
To: Mayor and Council

From: Dan Eberhardt, Manager Capital Infrastructure Delivery

Date: December 18, 2024

Subject: Winter Operations Plan 2024-2025

Report Highlights

- The Township of Springwater carries out road and sidewalk maintenance following the Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways (MMS).
- The last Winter Operations Plan was adopted by Council in 2023 through Resolution No. C591-2023.
- Staff review the Township's Winter Operations Plan annually, optimize operations, and make changes, as needed.
- The 2024/2025 winter maintenance season commenced on November 15th and concludes on April 15th 2025.

Background

The Township of Springwater's Winter Operations Plan (Appendix A) has been a working document with the purpose of outlining how winter maintenance is conducted, the levels of service that are expected to be upheld and, general practices for staff and fleet during various weather conditions.

The Plan is dynamic to allow the Township to evaluate and phase in any changes, new approaches, and technologies in winter maintenance activities in a fiscally sound manner. Any changes to the winter maintenance activities must adhere to the mandated Minimum Maintenance Standards for Municipal Highways (MMS).

The Plan is updated annually as part of the Department's commitment to continuous improvement. These updates provide staff with the opportunity to include level of service amendments to accommodate the growing needs of the community, including new developments, reconstruction projects and areas where route adjustments are necessary.

The Township of Springwater is responsible for the winter maintenance on:

- 677.4 Lane Kilometres of paved roads;
- 187 Lane Kilometres of unpaved roads;

- 45.6 kilometres of sidewalk;
- 30 parking lots, and 29 water & wastewater facility locations.

Winter Operations Management – Objective

The Township of Springwater:

- Will meet the Provincial MMS requirements.
- Is committed to improving its winter maintenance operations while continuing to ensure public safety.
- Will optimize the use of winter maintenance materials on all roads while striving to minimize negative impacts to the natural environment.
- Roads and Fleet staff will strive to provide safe winter road conditions for vehicular and pedestrian traffic as set out in the level of service policies and within the resources established by Council in a fiscally responsible manner.

Route Adjustments

Each year, adjustments are needed to account for new development, capital construction, route improvements, etc. Although these adjustments tend to be minor, updates are reflected in the Township's Winter Operations Plan. Each road/sidewalk is assigned a plow route (Appendix B) and these routes are balanced out to ensure that the lane kilometre distance is relatively similar. During a typical snowfall event, a plow route can be plowed within an 8-hour shift. This balance ensures that critical road corridors as well as minor corridors are maintained to meet the described levels of service based on their road classification per the *MMS*.

Minor adjustments have been made this year on existing plow routes to help optimize route time efficiency, as well as account for new roads added into the Township's Road network. The route adjustments are reflected in the overall plow route map in the Winter Operations Plan.

As per resolution C616C-2024, a third-party contractor will be completing winter maintenance on Old Second South, from Sutton Heights to 320m south of Sutton Heights. The Township will continue to patrol the road and the Township's representative will determine when maintenance is required. Once maintenance is determined to be required, the third-party vendor will be contacted, and they will complete all winter maintenance within 6 hours of the callout.

Similar to last year, the Township's [website](#) includes a live, in real-time, winter maintenance tracker for residents to stay engaged and informed on how winter operations are being conducted in their neighbourhood. The tracker provides information such as weather forecasting as well as when each of the Township's

roadways have been serviced by a snow plow. The tracker is currently available on the Township’s website for the winter season.

Conclusion

The Winter Operations Plan will continue to be a dynamic document in order to fit the growing and changing needs of the Township of Springwater. The Plan will continue to be reviewed and updated annually to account for new technology that could improve winter maintenance services, fleet upgrades, staffing changes and training requirements, revisions to Provincial and Municipal regulations/standards and finally, capturing geographical changes to the Township’s growing road network.

Financial Implications

Staff do not anticipate any negative implications to the operating budget for winter maintenance operations.

Pillars of Commitment

The above initiative supports the following Strategic Pillars of Commitment:

- **Goal 1** – Leveraging growth to improve Springwater as a community.
- **Goal 4** – Addressing climate change while embracing environmental sustainability.
- **Goal 5** – Corporate actions.

Approvals

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Reviewed by:	Scott Haw CRS-I Manager Roads and Fleet
Financial Implications Reviewed by:	Greg Bedard, CPA, CMRP, Director of Finance
Approved by:	Jeff Schmidt, CPA, CGA, Chief Administrative Officer
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Applicable Municipal Policy or Legislation

[O. Reg. 239/02: MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS](#)

Attachments

Appendix A - Winter Operations Plan 2024/2025

Appendix B – Winter Operations Plow and Sidewalk Routes



Township of Springwater

Winter Operations Plan 2024-2025



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Purpose

This Winter Operations Plan sets out a policy and procedural framework for ensuring that the Township of Springwater continuously delivers effective winter maintenance services and efficiently manages materials used in winter maintenance operations.

The Plan is to be dynamic, to allow the Municipality to evaluate and phase-in any changes, new approaches, and technologies in winter maintenance activities in a fiscally sound manner. At the same time, any modifications to municipal winter maintenance activities must adhere to the mandated minimum maintenance standards and not compromise roadway safety.

To be read in conjunction with the Township’s Salt Management Plan, the Winter Operations Plan for **Township of Springwater** was last endorsed by Council on the **1st day of November 2023, through Resolution C591-2023.**

Definitions

Anti-icing: means the application of liquid de-icers directly to the road surface in advance of a winter event.

De-icing: means the application of solids, liquids, pre-treated material to the road surface after the on-set of the winter event.

Highway: includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.

Non-Paved Surface: means a surface that is not paved.

Paved Surface: means a surface with a wearing layer or layers of asphalt, concrete or asphalt emulsion.

Pre-treat: means the application of liquids (calcium chloride, sodium chloride, etc.) to dry sand or salt prior to being loaded for storage or applied to the road surface.

Pre-wetting: means the application of liquids (calcium chloride, sodium chloride, etc.) at the spinner of the truck just prior to application to the road surface.

Significant weather event: means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality. The Township of Springwater will declare a significant weather event based on an alert from Environment Canada.

Winter Event: is a weather condition affecting roads such as snowfall, windblown snow, freezing rain, frost, black ice, etc., to which a winter event response is required.

Winter Event Response: is a series of winter control activities performed in response to a winter event.

Continuous Winter Event Response: is a response to a winter event with full deployment of staff and equipment that plow and sand the entire system.

Spot Winter Event Response: is a response to a winter event with only a part deployment of staff and equipment or with full deployment to only part of the system.

Winter Event Response Hours: are the total number of person-hours per year (plowing, salting/sanding, winging back, etc.) to respond to winter events.

Winter Operations Management – Objective

The Township of Springwater:

- Will meet the Provincial minimum maintenance standard requirements.
- Is committed to improving its winter maintenance operations while continuing to ensure public safety.
- Will optimize the use of winter maintenance materials on all roads while striving to minimize negative impacts to the natural environment.
- Roads and Fleet staff will strive, insofar as practicable, to provide safe winter road conditions for vehicular and pedestrian traffic as set out in the level of service policies and within the resources established by Council.

Policy Statement

The Township of Springwater will provide efficient and cost-effective winter maintenance per applicable provincial legislation and accepted standards while striving to minimize impacts to the environment, and ensure the safety of the municipal road and sidewalk network. These commitments will be met by:

- Adhering to the procedures contained within the Operations Plan.
- Committing to ongoing winter maintenance staff training and education.
- Monitoring on an annual basis, the present conditions of the winter maintenance program, as well as the effectiveness of the Winter Operations Plan.
- Reviewing and upgrading the Winter Operations Plan regularly to incorporate new technologies and new developments.

Winter Maintenance Program

The major winter maintenance activities are:

- Anti-icing
- Snow-plowing
- Salt/sand application
- Salt and sand storage
- Snow removal & snow storage
- Sidewalk plowing and sanding

The Township of Springwater is responsible for winter maintenance on:

Paved Roads: 677.4 lane km

Unpaved Roads: 187 lane km

Sidewalks 45.6 km

Appendix A - Winter Operations Plan 2024/2025

For the purposes of this winter operations plan, the highways under the jurisdiction of the Township of Springwater have been classified (Class 3, 4, 5, 6) as per the following table which is based on the Classification of Highways table included in O. Reg. 239/02 (Minimum Maintenance Standards for Municipal Highways). The MMS classifies all roads as a highway of varying speed limits.

Table 1 – Classifications of Highways

Average Annual Daily Traffic (number of motor vehicles)	Posted or Statutory Speed Limit (kilometers per hour)						
	91-100	81-90	71-80	61-70	51-60	41-50	1-40
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

For the purposes of the table above to this section, the average daily traffic on a highway or part of a highway under the jurisdiction of the Township of Springwater shall be determined:

- 1) by counting and averaging the daily two-way traffic on the highway or part of the highway; or
- 2) by estimating the average daily two-way traffic on the highway or part of the highway.

Level of Service

The Township of Springwater provides the following level of service based on the Minimum Maintenance Standards for Municipal Highways (MMS)(O. Reg. 239/02), as set out in section 3, in response to a winter event:

Weather Monitoring

- From October 1 to April 30, the minimum standard is to monitor the weather, both current and forecast, to occur in the next 24 hours, once every shift or three times per calendar day, whichever is more frequent, at intervals determined by the Municipality.
- From May 1 to September 30, the minimum standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once per calendar day.

Snow accumulation, roadways

- 1) The standard for addressing snow accumulation based on section 4 of the MMS for roadways is,
 - a) after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the Table 2 to this section, to deploy resources as soon as practicable to address the snow accumulation; and
 - b) after the snow accumulation has ended, to address the snow accumulation to reduce the snow to a depth less than or equal to the depth set out in the Table 2 within the time set out,
 - i) to provide a minimum lane width of the lesser of three metres for each lane or the actual lane width, or
 - ii) (ii) on a Class 4 or Class 5 highway with two lanes, to provide a total width of at least five metres. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (1).
- 2) If the depth of snow accumulation on a roadway is less than or equal to the depth set out in the Table 2 to this section, the roadway is deemed to be in a state of repair with respect to snow accumulation. O. Reg. 47/13, s. 4.

