



# **Winter Operations Planning Document for Township of Southgate**

**(Winter Season 2022-2023)**

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# A. Purpose

This winter operations plan sets out a policy and procedural framework for ensuring that the “The Township of Southgate” continuously improves on the safe and sustainable delivery of winter maintenance services and the effective and efficient use of road salt in their winter maintenance operations. This plan supersedes all previous plans for the “The Township of Southgate”.

The plan is meant 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 ensure that roadway safety is not compromised.

This Winter Operations Plan for the “The Township of Southgate” was endorsed by “The Township of Southgate Council” on the \_\_7\_\_ day of \_\_\_\_December\_\_\_\_2022.

# B. Definitions

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

***Continuous Winter Event Response*** is a response to a winter event with full deployment of manpower and equipment that plow/salt/sand the entire system.

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

***Highway*** means 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.

***Paved Road*** means a road with an asphalt surface, concrete surface, composite pavement, or portland cement.

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

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

***Roads Foreman & Fleet Manager*** is the person who is on duty at the time directing the snow/ice removal operations of the Township of Southgate. These&nbsp;individuals include: Public Works Manager, and/or any other individual



who may be assigned the responsibility of the Public Works Manager

**Route of Representative Roads** is another term used for patrol routes.

**Salt Route** is a collection of road segments, which during a winter storm will receive applications of salt to prevent the formation of a bond between snow and pavement, or if such a bond has already formed, to break that bond. Typically such routes have some sort of bare pavement level of service. Under certain circumstances (e.g. extremely cold pavement temperatures such that road salt would not be effective at bond breaking or prevention) sand may be applied to such routes to provide a temporary increase in grip.

**Sand Route** is a collection of road segments which during a winter storm will receive applications of sand to provide a temporary increase in grip. Typically such routes include gravel and other unpaved roads, where the use of salt or other freeze-depressant materials might impact road stability. The level of service on such routes would not have bare pavement as a service goal.

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

**Surface Treated Road** is road with bituminous surface treatment comprised of one or two applications of asphalt emulsion and stone chips over a gravel road.

**Unpaved Road** is a graded road with a gravel, stone or other loose traveling surface.

**Winter Event** is a weather condition affecting roads such as snowfall, windblown snow, freezing rain, frost or ice 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.

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

# 1. OBJECTIVE OF WINTER OPERATIONS MANAGEMENT

“The Township of Southgate” is committed to providing safe and sustainable winter maintenance operations while continuing to improve those operations to provide safety and mobility for the traveling public. As an integral part of this effort “the Township of Southgate” will strive to optimize the use of all winter maintenance materials as they pursue the goal of a safe and sustainable transportation system.

“The Township of Southgate” Public Works staff will strive, insofar as reasonably 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 the Council of “the Township of Southgate”.

## **2. POLICY STATEMENT**

The Township of Southgate will conduct safe and sustainable snowfighting to ensure, insofar as reasonably practicable, the safety and mobility of users of the municipal road network, in keeping with applicable state legislation.

The Township of Southgate will provide efficient and cost effective winter maintenance to ensure, insofar as reasonably practicable, the safety of users of the municipal road network in keeping with applicable provincial legislation and accepted standards while striving to minimize adverse impacts to the environment. These commitments will be met by:

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

## **3. QUICK OVERVIEW OF THE TOWNSHIP OF SOUTHGATE**

- Type of Organization: Municipal
- Structural Level: Township
- Estimated Population (2021 Consensus): 8676
- Total Area: 644350000.0 Square metres
- Street Address:  
185667 Grey Road # 9  
Dundalk, Ontario N0C 1B0  
Canada
- Telephone: 519-923-2110
- Website: [www.southgate.ca](http://www.southgate.ca)
- Roads Foreman & Fleet Manager: John Watson, 519-373-7844,
- Police:
  - Ontario Provincial Police - Grey County
    - Primary Phone: 1-800-310-1122

## 4. WINTER MAINTENANCE PROGRAM

### 4.1. The System Maintained

The major activities related to winter maintenance are:

- Snow plowing
- Salt /sand application
- Snow removal
- Snow storage
- Sidewalk plowing and de-icing
- Snow fencing

The Township of Southgate is responsible for winter maintenance on:

Road Category	Surface and Area Type	Individual Length (Lane kilometres)	Total Length (Lane kilometres)
Class 6	Unpaved and Rural	136.2	136.2
Class 5	Paved and Urban	24.0	37.0
	Surface Treated and Rural	13.0	
Class 4	Paved and Rural	278.4	808.9
	Surface Treated and Rural	89.4	
	Unpaved and Rural	441.1	

### 4.2. Level of Service

The Township of Southgate provides the following level of service during the winter maintenance season, as set out in 4.3, in response to a winter event.

The minimum standard for clearing snow accumulation is:

#### 4.2.1. Snow Accumulation and Ice Formation Policy

SNOW ACCUMULATION:

1. The standard for addressing snow accumulation 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 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 so as to reduce the snow to a depth less than or equal to the depth set out in the Table within the time set out in the Table,
    - i. to provide a minimum lane width of the lesser of three metres for each lane or the actual lane width, or
    - 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.
2. If the depth of snow accumulation on a roadway is less than or equal to the depth set out in the Table 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 subsection (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.
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.
5. For the purposes of this section, addressing snow accumulation on a roadway includes, but is not limited to,
  - a. plowing the roadway;
  - b. salting the roadway;
    - i. the application of other chemical or organic agents to the roadway;
  - c. applying abrasive materials to the roadway; or
  - d. any combination of the methods described in clauses (a), (b), (b.1) and (c). O. Reg. 47/13, s. 4.
6. This section does not apply to that portion of the roadway designated for parking. O. Reg. 47/13, s. 4.

7. If at any time a municipality declares a weather emergency, then all roadways within the municipality are deemed to be in a state of repair in respect of any snow accumulation present, until the applicable time under the Table to this section expires following the end of the declared weather emergency.

#### ICE FORMATION:

1. The standard for attempting 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.
  - b. Patrol in accordance with section 3.
  - c. 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 to attempt to prevent ice formation within the time set out in the Table to this section, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose. O. Reg. 47/13, s. 5.
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 earlier of,
  - a. the time that the municipality becomes aware of the fact that the roadway is icy; or
  - b. the applicable time set out in the Table to this section for treating the roadway to prevent ice formation expires. O. Reg. 47/13, s. 5.
3. The standard for treating icy roadways after the municipality becomes aware of the fact that a roadway is icy is to treat the icy roadway within the time set out in the Table to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in the Table for treating the icy roadway expires. O. Reg. 47/13, s. 5.
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. 47/13, s. 5.
5. If at any time a municipality declares a weather emergency, then all roadways within the municipality are deemed to be in a state of repair in respect of any ice present, until the applicable time under the Table to this section expires following the end of the declared weather emergency.

#### TABLE SNOW ACCUMULATION

<b>Class of Highway</b>	<b>Depth</b>	<b>Time</b>
1	2.5 cm	4 hours
2	5 cm	6 hours
3	8 cm	12 hours
4	8 cm	16 hours
5	10 cm	24 hours

TABLE  
ICE FORMATION PREVENTION AND ICY ROADWAYS

<b>Class of Highway</b>	<b>Time</b>
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

The snow accumulation and ice-formation policies are attached herein as a separate document, in Appendix 3-1

#### **4.2.2. Private Sidewalk Responsibility**

The Township of Southgate is responsible for some public sidewalk clearing and is not responsible for private sidewalk clearing, infrastructure not assumed by Township.

#### **4.2.3. Plowing Private Property**

Private properties are the responsibility of respective owners.

### **4.3. Winter Season Maintenance**

For Operational purposes, the Township of Southgate assumes the winter season commences on 2022-Nov-15 and is completed by 2023-Apr-15 , while acknowledging that winter events may occur outside of this timeframe.

### **4.4. Winter Preparations**

In the months prior to the start of the winter maintenance season, as identified in 4.3, the Township of Southgate undertakes the following tasks to prepare for the upcoming winter season.

#### **4.4.1. Prior to Winter Season**

Prior to the winter season, if required, prepare and call tenders for the supply of materials (e.g. salt, sand, liquid, etc.), replacement parts (for plows, solid and liquid application equipment), value added meteorological services (VAMS) and contract equipment (e.g. plow trucks, spreader trucks, combination units, etc.).

Sometime prior to the winter season the Township of Southgate will:

- Conduct a mandatory training session for staff and contract operators 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.
- Train winter patrollers (or staff whose duties also include patrolling) on the route of representative roads to be patrolled, their duties during a winter event, record keeping requirements, callout procedures and the de-icing chemicals to be applied for the forecast weather conditions.
- Inspect equipment to ensure proper working order. Schedule and complete any and all equipment repairs.
- Arrange for the delivery of materials (salt, sand and liquid solution) and begin filling storage facilities. If liquid solution is mixed on site, begin mixing and filling storage tanks.
- Confirm that all guiderail, catchbasin, hazard and fire hydrant markers, steep hill, sharp curve ahead warning signs, bridges ices sign, if any, are in place. Any missing markers should be replaced prior to the winter session.

#### **4.4.2. One Month Prior to the Winter Season**

One month prior to the winter season the Township of Southgate will:

- Assign equipment to staff.
- Calibrate material application equipment.
- Allow operators (staff and contract) 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).
- Assign staff to monitor and record weather forecasts on a daily basis. Upon the forecast of an approaching winter event, schedule a patrol of a route of representative roads. If a winter event is forecast prior to the start of the next scheduled shift a night and/or weekend patrol(s) of a route of representative roads should be scheduled. If a night or weekend patrol is scheduled the patroller should monitor and record the weather forecast and road conditions. The patrol person should be authorized to initiate a winter event response if conditions warrant a response.
- Have 50 % of the fleet ready to respond to a winter event.
- Have sufficient staff available to operate the fleet if conditions warrant a winter event response.

#### **4.4.3. Two Weeks Prior to the Winter Season**

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

- Have 75 % of the fleet ready to respond to a winter event.
- Have staff available to operate the required complement of the fleet if conditions warrant a winter event response

#### **4.4.4. At the Start of the Winter Season**

At the start of the winter season:

- Implement the winter shift schedule.
- Begin patrolling representative roads in all roads/areas that the organization is responsible for
- Respond to winter events as per the winter operations plan.

### **4.5. Winter Patrol**

During the winter maintenance season, 4.3, *Township of Southgate* carries out a winter patrol on a route of representative roads twice daily, 7 days a week. Between winter events a patrol of representative roads will occur during daylight hours and a second night patrol will be also be scheduled. The purpose of the patrol is to monitor and record weather and road conditions and mobilize winter maintenance operators 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 patrol person 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.

## **4.6. Operations**

### **4.6.1. Staffing and Hours of Work**

The Township of Southgate has a full time employee assigned to each vehicle used for winter operations. Each vehicle is assigned a route for sanding/salting and/or plowing.

The Township of Southgate adheres to the hours of service as dictated by Highway Traffic Safety Act, Reg. 555/06 (Ontario, Canada).

<b>Staffing for Winter Maintenance</b>				
<b>Employee</b>	<b>Job Title</b>	<b>Reports to Facility</b>	<b>Assigned Route(s)</b>	<b>Assigned Equipment</b>
Adam Nicholls	Operator/Labourer	Dundalk Depot	Unit 215, Unit 117, Unit 121, Unit 125, Unit 222	Unit 125 - 2022 Trackless
Al Loucks	Operator / Labourer	Hopeville Depot	Unit 216	
Bill Walsh	Operator/Labourer	Hopeville Depot	Unit 212	Unit 212 - 2013 International 7600 Tandem
Brian Ferguson	Operator / Labourer	Holstein Depot	Unit 122	Unit 113 - 2014 Trackless, Unit 122 - 2020 John Deere Grader 870G
Cory Henry	Lead Hand	Dundalk Depot	Unit 215, Unit 121, Unit 208, Unit 125, Unit 222	Unit 117 - 2018 Kubota Tractor, Unit 121 2020 Trackless , Unit 125 - 2022 Trackless, Unit 208 - 2008 Ford F550, Unit 215 - 2016 International S/A , Unit 222 - 2021 S/A International
Dale Mason	Operator	Hopeville Depot	Unit 101	Unit 101 - 2010 John Deere Grader 870G
Grayson Hannivan	Operator / Labourer	Dundalk Depot	Unit 215, Unit 117, Unit 121, Unit 208, Unit 125, Unit 222	Unit 117 - 2018 Kubota Tractor, Unit 121 2020 Trackless , Unit 125 - 2022 Trackless, Unit 208 - 2008 Ford F550, Unit 215 - 2016 International S/A , Unit 222 - 2021 S/A International
James Johnson	Seasonal Operator / Labourer	Hopeville Depot	Unit 216	Unit 216 - 2017 International 7600 Tandem
John Watson	Roads Foreman & Fleet Manager	Hopeville Depot	RORR 0 Unit 318, Unit 209 - spare unit	Unit 209 - 2004 Sterling Tandem Spare Unit, Unit 315 - 2018 Ford F150, Unit 318 - 2021 Chev 1500
Keith Cressman	Operator/Labourer	Holstein Depot	Unit 105	
Kyle Tipple	Operator / Labourer	Hopeville Depot	Unit 220, Unit 100, Unit 209 - spare unit	Unit 100 - 2004 Volvo Grader 740G

Lorne Fick	Operator / Labourer	Dundalk Depot	Unit 215, Unit 117, Unit 121, Unit 208, Unit 125, Unit 222	Unit 117 - 2018 Kubota Tractor, Unit 121 2020 Trackless , Unit 125 - 2022 Trackless, Unit 208 - 2008 Ford F550, Unit 215 - 2016 International S/A , Unit 222 - 2021 S/A International
Michael Sherson	Operator / Labourer/Patroller	Dundalk Depot	RORR 0 Unit 316, Unit 125 and Unit 121, Unit 215, Unit 208, Unit 222	
Paul Stevenson	Lead Hand	Holstein Depot	Unit 105, RORR 0 Unit 318	
Steve Bates	Team Leader	Hopeville Depot	Unit 220, Unit 209 - spare unit	Unit 209 - 2004 Sterling Tandem Spare Unit, Unit 220 Western Star Tandem
Steve Cooke	Operator/Labourer	Dundalk Depot	Unit 215, Unit 117, Unit 121, Unit 125, Unit 222	
Steve Smart	Operator / Labourer/Patroller	Holstein Depot	Unit 113	
Tia Augurusa	Operator / Labourer	Holstein Depot	Unit 214	Unit 113 - 2014 Trackless, Unit 214 - 2014 International Tandem
Todd Marshall	Operator / Labourer	Holstein Depot	Unit 205, Unit 105	Unit 113 - 2014 Trackless, Unit 205 - 2007 International Tandem
Wayne Burns	Operator / Labourer	Holstein Depot	Unit 116	Unit 113 - 2014 Trackless, Unit 116 - 2016 John Deere Grader 870G
Zach Hull	Patroller/ Operator	Dundalk Depot	RORR 0 Unit 316, Unit 117, Unit 121, Unit 125	Unit 121 2020 Trackless , Unit 125 - 2022 Trackless, Unit 208 - 2008 Ford F550

Some of the key responsibilities associated with the management and overseeing of winter operations for this winter season are as below:

- John Watson will receive issues and concerns of the citizens regarding snow and ice control efforts.
- John Watson will be responsible for making operational decisions.
- John Watson will be authority to which the field staff will communicate the field conditions to.
- John Watson will be responsible for shift scheduling.
- John Watson will (when physically possible) be responsible for providing appropriate signage and or barricades in case a road has to be closed due to severe winter storm.
- John Watson will ensure media releases are sent to local news and radio stations advising of road closures.
- Paul Stevenson will be second in command to the Roads Foreman & Fleet Manager.

