

Report to Council



Date: May 14, 2018
File: 1850-58
To: City Manager
From: Darryl Astofooroff, Public Works Manager
Subject: Snow and Ice Program Review, Additional Snow Routes

Recommendation:

That Council receives, for information, the report from the Public Works Manager dated May 14, 2018 recommending that additional designated snow routes be implemented in the Traffic Bylaw No. 8120;

AND THAT Bylaw No. 11601 being Amendment No. 30 to Traffic Bylaw No. 8120 be forwarded for reading consideration;

AND FURTHER THAT Council consider an ongoing snow clearing budget increase as part of the 2019 budget.

Purpose:

To provide Council with an update on the 2017/2018 Winter Snow Clearing effort, provide options to maintain or improve on existing service levels, and to update Traffic Bylaw No. 8120 to allow for additional designated snow routes.

Background:

On January 15, 2018 Council received a verbal report from the Infrastructure Operations Department Manager on winter snow clearing efforts with an overview of challenges faced during repeated heavy snow events. Staff reported on several operational improvements that have been made since 2015 including:

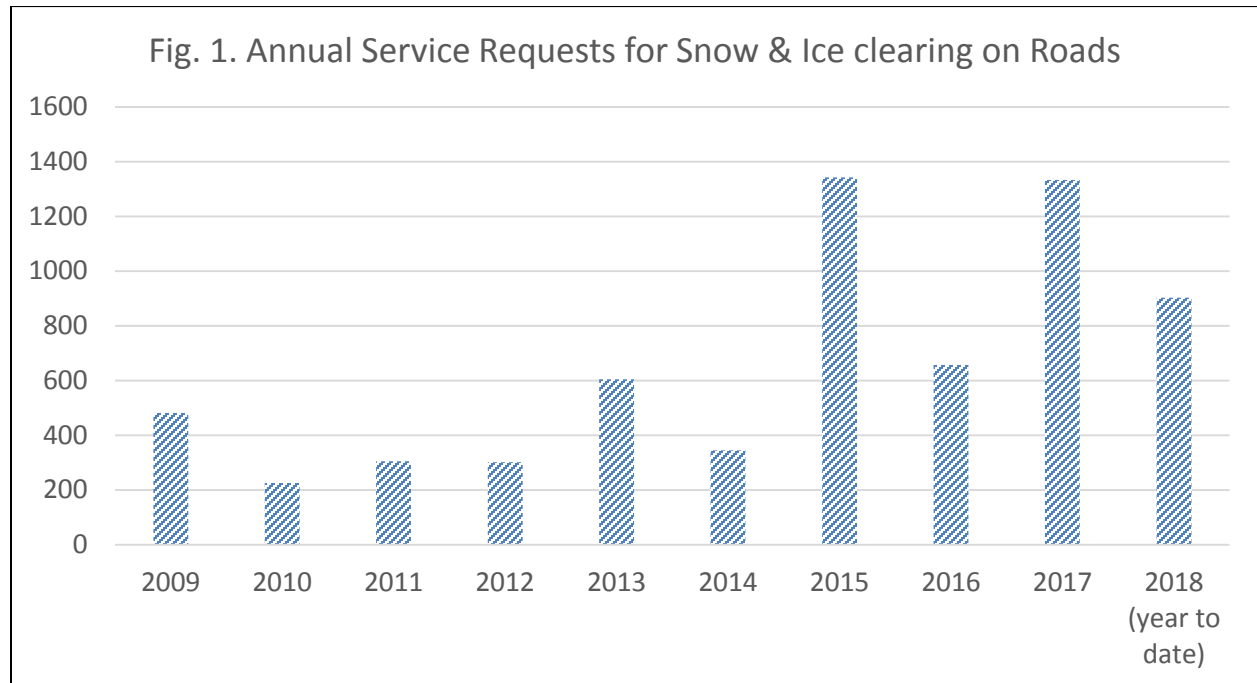
- the introduction of snow routes within four neighbourhoods;
- increased public communications (social media, website, e-Subscribe);
- additional equipment (three sidewalk plows);
- operational shift changes (Roads Operations and Fleet mechanics) to increase staff availability; and
- enlisting support from other departments (e.g. Parks) to assist with keeping bus stops clear.

