Public Discussion

Snow Clearing & Ice Control on the Active Transportation Network

February 25, 2023

Winnipeg

Agenda

- Active Transportation Networks
- Snow Clearing and Ice Control Policy
- Resources
- Challenges
- Opportunities

Walking Network

4,052 km

Sidewalks



Pathways

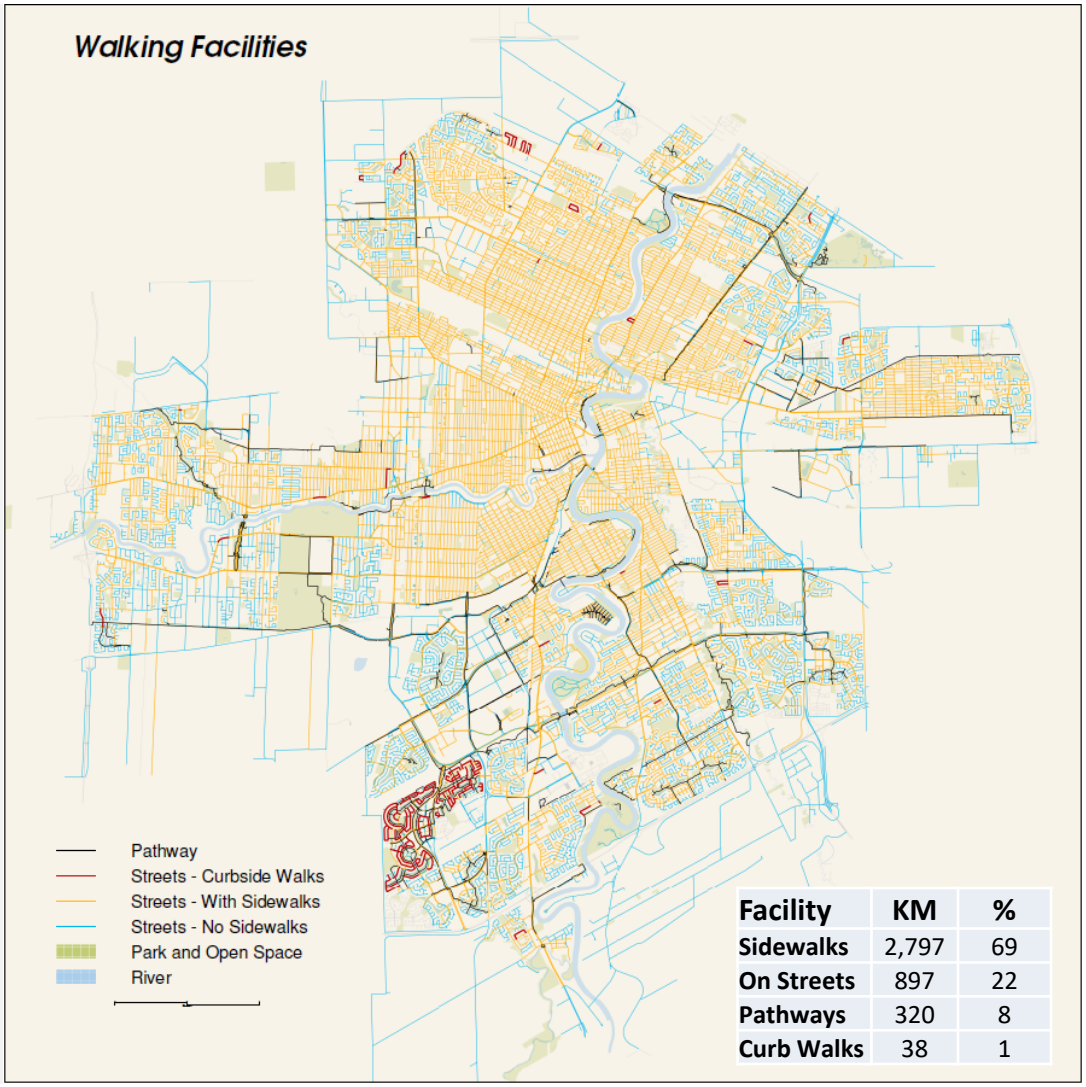


Curbside Sidewalks



Streets with no Sidewalks



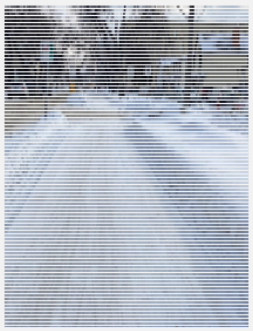


Facility	KM	%
Sidewalks	2,797	69
On Streets	897	22
Pathways	320	8
Curb Walks	38	1