#### 4.6.2. Winter Material Used Annually

Primary Solid Material	Brand Name or Supplier	Expected Quantity this Season vs. Actual Quantity Last Season	Comes Pre-Mixed with	In-House Mix Added
Pretreated Salt	Sifto Salt	0.3 Tonnes(Can) vs. 0.3 Tonnes(Can)	Salt (NaCl) 5.5%	

#### 4.6.3. Application Rates

	Min. and Max. Ranges (Tonnes/lane-kilometre)		
	0.0 to -5.0 CELSIUS	-5.0 to -10.0 CELSIUS	-10.0 to -18.0 CELSIUS
Frost	0.01 - 0.02	0.02 - 0.02	0.01 - 0.01
Light Snow	0.01 - 0.02	0.02 - 0.02	0.01 - 0.01
Heavy Snow	0.01 - 0.02	0.02 - 0.02	0.01 - 0.01
Freezing Rain	0.01 - 0.02	0.02 - 0.02	0.01 - 0.01

#### 4.6.4. Equipment - Winter Maintenance Fleet

The Township of Southgate provides winter maintenance services on 24 routes with the equipment listed in Appendix 3.

<b>VEHICLE NAME OR NUMBER</b>	<b>VEHICLE TYPE</b>	<b>ASSOCIATED ROUTES</b>	<b>ASSOCIATED EMPLOYEES</b>	<b>LOCATION /YARD</b>
Unit 100 - 2004 Volvo Grader 740G	Grader	Unit 100	Kyle Tipple, Steve Bates	Hopeville Depot
Unit 101 - 2010 John Deere Grader 870G	Grader	Unit 101	Dale Mason	Hopeville Depot
Unit 105 - 2008 John Deere 870D	Grader	Unit 105	Keith Cressman, Paul Stevenson	Holstein Depot
Unit 113 - 2014 Trackless	Other	Unit 113	Brian Ferguson, Keith Cressman, Paul Stevenson, Tia Augurusa, Todd Marshall, Wayne Burns	Holstein Depot
Unit 116 - 2016 John Deere Grader 870G	Grader	Unit 116	Wayne Burns	Holstein Depot
Unit 117 - 2018 Kubota Tractor	Other	Unit 117	Adam Nichols, Cory Henry, Grayson Hannivan, Lorne Fick, Steve Cooke	Dundalk Depot
Unit 121 2020 Trackless	Other	Unit 121	Adam Nichols, Cory Henry, Grayson Hannivan, Lorne Fick, Michael Sherson, Zach Hull	Dundalk Depot
Unit 122 - 2020 John Deere Grader 870G	Grader	Unit 122	Brian Ferguson	Holstein Depot
Unit 125 - 2022 Trackless	Other	Unit 125	Adam Nicholls, Cory Henry, Grayson Hannivan, Lorne Fick, Michael Sherson, Steve Cooke, Zach Hull	Dundalk Depot
Unit 205 - 2007 International Tandem	Tandem Axle	Unit 205	Todd Marshall	Holstein Depot
			Adam Nichols, Cory	

Unit 208 - 2008 Ford F550	Single Axle	Entire Township 312	Henry, Grayson Hannivan, Lorne Fick, Michael Sherson, Zach Hull	Dundalk Depot
Unit 209 - 2004 Sterling Tandem Spare Unit	Tandem Axle	Unit 220	John Watson, Steve Bates	Hopeville Depot
Unit 212 - 2013 International 7600 Tandem	Tandem Axle	Unit 212	Bill Walsh	Hopeville Depot
Unit 214 - 2014 International Tandem	Tandem Axle	Unit 214	Tia Augurusa	Holstein Depot
Unit 215 - 2016 International S/A	Single Axle	Unit 215	Adam Nichols, Cory Henry, Grayson Hannivan, Lorne Fick, Michael Sherson, Steve Cooke	Dundalk Depot
Unit 216 - 2017 International 7600 Tandem	Tandem Axle	Unit 216	James Johnson	Hopeville Depot
Unit 220 Western Star Tandem	Tandem Axle	Unit 220	Steve Bates	Hopeville Depot
Unit 222 - 2021 S/A International	Single Axle	Unit 222	Adam Nichols, Cory Henry, Grayson Hannivan, Lorne Fick, Michael Sherson, Steve Cooke	Dundalk Depot
Unit 312 - 2016 Ford 150	Other	RORR 0 Unit 318	Paul Stevenson	Holstein Depot
Unit 315 - 2018 Ford F150	Other	RORR 0 Unit 318	John Watson	Hopeville Depot
Unit 318 - 2021 Chev 1500	Other	RORR 0 Unit 318	John Watson	Hopeville Depot
Unit 319 - 2021 Chev 1500	Other	RORR 0 Unit 318	Paul Stevenson	Holstein Depot

#### 4.6.4.1. Mechanics

The Township of Southgate does not have mechanics available to fix equipment issues.

#### **4.6.5. Winter Maintenance Facilities**

The Township of Southgate provides winter maintenance services from the winter maintenance facilities listed below.

##### **4.6.5.1. Holstein Depot**

Facility Type:  
Patrol Yard

Facility Address:  
Holstein Depot, 123273 Southgate Road 12, Holstein, Ontario N0G 2A0,  
Canada

Facility Phone:  
519-334-3581

Number of Front-end Loaders:  
1

Year Built:  
1972

Design and Logistics:

- All materials are handled in a designated area characterized by an impermeable surface
- Equipment is in place to prevent overloading of trucks
- System is in place for collection and/or treatment of wastewater from cleaning of trucks
- Control and diversion of external waters (not impacted by salt) is in place
- Ongoing clean-up of the site surfaces and spilled material is swept up quickly
- Risk management and emergency measures plans are in place

Material Storage Details:

- There is storage space available inside of this facility. It presently stores:
  - Sand / Salt mixture – 2.5 Tonnes(Can)
- There is no storage space available outside of this facility.

Equipment Storage Details:  
CAT 930K Loader



Equipment Washing Details:

This yard is located in the town of Holstein

Miscellaneous Material Details:

Sand dome

Site Drainage Details:

- There isn't any drainage and collection system for runoff of salt-contaminated waters at this facility
- The chloride concentration in the runoff is not monitored
- This site discharges to:
- Additional Site Storage Details

#### **4.6.5.2. Dundalk Depot**

Facility Type:

Patrol Yard

Facility Address:

75 Dundalk Street, Dundalk, Ontario N0C 1B0, Canada

Facility Phone:

519-923-5054

Year Built:

1995

Design and Logistics:

- All materials are handled in a designated area characterized by an impermeable surface
- Equipment is in place to prevent overloading of trucks
- System is in place for collection and/or treatment of wastewater from cleaning of trucks
- Control and diversion of external waters (not impacted by salt) is in place
- Ongoing clean-up of the site surfaces and spilled material is swept up quickly
- Risk management and emergency measures plans are in place

Material Storage Details:

- There is no storage space available inside of this facility.
- There is no storage space available outside of this facility.

Equipment Storage Details:

Unit 125 - 2022 Trackless, Unit 117 - 2018 Kubota Tractor, Unit 208 - 2008 Ford

F550, Unit 215 - 2016 International, Unit 121 - 2020 Trackless Unit 222 - 2022 International Single-Axle

Equipment Washing Details:

Yard located in the town of Dundalk

Miscellaneous Material Details:

Dundalk uses sand and salt from the Grey County dome.

Site Drainage Details:

- There is drainage and collection systems for runoff of salt-contaminated waters at this facility
- The chloride concentration in the runoff is not monitored
- This site discharges to:
- Additional Site Storage Details

#### **4.6.5.3. Hopeville Depot**

Facility Type:

Patrol Yard

Facility Address:

185667 Grey Rd 9 RR#1, Dundalk, Ontario N0C 1B0, Canada

Facility Phone:

519-923-2110

Number of Front-end Loaders:

1

Year Built:

1973

Design and Logistics:

- All materials are handled in a designated area characterized by an impermeable surface
- Equipment is in place to prevent overloading of trucks
- System is in place for collection and/or treatment of wastewater from cleaning of trucks
- Control and diversion of external waters (not impacted by salt) is in place
- Ongoing clean-up of the site surfaces and spilled material is swept up quickly
- Risk management and emergency measures plans are in place

Material Storage Details:

- There is storage space available inside of this facility. It presently stores:
  - Sand / salt – 3.5 Tonnes(Can)
- There is no storage space available outside of this facility.

Equipment Storage Details:  
All equipment is indoors

Equipment Washing Details:  
This location is also the Administration office

Miscellaneous Material Details:  
Sand shed

Site Drainage Details:

- There isn't any drainage and collection system for runoff of salt-contaminated waters at this facility
- The chloride concentration in the runoff is not monitored
- This site discharges to:
- Additional Site Storage Details

#### **4.6.6. Parking Lots**

The Township of Southgate provides winter maintenance services to the listed parking lots below.

##### **4.6.6.1. Frank McIntyre**

Facility Address: Frank McIntyre, 250 Owen Sound Street, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 20

Responsibility to maintain: Township of Southgate

The lot is used for storage or disposal of snow.

The drainage from this lot is controlled.

Service Policy:

Regular maintenance provided.

##### **4.6.6.2. Medical Center**

Facility Address: 53 Main St W, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 10

Responsibility to maintain: Township of Southgate

The lot is not used for storage or disposal of snow.

The drainage from this lot is controlled.

Service Policy:

Parking Lot receives regular maintenance.

#### **4.6.6.3. Dundalk Arena and Community Center**

Facility Address: 550 Main Street East, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 100

Responsibility to maintain: Township of Southgate

The lot is used for storage or disposal of snow.

The drainage from this lot is controlled.

Service Policy:

Parking lot receiving regular maintenance.

#### **4.6.6.4. Library**

Facility Address: 80 Proton St N, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 10

Responsibility to maintain: Township of Southgate

The lot is used for storage or disposal of snow.

The drainage from this lot is controlled.

Service Policy:

Parking lot receives regular maintenance.

#### **4.6.6.5. Proton Street North**

Facility Address: Proton Street North, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 20

Responsibility to maintain: Township of Southgate

The lot is not used for storage or disposal of snow.

The drainage from this lot is controlled.

Service Policy:

Parking lot receives regular maintenance.

#### **4.6.6.6. Artemesia Parking Lot**

Facility Address: Artemesia Street North of Main, Dundalk, Ontario N0C 1B0, Canada

Number of Parking Spots: 4

Responsibility to maintain: Township of Southgate

The lot is not used for storage or disposal of snow.

The drainage from this lot is not controlled.

Service Policy:

Parking lot receives regular maintenance.

#### **4.6.7. Snow Removal and Disposal**

Currently, municipal staff removes and hauls snow to the sites listed in the table below when the accumulation of piled snow impedes traffic on the road and/or sight lines at intersections.

The decision to initiate the hauling operation will be dependent upon the depth and accumulation of snow. Snow will only be removed from intersections where a public street intersects with another public street. This operation will typically be conducted after other higher priority post-storm activities have been completed.

Under normal circumstances, hauling of the snow will be conducted during normal working hours. Snow removal from the rights-of-way into private property driveways will be the responsibility of the adjacent private property owner\*.

##### **4.6.7.1. Dundalk**

Site Address: 752051 Ida Street, Dundalk, Ontario N0C 1B0, Canada

#### Surrounding Land Use and Surface Material:

- North of site: Commercial – Unpaved
- South of site: Residential – Unpaved
- East of site: n/a – Unpaved
- West of site: n/a – Unpaved

#### Drainage:

- Controlled runoff: No
- Retention pond: No
- Additional details: The Run-off is managed on site.

#### Site Design:

- Design capacity: 1000000 Litres
- Snow disposed-off entirely on a low permeability surface: 0 %
- Meltwater directed to a retention pond before its discharge: 0 %
- Meltwater collected and discharged into a municipal sewer system: 0 %
- Meltwater collected and discharged into a watercourse: 0 %

#### Additional Details:

Snow is brought to the Township of Southgate lagoon property.

The Township of Southgate does not use snow melters.

### **4.6.8. Plow Routes**

Appendix 2 contains maps of the salt/sand routes, anti-icing routes and plow routes.

### **4.6.9. Salt Vulnerable Areas**

Certain locations within the area of responsibility of the Township of Southgate have been identified as being potentially vulnerable to the over-application of road salt. These areas are shown on the route maps in the appendices. Accordingly, salt storage, snow disposal and material application in these areas will be strictly monitored and in some cases may be restricted in a variety of ways.

