



UNBURYING BUFFALO

Making the Case for Sidewalk Snow Removal



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Front cover photograph by Pat Cray.



REPORT SUMMARY

The role of any municipal government is often widely debated, but at its most basic definition, that role is to provide services which cannot be reasonably handled by individual citizens, especially in emergencies. Two major snowfalls in the city of Buffalo in the winter of 2022 have illustrated the need for better snow removal, handled by the city itself. While certain measures to remove snow from roads exist and are being expanded upon in light of the recent Christmas blizzard, no plan exists currently for the removal of snow from sidewalks, as the city places that responsibility on individual property owners. Sidewalks are a vital link throughout the city for a significant portion of its commuting population.

This report is two-fold. Firstly, it aims to frame the problem of lack of sidewalk snow removal as relevant and requiring remedy. Secondly, it also offers solutions as to how such a plan may be implemented. The problem is clear: a lack of sidewalk snow removal hinders working class Buffalonians without a car from access not only to work, but also necessary services. Solutions differ from municipality to municipality, both in scope and cost. One fact is indisputable, though: in almost every city which receives significant snowfall in North America, some plan exists to not only clear snow from roads, but from sidewalks as well. **The city of Buffalo must follow suit, joining other cities across upstate NY and North America, and implement their own plan for sidewalk snow removal.**



Business owner using a snowblower (Photo from Pat Cray)



Pedestrian walking in the street (Photo from Pat Cray)

INTRODUCTION

Sidewalks are a crucial piece of public infrastructure — a fact that is often forgotten, as pedestrians and their needs are put second to the demands of our current car-centered model of urban development.

Among large US cities, Buffalo faces a particular (though not unique) challenge to keeping sidewalks usable: its famously snowy Winters. Federal regulation requires that sidewalks be cleared from debris in a reasonable time after weather events.¹ For Buffalo and other comparable cities, that means getting sidewalks clear of snow and ice, otherwise walking for daily needs becomes dangerous, and often impossible.

This systematic neglect of sidewalks is an even bigger problem for working class and other marginalized people in the city. One third of residents in the city of Buffalo do not own a car², and nearly one fifth have a disability.³ Both groups are disproportionately impoverished. For these Buffalonians, sidewalks are their main link to the city, allowing them to get to and from home, bus stops, work, the grocery store, and any number of other necessary places that car drivers can access freely once roads are plowed. When snow makes walking difficult, that link is broken.

Cities can and do address the issue of sidewalk snow removal in a number of different ways. As it stands, the city of Buffalo takes a distinctly hands-off approach. According to the City Code, sidewalk snow clearance is the responsibility of the property owner, and the city's role is limited to applying fines.⁴ Winter after winter, the city reminds its citizens: the burden of getting sidewalks cleared is put on the shoulders of the public. This is not only fundamentally unfair, but also infeasible in a timely manner. This leads to dangerous situations where often people walk in the roads in their daily commute, alongside cars trying to navigate slippery and icy conditions.

How does this play out in practice? According to the city's open data⁵, in 2021, only 97 summons were issued for lack of sidewalk snow clearance - a number low enough to astound anyone who has taken even a short walk anywhere in the city in the days after a snowstorm.

The events of the November snowstorm and December Blizzard of 2022 have shown that the challenges Buffalo faces in terms of snow are not going away any time soon. If the status quo holds, those who rely on sidewalks to get around will continue to find themselves trapped or forced to put their bodies at risk by braving the ice. Individual acts of charity are inspiring and commendable, but there must be a collective, municipal response. Only the city of Buffalo, empowered by and accountable to all Buffalonians, has the resources and capacity to successfully deal with this pedestrian crisis.



Pedestrians walking a dog in the street (Photo from Pat Cray)

RESEARCH

Buffalo is not the only city in New York, let alone North America, that has to deal with snow removal on a large scale. Throughout the U.S. and Canada, several different solutions have been devised and implemented by city-level municipalities to address the problem. Most notably, Buffalo's upstate neighbors, Rochester and Syracuse, have both implemented sidewalk snow removal plans. Each of these plans vary in terms of their scope, cost, and financing, and are presented here in part as a reference.

OTTAWA, ON

Ottawa is a city located in the Canadian province of Ontario. Ottawa is, additionally, the capital of Canada and forms the core of the Ottawa–Gatineau census metropolitan area (CMA) and the National Capital Region (NCR). As of 2021, Ottawa is the fourth-largest city and fourth-largest metropolitan area in Canada.