Council requested staff to return to Council at the close of the winter season with recommendations for resource improvements or policy/bylaw changes which may be necessary to maintain or improve service levels should recent winter weather patterns continue in the years ahead.

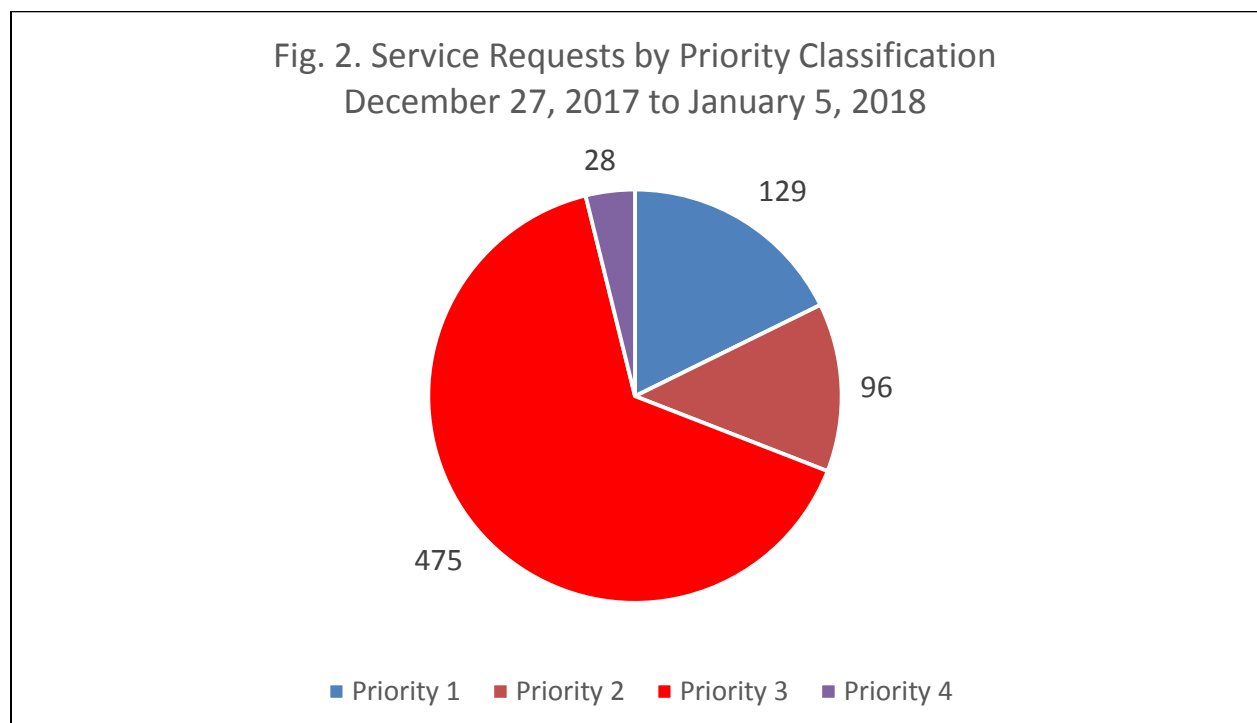
Staff analyzed data within the service request (SR) system. Figure 1 below indicates total SR's received over the past ten years (2018 partial) for Snow and Ice clearing on roads. Staff compared total annual

snowfall to numbers of SR's over the ten-year period but there was no clear correlation, likely because freezing rain, freeze/thaw cycles and other factors can have a major impact on winter maintenance operations. Figure 1 does show increasing numbers of SR's in the last three years. In addition to some larger snowfall events since 2015, other possible reasons for increasing SR's might include:

- More hillside development / growing road network;
- Greater number of snowfall events per winter; even though the total accumulation isn't high, we often receive many small events back to back; or
- Changing expectations from citizens with regards to service levels



Staff analyzed SR's through the record 37cm snowfall event that began on December 27, 2017 and found that over 70 per cent of SR's came from local residential roads (Fig. 2).