#### **4.6.9.1. Dundalk Wells**

Facility Address:

Area Footprint: 230000.0 Square Metres

Additional Details: Well D3 is located at 280 Victoria Street West (Industry Road)

in Dundalk Well D4 is located at 550 Main Street East in Dundalk Well D5 is located at 250 Hagan East Street in Dundalk

Mitigation Measures: The Township of Southgate uses 4% salt in a sand/salt mix.

Associated Vulnerabilities: Drinking water (surface or groundwater)

#### **4.6.10. Weather Monitoring**

In order to determine an effective winter event response and allocate the appropriate resources the Township of Southgate supplements their general observations with weather information from various sources which includes:

- 6 Infrared Thermometers
- Observations from municipal staff, communication with staff of adjacent municipalities;
- Customized weather forecasts which are updated 4 times/day from a Value Added Meteorological Service The Winter Web App Team at Ontario Good Roads Association
- OGRA Weather Tracking Service

#### **4.6.11. Communications**

Maintaining reliable internal communications is a critical component of winter operations. The Township of Southgate uses the following:

- All winter maintenance vehicles are equipped with two way communications (radios, cell phone, etc.).
- Township of Southgate provides a call centre which:
  - Is open during the winter season identified in section 4.3 in this document and is staffed 24 hours a day.
  - Is available 7 days a week.

All citizen issues concerning snow and ice control efforts will be routed to Roads Foreman & Fleet Manager . The Roads Foreman & Fleet Manager will determine appropriate follow-up responses to citizen inquiries.

The municipality provides external communication with the general public via:

- Information posted on the municipality's web site ([www.southgate.ca](http://www.southgate.ca))
- [www.facebook.com](https://www.facebook.com)

#### **4.6.12. Boundary Street Jurisdiction and Responsibility**

The table below outlines the responsibilities of each agency has to the roads bordering with the Township of Southgate. The agencies listed in the table have first response maintenance responsibility to these roads. If the Township of

Southgate has its snow routes open and serious problems remain on the boundary streets, The Township of Southgate snow plows may assist based upon the judgement of Roads Foreman & Fleet Manager on duty.

TABLE

<b>Organization, and Contact</b>	<b>Responsibility Details</b>	<b>Telephone Number</b>
The Municipality of Grey Highlands, Chris Cornfield	Roads emergency number	519-986-4069
The Municipality of West Grey, Brent Glazier	Director of Infrastructure & Public Works	519-369-2200
The Township of Melancthon, Craig Micks	Public Works Superintendent	519-925-5525
The Township of Wellington North, Dale Clark	Roads Foreman	519-848-2790

#### **4.6.13. Callout Procedures**

Operational decisions will be made by the Roads Foreman / Fleet Manager or his 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, merely acts as an aid in determining if a call out of staff and equipment by the Roads Foreman / Fleet Manager to respond to a winter event is warranted.

It is vital therefore that the Roads Foreman / Fleet Manager records the prevalent conditions and relevant information when he makes a decision.

The patrol person shall inform the Roads Foreman / Fleet Manager of changing of road and weather conditions observed in the field. When a winter event response is required the patroller will contact Public Works staff by phone. The patroller will contact staff as per the shift schedule and the direction given by the Roads Foreman / Fleet Manager. In the absence of the patroller 1 the patrol 2 person shall be his/her designate and initiate a call out in response to a winter event.

#### **4.6.14. Road Closure and Procedures**

In the event a road must be closed due to a severe winter storm, Ontario Provincial Police - Grey County will request signs be placed to close the road. Appropriate signage and barricades will be available at the patrol yard. Upon receiving a request from Ontario Provincial Police - Grey County to close a road to traffic,



#### **4.6.15. Declaration of Emergency Parking Ban**

No Parking on streets from November 15 to April 15 from 12am to 7am.

Cars parked on the streets during a snow removal effort may be ticketed and/or towed away. A snow emergency parking ban may be declared by Roads Foreman & Fleet Manager , or their designee. The Ontario Provincial Police - Grey County and media will be notified when the parking ban is initiated.

#### **4.6.16. Operating Instructions and Safety Rules**

All individuals (whether local staff or contracted) shall abide by operating instructions and safety rules as stated in Appendix 6.

### **4.7. Decommissioning Winter Operations**

After the winter season identified in 4.3 expires, the Township of Southgate undertakes the following tasks to decommission winter operations:

#### **4.7.1. Two Weeks After the Winter Season Ends**

Two weeks after the winter season ends:

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

#### **4.7.2. One Month After the Winter Season Ends**

One month after the winter season ends:

- Cease all winter highway maintenance operations
- Decommission the remainder of the equipment providing weather forecasts warrant the decommissioning.

### **4.8. Training**

The Township of Southgate provides winter operations training for all staff involved in the delivery of winter services.

Individuals in the following positions within and outside of the organization have been trained:

- Within Organization:
  - Manager(s)
  - Supervisor(s)
  - Operator(s)
  - Mechanic(s)
  - Patroller(s)
- Contracted Staff:
  - Manager(s)
  - Supervisor(s)
  - Operator(s)
  - Mechanic(s)
  - Patroller(s)

It is compulsory for the organization's in-house staff to be trained for winter services. All trained staff will verify that the training was received by either signing the "Record of Training" included in Appendix 7-1 or 7-2, or another verification document.

Current winter operations training(s) for in-house staff:

- Equipment Circle Check
- Equipment Calibration
- Record Keeping
- Health and Safety
- Level of Service – policies, practices and procedures
- Identification of Plow Routes – including variations for year to year and issues identified along the route
- Identification of vulnerable areas
- Yard and Equipment maintenance

## 4.9. 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 is responsible for keeping the following records:

For Equipment Operators:

- Materials used (sand, salt, liquids)
- Route Plowed and strategy used (plow only, salt/sand only, anti-ice, combination plowing/sanding/salting)

For Patrollers:

- Winter Patrol Record
- Call Out Diary
- Weather and/or RWIS Information Received

For Operations Supervisors:

- Operations Diary
- Incident/Collision Reports
- Total materials used
- Equipment Calibration Records
- Retains records of salt application rates of your fleets
- Has Automatic Vehicle Location (AVL) system installed on fleet

The date will be recorded as YYYY-MMM-DD. It will be written in a numerical format ( 2022-Dec-01 ). 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 a case where you change writing pens.

## 5. 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.

Based upon the need to maintain continual service throughout the season, and the previous experience obtaining critical supplies and equipment at the height of the season, over the next ten years the Township of Southgate plans to undertake a number of improvements that will be monitored and updated annually.

- Equipment
  - 2022-2023 Season: Using Pre-treated salt pug milled with sand. New Tandem snowplow in Holstein unit 221. New Single Axle snowplow in Dundalk unit 222. Updated GPS/AVL in units

## 6. MONITORING AND UPDATING

Safe and sustainable winter operations includes, as one of its fundamental tenets, the monitoring and updating of winter operations plans, policies, practices and

procedures (the “four Ps”) of the Township of Southgate in an ongoing manner. To that end, the following continuous improvement cycle is used to refine the “four Ps” annually.



At the end of the winter season, as identified in 4.3, a meeting to review winter operations will be held each year with all winter operations staff to itemize all issues that arose 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 Southgate shall train staff on the changes to equipment and/or winter maintenance policies, practices, and procedures.

The winter season of (2021/22) will be the benchmark year. Year over year achievement using the performance measures listed below will be measured against said benchmark year. Performance measures will be used to determine whether or not the objectives of the Winter Operations Plan and/or winter maintenance policies, practices, and procedures have been met.

Monitoring the severity of the winter season:

- % change (+/-) in the total annual Centimetres of snow accumulation from the benchmark year
  - Last Season: 1425.0
  - This Season: 1153.0
  - **% Change: -19.09**
- % change (+/-) in the total number of days with measurable snowfall from the benchmark year
  - Last Season: 90
  - This Season: 69
  - **% Change: -23.33**
- % change (+/-) in the total number of days with freezing rain from the benchmark year
  - Last Season: 9
  - This Season: 5
  - **% Change: -44.44**
- % change (+/-) in the total number of continuous winter event responses from the benchmark year
  - Last Season: 22
  - This Season: 51
  - **% Change: +131.82**
- % change (+/-) in the total number of spot winter event response from the benchmark year
  - Last Season: 10
  - This Season: 59
  - **% Change: +490.00**
- % change (+/-) in the total number of winter event hours from the benchmark year
  - Last Season: 2020.0
  - This Season: 2635.0
  - **% Change: +30.45**
- % change (+/-) in the total number of days that required salt operation from the benchmark year
  - Last Season: 30
  - This Season: 35
  - **% Change: +16.67**

Monitoring the Salt Used:

- % change (+/-) in the total tons of salt purchased annually from the benchmark year
  - Last Season: 400.0
  - This Season: 400.0
  - **% Change: +0.00**
- % of applications where discharge rates exceeded
  - Last Season: 0
  - This Season: 0
  - **% Change: +NaN**
- % change (+/-) in the total tons of salt applied annually per lane km per winter event
  - Last Season: 400.0
  - This Season: 400.0
  - **% Change: +0.00**

Ensuring customer satisfaction:

- % change (+/-) in the total number of winter event responses that met or exceed the level of service policy from the benchmark year
  - Last Season: 32
  - This Season: 110
  - **% Change: +243.75**
- % change (+/-) in the total number of complaints received regarding winter operations from the benchmark year
  - Last Season: 3
  - This Season: 5
  - **% Change: +66.67**

## 7. ADDITIONAL DETAILS

### 7.8 No Winter Maintenance Roads 2022-2023

### 7.10 Dundalk Winter Activity Report

The Dundalk Public Works Team will complete this form for reporting Winter Activity.

## 8. DISTRIBUTION OF THIS PLAN

This Plan shall be distributed to the following:

- Public Works Supervisors
- Public Works Manager
- Public Works Foreman / Fleet Manager
- Operations Staff
- Township Plow Trucks or Graders
- Township of Southgate Council

## **9. DISCLAIMER**

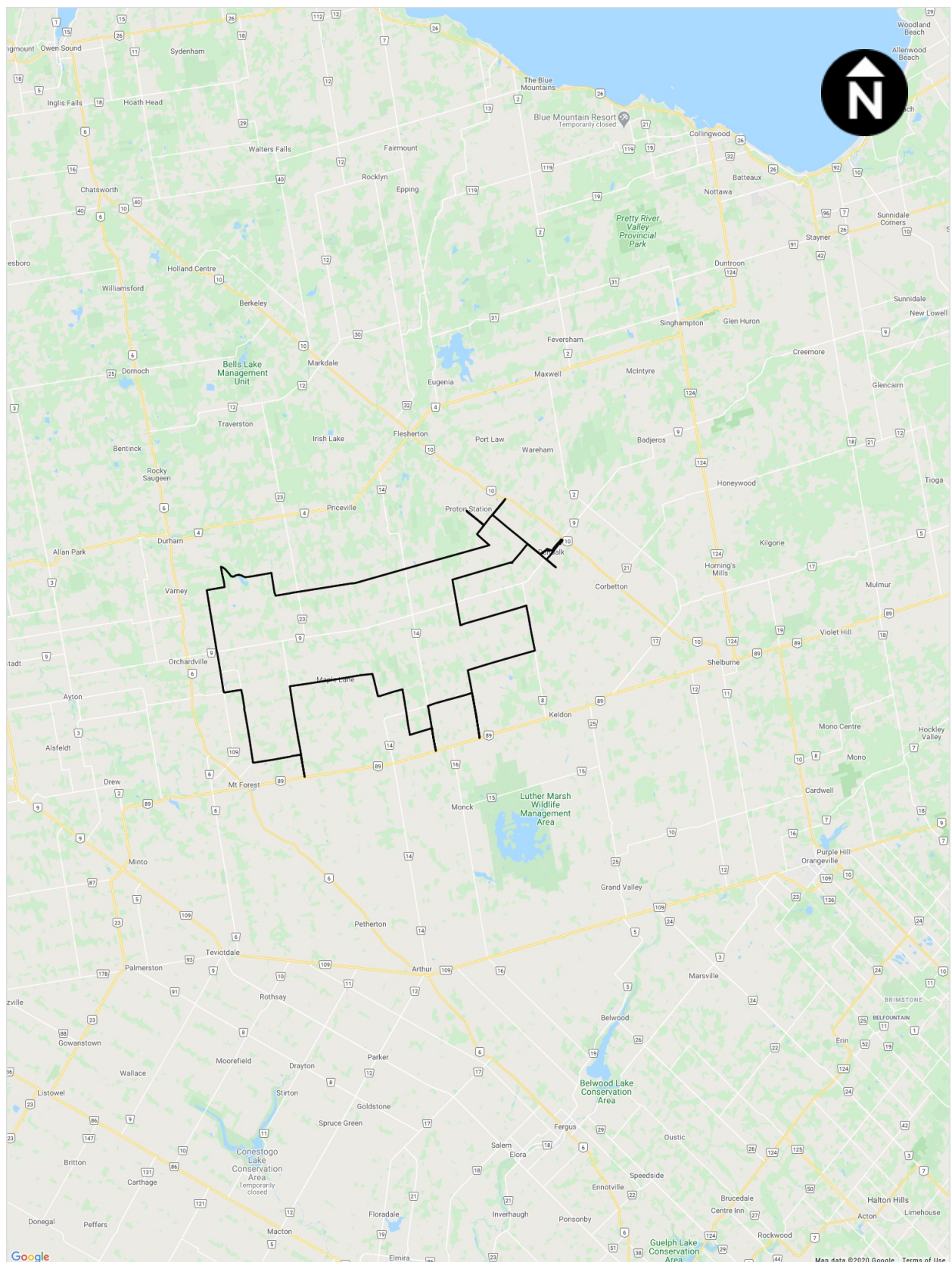
This Manual may be affected by at least one or more of the following events which could delay or alter snow and ice control by the Township of Southgate:

1. Equipment breakdown
2. Vehicles disabled in deep snow.
3. Weather so severe as to cause work to be stopped for the safety of all personnel.
4. Unforeseen conditions and emergencies.
5. Significant medical related emergencies.