- 3) For the purposes of this section, the depth of snow accumulation on a roadway and, if applicable, lane width under clause (1) (b), may be determined in accordance with subsection (4) by a municipal employee, agent, or contractor, whose duties or responsibilities include one or more of the following:
 - a) Patrolling highways.
 - b) Performing highway maintenance activities.
 - c) Supervising staff who perform activities described in paragraph 1 or 2. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (2).
- 4) The depth of snow accumulation on a roadway and lane width may be determined by,
 - a) performing an actual measurement;
 - b) monitoring the weather; or
 - c) performing a visual estimate. O. Reg. 47/13, s. 4; O. Reg. 366/18, s. 5 (3).
- 5) For the purposes of this section, addressing snow accumulation on a roadway includes,
 - a) plowing the roadway;
 - b) salting the roadway;
 - c) applying abrasive materials to the roadway;
 - d) applying other chemical or organic agents to the roadway;
 - e) any combination of the methods described in clauses (a) to (d). O. Reg. 366/18, s. 5 (4).
- 6) This section does not apply to that portion of the roadway,
 - a) designated for parking;
 - b) consisting of a bicycle lane or other bicycle facility; or
 - c) used by a municipality for snow storage. O. Reg. 366/18, s. 5 (4).

Table 2 - Snow Accumulation- Roadways

Class Of Highway	Depth cm	Time Hours
3	8	12
4	8	16
5	10	24

O.Reg 47/13, s.4; O.Reg.366/18, s.5(5)

Snow accumulation on roadways, significant weather event

- 1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the significant weather event is,
 - a) to monitor the weather in accordance with section 3.1 of O. Reg. 366/18; and
 - b) if deemed practicable by the Municipality, to deploy resources to address snow accumulation on roadways, starting from the time that the Municipality deems appropriate to do so. O. Reg. 366/18, s. 7.
- 2) If the Municipality complies with subsection (1), all roadways within the Municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table 2 expires following the declaration of the end of the significant weather event by the Municipality. O. Reg. 366/18, s. 7.
- 3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the Municipality shall,
 - a) declare the end of the significant weather event when the Municipality determines it is appropriate to do so; and
 - b) address snow accumulation on roadways in accordance with section 4 of O. Reg. 366/18, s. 7.

Ice formation on roadways and icy roadways

- 1) The standard for the prevention of ice formation on roadways is doing the following in the 24-hour period preceding an alleged formation of ice on a roadway:
 - a) Monitor the weather in accordance with section 3.1 of O. Reg. 366/18.
 - b) If the Municipality determines, as a result of its activities under paragraph 1 or 2, that there is a substantial probability of ice forming on a roadway, treat the roadway, if practicable, to prevent ice formation within the time set out in Table 3 to this section, starting from the time

that the Municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 8.

- 2) If the Municipality meets the standard set out in subsection (1) and, despite such compliance, ice forms on a roadway, the roadway is deemed to be in a state of repair until the applicable time set out in Table 4 to this section expires after the Municipality becomes aware of the fact that the roadway is icy. O. Reg. 366/18, s. 8.
- 3) Subject to section 5.1 of O. Reg. 366/18, the standard for treating icy roadways is to treat the icy roadway within the time set out in Table 4 to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in Table 4 to this section expires after the Municipality becomes aware of the fact that a roadway is icy. O. Reg. 366/18, s. 8.
- 4) For the purposes of this section, treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand. O. Reg. 366/18, s. 8.
- 5) For greater certainty, this section applies in respect of ice formation on bicycle lanes on a roadway, but does not apply to other types of bicycle facilities. O. Reg. 366/18, s. 8.

Table 3

Ice Formation Prevention

O.Reg 366/18, s.8

Class of Highway	Time
3	16 Hours
4	24 Hours
5	24 Hours

Table 4

Treatment of Icy Roadways

O.Reg 366/18, s.8

Class of Highway	Time
3	8 Hours
4	12 Hours
5	16 Hours

Icy roadways, significant weather event

- 1) If a municipality declares a significant weather event relating to ice, the standard for treating icy roadways until the declaration of the end of the significant weather event is,
 - a) to monitor the weather in accordance with section 3.1 of O. Reg. 366/18; and
 - b) if deemed practicable by the Municipality, to deploy resources to treat icy roadways, starting from the time that the Municipality deems appropriate to do so. O. Reg. 366/18, s. 8.
- 2) If the Municipality complies with subsection (1), all roadways within the Municipality are deemed to be in a state of repair with respect to any ice which forms or may be present until the applicable time in the Table 4 expires after the declaration of the end of the significant weather event by the Municipality. O. Reg. 366/18, s. 8.
- 3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the Municipality shall,
 - a) declare the end of the significant weather event when the Municipality determines it is appropriate to do so; and
 - b) treat icy roadways in accordance with section 5. O. Reg. 366/18, s. 8.

Snow accumulation on sidewalks

- 1) Subject to section 16.4 of O. Reg. 366/18, the standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is,
 - a) to reduce the snow to a depth less than or equal to 8 centimetres within 48 hours; and
 - b) to provide a minimum sidewalk width of 1 metre. O. Reg. 366/18, s. 15.
- 2) If the depth of snow accumulation on a sidewalk is less than or equal to 8 centimetres, the sidewalk is deemed to be in a state of repair in respect of snow accumulation. O. Reg. 366/18, s. 15.
- 3) If the depth of snow accumulation on a sidewalk exceeds 8 centimetres while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair with respect to snow accumulation, until 48 hours after the snow accumulation ends. O. Reg. 366/18, s. 15.

- 4) For the purposes of this section, the depth of snow accumulation on a sidewalk may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3) with necessary modifications. O. Reg. 366/18, s. 15.
- 5) For the purposes of this section, addressing snow accumulation on a sidewalk includes,
 - a) plowing the sidewalk;
 - b) salting the sidewalk;
 - c) applying abrasive materials to the sidewalk;
 - d) applying other chemical or organic agents to the sidewalk; or
 - e) any combination of the methods described in clauses (a) to (d). O.Reg 366/18 s. 15

Snow accumulation on sidewalks, significant weather event

- 1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,
 - a) to monitor the weather in accordance with section 3.1 of O. Reg. 366/18; and
 - b) if deemed practicable by the Municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the Municipality deems appropriate to do so. O. Reg. 366/18, s. 15.
- 2) If the Municipality complies with subsection (1), all sidewalks within the Municipality are deemed to be in a state of repair with respect to any snow present until 48 hours following the declaration of the end of the significant weather event by the Municipality. O. Reg. 366/18, s. 15.
- 3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the Municipality shall,
 - a) declare the end of the significant weather event when the Municipality determines it is appropriate to do so; and
 - b) address snow accumulation on sidewalks in accordance with section 16.3. O. Reg. 366/18, s. 15.

Ice formation on sidewalks and icy sidewalks

- 1) Subject to section 16.6 of O. Reg. 366/18, the standard for the prevention of ice formation on sidewalks is to,
 - a) monitor the weather in accordance with section 3.1 of O. Reg. 366/18 in the 24-hour period preceding an alleged formation of ice on a sidewalk; and
 - b) treat the sidewalk if practicable to prevent ice formation or improve traction within 48 hours if the Municipality determines that there is a substantial probability of ice forming on a sidewalk, starting from the time that the Municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 366/18, s. 15.
- 2) If ice forms on a sidewalk even though the Municipality meets the standard set out in subsection (1), the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the Municipality first becomes aware of the fact that the sidewalk is icy. O. Reg. 366/18, s. 15.
- 3) The standard for treating icy sidewalks after the Municipality becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated. O. Reg. 366/18, s. 15.
- 4) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk. O. Reg. 366/18, s. 15.

Icy sidewalks, significant weather event

- 1) If a municipality declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,
 - a) to monitor the weather in accordance with section 3.1 of O. Reg. 366/18; and
 - b) if deemed practicable by the Municipality, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the Municipality deems appropriate to do so. O. Reg. 366/18, s. 15.
- 2) If the Municipality complies with subsection (1), all sidewalks within the Municipality are deemed to be in a state of repair with respect to any ice which forms or is present until 48 hours after

the declaration of the end of the significant weather event by the Municipality. O. Reg. 366/18, s. 15.

- 3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the Municipality shall,
 - a) declare the end of the significant weather event when the Municipality determines it is appropriate to do so; and
 - b) address the prevention of ice formation on sidewalks or treat icy sidewalks in accordance with section 16.5. O. Reg. 366/18, s. 15.

Declaration of significant weather event

- 1) A municipality declaring the beginning of a significant weather event or declaring the end of a significant weather event under this Regulation shall do so in one or more of the following ways:
 - a) By posting a notice on the Municipality's website.
 - b) By making an announcement on a social media platform, such as Facebook or Twitter.
 - c) By sending a press release or similar communication to internet, newspaper, radio, or television media.
 - d) By notification through the Municipality's police service.
 - e) By any other notification method required in a by-law of the Municipality. O. Reg. 366/18, s. 15.
- 2) A Significant Weather Event shall be declared by the Director of Public Works or designate and will be based on information provided by Environment Canada for this area regarding warnings and watches. If Environment Canada issues a Public Weather Alert, the Municipality will declare a Significant Weather Event.
- 3) When the Township of Springwater declares a significant winter event, this shall also mean they have declared an exemption from the Hours of Service Regulation O. Reg. 555/06 under section 3 (1) 4.1.

Winter Maintenance Season

The winter maintenance season, within which the Township of Springwater will perform winter highway maintenance, commences on **November 15** and will end on **April 15 of the following calendar year.**

Winter Preparations

In the months prior to the start of the winter maintenance season, the Township of Springwater undertakes the following tasks to prepare for the upcoming winter season:

Prior to the Winter Season

Prior to the winter season, the Township of Springwater will:

1. Conduct a mandatory training session for staff where all policies, procedures, schedules, reporting procedures for callout, route maps, equipment training and safety precautions will be discussed. Any issues resulting from the meeting with regard to the policies, procedures, schedules, reporting procedures for callout, route maps, equipment training and safety precautions shall be resolved either at the meeting or prior to the winter season.
2. Train winter patrollers (or staff whose duties also include patrolling) on the route of representative roads to be patrolled between winter events, their duties during a winter event, recording keeping requirements and callout procedures and the de-icing chemicals to be applied for the forecast weather conditions.
3. Inspect equipment to ensure proper working order. Schedule and complete any and all equipment repairs.
4. Arrange for the delivery of materials (salt, sand and liquid solution) and begin filling storage facilities.
5. Confirm that all guiderail, catch basin, hazard and fire hydrant markers, if any, are in place. Any missing markers will be replaced prior to the winter session.