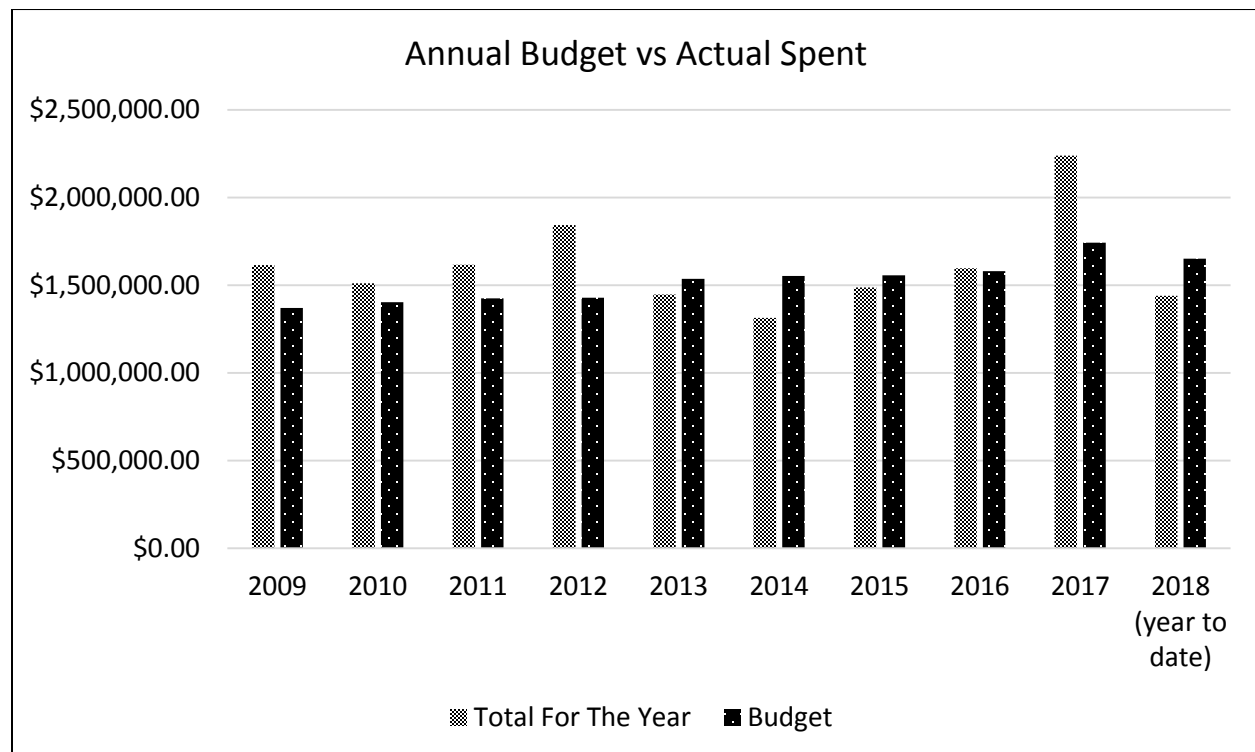


The Roadways Operations Branch follow the City's Snow and Ice Control Policy No.322, which determines the order of priority for clearing roads (excerpt follows):

- Priority 1 Roads: Plowed and sanded or salted within 8 hours of the end of a storm.
- Priority 2 Roads: Plowed and sanded or salted within 12 hours of the end of a storm.
- Priority 3 Roads: Plowed and sanded or salted within 48 hours of the end of a storm.
- Priority 4 Roads: Plowed and sanded or salted during regular working hours.