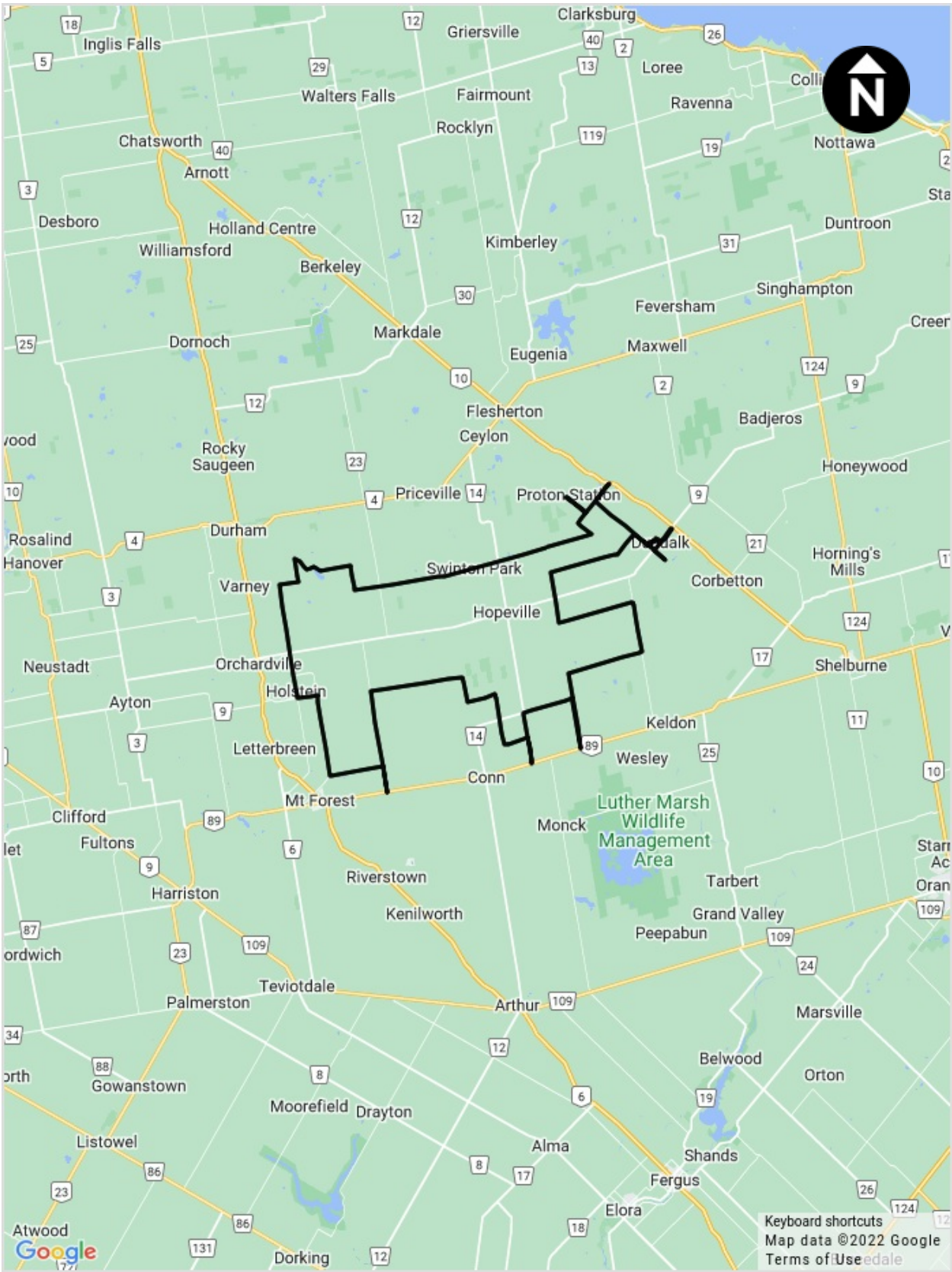
# **Appendix 1**

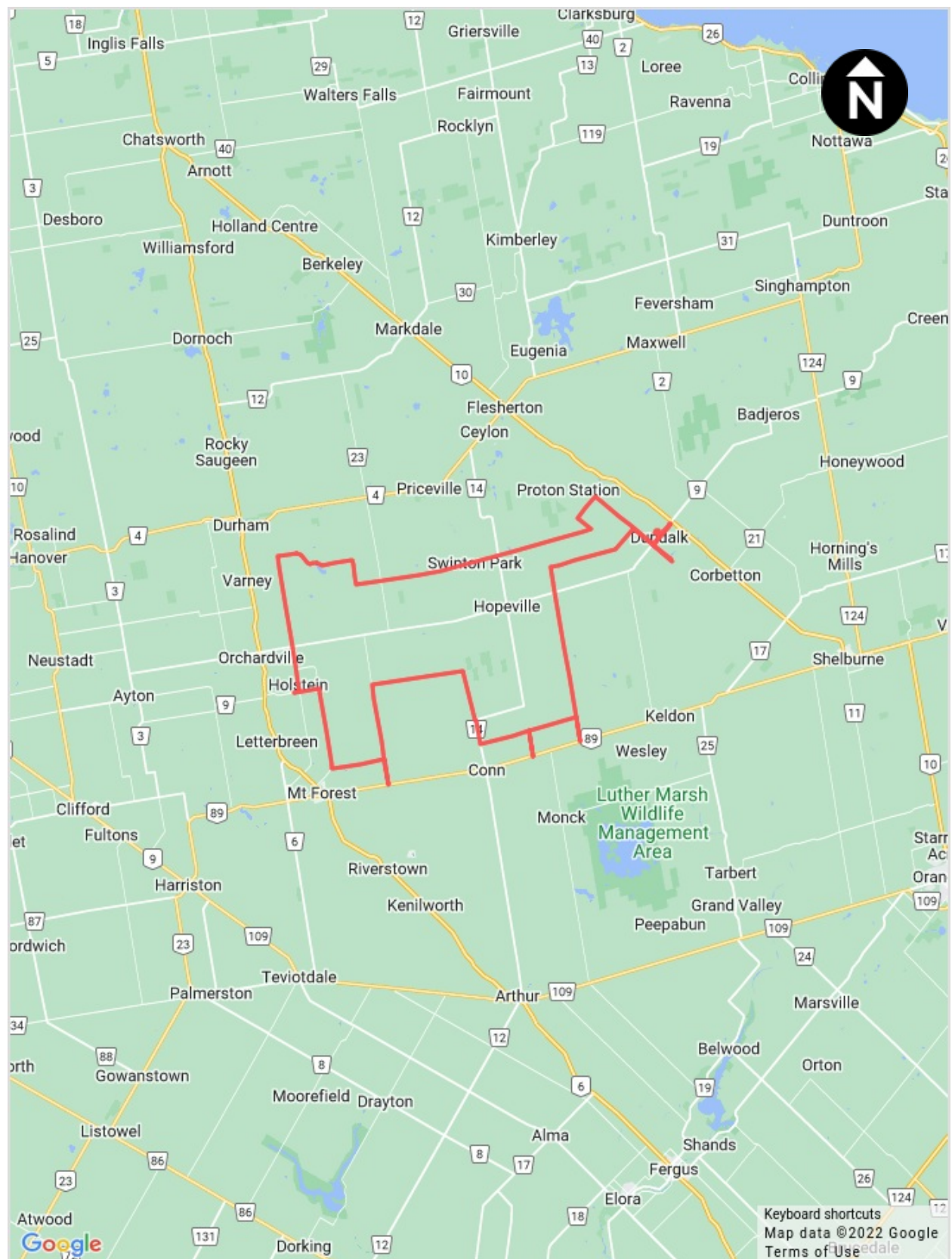
Patrol Routes  
(a.k.a. Routes of Representative Roads)