Table 1. Comparing annual snowfall and snow removal budget between Ottawa, ON and Buffalo, NY

Metric	Ottawa	Buffalo
Population	1,017,449 ⁶	276,807 ¹¹
Average Annual Snowfall (2011-2022)	97.22 in. ⁷	94.4 in. ¹²
Annual Snow Removal Budget	\$51,815,334 ⁸	\$6,885,249 ¹³
Snow Removal Budget Per Capita	\$50.93/person	\$24.87/person
Land Area	1,732.50 square miles ⁹	40.38 square miles ¹⁴
Sidewalk Responsibility	City ¹⁰	Individual ¹⁵

The municipal government in Ottawa is responsible for the removal of snow and ice from sidewalks. While Ottawa is responsible for this removal, citizens are encouraged to distribute de-icing materials such as salt and sands, and can pick these materials up free of charge at various locations throughout the city.¹⁶ The city is still responsible for the vast majority of sidewalk snow and ice removal, with the exception of unpaved trails and paved pathways that are not winter maintained (for instance a paved trail in a park closed in the winter)

For treating icy and/or snow covered sidewalks and pathways, resources are deployed as soon as practical after the city becomes aware of the icy conditions. Icy sidewalks and pathways are to be treated within the times defined in Appendix A. If the depth of snow accumulation is less than the minimum for deployment, then resources may be deployed subject to sidewalk and pathway conditions resulting from previous snow accumulations or from forecasted weather conditions.

Bus stops located along city roads are cleared within 24 hours after the snow accumulation has ended. Windrows across sidewalks at intersections and at pedestrian crossings that are left after road plowing operations are removed within 16 hours after the end of the storm.¹⁷

BURLINGTON, VT

Burlington is a city located in northwestern Vermont on the shores of Lake Champlain. Burlington is the largest city in the state of Vermont.

Table 2. Comparing annual snowfall and snow removal budget between Burlington, VT and Buffalo, NY

Metric	Burlington	Buffalo
Population	44,781 ¹⁸	276,807
Average Annual Snowfall (2011-2022)	82.1 in. ¹⁹	94.4 in.
Annual Snow Removal Budget	\$1,472,182.24 ²⁰	\$6,885,249
Snow Removal Budget Per Capita	\$32.88/person	\$24.87/person
Land Area	10.31 square miles ²¹	40.38 square miles
Sidewalk Responsibility	City ²²	Individual

Sidewalk snow removal is a responsibility of the municipal government in Burlington. Operations are carried out via city employees in the Burlington Department of Public Works. The city maintains a total of 9 sidewalk plowing routes. Per the city's snow plan²³, the estimated times to complete each route are laid out in Table 3.

Table 3. Burlington, VT's estimated time to complete each sidewalk snow removal route

Action	Estimated Time to Completion
Hours to plow every sidewalk once	8 hours
Hours to snow blow every sidewalk once (depending on depth and weight of snow)	24-30 hours
Hours to Salt Sidewalk	12 hours

Burlington conducts sidewalk clearing operations concurrently with street and bike lane snow removal operations. Burlington primarily uses plow tractors to remove small amounts of snow, however when snow banks build too high for plows and tractors to be effective, city employees use standard snow plows to clear each sidewalk. Along with snow removal activities, city employees continuously scrape ice from, and apply de-icing agents to sidewalks throughout the winter season to prevent the accumulation of ice and packed snow. City employees maintain an extra emphasis on sidewalks in heavy pedestrian corridors such as the downtown and schools and their adjacent lots. Employees often begin snow and ice removal operations as early as 3AM to ensure that children are able to safely walk to school.



Pedestrian preparing to cross the road (Photo from Pat Cray)

ROCHESTER, NY

Rochester is the fourth largest city in New York State with a population just over 210,000. The city is located along Lake Ontario in the northernmost part of the Finger Lakes Region and roughly 60 miles from Buffalo. Rochester's snow removal program is a combination of property owner responsibility and city support during substantial events.