Priority 2-4 roads will not be serviced until service levels of Priority 1 roads are achieved. If another storm occurs prior to completion of Priority 2-4 roads, attention will again shift to Priority 1 roads.

The snow removal budget and the Snow Removal Reserve balance was also reviewed. The graph below represents the annual budget over the past ten years and the actual amount spent. The first three months of 2018 has already depleted 85 per cent of the annual snow budget.



In years of budget surplus, the surplus is contributed to the Snow Removal Reserve. When a deficit occurs during heavy snow event years such as 2017, the over spending is covered by the reserve. The analysis of the reserve over the last ten years shows that spending levels have increased and the Snow Removal Reserve is becoming depleted.

Growth, narrow hillside road designs, on-street bike lanes, cycle tracks and multi-use corridors have all added to the challenges of snow removal. There is no pattern within the weather data to accurately forecast for the future. The financial reserves are depleted rapidly during winters with continual or extraordinary snow events.

In response to increasing Service Requests, staff have investigated additional improvements which would allow for increased service levels on Priority 3 roads, some of which have a financial impact. These include:

- Increasing communication efforts through advertising, social media, and signage;
- Using GPS technology to monitor progress in the field in real time and allow for a quicker transition between operators during shift changes;
- Adding additional resources for snow removal for specific tasks; i.e. cul-de-sacs in higher elevation neighborhoods, multi-use corridors;
- Hiring additional snow removal contractors and increasing annual contractual/retainer period;
- Adding additional snow routes (parking bans during large snow events within neighbourhoods); and
- Adding additional standby staff to cover weekends.

In an ongoing effort to improve on service, staff have compiled options which we will consider recommending to the City Manager in the 2019 Budget.

Option 1. Status quo with no increase to the annual snow removal budget. Add additional snow routes per Schedule A.

Option 2. Increase the annual snow removal budget by \$256,000 to cover shortfalls as the average experienced over the last two years. Also add additional snow routes per Schedule A.

Option 3. (preferred) Increase the annual snow removal budget by \$400,000 to enhance service levels; hire additional contractors to improve response time into residential (Priority 3) streets and add additional resources. Also add additional snow routes per Schedule A.

At present staff recommend adding additional snow routes in the Black Mountain, Kirschner Mountain and Academy Way neighbourhoods. This amendment would have costs associated with sign installation at entrance points to neighbourhoods estimated at \$8,000. Staff proposes to utilize the existing snow removal budget to fund this installation.

Communications Comments:

Residents on Snow Routes will be notified prior to the program implementation and neighbourhood signage installation. The notification will include the ability to sign up for Snow Route updates through the City's eSubscribe system.

Internal Circulation:

Stephen Fleming – City Clerk
Laurens Campbell – Supervisor, Traffic Operations
Jodie Foster – Community Communications Manager
David Gazley – Bylaw Services Manager
Melanie Antunes, Budget Supervisor

Legal/Statutory Authority:

City of Kelowna Traffic Bylaw 8120

Existing Policy:

Council Policy 332 – Snow and Ice Control

Financial/Budgetary Considerations:

Staff will submit as part of the 2019 budget process an ongoing request to the annual snow removal budget for increased service levels.

Considerations not applicable to this report:
Legal/Statutory Procedural Requirements:
Personnel Implications:
External Agency/Public Comments:
Alternate Recommendation:

Submitted by:

D. Astofooroff, Public Works Manager

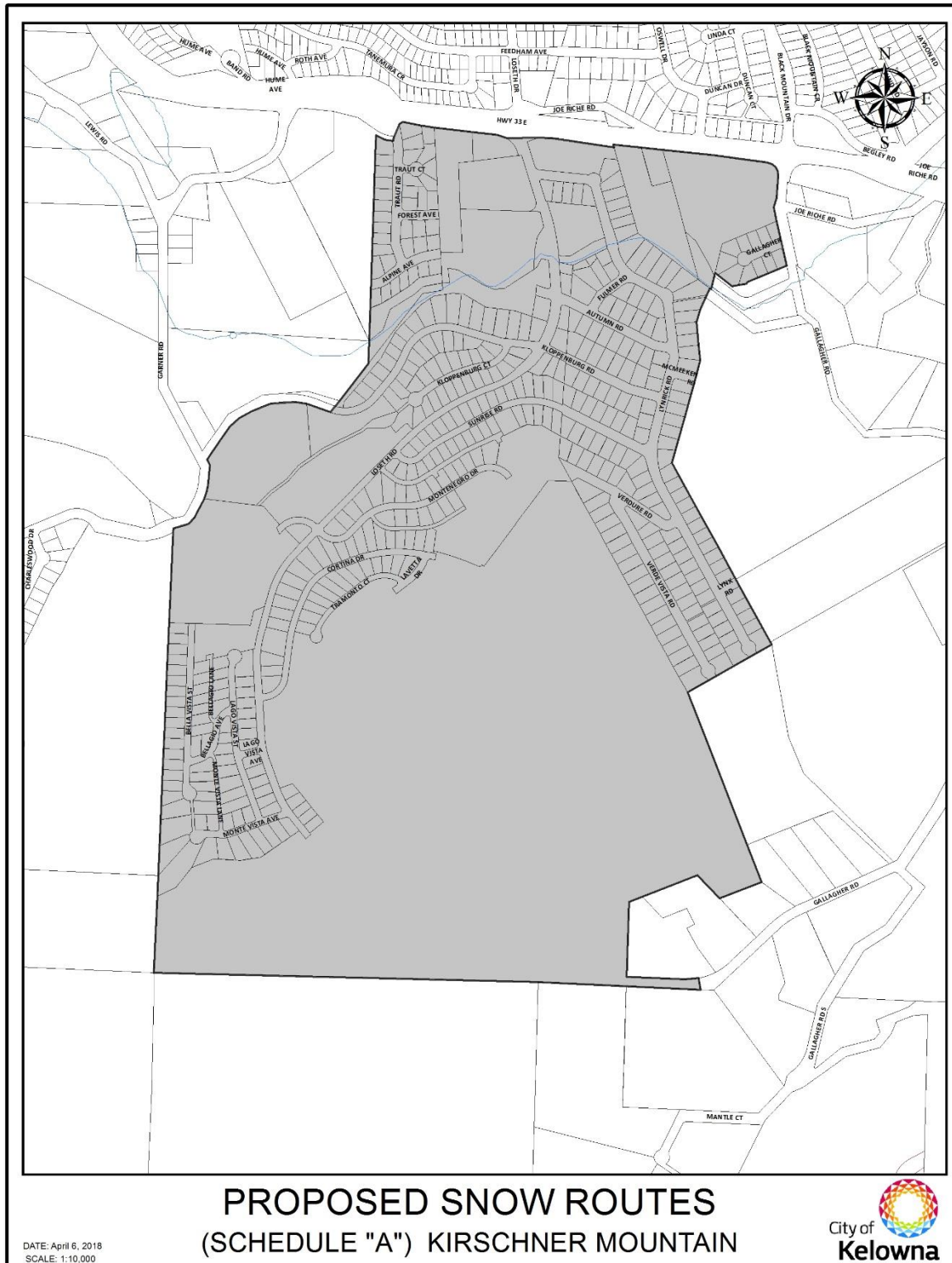
Approved for inclusion:

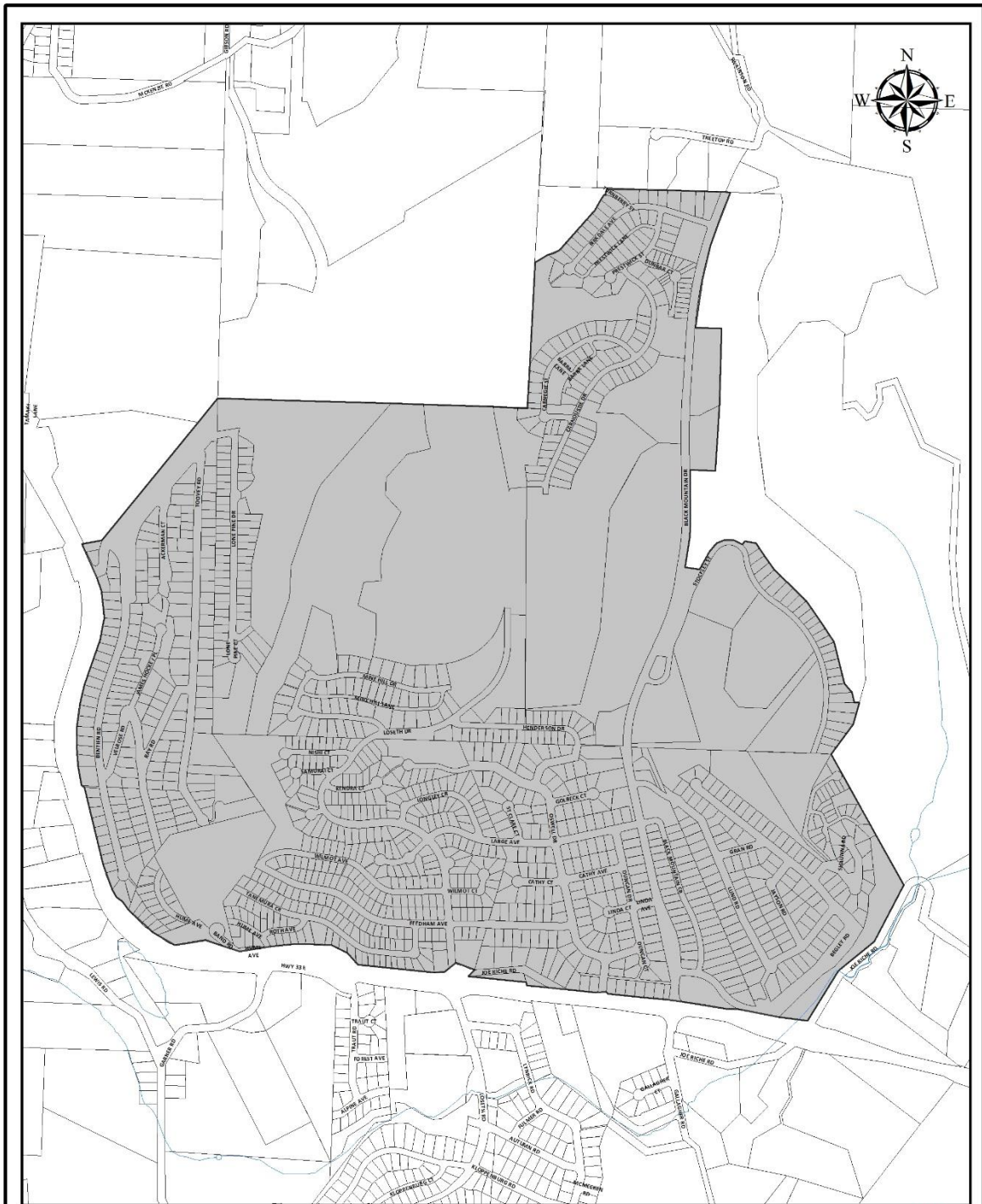


Ian Wilson, Infrastructure Operations Department Manager

cc: Corinne Boback, Legislative Coordinator
George King, Financial Planning Manager
Genelle Davidson, Director of Financial Services