Cycling Network

672 km

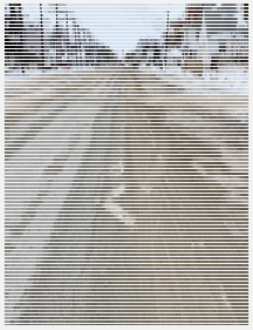
Bike Paths



Pathways

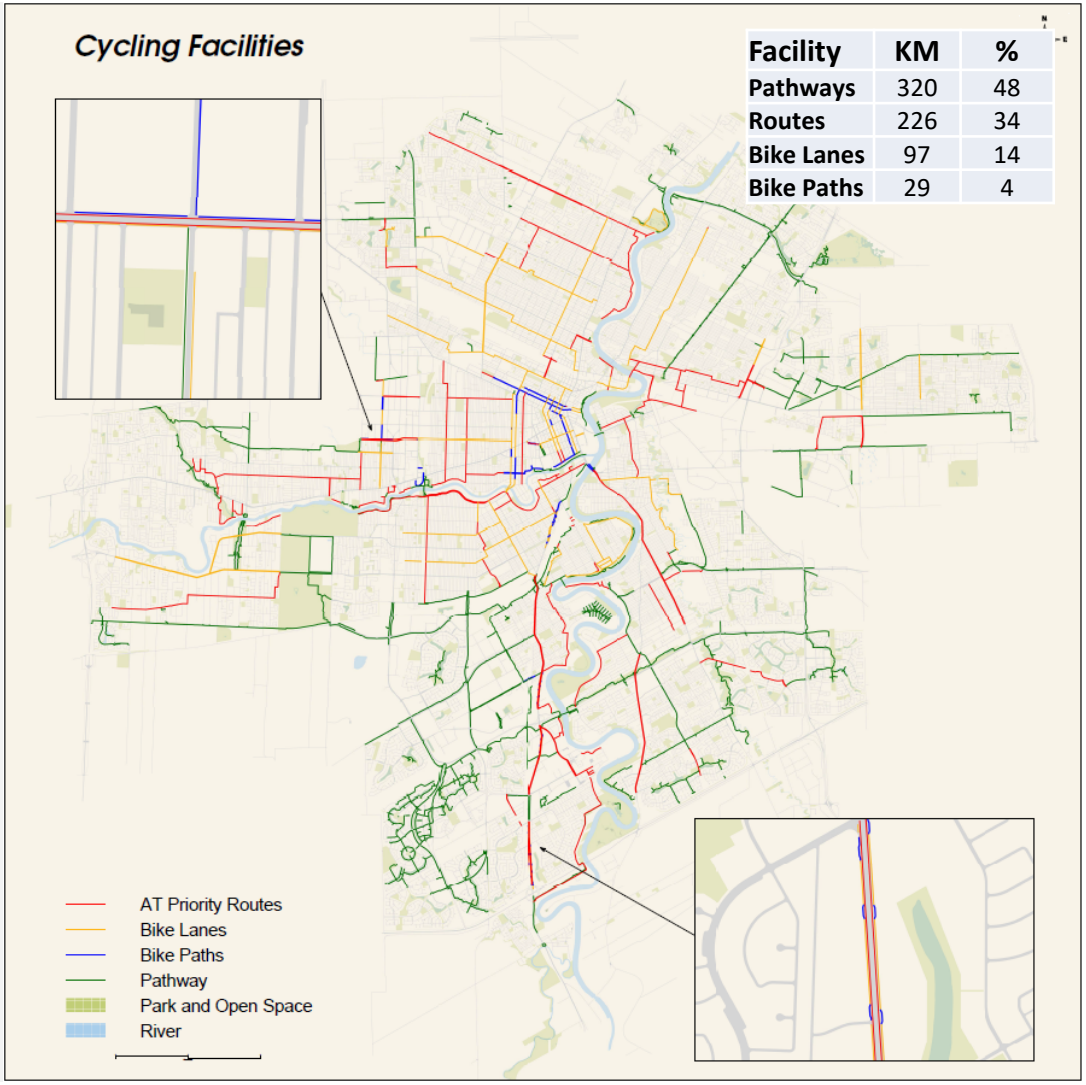


Bike Lanes



Priority Routes





Snow Clearing and Ice Control Policy

Background

- Effective September 1979
- 14 updates (1987-2022)
- Section 3.3: Plowing of Sidewalks, Active Transportation Pathways and Park Pathways