Table 4. Comparing annual snowfall and snow removal budget between Rochester, NY and Buffalo, NY

Metric	Rochester	Buffalo
Population	210,606 ²⁴	276,807
Average Annual Snowfall (2011-2022)	98.94 in. ²⁵	94.4 in.
Annual Snow Removal Budget	\$8,479,100 ²⁶	\$6,885,249
Snow Removal Budget Per Capita	\$40.26/person	\$24.87/person
Land Area	35.77 square miles ²⁷	40.38 square miles
Sidewalk Responsibility	City & Individual ²⁸	Individual

Per City Code²⁹, it is the responsibility of property owners to remove snow from the sidewalk in front of their property in a timely fashion. During substantial snow storms where there is an accumulation of 4+ inches of snow, the city provides clearing services through a fleet of privately hired contractors.³⁰ This fleet of contractors plow 878 miles of sidewalks throughout the city. The sidewalks that are plowed are divided up into distinct routes that extend approximately 15 miles and each route is assigned to a specific contractor (see Appendix B). The city budgets around \$1 million³¹, or 0.15% of their annual budget, for their sidewalk snow removal program. This program is funded through an embellishment fee on property tax bills based on the property's front footage. On average, this fee costs a property owner \$35 per year.³¹ In addition to sidewalks, the city also assists with the clearing of bus shelters.

SYRACUSE, NY

Syracuse is a medium-sized Upstate New York city with a population little over 146,000 people. Syracuse's Common Council first approved sidewalk snow removal for the 2019-2020 season, hiring a contractor to clear 38 miles of sidewalk.³² As of November 2022, the city announced an expansion of the municipal sidewalk snow removal program³³, increasing the program to 125 miles of sidewalks (see Appendix C). Their snow removal efforts largely focus on providing access to each of the city's public schools.

Table 5. Comparing annual snowfall and snow removal budget between Syracuse, NY and Buffalo, NY

Metric	Syracuse	Buffalo
Population	146,103 ³⁴	276,807
Average Annual Snowfall (2011-2022)	113.84 in. ³⁵	94.4 in.
Annual Snow Removal Budget	\$3,975,779 ³⁶	\$6,885,249
Snow Removal Budget Per Capita	\$27.21/person	\$24.87/person
Land Area	25.64 square miles ³⁷	40.38 square miles
Sidewalk Responsibility	City & Individual ³⁸	Individual

Similar to Rochester, Syracuse's City Ordinance states that it is the responsibility of property owners to remove snow from the sidewalk in front of their property in a timely fashion.³⁹ During snow events where there is an accumulation of 3+ inches of snow, the city will utilize the DPW's fleet of snow plows to remove snow from 20.8% of all city sidewalks that surround each of the city's public schools.⁴⁰ The city budgets \$650,000, or 0.23% of their annual budget, for their sidewalk snow removal program.⁴¹ The city funds their sidewalk snow removal program through an annual \$20 user fee per residential property and \$60 per commercial property to all property owners.⁴² Utilizing GPS technology, the city has made it available for residents to view in real-time what sidewalks have been plowed and when.⁴³

RECOMMENDATIONS

FUNDING

In order to continually fund sidewalk snow removal, the city could do one of two things: assess a frontage tax, similar to Rochester, or implement a user fee, similar to Syracuse. A frontage tax could be collected to provide city-wide removal services, whereas a user fee could be collected if the city were to narrow in on public transit and public school-oriented removal.

As of the 2022-2023 True Tax Roll there are 83,279 taxable parcels.⁴⁴ At a proposed frontage tax rate of \$0.50 per foot of frontage for residential, and \$1.50 per foot of all other uses that are not residential, this tax could generate \$3 million to fund this service (see Table 6) and it would only cost the average homeowner \$18.72 per year.⁴⁵

Table 6. Potential frontage tax rate revenue in the city of Buffalo

Property Type by Class	Count of Taxable Properties	Frontage Total	Proposed Tax Rate	Tax Rate Revenue
200, Residential	66,681	2,496,289.31	\$0.50/foot	\$1,248,144.66
300, Vacant	8,714	408,197.15	\$1.50/foot	\$612,295.72
400, Commercial	6,867	541,561.38	\$1.50/foot	\$812,342.07
500, Recreation & Entertainment	57	10,619.38	\$1.50/foot	\$15,929.07
600, Community Services	126	17,984.63	\$1.50/foot	\$26,976.95
700, Industrial	442	107,125.50	\$1.50/foot	\$160,688.25
800, Public Services	392	76,133.44	\$1.50/foot	\$114,200.16
			Frontage Tax Total:	\$2,990,576.88

While city-wide removal services would be the most beneficial to residents, at the very least implementing it along major commercial corridors, public transportation routes, and public schools should be a necessity.