One Month Prior to the Winter Season

One month prior to the winter season the Township of Springwater will

1. Assign equipment to staff.
2. Calibrate material application equipment.

3. Allow operators time to familiarize themselves with any new equipment, material application rates, material application equipment and their route (driving the route and noting obstacles along the route).
4. Assign staff to monitor weather forecasts on a daily basis. Assign night patrol shift if forecast indicates an overnight winter event is probable. The Road Supervisor will be authorized to initiate a winter event response if conditions warrant a response.
5. Have 25% of the fleet ready to respond to a winter event.
6. Have sufficient staff available to operate the fleet if conditions warrant a winter event response.

Two Weeks Prior to the Winter Season

Two weeks prior to the winter season the Township of Springwater will:

1. Begin regularly scheduled winter patrol of representative Township roads.
2. Have the required complement of the fleet ready to respond to a winter event.
3. Have staff available to operate the required complement of the fleet if conditions warrant a winter event response

At the Start of the Winter Season

At the start of the winter season:

1. Implement the winter shift schedule for road patrol and evening operators.
2. Begin patrolling representative roads in all maintenance classes.
3. Respond to winter events as per the winter operations plan.

Winter Patrol

During the winter maintenance season, the Township of Springwater carries out a winter patrol on a route of representative roads as required by the Minimum Maintenance Standards. Between winter events a patrol of representative roads will occur during daylight hours and a second night patrol will also be scheduled.

The purpose of the patrol is to monitor and record weather and road conditions and mobilize winter maintenance operators, contractors and equipment should a winter event be observed and a winter event response is required.

On the approach of a winter event or during a winter event the route of representative roads may be modified, insofar as reasonably practicable, depending on the type and severity of winter event or the direction from which the storm approaches.

The Road Supervisor will be familiar with local conditions in their patrol area and prepare a condition log of road and weather conditions as well as any actions taken during the shift. The winter patrol schedule parallels the designated winter season.

Operations

Staffing and Hours of Work

The Township of Springwater has an operator assigned to each vehicle used for winter operations. Each vehicle is assigned a route for winter maintenance. The Township shall use the optimum mix of its employees, contract staff, seasonal call-in operators, and contractors for winter maintenance.

The Township of Springwater adheres to the hours of service as set out in the Highway Traffic Act, Reg.555/06.

Winter Materials Used Annually

Material 2023/2024	
Solids	
Rock Salt (NaCl)	701 Tonnes
Sand	56,934 Tonnes
Liquids	
Salt Brine (NaCl)	116,000 Liters

Percentage salt in sand salt mixture by weight 5%
(Industry standard 2% to 5%)

Application Rates

Class of Road	Spreading Rate
3	300-500 Kg/km
4	300-500 Kg/km
5	300-500 Kg/km

Equipment - Winter Maintenance Fleet

The Township internal staff provides winter maintenance services on:

- a. 13 road routes
- b. 3 sidewalk routes, and
- c. 3 parking lot routes.

The Municipality has the following equipment available for winter maintenance:

- a. 11 tandem axle snowplows with 1 spare
- b. 2 single axle snowplows
- c. 1 tandem for brine operations
- d. 3 medium duty snowplows pick-up trucks with 1 spare
- e. 3 sidewalk snowplows with 1 spare
- f. 2 road graders
- g. 2 loaders with 1 spare

Plow Routes

Route	Equipment
A Rural	Tandem with reversable one way and pre-wet
B Rural	Tandem with reversable one way and pre-wet
C Rural	Tandem with reversable one way and pre-wet
D Urban/Rural	Tandem with reversable one way and pre-wet
E Rural	Tandem with reversable one way and pre-wet
F Rural	Tandem with reversable one way and pre-wet
G Urban/Rural	Tandem with reversable one way and pre-wet
H Urban	Tandem with reversable one way and pre-wet
I Urban/Rural	Tandem with reversable one way and pre-wet
J Urban	Tandem with reversable one way and pre-wet
K Urban	Single Axle with reversable one way and pre-wet

L Urban	Single Axle with reversable one way and pre-wet
M Urban	Tandem with reversable one way and pre-wet
Sidewalk Routes	
X	Sidewalk Machine with plow/blower and sand capabilities
Y	Sidewalk Machine with plow/blower and sand capabilities
Z	Sidewalk Machine with plow/blower and sand capabilities
Parking Lot/Pump House Snow removal	
A	3/4 ton truck equipped with multi directional blade and sander
B	3/4 ton truck equipped with multi directional blade and sander
C	One ton truck equipped with multi directional blade and sander

*Note that Old Second Road South from Sutton Heights to 320m south of Sutton Heights will be completed by a third-party contractor.

Sand/Salt and Plow Routes

Appendix B contains image files of the Township of Springwater routes.

Boundary Roads

Springwater Township has entered into 5 Boundary Road Agreements with the adjacent municipalities for the purpose of outlining maintenance responsibilities on our shared boundary roads. The agreements indicate what party is responsible for summer and winter maintenance on each specific boundary road. The Municipality responsible for the maintenance of the road, must adhere to the Minimum Maintenance Standards for the specific classification of the roadway.

Yard Facilities

The Municipality provides winter maintenance services from the patrol yards listed below. Each patrol yard has a front-end loader capable of loading the winter maintenance fleet with material.

Yard 1: Snow Valley Road

Equipment Storage Details:

Indoor and Outdoor

Material Storage Details: Indoor

Mechanic Bay:

For repairs/maintenance

Yard 2: Flos 7 West

Equipment Storage Details:

Indoor and outdoor

Material Storage Details: Indoor

Vulnerable Areas

Township of Springwater falls under a Source Water Protection Region.

The Approved Assessment Report delineates areas that are vulnerable to contamination; these are known as Wellhead Protection Areas (WHPA) for wells and Intake Protection Zones (IPZ) for the surface water intake.

A WHPA is the area around the wellhead where land use activities have the greatest potential to affect the quality of the water flowing into the well. An IPZ is the area of water and land where activities have the potential to affect the quality of water being taken up by the surface water intake. Sodium and Chloride, components of road salt and brine, were identified as a Drinking Water Issue.

The Issues Contributing Area is the area of land where drinking water threats

may contribute to a known drinking water issue for the Springwater Water Supply. Land use activities such as the application, handling, and storage of road salt and the storage of snow that can release these parameters that are identified as a Drinking Water Issue within the identified Issues Contributing Area and are to be considered as Significant Drinking Water Threats.

Weather Monitoring

- (1) From October 1 to April 30, the minimum standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once every shift or three times per calendar day, whichever is more frequent, at intervals determined by the Municipality.
- (2) From May 1 to September 30, the minimum standard is to monitor the weather, both current and forecast to occur in the next 24 hours, once per calendar day.

In order to determine an effective winter event response and allocate the appropriate resources the Township of Springwater supplements road patrol information with weather information from various sources which includes:

- Observations from municipal staff, communication with staff of adjacent municipalities and MTO contractors;
- Monitoring websites www.theweathernetwork.ca;
- Staff also monitors pavement temperatures by means of on-board infra-red thermometers which are mounted on the patrol and other trucks, and;
- On Board temperature reading in Road Supervisor or Patroller vehicle.

Communications

All winter maintenance vehicles are equipped with two-way communications (radios, cell phone, etc.). Municipal staff is responsible for reporting changing winter weather and/or road conditions as the changes are observed.

Municipality communicates important information to the public via:

- Media press releases
- Information posted on municipal website: www.Springwater.ca,
- Facebook,

- Twitter, or
- Local radio and/or television

Call Out Procedures

Operational decisions will be made by the Manager, Roads and Fleet, Road Supervisor, Foreperson, Patroller or his/her designate with the aid of available forecasting, level of service policy, patrolling, etc. However, it should be emphasized that decisions will be subjective and external input, whether in this plan or elsewhere, are mere aids in determining if a call out of staff, contractors and equipment by the Road Supervisor or designate to respond to a winter event is warranted. Therefore, it is vital that the Road Supervisor or designate records the prevalent conditions and relevant information when he/she makes a decision.

The Patroller shall inform the Road Supervisor, Operations Technician or Manager of Roads and Fleet of changing of road and weather conditions observed in the field. When a winter event response is required the Road Supervisor or designate will contact staff as required.

Road Closure Procedures

In the event a road must be closed due to a severe winter storm, Ontario Provincial Police may request signs be placed to close the road. Rb-92 Road Closed Signs on portable stands, and barricades will be available at the patrol yard.

Upon receiving a request from Ontario Provincial Police to close a road to traffic, the Road Supervisor or his/her designate will organize manpower and equipment to place the signs and barricades. The Road Supervisor or his/her designate will contact the Manager, Roads and Fleet and Communications Officer, and request that a media release be sent to the local news, radio stations, and other designated agencies advising of the road closure.

Roads will be deemed to be closed once the signs and barricades are placed. When it is physically impossible to place signs and barricades to close a road, the Road Supervisor or his/her designate will advise Ontario Provincial Police.

Training

The Township of Springwater provides winter operations training for all staff involved in the delivery of winter services. It is compulsory for the municipal staff to attend the training sessions.

Current Winter Operations Trainings:

- Equipment Circle Check
- Record Keeping
- Health and Safety
- Identification of Plow Routes - including variations for year to year and issues identified along the route
- Yard and Equipment maintenance

Record Keeping

Full and accurate completion of the documents listed below, according to the applicable procedures, ensures that the Municipality is protected from liability by providing solid documentation that procedures have been followed.

Staff are responsible for keeping the following records:

For Equipment Operators:

- CVOR Time Card as part of their timesheet
- Materials used (sand, salt, liquids)
- Route Plowed and strategy used (plow, sand or plow and sand) For Patrollers:
- Winter Patrol Record
- Call Out Diary
- Weather and/or RWIS

Road Supervisor and Forepersons:

- Operations Diary
- Incident/Collision Reports
- Equipment Calibration
Records

For Operations Technician & Engineering Technicians:

- Total materials used
- Total number of deployments
- Weather Monitoring
- Total Materials Purchased

The date will be recorded as Day/Month/Year. It will be written in a numerical format (DD/MM/YYYY). The time shall be documented using the 24-hour clock format.