Snow Clearing and Ice Control Policy

AT Related Sections

1993

- Priority 1 streets- cleared after 3cm within 36 hrs
  Section 3 (3.1) (A)
- Priority 1 & 2 sidewalks- cleared after 5cm within 36 hrs
  Section 3 (3.3) (A)
- Priority 3 sidewalks- cleared after 8cm within 5 days
  Section 3 (3.3) (A)
- Transit Plus Loading Zones
  Section 3 (3.4) (G)
- Accessibility Access to Private Property
  Section 3 (3.4) (F)

Snow Clearing and Ice Control Policy

AT Related Sections

2007

- Downtown- cleared to bare pavement (achieved when boulevard windrows are removed using Skid Steers) Section 3 (3.3) (B)

2011

- Designated Parks Pathways- cleared after 8cm
  (Plowed by Parks and Open Spaces when adequate funds are available) Section 3 (3.3) (G)

2014

- Enhanced Priority 3 Sidewalks (P3E)- Designated Routes
  (Designated access routes from senior citizen complexes, schools and high-density developments) Section 3 (3.3) (D)

Snow Clearing and Ice Control Policy

AT Related Sections

2018

- Active Transportation Priority Routes Section 3 (3.3) (E)

  Priorities established for each pathway. AT Priority Routes, roads and sidewalks (Priority 1AT, Priority 2AT, and Priority 3AT), will be plowed and sanded as Priority 1

Bus Stops Clearing Practices

- Public Works clears platforms and sidewalk connections as part of the streets clearing operations (over 5,000 bus stops)
- Transit/Biz clears access to shelters

Snow Clearing and Ice Control Policy

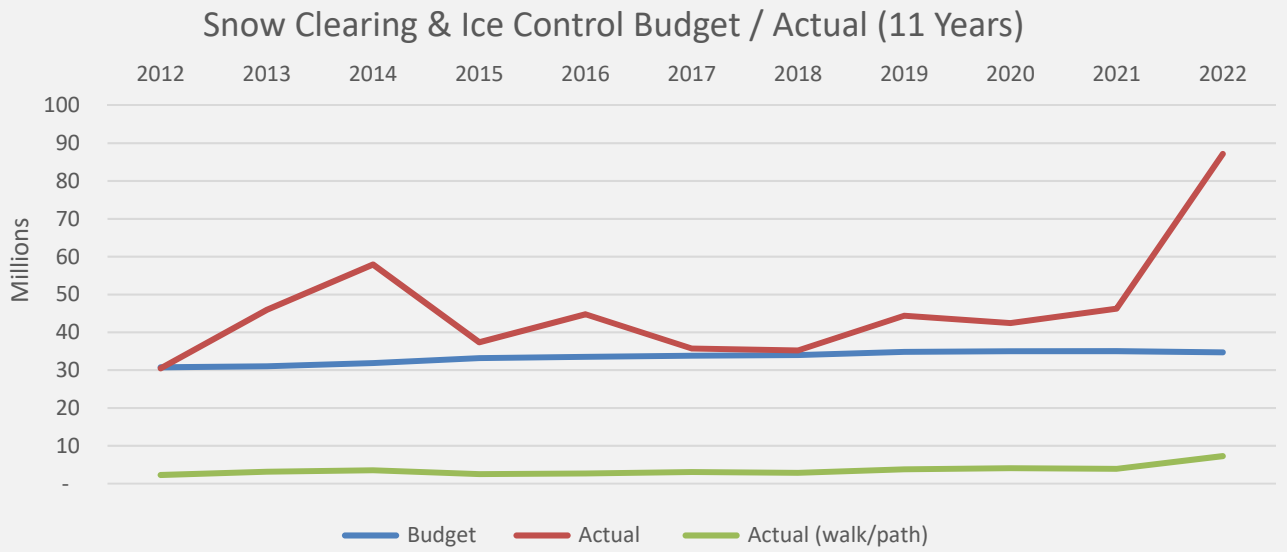
Current AT Level of Service

	Walks/Paths/Bike Paths				Roads/Bike Lanes			
	P1	P2	P3E	P3	P1AT	P2AT	P3AT	P3
Trigger	5cm			8cm	3cm			10cm
Timeline	36 hrs			5 days	36 hrs			5 days
Salting	N				Y	*	N	
Sanding	Y		*		Y		Y**	

P- Priority
*- under extreme conditions
**- restricted to short bursts at specific locations

Resources

Budget



Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Budget Expenditures	30.8	31.0	31.9	33.2	33.5	33.8	34.0	34.8	35.0	35.0	34.7
Total Actual Expenditures	30.5	45.9	57.9	37.4	44.8	35.7	35.2	44.4	42.5	46.2	87.2
Actual Expenditures for Walks and Paths	2.3	3.1	3.6	2.5	2.7	3.0	2.9	3.8	4.1	3.9	7.3

Average Overbudget (2012-2021)- $8.7M

Resources

Who is doing the work?