Funding this narrower scope could be done through an additional user fee. If the city of Buffalo were to mirror Syracuse's fee of \$20 for residential properties and \$60 for all other uses, this user fee could raise \$2.4 million towards this service (see Table 7). Identifying specific routes to target could be identified through public input and speaking with key stakeholders such as the Buffalo Common Council's Bicycle and Pedestrian Board, GObike Buffalo, and Citizens for Regional Transit.

Table 7. Potential user fee revenue in the city of Buffalo

Property Type by Class	Count of All Properties (Not City-Owned)	User Fee	User Fee Revenue
200, Residential	66,949	\$20.00	\$1,338,980.00
300, Vacant	9,638	\$60.00	\$578,280.00
400, Commercial	7,249	\$60.00	\$434,940.00
500, Recreation & Entertainment	97	\$60.00	\$5,820.00
600, Community Services	749	\$60.00	\$44,940.00
700, Industrial	461	\$60.00	\$27,660.00
800, Public Services	426	\$60.00	\$25,560.00
900, Parks	4	\$60.00	\$240.00
		User Fee Total:	\$2,456,420.00

IMPLEMENTING

REQUEST FOR QUOTATIONS

Implementing a request for quotations (RFQ) process for private contractors would reduce liability on the city and make the initiative more feasible to implement. Rochester puts out several RFQ's each year for its 878 miles of sidewalk snow removal⁴⁶ and buckets different routes together in each request in order to allow several contractors the chance to be awarded a bid, as opposed to selecting one contractor for the whole city. For the 2022-2023 snow removal season, the city of Rochester divided all of the routes between 4 separate RFQs.

The city of Buffalo has 20 plow districts split into 10 pairings.⁴⁷ These pairings could be divided between 5 RFQs, with each RFQ soliciting service for 2 of the pairings, or 4 of the districts. Dividing the snow removal between up to five contractors would make the work more manageable, and by having contractors provide a quote the city could ensure the best possible price for taxpayers.

MUNICIPAL EMPLOYEES

There are clear differences between a municipal solution to sidewalk snow removal, versus a solution that contracts out to private snow removal companies. **A municipal program within the Department of Public Works (DPW) has the clear advantage of being uniform and centralized, and thus can be more efficient than managing multiple contractors during each snowfall.** Private contractors can vary in quality and timeliness, and the bidding process to do so as cheaply as possible can lead to poorer outcomes. A municipal program can follow already established guidelines from the DPW, and create worthwhile seasonal city employment to complement the summer seasonal construction program. **A government program also provides much-needed accountability.** A citizen with a concern over a lack of snow removal can call 311, and action can be taken directly, instead of the city becoming a messenger service for a contractor, who may or may not answer such concerns in a timely manner. Ostensibly, the accountability for this program then lies with the city, and ultimately its constituents themselves, through the electoral process. When a private contractor is found lacking in fulfilling their contract, the ramifications are much different; a contract may be found in breach, canceled, and litigation might ensue, but none of these remedies lead to actual snow removal which may be direly needed.

The divide between the quality of a potential city program and private contractors is no clearer than a problem the city of Buffalo has had during this past school year. The city relies on a private contractor, First Student, to bus school children to Buffalo area schools. First Student has

been unable to meet the basic transportation needs of Buffalo schoolchildren, claiming all sorts of problems which they still struggle to fix.⁴⁸ Instead of creating that capacity in the city government, and thus being able to itself adjust to the demand for bussing via governmental mechanisms, **the city finds itself in a situation where they cannot force First Student to simply meet the requirements of their contract.** The city's only recourse may eventually find a litigation solution to this situation, which can lead to financial restitution. However, the actual bussing problem has fallen in the laps of parents and teachers, putting undue strain on working class citizens while First Student simply collects on its contract, while claiming it is working in good faith, **This recent example illustrates the pitfalls of relying on private contractors for essential city services,** and thus colors the recommendations of this report. The inclusion of methods of implementing a private solution to snow removal must be seen as only a reference, for the sake of completeness. **It is the opinion of this report that the city of Buffalo should create a centralized municipal sidewalk snow removal program within the Department of Public Works, accountable to the city government and its citizens.**

SUPPLEMENTARY ASSISTANCE GRANTS

Even if the city of Buffalo were to implement sidewalk snow removal for major snow events, there would still be a need for supplementary assistance for minor snowfall totals. A few inches of snow on the sidewalk poses problems for folks who are elderly or living with a disability, and if not removed in a timely manner can quickly turn into a sheet of ice, making the sidewalk treacherous even for those who are able-bodied.