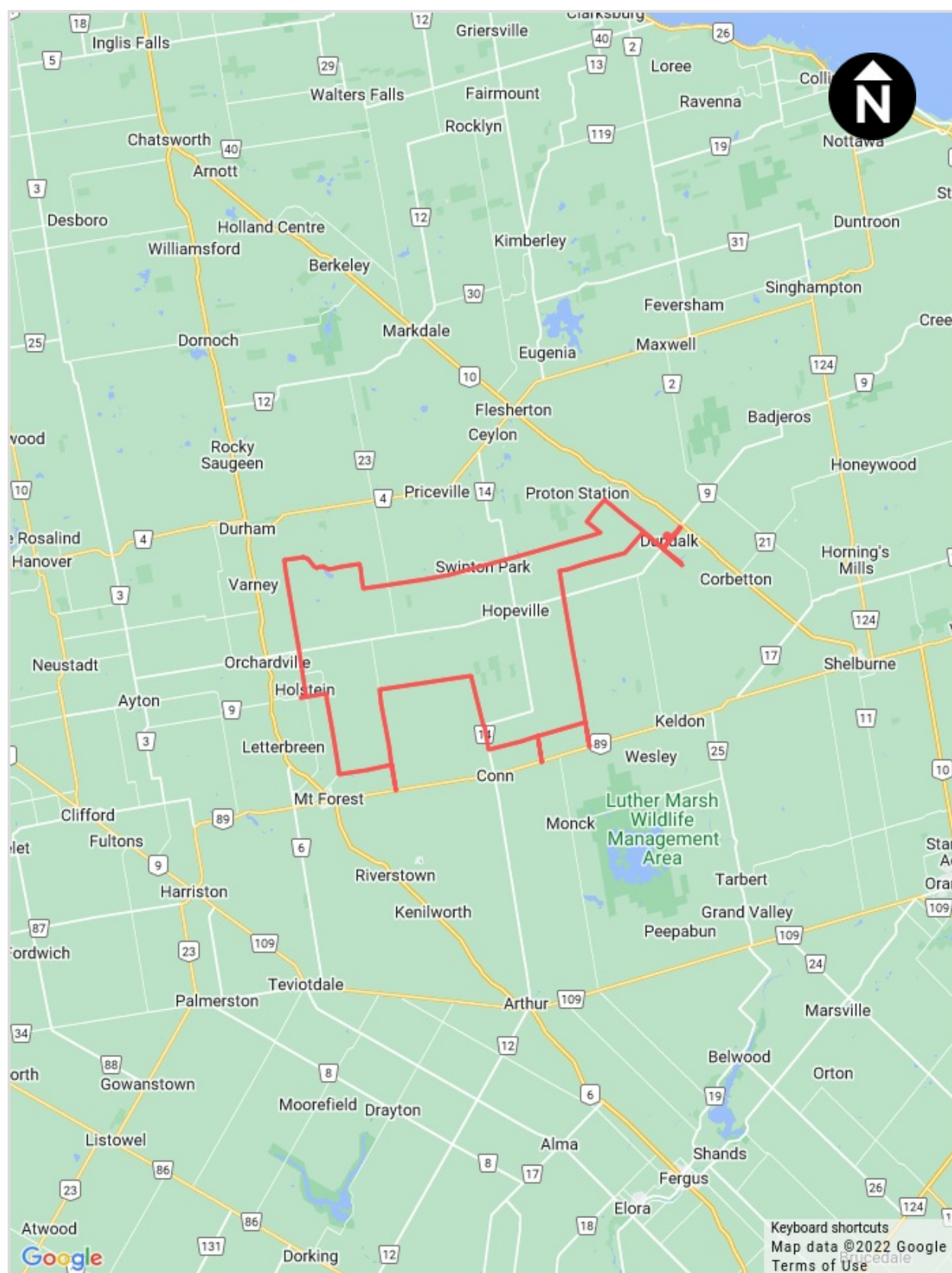










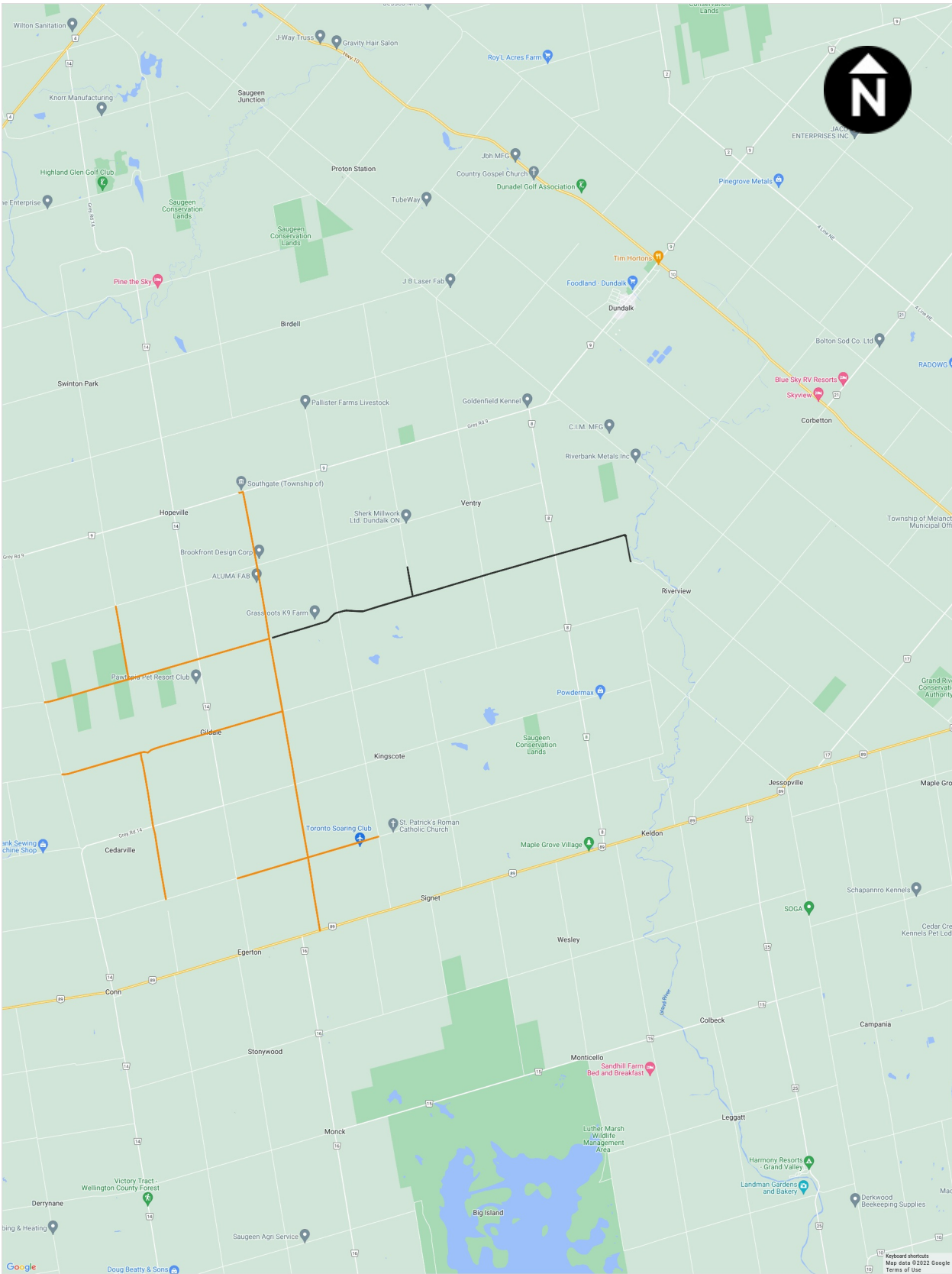


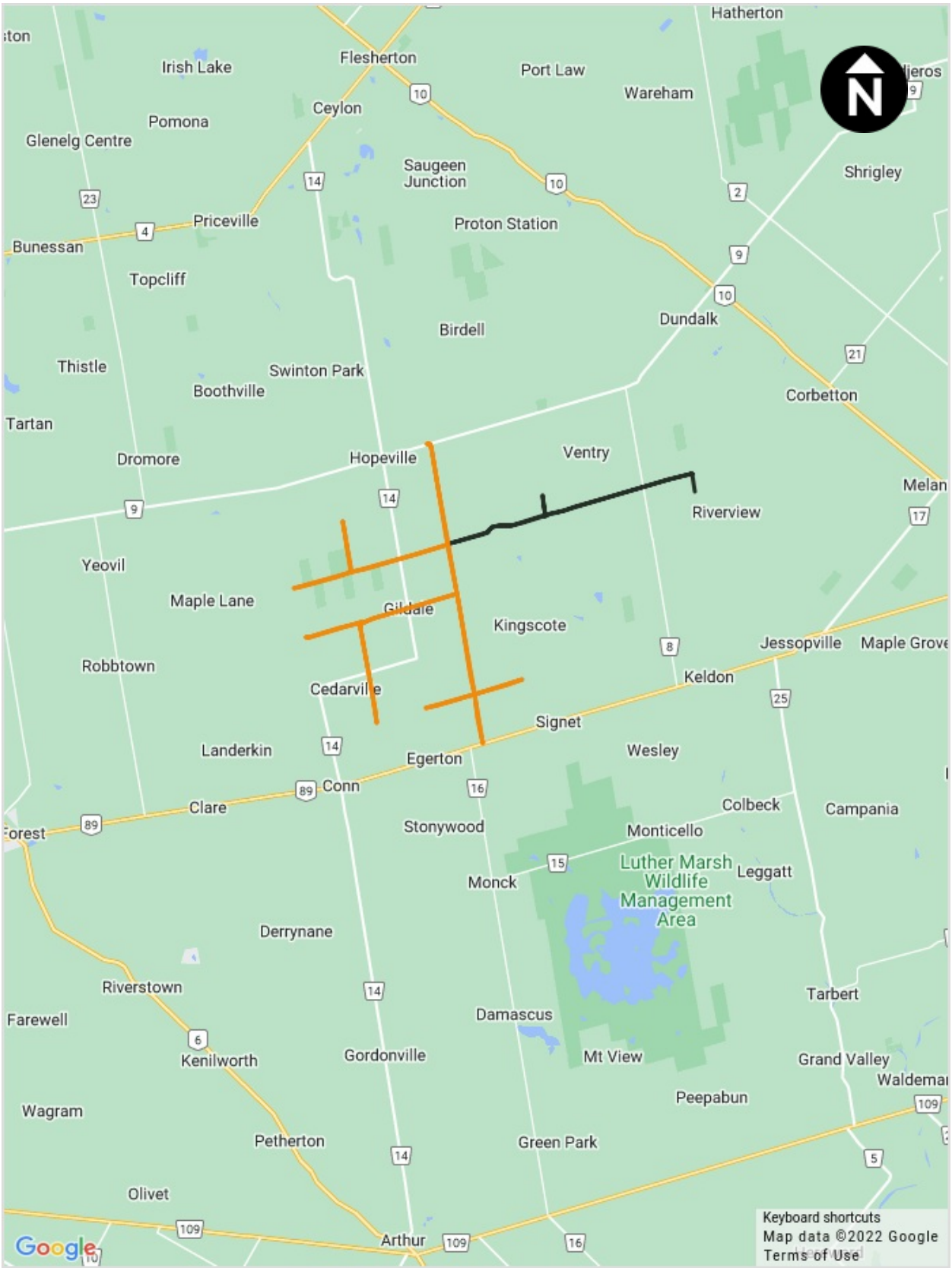
# **Appendix 2**

## Road and Sidewalk Routes

Unit 100  
Roadway Route

Total Length: 187.57 Lane Kilometres

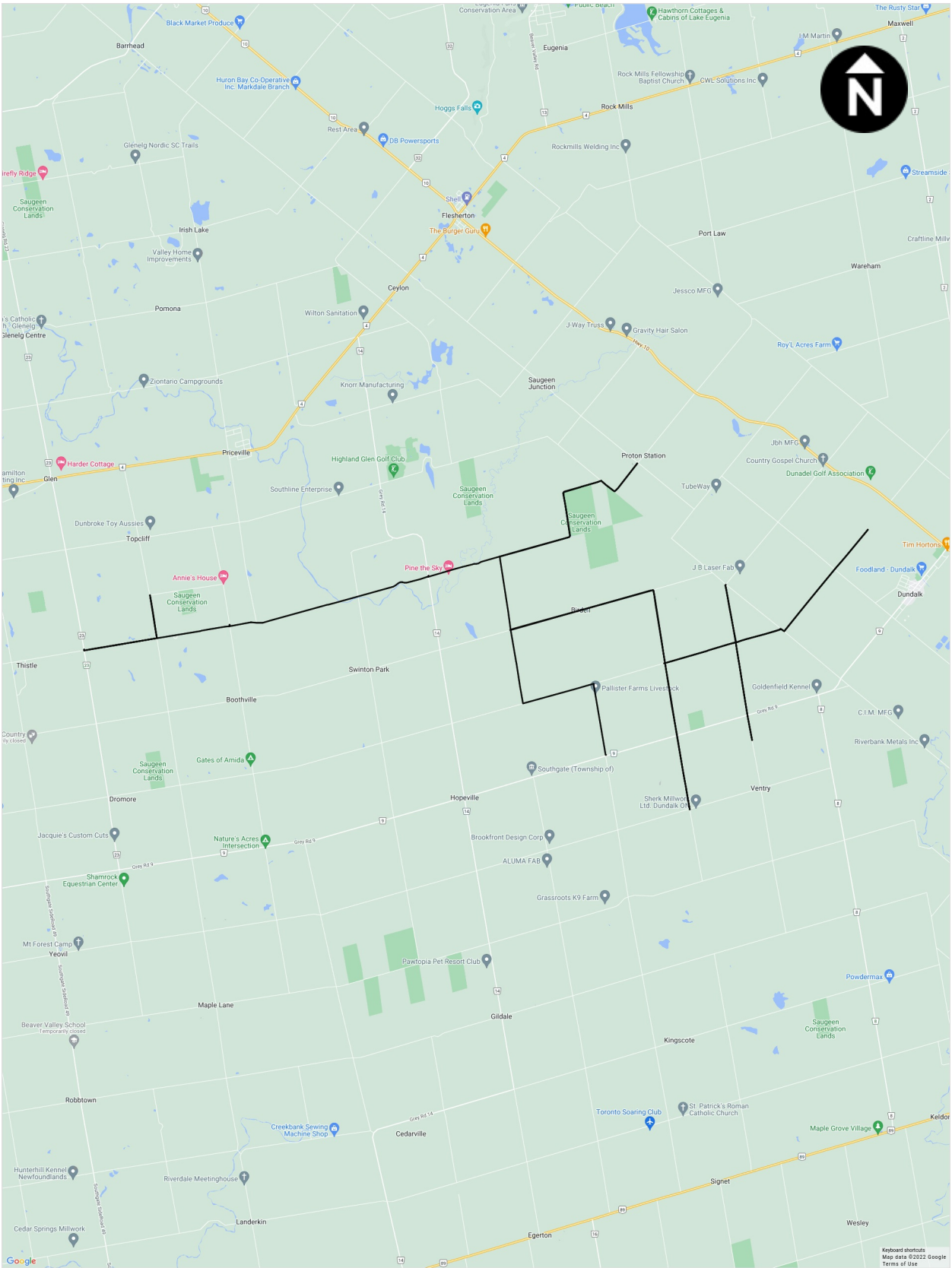






Unit 101  
Roadway Route

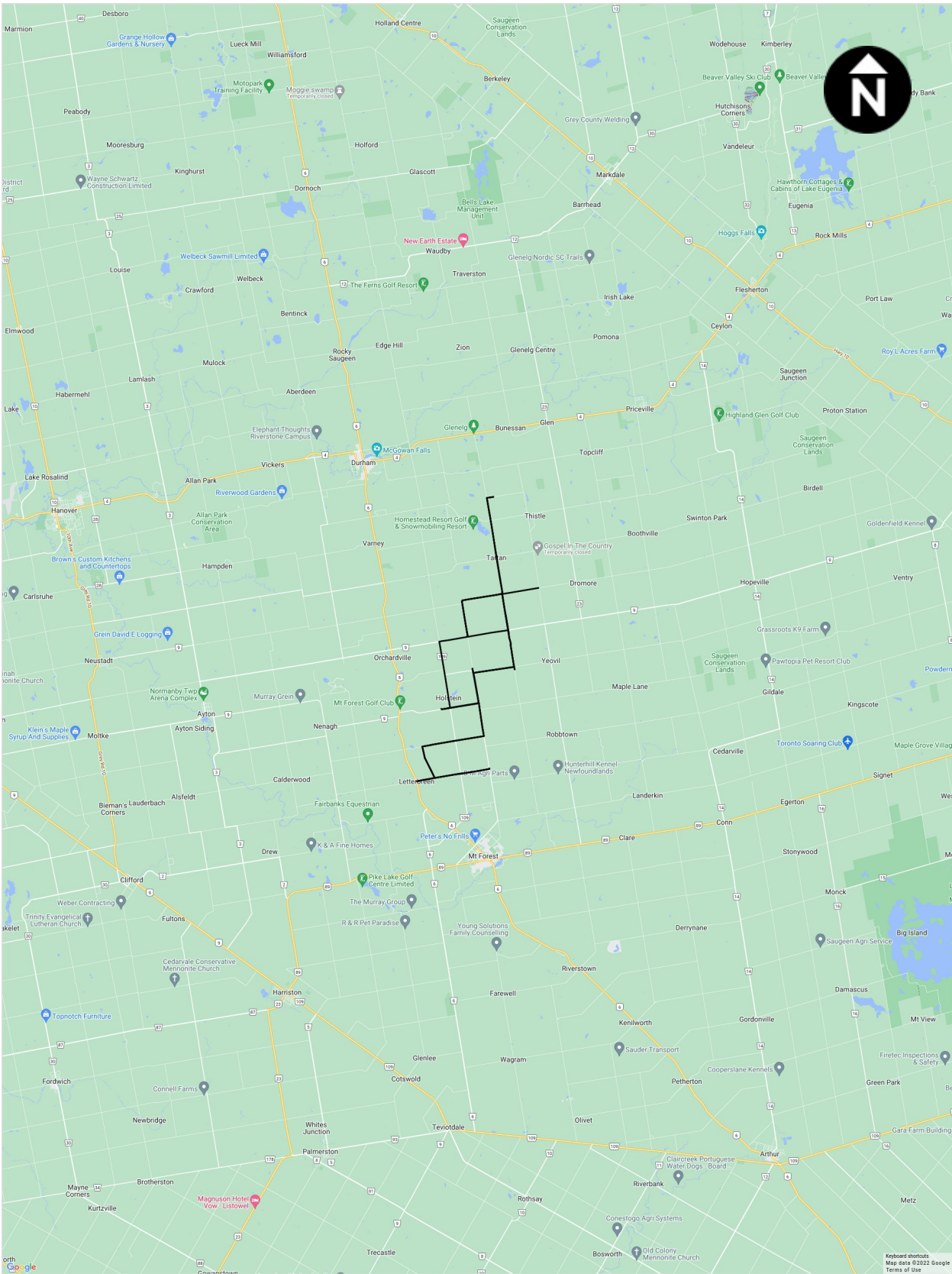