Always retain the original copy of documents regardless of their appearance. Writing must be legible for others to read and written in ink. Stains or dirt on the documents is not an issue. If a document requires correction, then a line is to be placed through the incorrect information without making it illegible and continue writing on the original document. Initial corrections or change in the colour of ink in case you change writing pens.

Decommissioning Winter Operations

After the winter season expires the Township of Springwater undertakes the following tasks to decommission winter operations.

Two Weeks After the Winter Season Ends

Two weeks after the winter season ends:

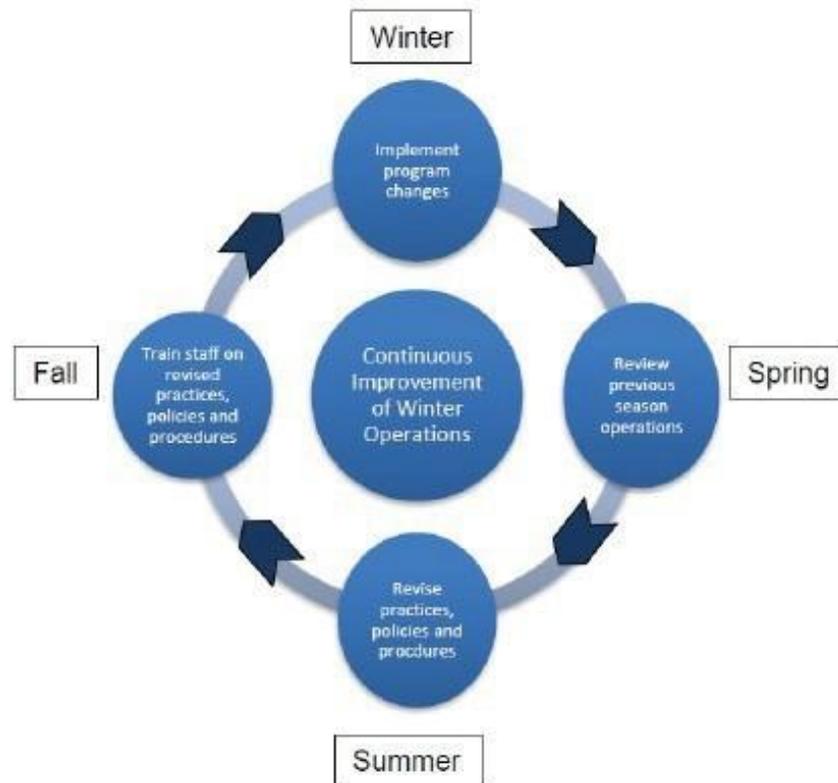
2. Cease regularly scheduled winter night patrols;
3. Continue monitoring weather forecasts. Assign night patrol shift if forecast indicates an overnight winter event is probable;
4. Decommission 50% of the fleet.

One Month After the Winter Season Ends

One month after the winter season ends, all winter maintenance operations and decommission the remainder of the equipment providing weather forecasts warrant the decommissioning.

Plan Improvements

The current winter maintenance policies, practices and procedures form the baseline or benchmark upon which improvements can be made to improve winter operations and/or the use and management of road salt.



Monitoring and Updating

The purpose of monitoring and updating is to provide a basis for continuous improvement of the winter operations plan and the winter maintenance policies practices and procedures of the Township of Springwater.

At the end of the winter season, a meeting to review winter operations will be held each year with all winter operations staff to itemize all issues that arise during the winter season and discuss how these issues may be resolved.

Prior to the start of the next winter season and with sufficient lead time to implement any changes, the Township of Springwater shall train staff on the changes to equipment and/or winter maintenance policies, practices, and procedures.

Appendix B – Winter Operations Plow and Sidewalk Routes



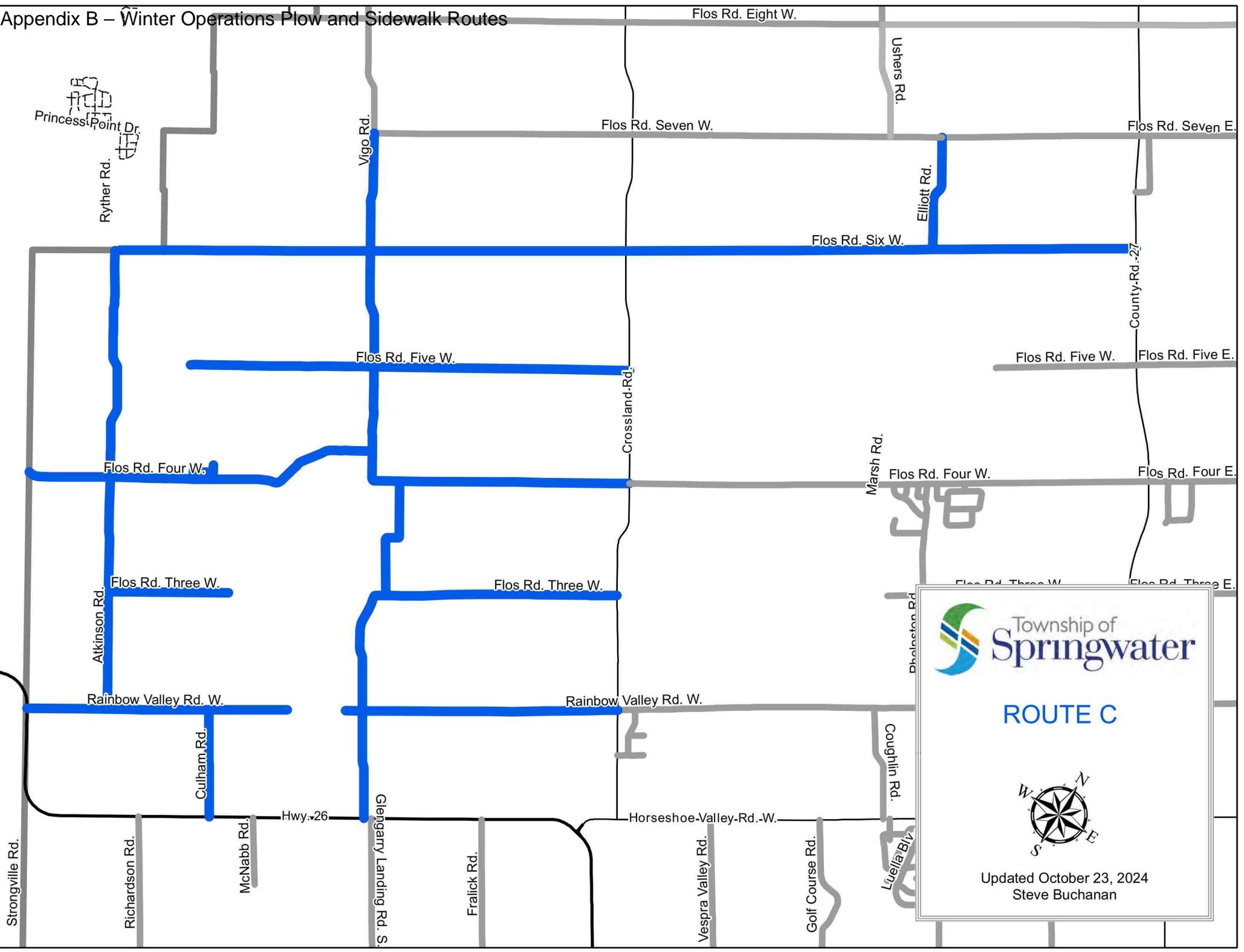
Township of
Springwater

ROUTE A



Updated October 23, 2024
Steve Buchanan

Appendix B – Winter Operations Flow and Sidewalk Routes



 Township of
Springwater

ROUTE C



Updated October 23, 2024
Steve Buchanan

Flos Rd. Seven W.

Flos Rd. Seven E.

Appendix B – Winter Operations Plow and Sidewalk Routes

Flos Rd. Six W.

Baseline Rd.

Mill St. W.

Mill St. W.

Albert St. W.

Mill St. E.

McFadden Dr.

Flos Rd. Five W.

Flos Rd. Five E.

Old Second N.

Flos Rd. Four E.

Flos Rd. Four W.

Marni Ln.

Flos Rd. Three W.

Flos Rd. Three E.

Matheson Rd.

Rainbow Valley Rd. W.

Rainbow Valley Rd. E.

Cassell Dr.
Ingiam Rd.

Valley-View Dr.

Coughlin Rd.



Township of
Springwater

ROUTE D



Updated October 23, 2024
Steve Buchanan

McNutt Rd.

Line 1 N.

Scarlett Line

Old Second S.

Horseshoe-Valley-Rd.-W.

Maltman Ct.

Gill Rd.

Hillview Cres.

Bertram Industrial Pkwy.

Nursery Rd.

County Rd. -27

Luella Blvd.

Laddie Ln.

Wilson Dr.

Binnie Dr.

Pinehurst Ln.

Marsh Rd.

Phelpston Rd.

Loftus Rd.

Victoria Rd.