The city of Buffalo could provide grants for organizations and block clubs such as Parkside Community Association's Snow Angels or Buffalo Mutual Aid Network's Snow Brigade. These grants could help organizations provide supplementary snow removal service to the community, and the funds could be used towards materials such as shovels, de-icing materials, gloves, and snow blowers.

Resources for new programs are available via the US Department of Housing and Urban Development's Community Development Block Grant Program (CDBG).⁴⁹ Many cities across the country have used this program to create snow removal programs for elderly, poor, and disabled residents. The city of Cuyahoga Falls, Ohio maintains a program of distributing vouchers to income/disability qualifying residents to hire qualified contractors to clear snow and ice from their respective driveways, walkways and sidewalks.⁵⁰ The city of Moorhead, MN maintains a similar program, however the city hires the contractors themselves and does not have a cap on the services.⁵¹ Many cities use contractors with programs funded under CDBG, however funds from the program may be used to pay for municipal employees to provide these services.

CONCLUSION

The problem of sidewalk snow removal, and the personal duty created by the city of Buffalo on its citizens, is clear and obvious.

It has not worked, and continues to not work. Absent landlords fail to clear their sidewalks, or rely on management companies not based in the city who only arrive days later. Private citizens often do not have the means or time to clear sidewalks on top of their already busy lives. In addition to sidewalks, **bus stops remain inaccessible, leading to people walking in the streets**, making already treacherous driving conditions even more dangerous. When one third of the city relies on the city's sidewalks to access it, and even more rely on public transportation, this is unacceptable.



Homeowner using a pedal powered snow pusher (Photo from Pat Cray)

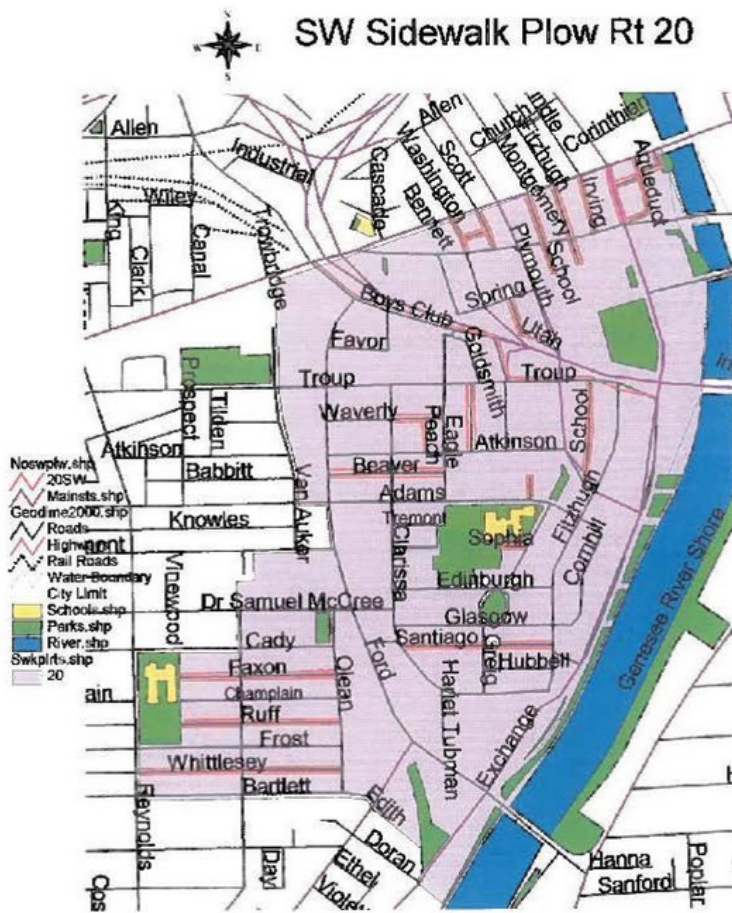
Cities across the northern United States and Canada have almost universally found municipal-led solutions to clear sidewalks of snow and shoulder this essential service. **The city of Buffalo must follow suit.** Various solutions have been proposed, but the most streamlined, most accountable method is clear. **Implementation of a frontage tax or small increase in the city's user fee can create a robust municipal sidewalk snow removal program.** The city should create this program within the Department of Public Works, staffed by city employees, and accountable to the city and its citizens, as soon as possible. The creation of this program will relieve the burden from working class Buffalonians, increase their personal safety during their daily commute, and make the city of Buffalo accessible during winter months.

