifax. The data compares weekday counts in January 2021 to January 2020. Pedestrian data is provided by DHBC and Develop NS.

↓ **63%** ARGYLE

↓ **66%** GEORGE

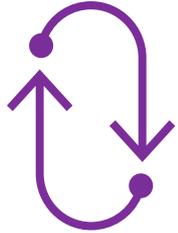
↓ **70%** N. BARRINGTON

↓ **50%** S. BARRINGTON

↓ **47%** UPPER WATER

↓ **21%** LOWER WATER

Pillars of an Integrated Mobility Plan



CONNECTED

Connects people, places, goods, and services



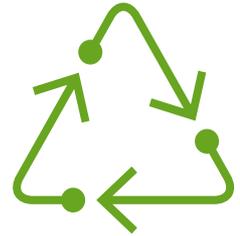
HEALTHY

Safe comfortable, convenient for all ages and abilities



AFFORDABLE

Investment is strategic and travel is affordable



SUSTAINABLE

Environmentally, socially, and economically responsible

Key Principles



COMPLETE COMMUNITIES

Cluster complete communities around public transit, employment, shops, and services.



MOVE PEOPLE

Move people and goods, instead of focusing solely on vehicles.



MANAGE CONGESTION

Manage congestion instead of attempting to eliminate it.



INTEGRATE SOLUTIONS

There is no one solution to solve mobility problems.

ROAD NETWORK

- **MANAGE CONGESTION** rather than try to eliminate it
<https://youtu.be/nmSgK0VIZXA>
- Identify and develop plans for **STRATEGIC CORRIDORS**
- Revise **RED BOOK** (HRM Municipal Design Guidelines)
- Develop **MULTI-MODAL LEVEL OF SERVICE** Guidelines
- Improved use of **TRAFFIC SIGNAL TECHNOLOGY** and **VARIABLE MESSAGE SIGNS**
- Develop an innovative **DATA COLLECTION STRATEGY**



Benefits of Traffic Signal Optimization

- Improved transit (help maintain schedules, transit signal priority)
- Improved emergency response (Fire signal pre-emption)
- Reduced GHG emissions (supports HalifACT objectives)
- Improved Road Safety
 - Reduced aggressive driving
 - Reduced neighbourhood shortcutting

Traffic Signal Operation

- Assign right of way to users at busy intersections
- Signal operation is complex
 - All users and directions need to be considered together
 - Changes for one user, impact all users
 - Signal timing changes at one intersection can impact the entire corridor
- Balance operation based on demand to provide safe and efficient movement for all users while minimizing delay for everyone

Selection of Locations for Pedestrian Recall

- Factors considered when selecting intersections for pedestrian recall:
 - Location
 - Pedestrian Activity
 - Other Modes (transit, goods movement, etc.)
 - Roadway function and geometry
- Identified 23 signals to be set to pedestrian recall for all crossings
- Identified 71 signals to be set to pedestrian recall for side street crossings

Signals for Pedestrian Recall

- Total of **278** traffic signals
- **38%** currently have pedestrian recall
 - 82 all crossings / 25 side street crossings
- **72%** will have pedestrian recall after proposed changes
 - 105 all crossings / 96 side street crossings

Changes Proposed

- Implement pedestrian recall at identified locations
- Adjust times for pedestrian recall at existing locations
 - Time period when pedestrian recall is active is currently inconsistent across existing locations
 - Locations will be set for pedestrian recall between 6 am & midnight to provide consistency and predictability throughout the network
 - Period would include times with highest pedestrian activity
- Decals will be installed to indicate times when the button would be required to activate the pedestrian signal

Accessible Pedestrian Signals (APS)

- Currently require the user to press & hold the APS button for 3 seconds to activate the audible signal
 - Can be problematic for those using mobility aids or who have physical limitations that makes holding the button difficult
- Reconfigure APS to allow for “single press” operation
 - 3 second “hold” would no longer be required
 - Audible signal would be activated by a single press of the button
 - Results in easier operation for those who require the audible signal

Impacts Related to Pedestrian Recall

- Pedestrian recall operation means that traffic signals will continually cycle, even when there is no demand
 - Increased delay to transit, cyclists, goods movement and pedestrians
 - In certain circumstances, impact to fire emergency response
 - Increased congestion, more vehicle idling and increased emissions
 - Safety impacts resulting from driver frustration and ignoring signals when there is no demand on the other movement being served
- These impacts are counter to other HRM initiatives such as the Moving Forward Together Plan, AT Priorities Plan, HalifACT, etc.

Example of Operational Impact

Portland St at Portland Estates Blvd / Spring Ave

- Intersection on a main corridor with very low pedestrian crossing demand
- Shows a “snapshot” of impact at a single location for a single period in time
- Total impact would be compounded along the entire corridor (all signals would be set for pedestrian recall) and over the entire day

Example of Operational Impact

	AM Peak				PM Peak			
	Existing		With Recall		Existing		With Recall	
	WB	EB	WB	EB	WB	EB	WB	EB
Delay (s)	7.5	4	20	11	6	8	16	23
Queue (m)	105	21	165	33	51	141	74	223

Other Jurisdictions & HRM

- Information was obtained from 18 jurisdictions across Canada
- It was found there was no blanket approach to push-button use for all intersections
- Intersections in downtown areas and/or where pedestrian activity is high did not require a button to be pressed

Other Jurisdictions & HRM

- Intersections on high volume roadways with low pedestrian activity or during times where pedestrian activity was low required a button to be pressed
- HRM's current approach is consistent with general practice across Canada

Implementation

- Programming changes required at 145 intersections
- Currently 3 Traffic Signals Analysts available to do the work
 - Anticipated programming changes could be completed by end of September
- Decals will be required to be produced and applied at all intersections to identify push-button operation
 - Decals cannot be applied in cold weather, so work would start in spring
- Changes proposed for APS could be started right away

Thank You