Total Length: 159.95 Lane Kilometres

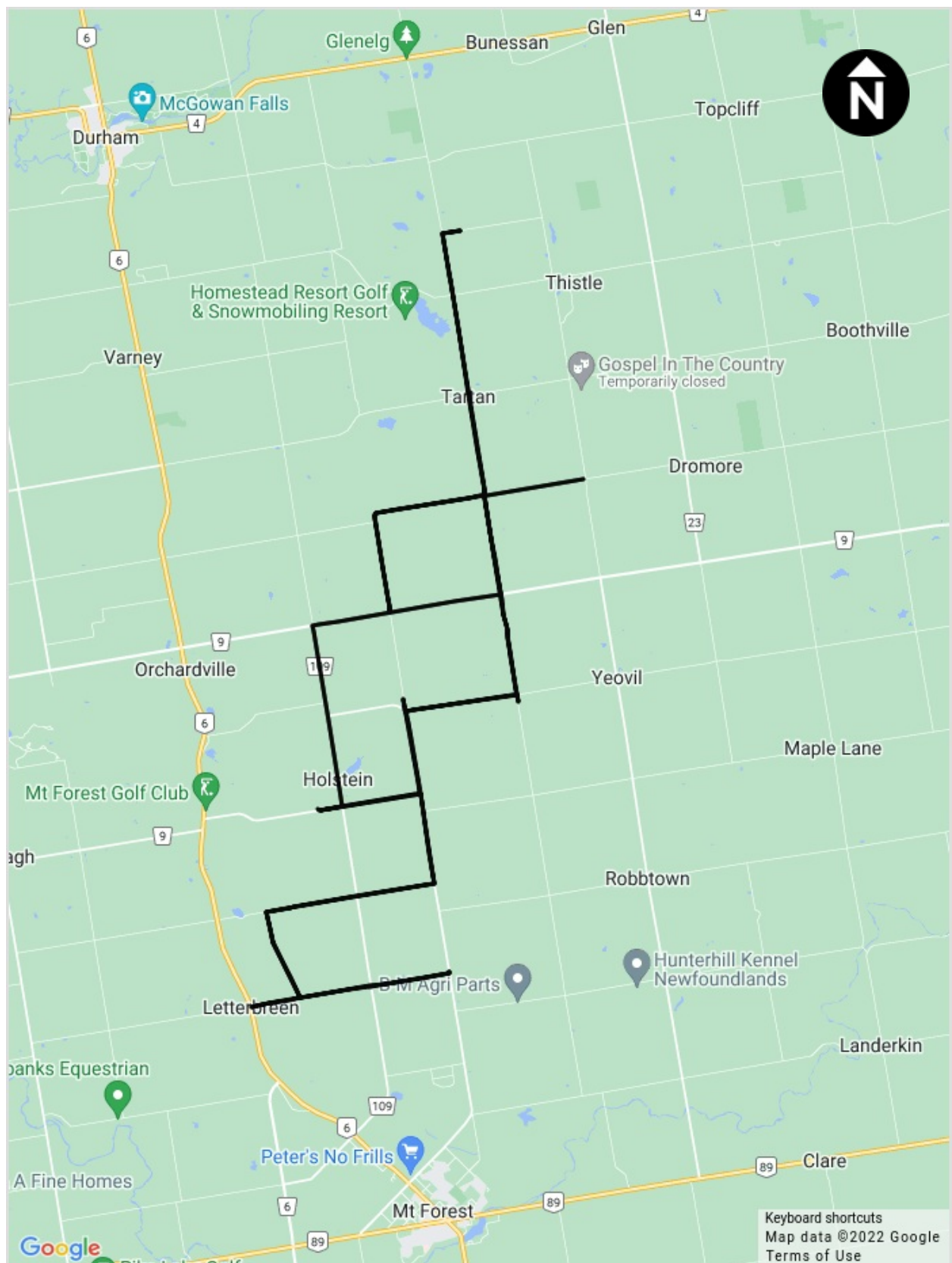




Unit 105  
Roadway Route

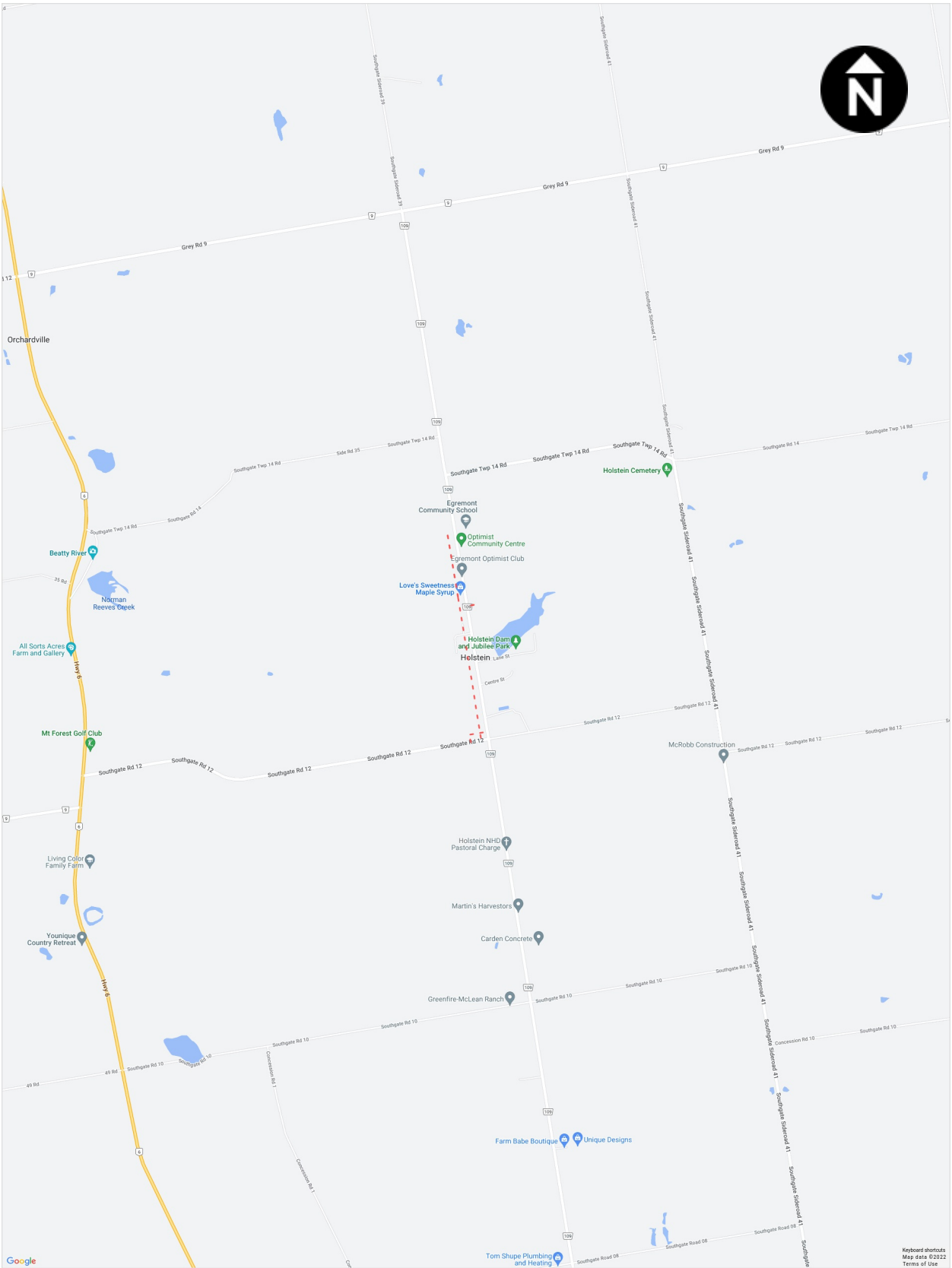
Total Length: 151.97 Lane Kilometres

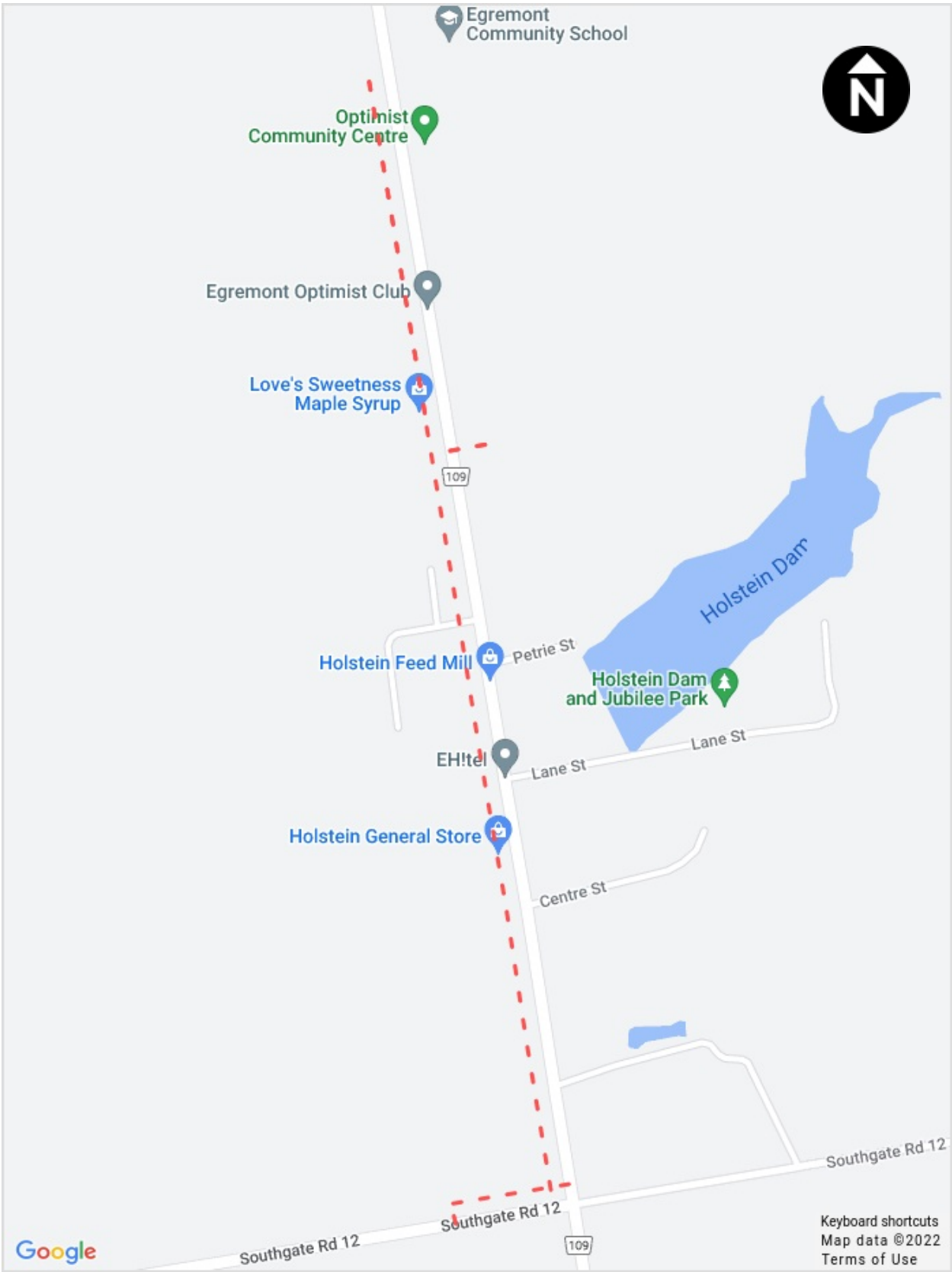




Unit 113  
Sidewalk Route

Total Length: 1.69 Lane Kilometres

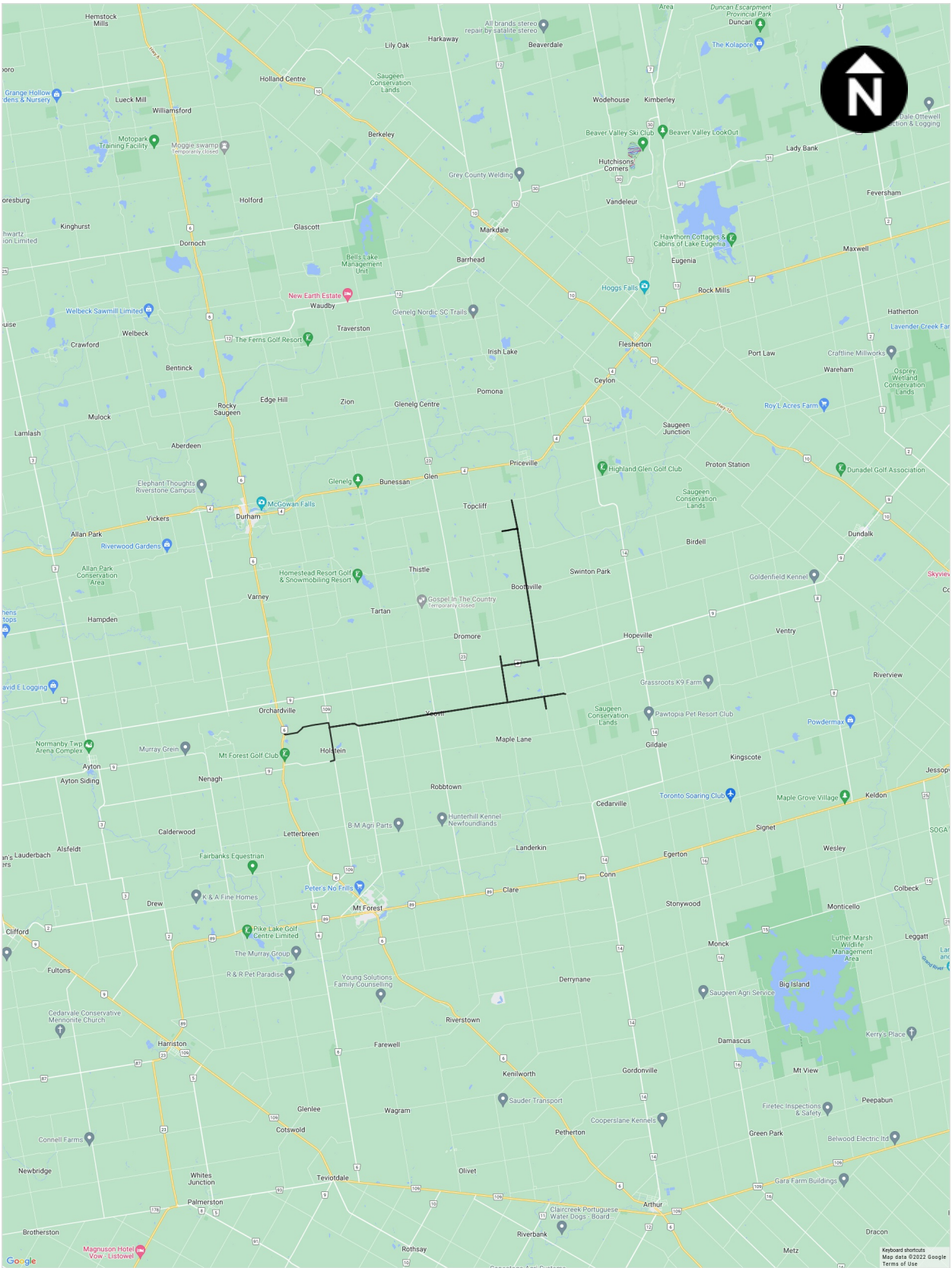


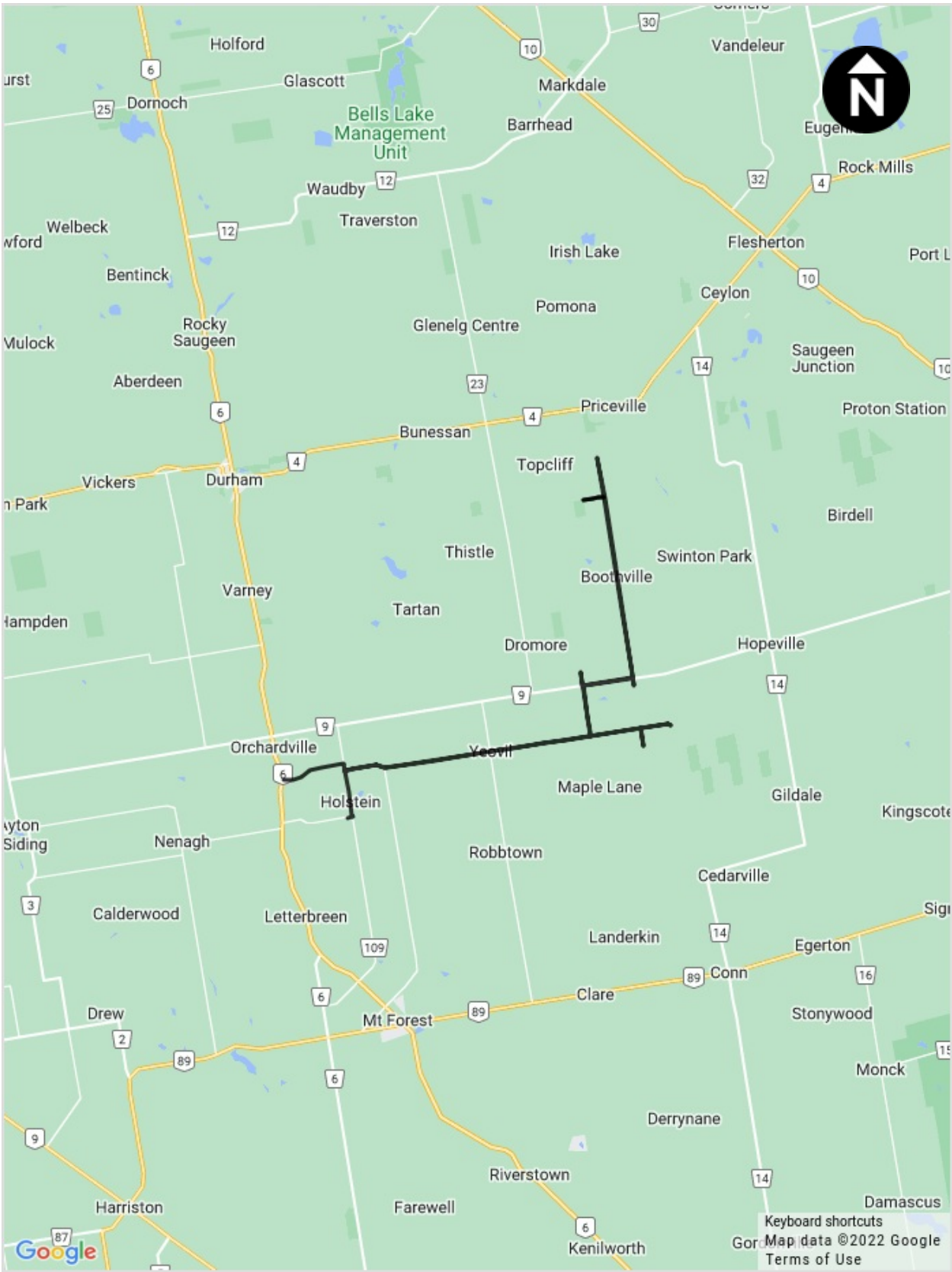




