

Agency: Commerce, Community and Economic Development**Grants to Municipalities (AS 37.05.315)****Grant Recipient: Anchorage****Federal Tax ID: 92-0059987****Project Title:****Project Type: New Construction and Land Acquisition**

Anchorage - Fairview Sidewalk Snow Disposal Pilot Project

State Funding Requested: \$50,000
One-Time Need**House District: Anchorage Areawide (16-32)****Brief Project Description:**

This project will install a below grade snow melt cistern accessible a sidewalk level hatch adjacent to the Fairview Recreation Center. A heating element within will allow sidewalk snow to be plowed into the cistern for melting.

Funding Plan:

Total Project Cost:	\$50,000
Funding Already Secured:	(\$0)
FY2013 State Funding Request:	(\$50,000)
Project Deficit:	\$0

Detailed Project Description and Justification:

This project will install a below grade snow melt cistern accessible a sidewalk level hatch adjacent to the Fairview Recreation Center. A heating element within will allow sidewalk snow to be plowed into the cistern for melting. Similar systems are used in other sub-Arctic environments. This cistern will serve as a test to determine the viability of the cistern melting method of snow disposal in Anchorage.

Project Timeline:

Design expenditures are anticipated in 2013 and 2014. Installation is expected in 2014.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Municipality of Anchorage

Grant Recipient Contact Information:

Name: Gary Jones
Title: Capital Program Coordinator
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Has this project been through a public review process at the local level and is it a community priority? ☒ Yes ☐ No

Easy snow removal by throwing it into the ground

POINT 1

It's easy to use.

Just open the lid of the concrete pipe, throw snow in and switch on the device. Electricity melts the snow automatically.

POINT 2

It's compact.

A very small space in your front yard or in front of your garage will do. It will present no obstacle, because it's buried underground.

POINT 3

It's easy to maintain.

It doesn't need refueling and it has a very simple design. It's easy to maintain, with little chance of breakdown.

POINT 4

It can handle any type of snow.

It can handle any type of snow from freshly fallen snow, snow packed hard by ploughing and snow from rooftops.

POINT 5

Melt water seeps naturally into the soil.

Melt water gradually overflows the water pool and seeps naturally into the soil.

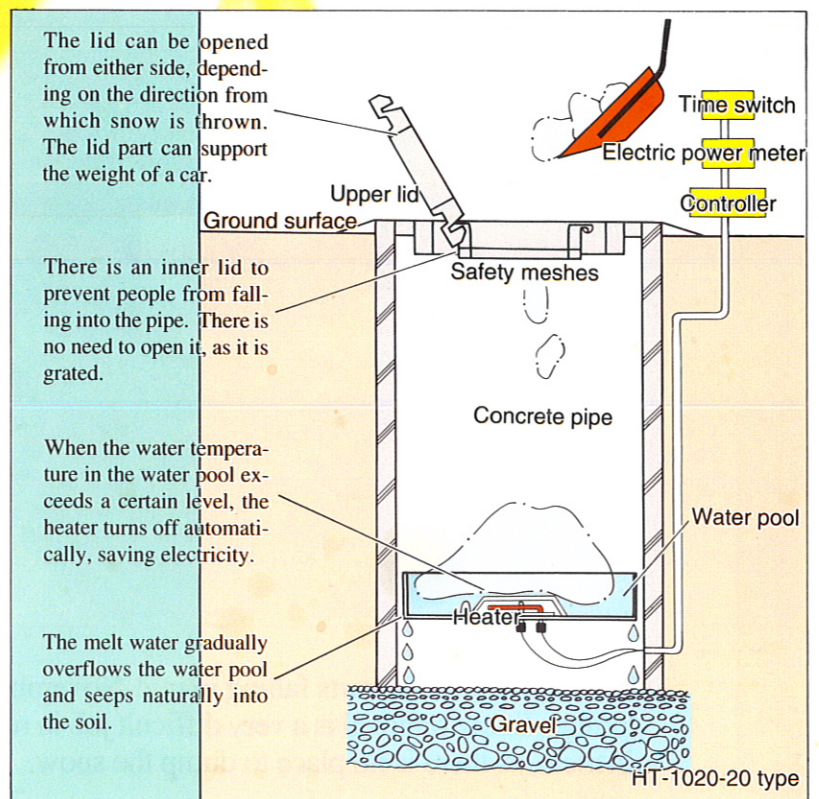
Convenient and economical electric bill system especially for snowy districts

Contract for electricity for snow melting

"Electricity for snow melting" means electricity which is used continuously for over four months every winter for the purposes of snow melting and heating. Although this supply of electricity is stopped for five hours every day, from 4:00 p.m. to 9:00 p.m., it can be freely used during the other 19 hours of the day. You will only be charged for the contract period. It is a very economical system especially for cold and snowy Hokkaido.

Specifications

Name	Item	Type	
		HT-1020-20	HT-1522-44
Concrete pipe	Inner dia.	1m	1.5 m
	Depth	2 m	2.2 m
	Capacity	1.57 m	3.53 m
	Material	Concrete	Concrete
Water pool	Material	Galvanized steel	Galvanized steel
	Heater capacity	Single-phase AC 200V x 2.0kW	Single-phase AC 200V x 4.4kW
Upper lid	Material	Galvanized steel	Galvanized steel
Snow-melting capacity	20 cm accumulation of snow	25 m ²	55 m ²
	Density	400 kg	880 kg
	80 kg/m ³	Treated in 24 hours	Treated in 24 hours



Improving Mobility in Our Winter City

It is Deep Winter and the snow is high. As a Winter City and the only metropolitan area in America located in the sub-arctic, Anchorage faces unique challenges. One of them is coping with periodic seasons of high snowfall. As we go about our regular activities this year, it is becoming obvious that the routine approach to snow management is straining to keep up.