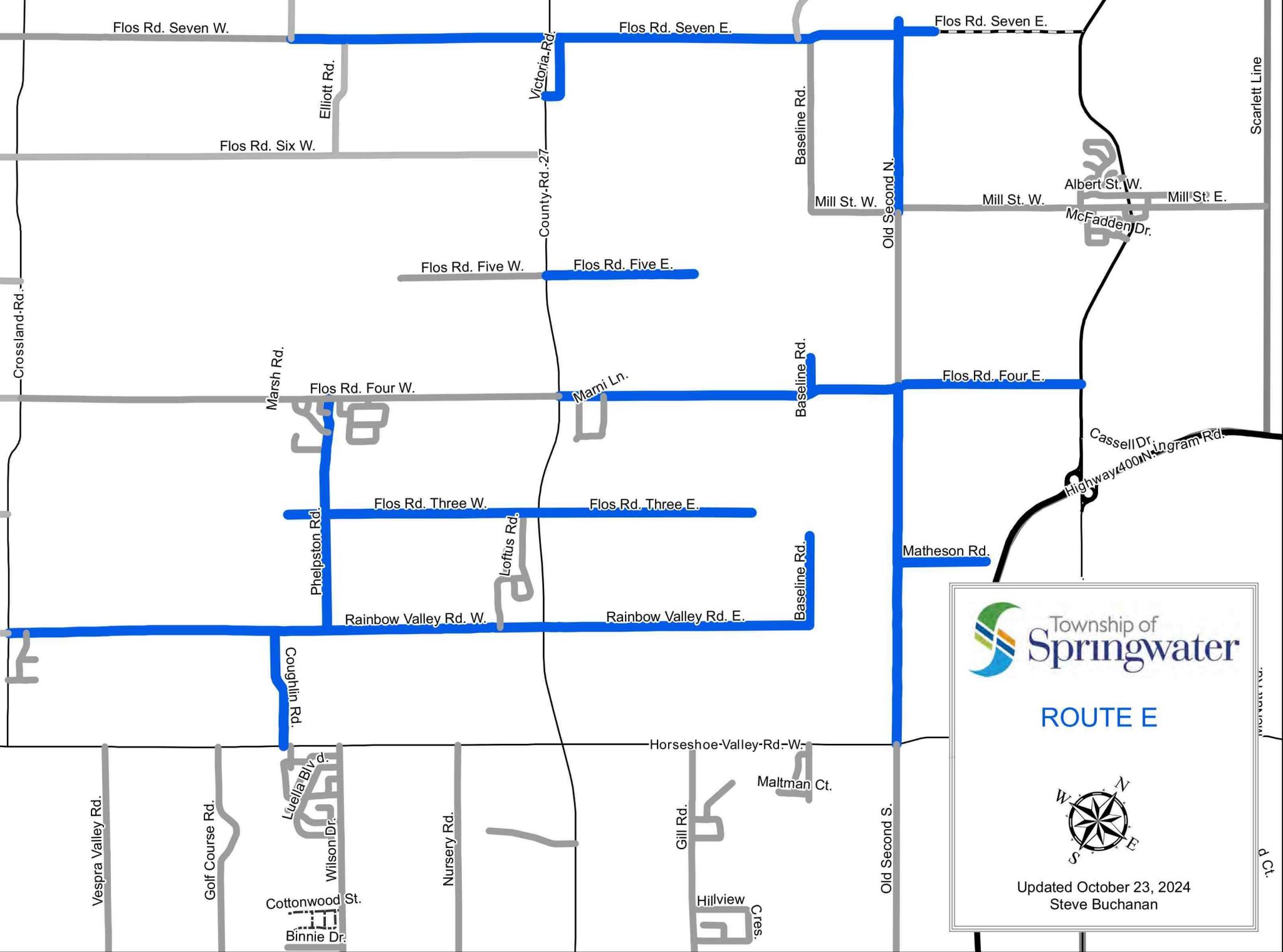
Elliott Rd.

Crossland Rd.

Vespra Valley Rd.

Golf Course Rd.