Unit 116  
Roadway Route

Total Length: 123.64 Lane Kilometres





Unit 117  
Roadway Route

Total Length: 0.79 Lane Kilometres



Unit 121  
Sidewalk Route

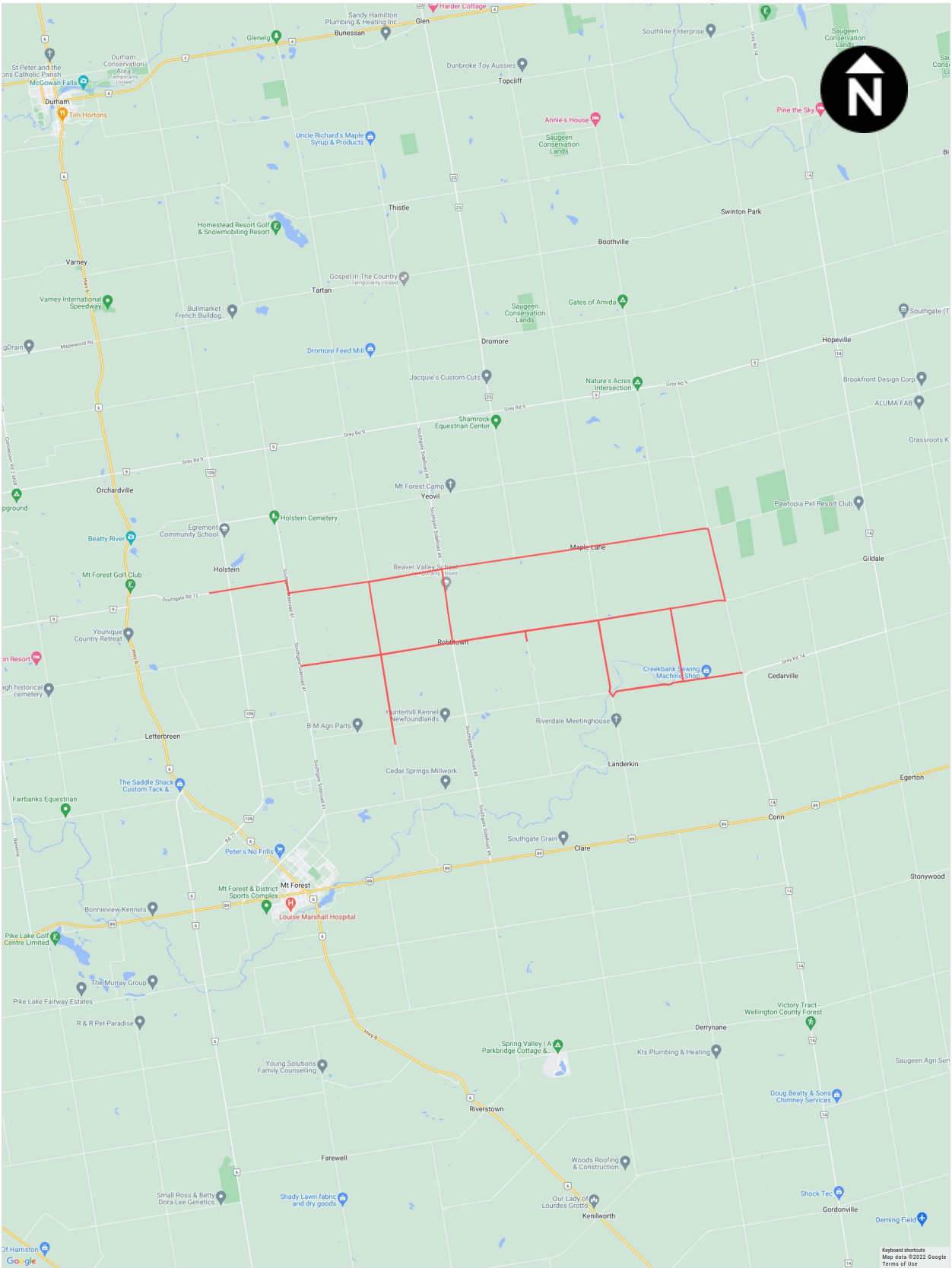
Total Length: 6.33 Lane Kilometres





Unit 122  
Roadway Route

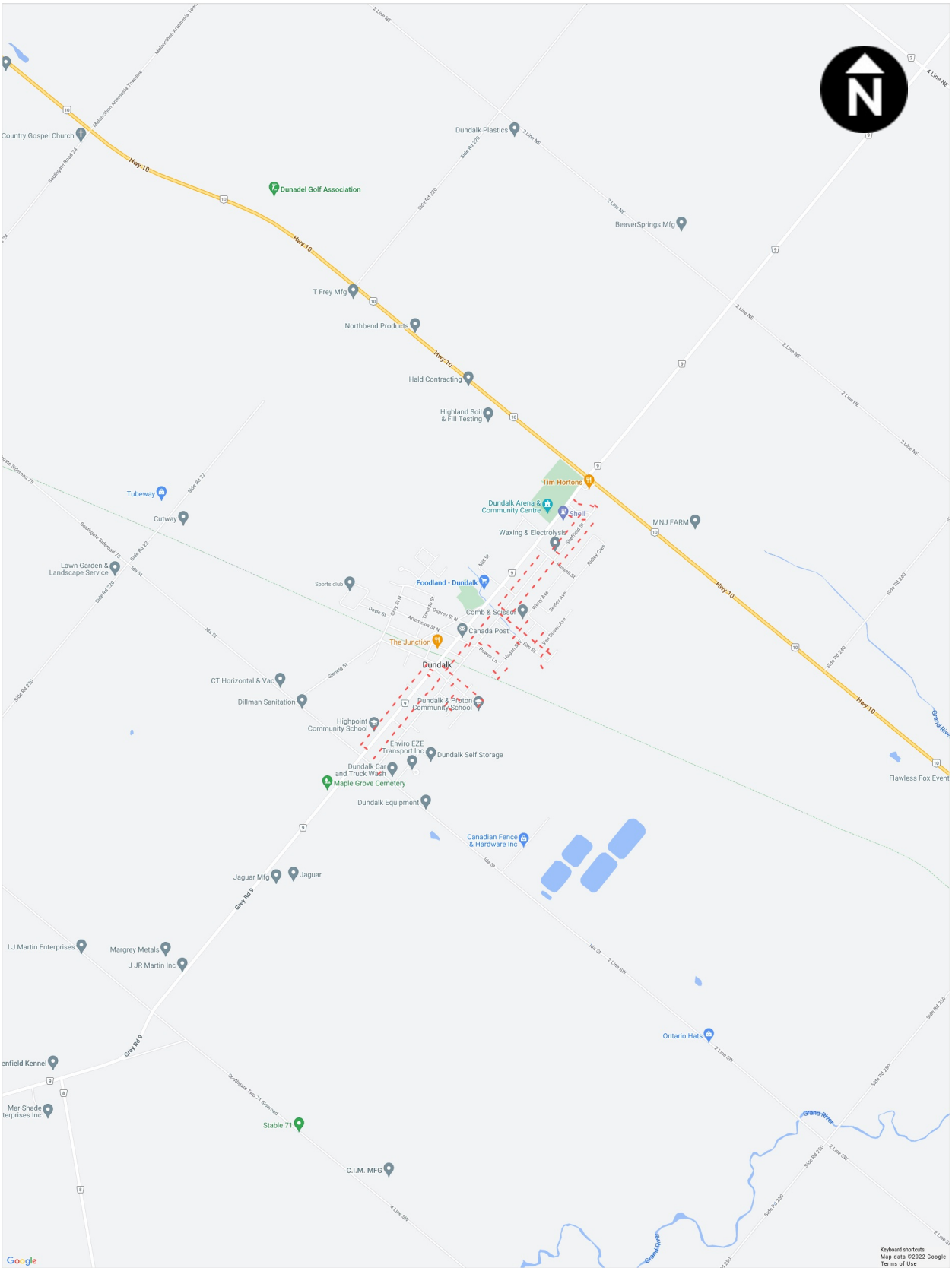
Total Length: 154.64 Lane Kilometres