APPENDIX A: OTTAWA SIDEWALK SNOW REMOVAL PLAN⁵²

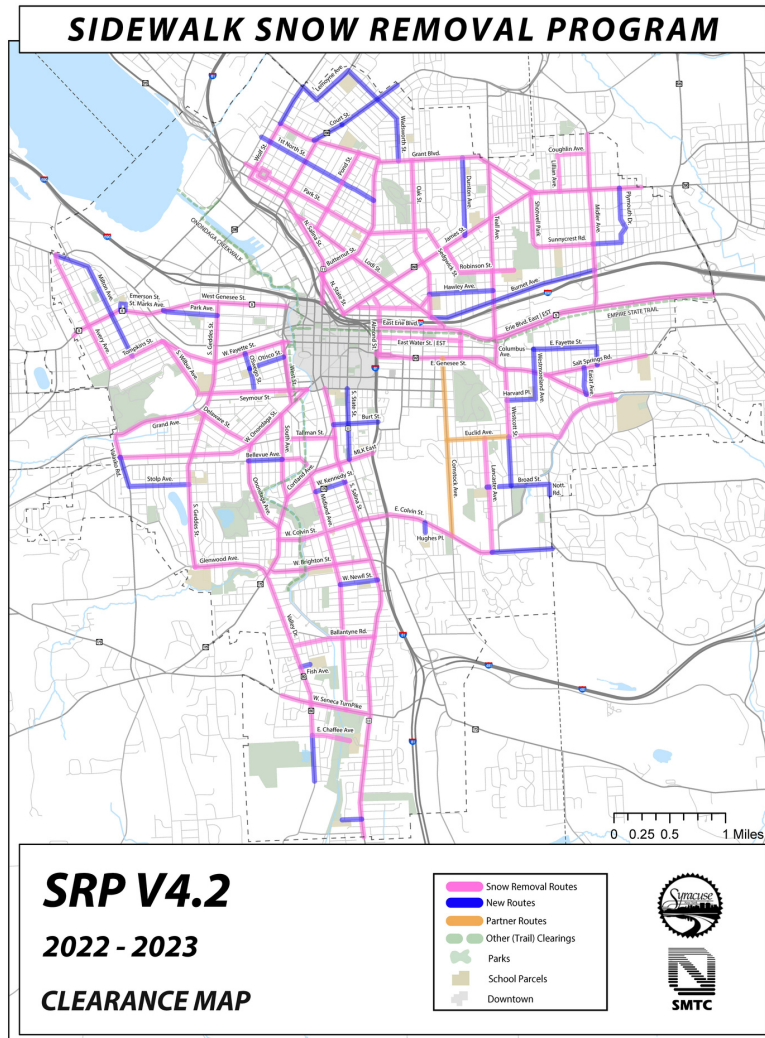
Sidewalk/Pathway Maintenance Classification	Minimum Depth of Snow Accumulation for Deployment of Resources	Time to Clear Snow Accumulation from the End of Snow Accumulation or Time to Treat Icy Conditions	Treatment Standard	
			Bare Surface	Snow Packed
1. <ul style="list-style-type: none"> Downtown business district ByWard Market large employment centers special tourism areas 	2.5 cm	4 h	X	
2. <ul style="list-style-type: none"> downtown/urban residential neighborhoods where sidewalks are only safe place to walk sidewalks in Villages pathways that serve as main community links or to access transit services sidewalks along roads with transit service, emergency facilities, public facilities, or retail/commercial frontages pathways designated as part of city cycling routes 	5 cm	12 h	Sidewalks directly adjacent to arterial roads	All other locations
3. <ul style="list-style-type: none"> sidewalks along rural and suburban collector and residential roads paved pathways in rural and suburban neighborhoods (pathways that are winter maintained) 	5 cm	16 h		X
4. <ul style="list-style-type: none"> unpaved pathways and trails paved pathways that are not winter maintained 	Not winter maintained			

APPENDIX B: ROCHESTER SIDEWALK SNOW REMOVAL ROUTE⁵³

SIDEWALK SNOWPLOWING, 2022-2023 INITIAL SEASON – ROUND 4



APPENDIX C: SYRACUSE SIDEWALK SNOW REMOVAL MAP⁵⁴



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