Appendix B – Winter Operations Plow and Sidewalk Routes



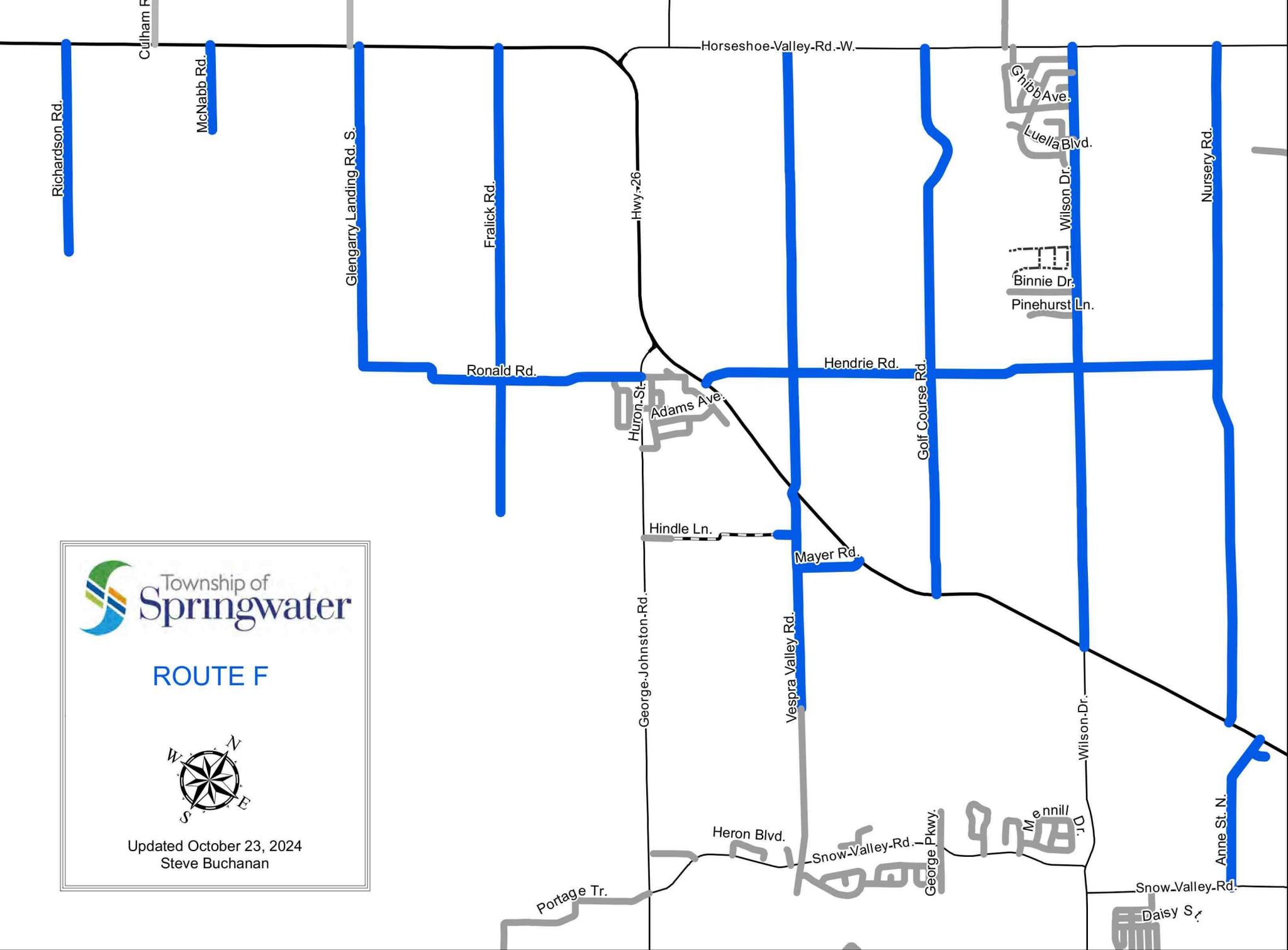
 Township of
Springwater

ROUTE E



Updated October 23, 2024
Steve Buchanan

Appendix B – Winter Operations Plow and Sidewalk Routes



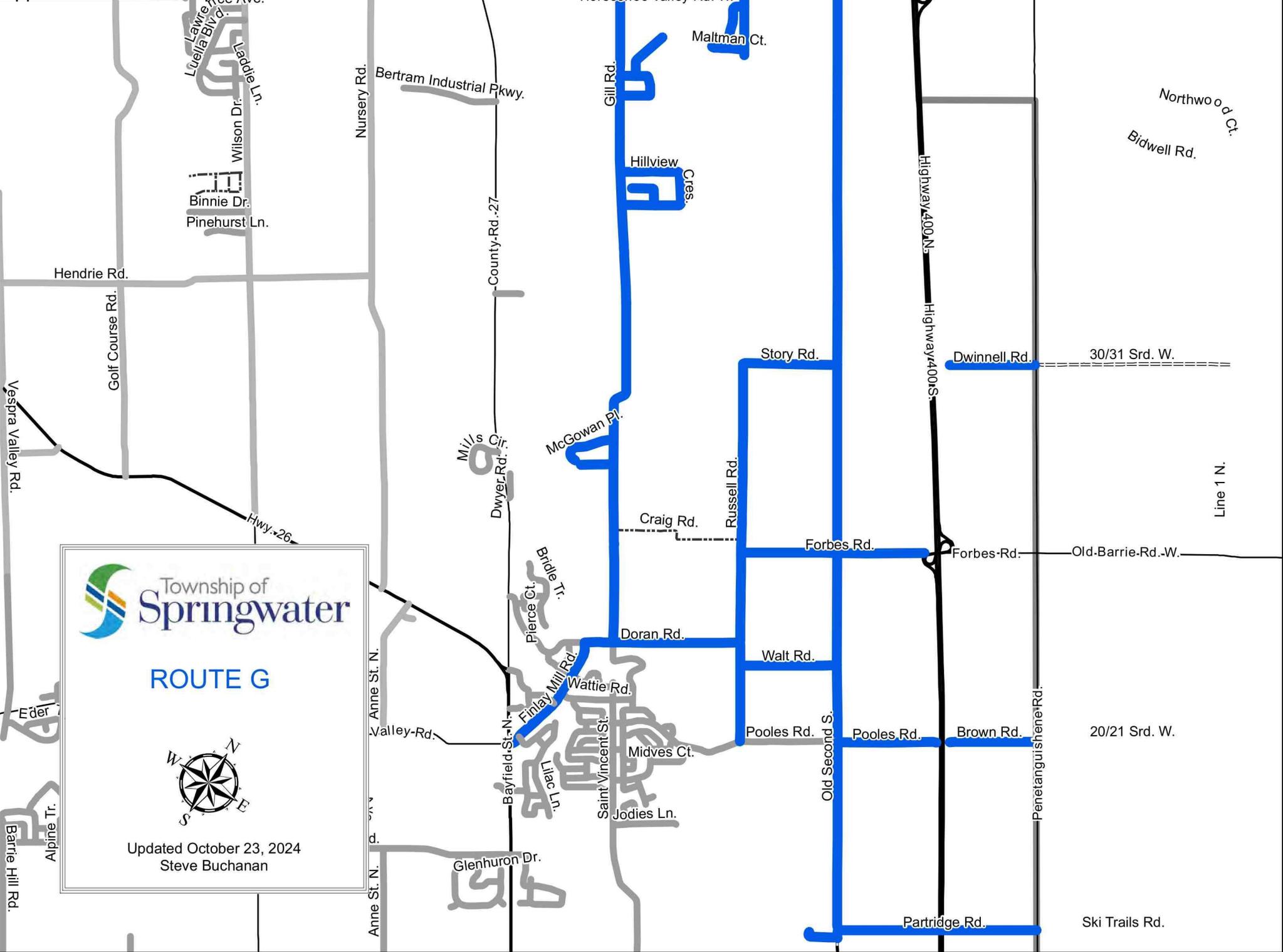
 Township of
Springwater

ROUTE F

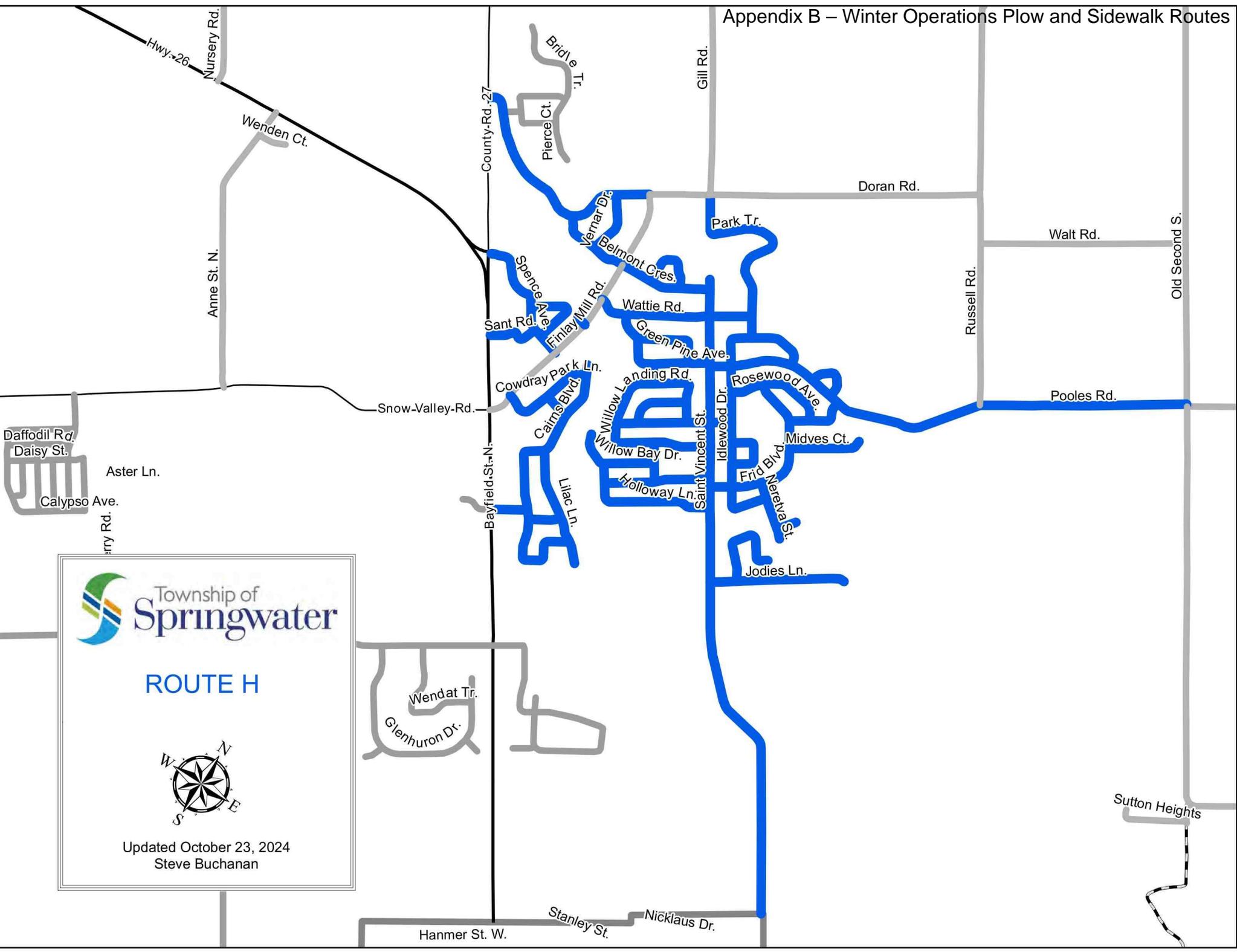


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Appendix B – Winter Operations Plow and Sidewalk Routes



Appendix B – Winter Operations Plow and Sidewalk Routes

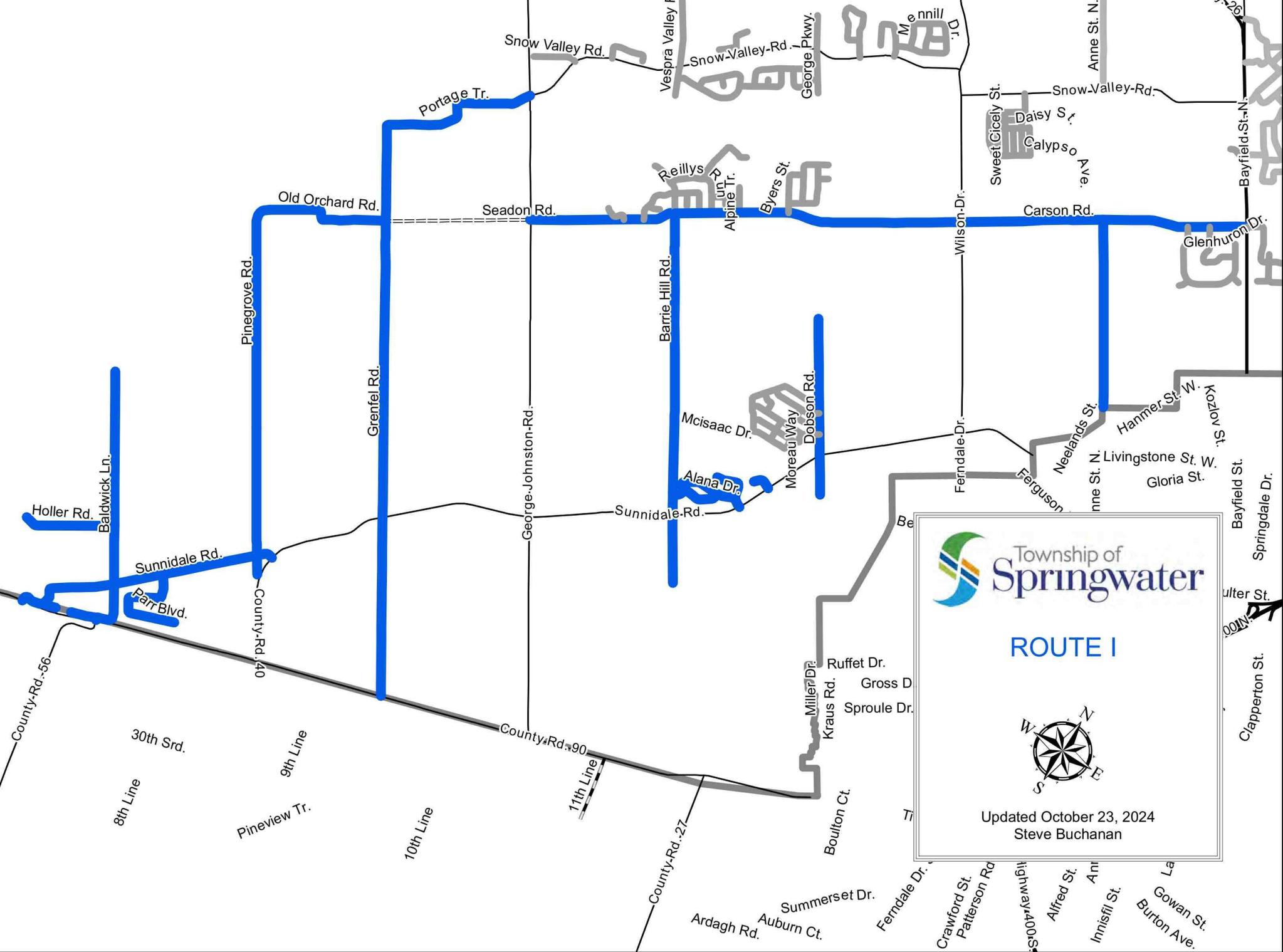


ROUTE H



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Appendix B – Winter Operations Plow and Sidewalk Routes