% plowed by	Streets Maintenance 3 Branches	Parks and Open Spaces 4 Branches	Contractors 10
Walks/Paths km	2,489	170	525
Walks/Paths %	78%	5%	17%
AT Routes km	94		132
AT Routes %	42%		58%

Walks/Paths % equipment	City	Hired
Plowing	80%	20%
Blowing	53%	47%

17 groups provide service

300 pieces of equipment during an event

Resources

Equipment- Streets Maintenance

31 Walk Machines



Blade



Blower

14 Sand Spreaders



Tow Behind

Hired Hourly Equipment:
2 walk plow machines during the first 36 hrs of a P1 & P2 walk/path plow event (on average)

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Resources

Bare Pavement?

Different Equipment





Anti-Icing Chemicals



- Damage to equipment
- Limited to sidewalks in good conditions
- Annual inspections on 3,184 km
- Inconsistent level of service

Resources

Work Management

City is divided into
3 geographical areas

Each area is divided into zones which are assigned to Foremen for inspections



Resources

Work Management

During Snow Events

- City crews are supervised by foremen
  29 Foremen across 3 City areas, working in 2 x 12 hrs shifts
- Contractor crews are supervised by inspectors
  20 inspectors: 10 (Primary) on days and 10 on nights
- Reporting % complete, available on City website

Resources

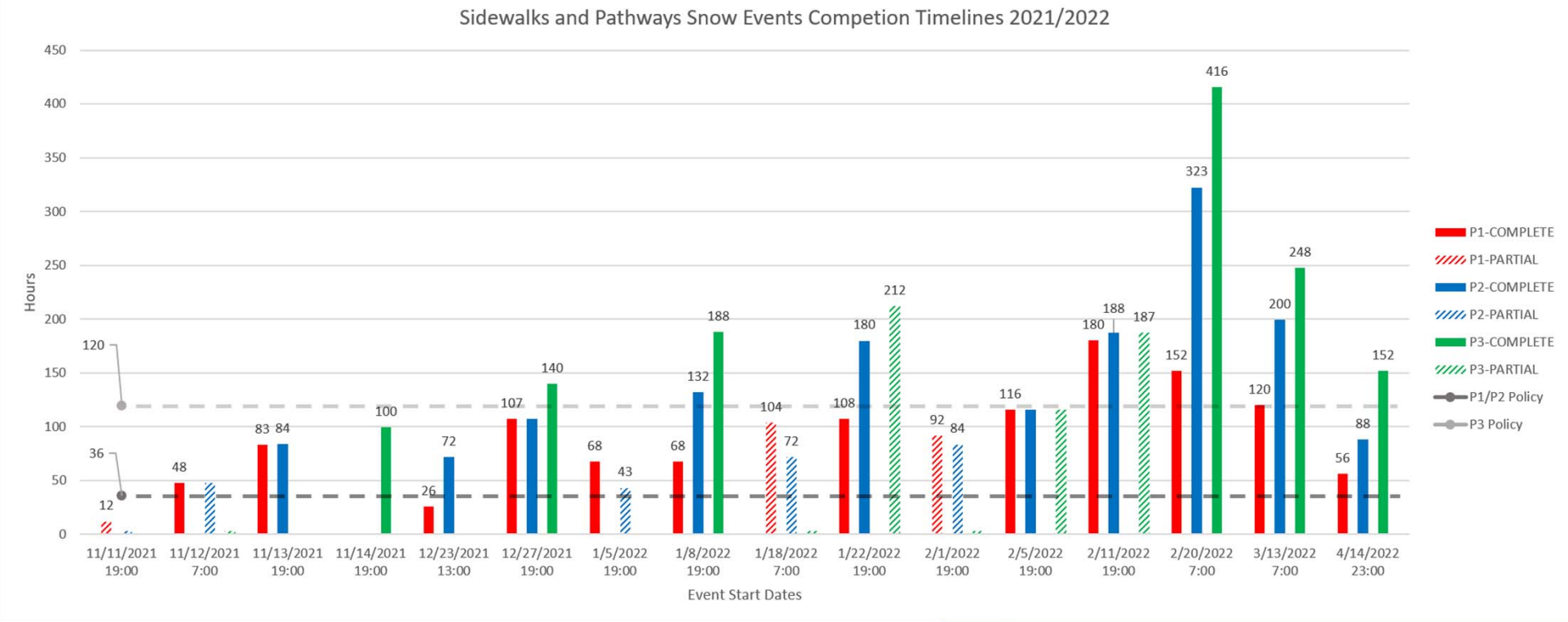
Work Management

Between Snow Events

- Zones inspections
- Ice Control (sanding/salting)
- Service requests
- Snow hauling
- Reducing high piles
- Maintenance plowing
- Watermain breaks
- Debris pickup
- Pothole patching
- Contract Administration