Snow is required by Municipal Code to either be stored on site or physically removed. Responsibilities for snow removal and storage are split. In the Anchorage Road District Service Area businesses and major institutions remove snow from their sites. Streets are typically the responsibility of the State (major roads) or the Municipality (minor and local roads).

The Municipality has a standard operating policy of making all streets passable within 72 hours after a significant snowfall. This standard applies generally to the road section itself. Snow removal from sidewalks and/or trails is another matter. It is normal practice for sidewalks to be used for snow storage in the immediate aftermath of a snow event. It can be weeks, if not months, before street maintenance crews get around to clearing the sidewalks. This policy creates a disincentive to walk or bike during the six months of our sub-arctic winter. It is not unusual to see a person forced to walk in the roadway with moving vehicles because the sidewalk is stacked high with snow berms.

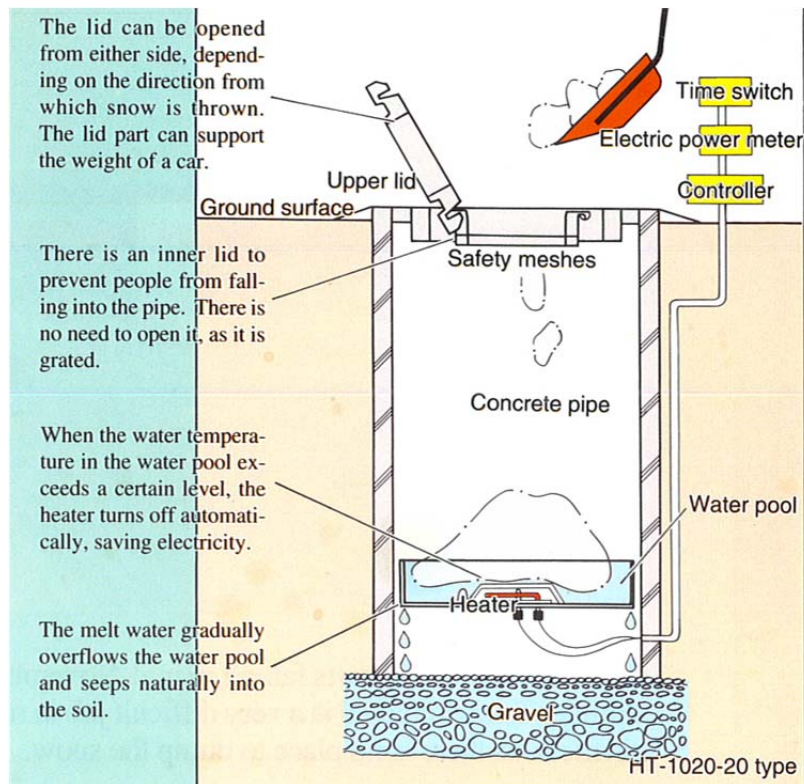
The leadership of our community has decided that changing current policies and raising the standards for snow removal are too expensive. There is an unspoken agreement that property owners should not be asked to pay for faster or more expansive snow removal. Municipal Code does not even require property owners outside of Downtown to assist with snow removal from adjacent sidewalks. In fact, you often see instances where property owners have allowed private snow removal operators to move the snow from their parking area and push it into a densely packed snow pile on the public sidewalk.

The folks in the Fairview neighborhood have, for many years, tried to get local government to explore new approaches to snow management. There are ways to raise the standards for snow removal without requiring any significant increases in property taxes. We wish to thank Assemblyman Patrick Flynn for his amendment during Assembly discussion of the Capital Budget that added \$50,000 for Snow Melt Cistern to the State Legislative request list. Kudos go out to other Assembly members for supporting the amendment and to the Mayor for not vetoing the request. The funds will examine a new approach to snow management and prototype an Anchorage specific application.

The concept represents an effort to advance a neighborhood-based approach to snow removal. Such an approach relies on a partnership between government and the citizenry. We think development of snow-melt cisterns of various sizes in the Fairview area will contribute to our common goal of becoming a more livable Winter City. The idea is fairly simple. A concrete lined cistern is placed in the ground. At the bottom of the cistern and below the freeze-thaw line is an electrically powered melting system. Snow from sidewalks, parking areas and driveways is placed in the cistern by local residents who lift up a stainless steel plate and push snow into it. The snow melt system is activated and the resultant water seeps into the natural sub-surface drainage system. The melting operation could be activated manually

or by sensors with an automatic cut-off. The size of the cistern can vary. It can be constructed to handle snow loads for a single homeowner or large enough to accommodate a cul-de-sac or block. An example of the design commonly used on the island of Hokkaido, Japan is shown below.

We all share a common goal of making Anchorage a more livable Winter City. Achieving this goal requires supportive efforts by citizens, businesses, public employees and elected officials. The six months of cold and darkness do not have to be just endured. It is possible to make winter work to our advantage. Building the infrastructure for greater civic engagement by residents as volunteer Snowfighters has numerous benefits. These include reduced snow removal costs, a strengthened sense of community, a healthier neighborhood environment for children and elders, opportunities for community service by our young men and women and a more enjoyable winter experience for residents and tourists.



The snow berms are getting higher. Storage space is being maxed out. Snow removal to Municipal and private storage sites is expensive. If government can help develop the physical infrastructure for neighborhood based snow removal, then local residents can step forward. It is time to try a new approach. Let's empower our citizenry and give Neighborhood Snowfighters a try.

Allen Kemplen is a resident of Fairview and active in his neighborhood community council.