Appendix B – Winter Operations Plow and Sidewalk Routes

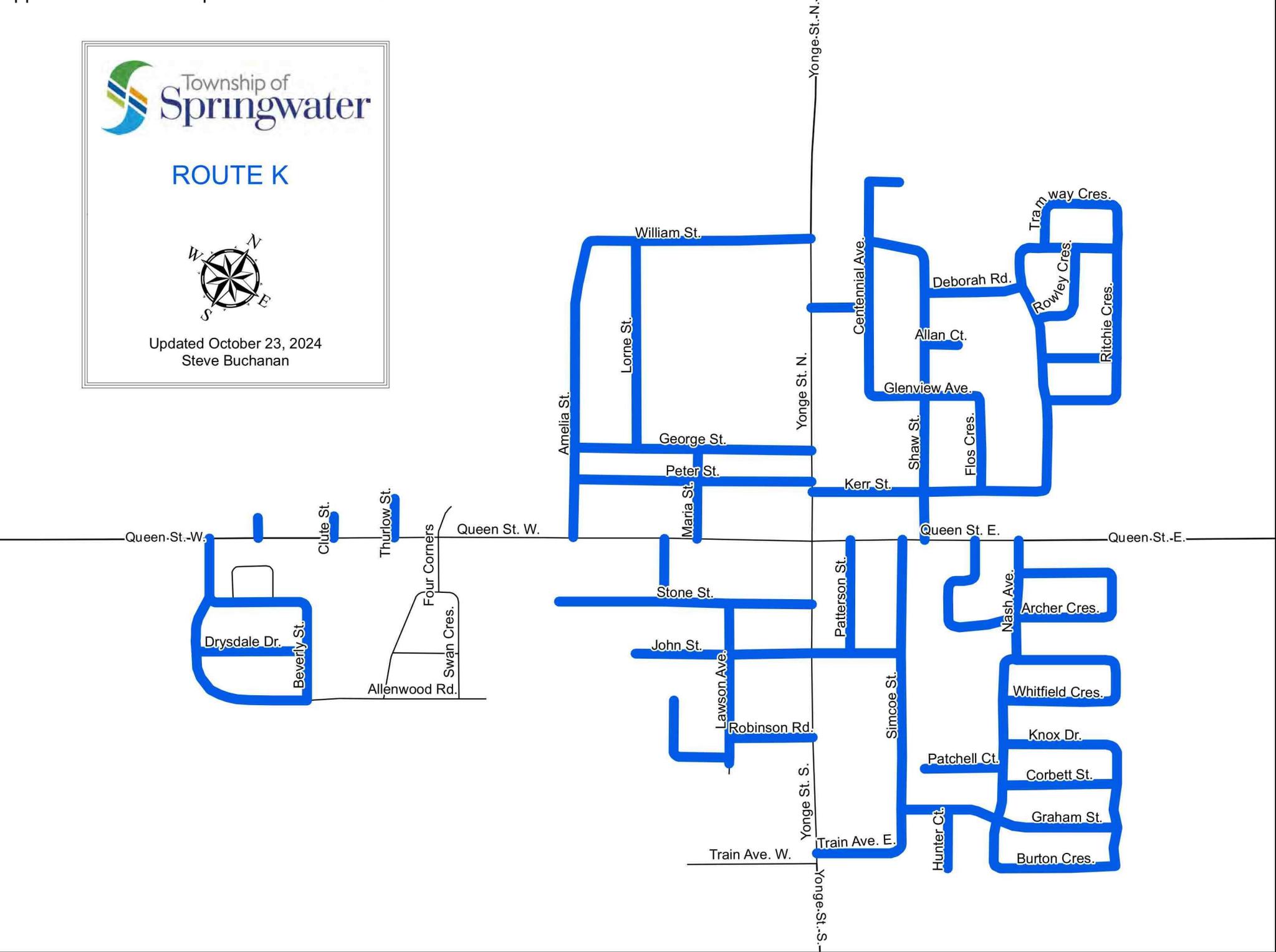


Township of
Springwater

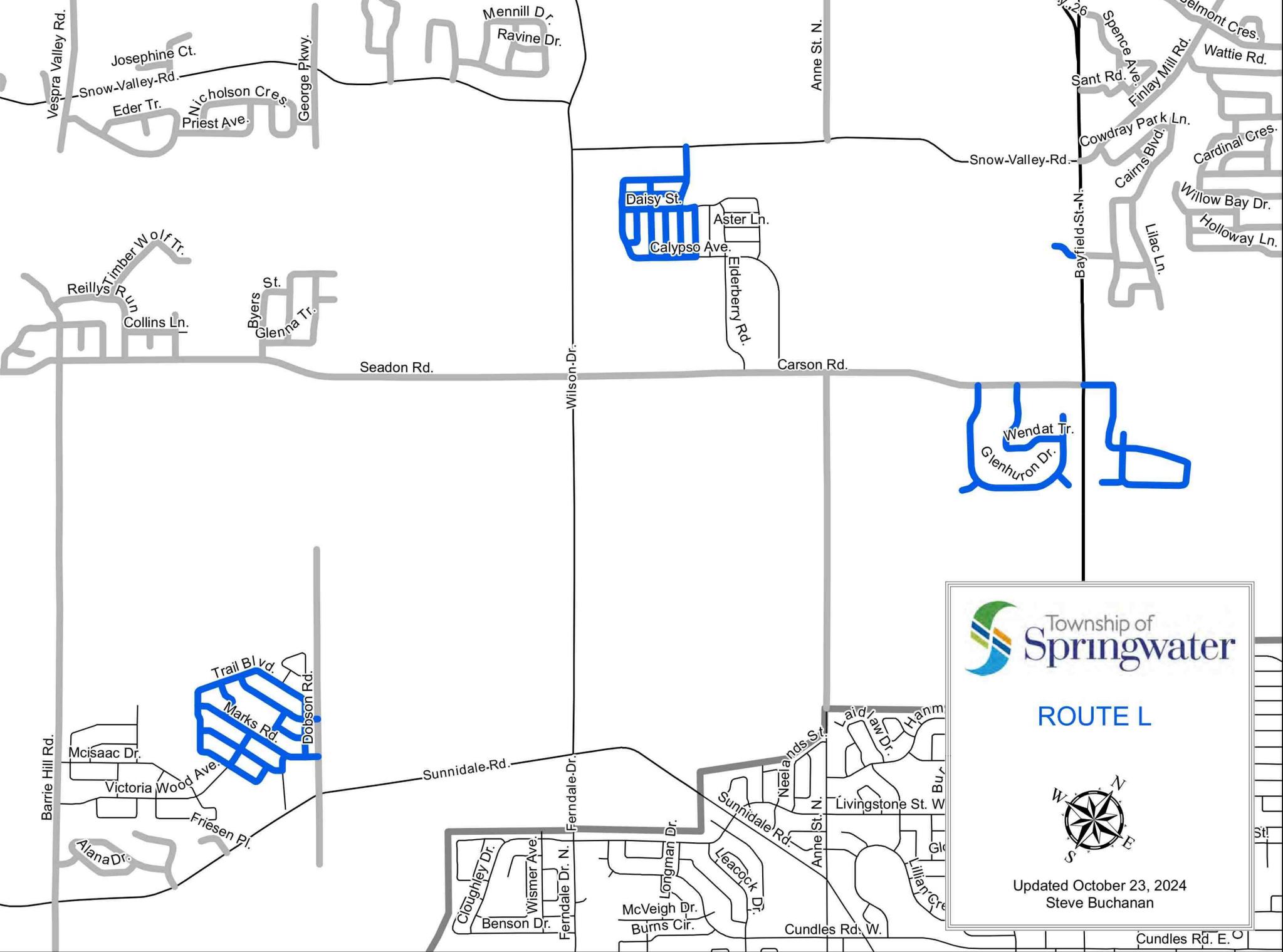
ROUTE K



Updated October 23, 2024
Steve Buchanan



Appendix B – Winter Operations Plow and Sidewalk Routes



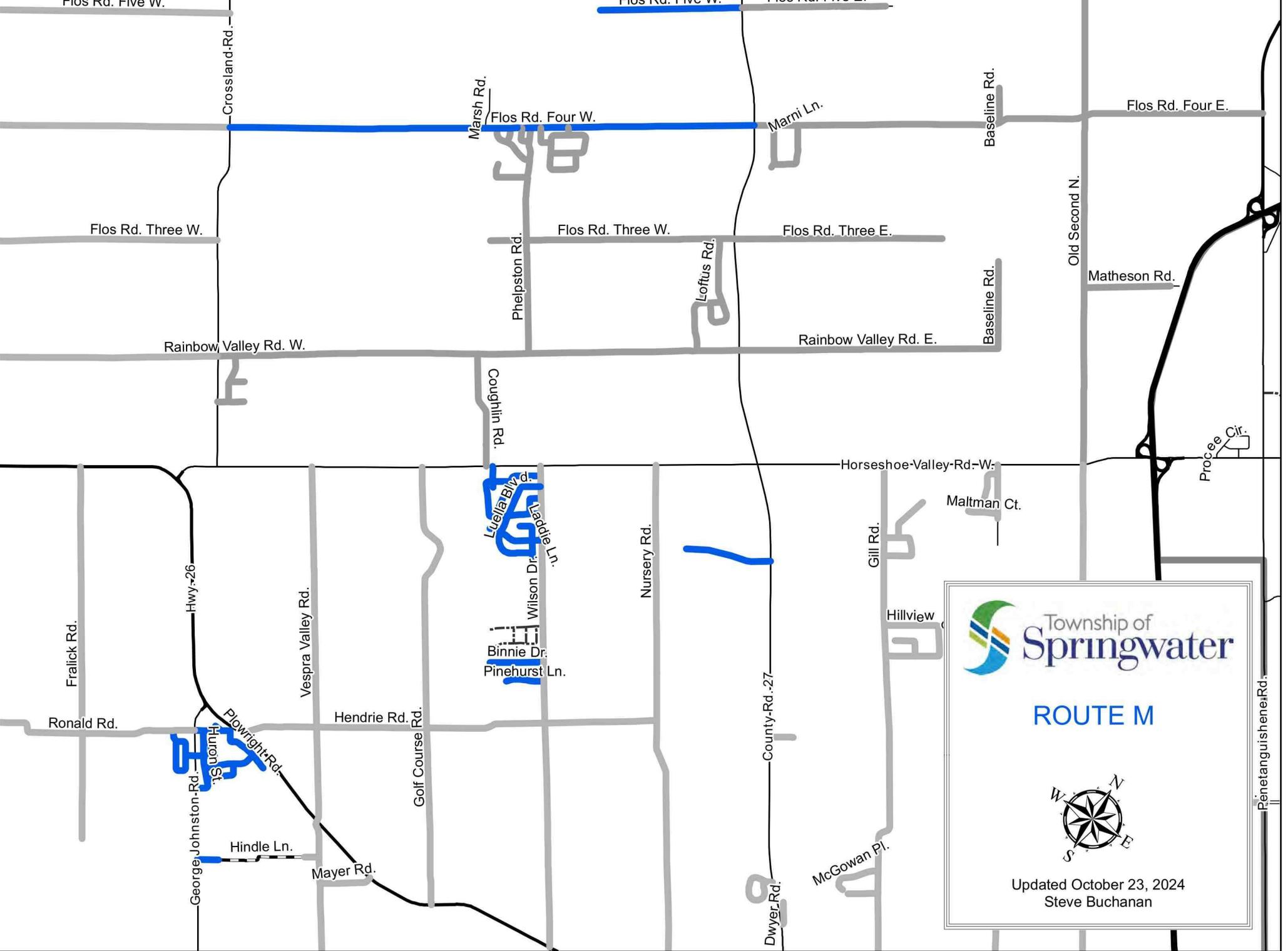
Township of
Springwater

ROUTE L



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Appendix B – Winter Operations Plow and Sidewalk Routes