Challenges

Meeting Policy Targets



Challenges

Resources Analysis

- Streets Maintenance crews plow 1,513 km P1 & P2 walks/paths
- Current 31 walk machines can plow 903 km within 36 hrs
- Analysis based on:
  - Average speed for plowing 1.1 km/hr (Includes travel time)
  - Equipment downtime of 36% on average for 2019-2022 (breakdowns & damages)
- The gap in meeting policy is 610 km (plowed within 36 hrs)
  Equivalent to a 24 hrs delay

Challenges

Plowing Quality and Conflicts with Roads









Challenges

Other

- Weather- high winds mid-winter melts
- Public
  - Spillage from private walks and approaches
  - Unmaintained private approaches
  - Snow boulders pushed onto walks

Opportunities

Adequate Resources

Closing resources gap of 610 km of P1 & P2 walk/paths for 2023-2024:

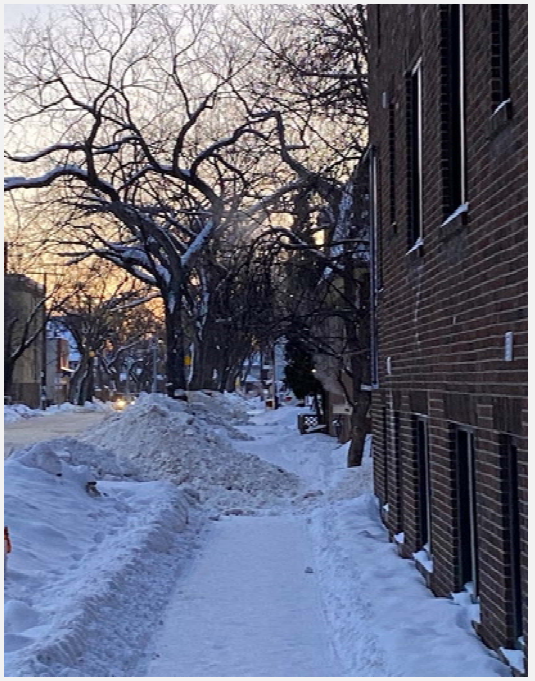
- 437 km to be cleared by 15 additional walk machines with attachments which are expected to be delivered in June 2023
- 174 km- funding is approved for additional resources

Opportunities

Additional Plowing Activities

2nd round of snow clearing behind roads and back lanes plow





Opportunities

Additional Plowing Activities

Maintenance plows following high winds and mid-winter melts



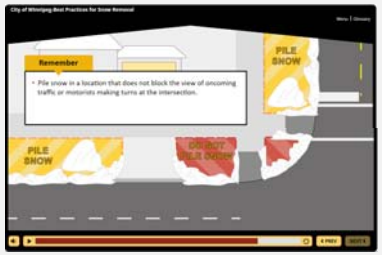


Opportunities

Enhanced Training

Updating current training with accessibility and AT related info
To be taken annually by all City forces and contractors











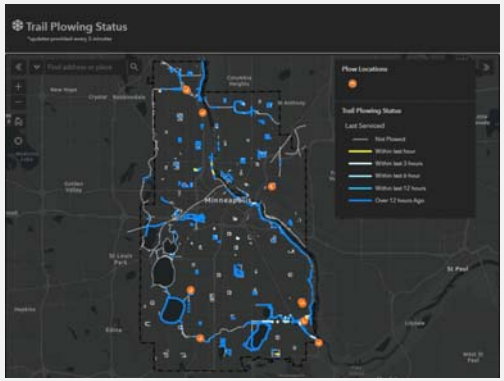
Opportunities

Using Technology to Enhance Level of Service

Citywide live walk/paths plowing status map

Automatic Vehicle Location (AVL) Technology

- Provide useful info to the public
- Support City and Bizs with operational decisions
- Assist with inspections





Opportunities

Continuation of Current Activities

- Annual report on snow clearing and ice control
  Special Policy Committee on Public Works
- Collection and analyzing operational data
  Plowing Speed, Equipment Downtime, Service Requests
- Periodic review of snow clearing policies and operations in other municipalities

Public Discussion

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Questions?

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