Schedule A

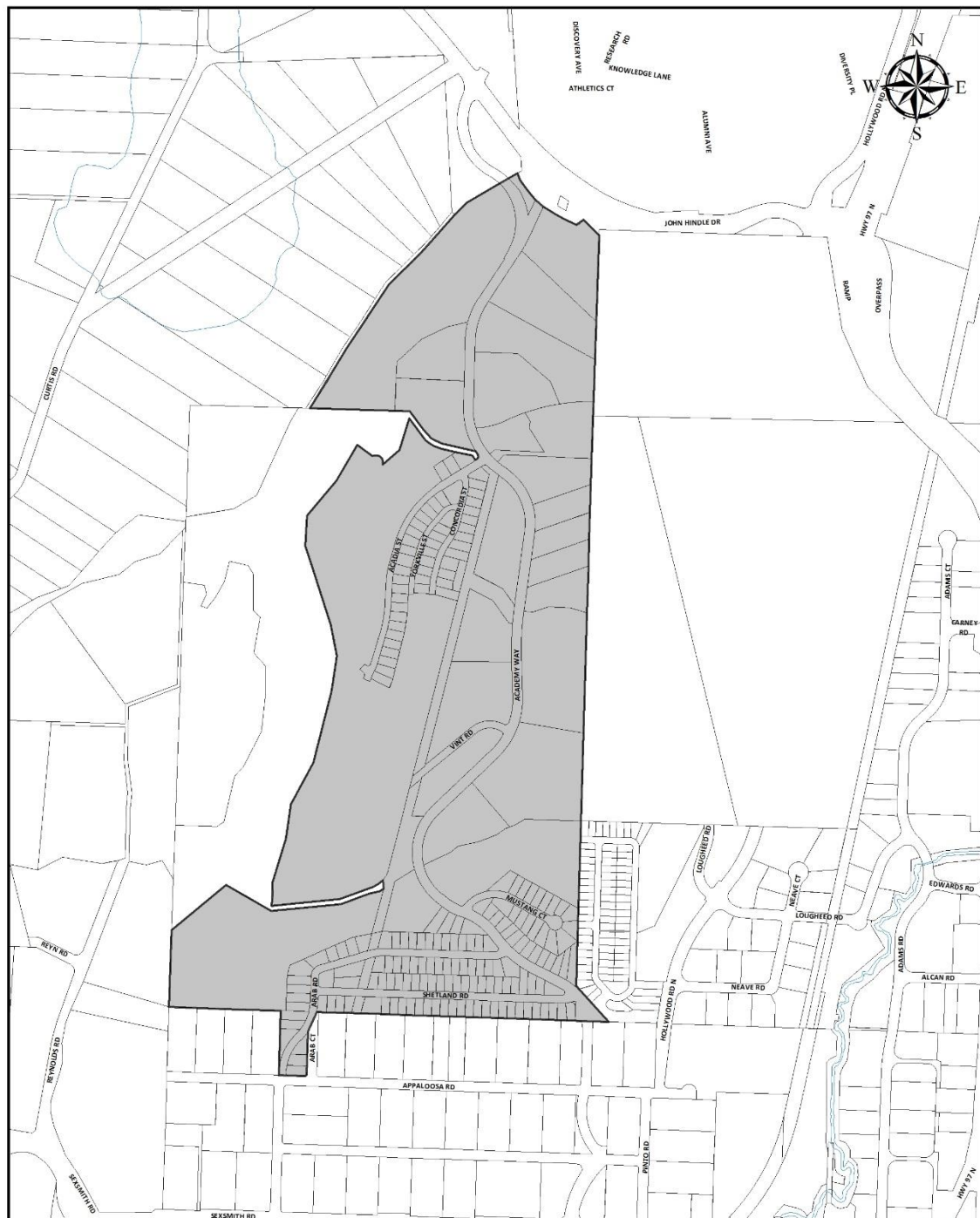




PROPOSED SNOW ROUTES **(SCHEDULE "A") BLACK MOUNTAIN**

DATE: April 6, 2018
 SCALE: 1:12,500





PROPOSED SNOW ROUTES **(SCHEDULE "A") ACADEMY WAY**

DATE: April 6, 2018
 SCALE: 1:10,000