 Township of Springwater

ROUTE M



Updated October 23, 2024
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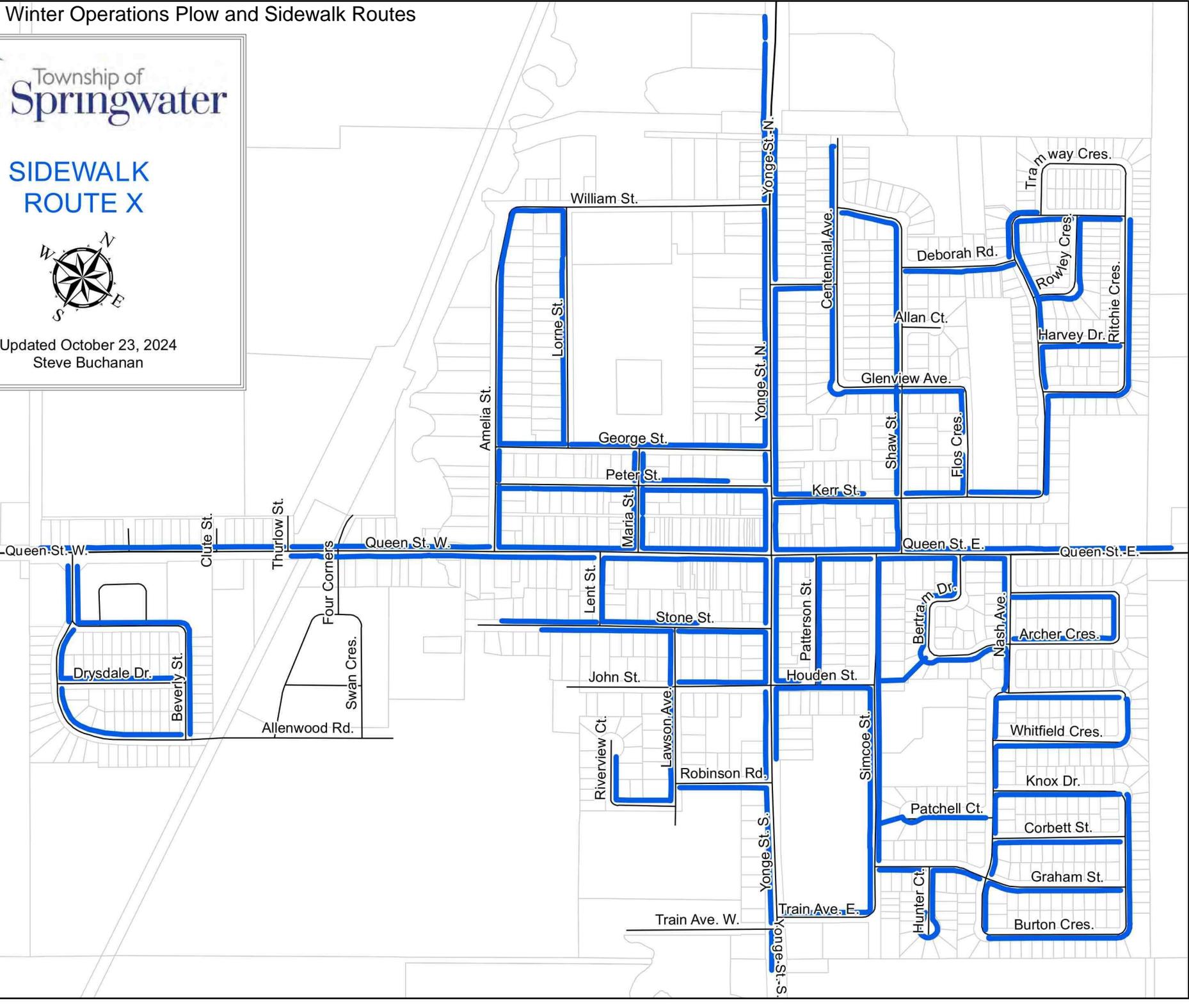
Appendix B – Winter Operations Plow and Sidewalk Routes



SIDEWALK ROUTE X



Updated October 23, 2024
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- Queen St. W.
- Clute St.
- Thurflow St.
- Four Corners
- Queen St. W.
- Queen St. E.
- Queen St. E.
- Drysdale Dr.
- Beverly St.
- Allenwood Rd.
- Swan Cres.
- Lent St.
- Stone St.
- John St.
- Riverview Ct.
- Lawson Ave.
- Robinson Rd.
- Train Ave. W.
- Train Ave. E.
- Yonge St. S.
- Yonge St. N.
- Amelia St.
- Lorne St.
- George St.
- Peter St.
- Maria St.
- Kerr St.
- William St.
- Centennial Ave.
- Shaw St.
- Flos Cres.
- Glenview Ave.
- Allan Ct.
- Deborah Rd.
- Tramway Cres.
- Rowley Cres.
- Harvey Dr.
- Ritchie Cres.
- Patterson St.
- Houden St.
- Simcoe St.
- Hunter Ct.
- Bertram Dr.
- Nash Ave.
- Archer Cres.
- Whitfield Cres.
- Knox Dr.
- Patchell Ct.
- Corbett St.
- Graham St.
- Burton Cres.

Appendix B – Winter Operations Plow and Side-walk Routes

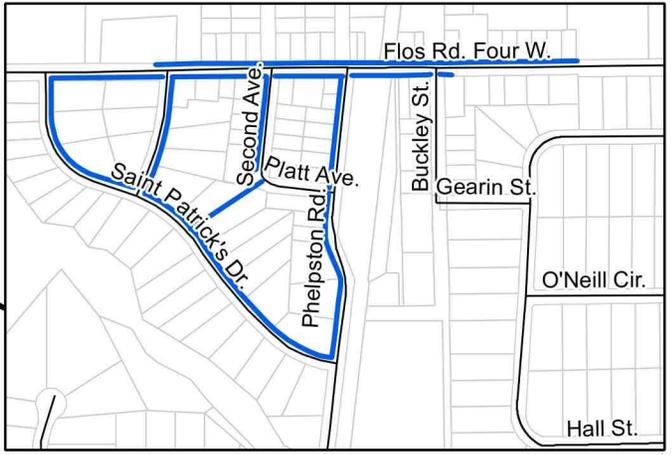
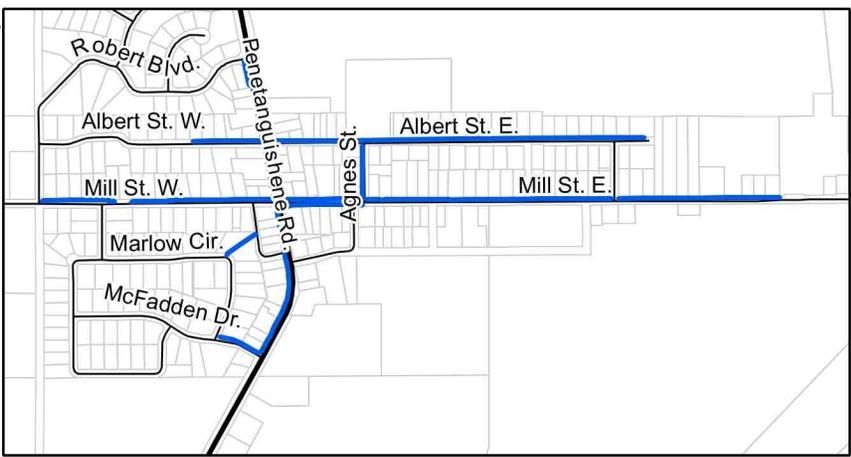


Township of
Springwater

SIDEWALK ROUTE Y



Updated October 23, 2024
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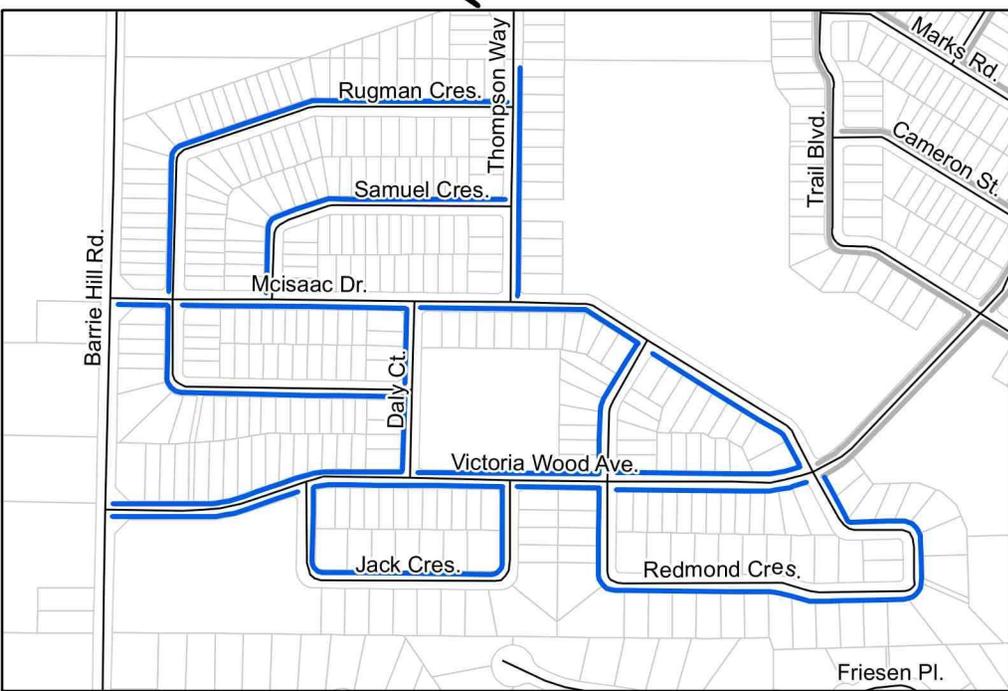


HILLSDALE

PHELPSTON

MINESING

STONEMANOR



Appendix B – Winter Operations Plow and Sidewalk Routes



SIDEWALK ROUTE Z



Updated October 23, 2024
Steve Buchanan