Unit 125  
Sidewalk Route

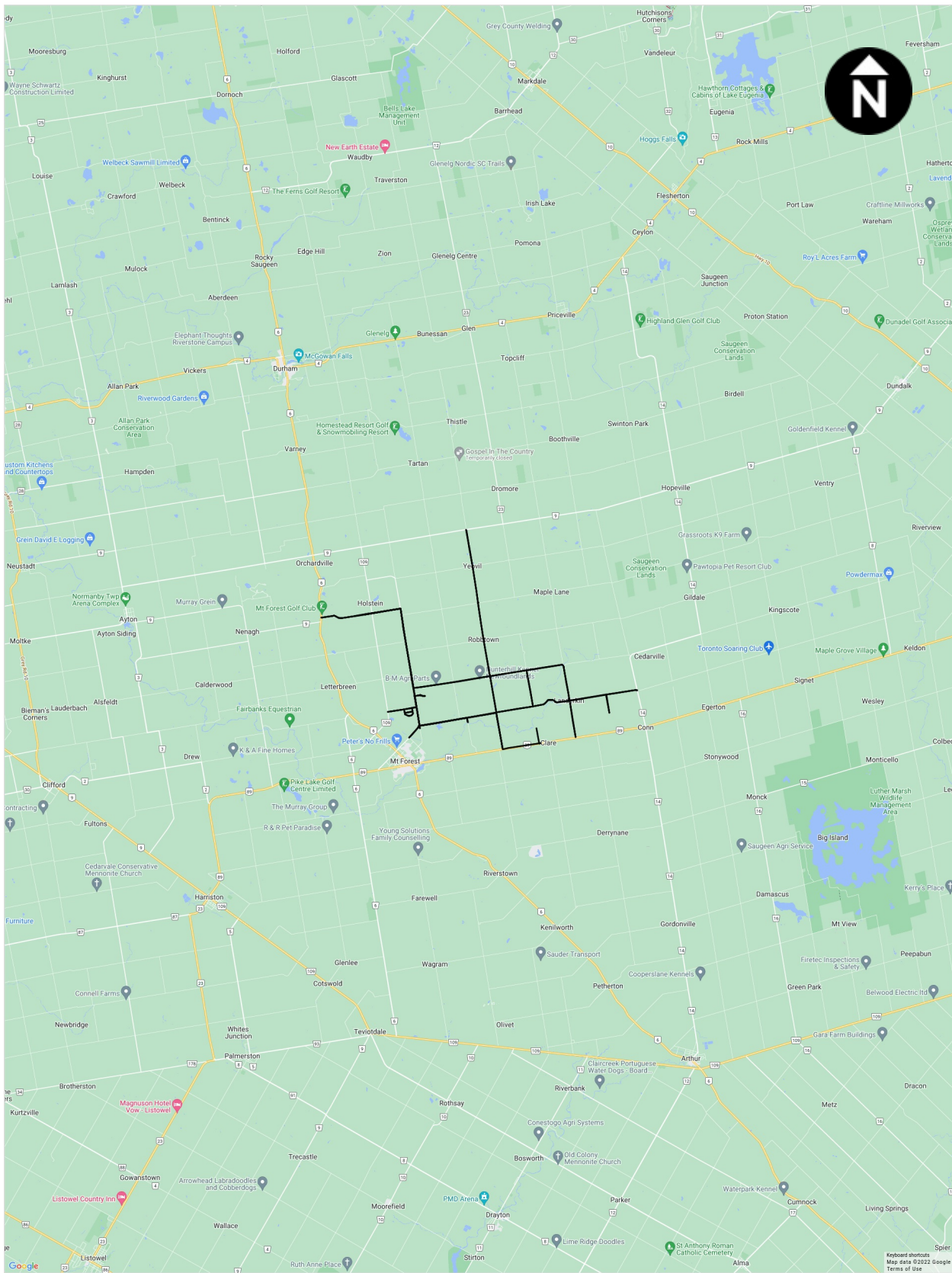
Total Length: 6.5 Lane Kilometres

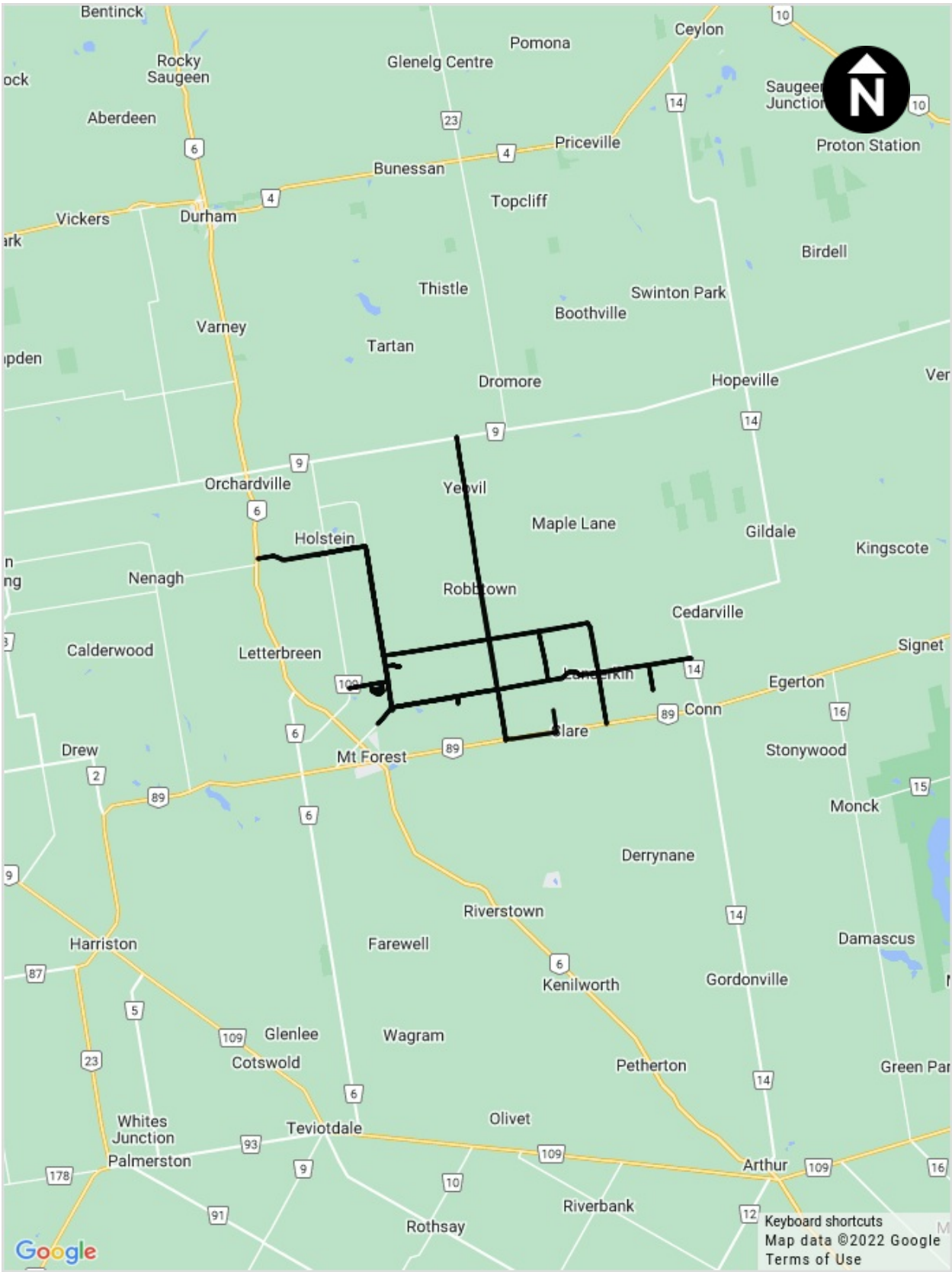




## Roadway Route

Total Length: 305.73 Lane Kilometres

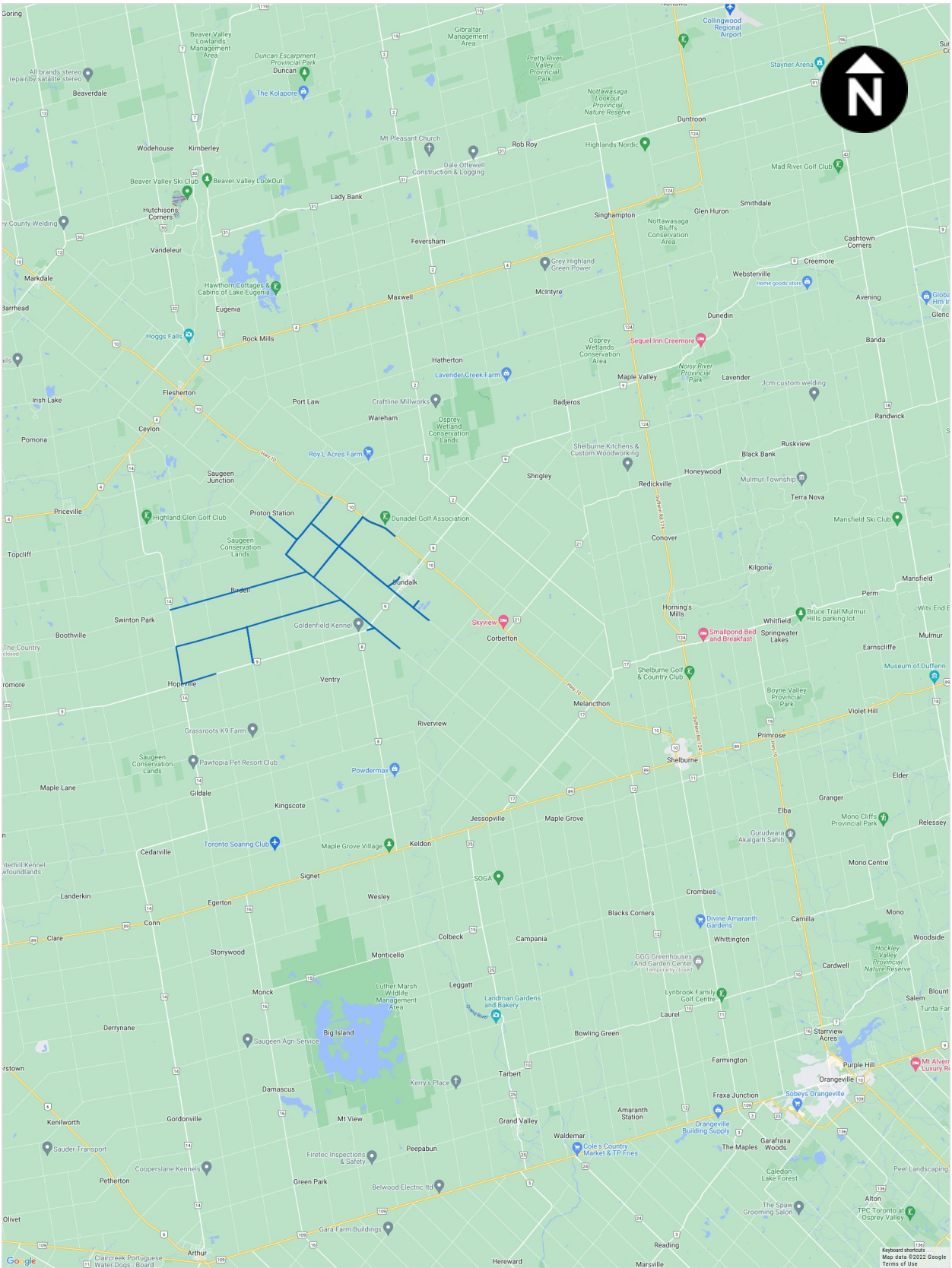






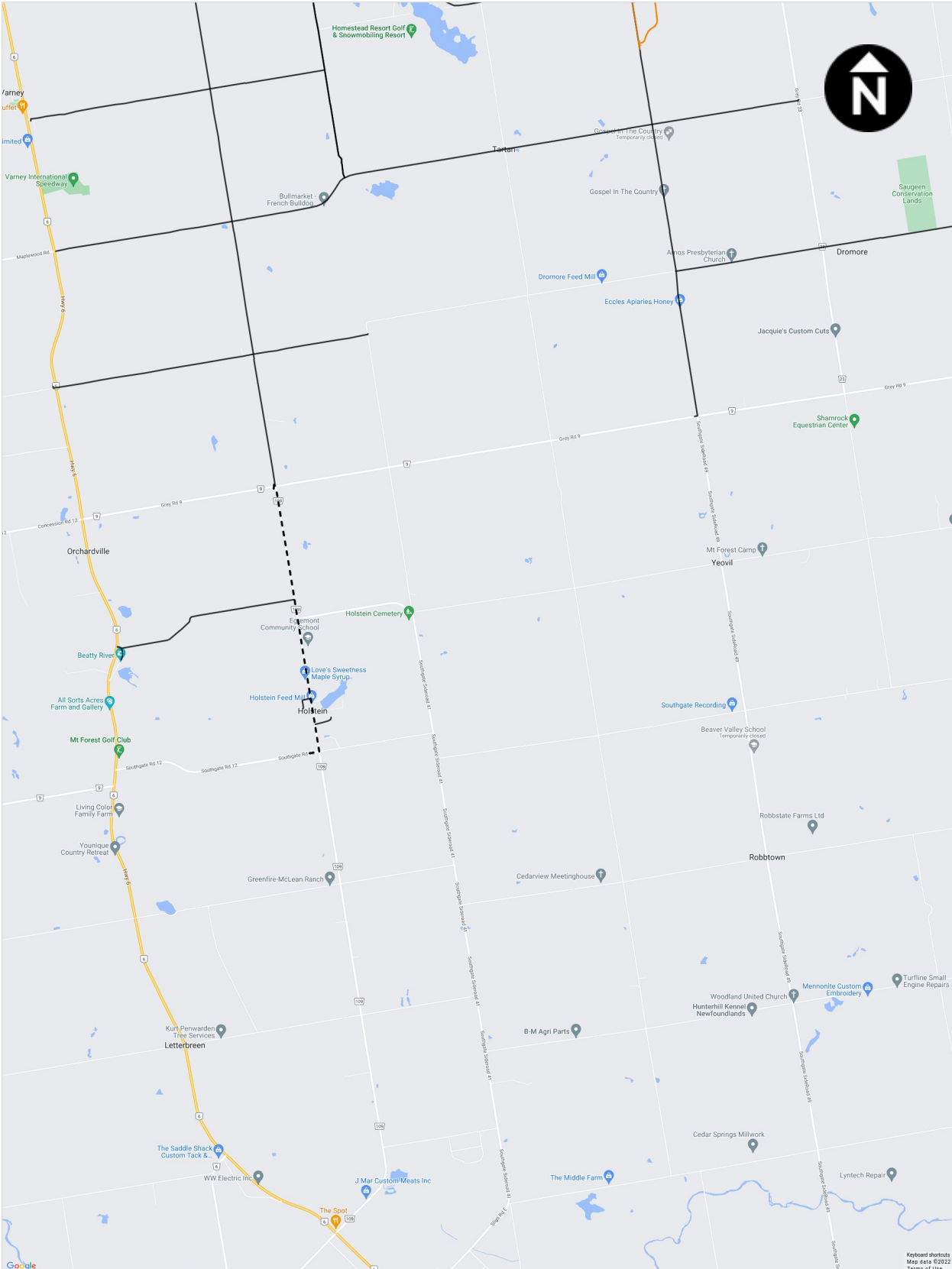
Unit 212  
Roadway Route

Total Length: 169.76 Lane Kilometres



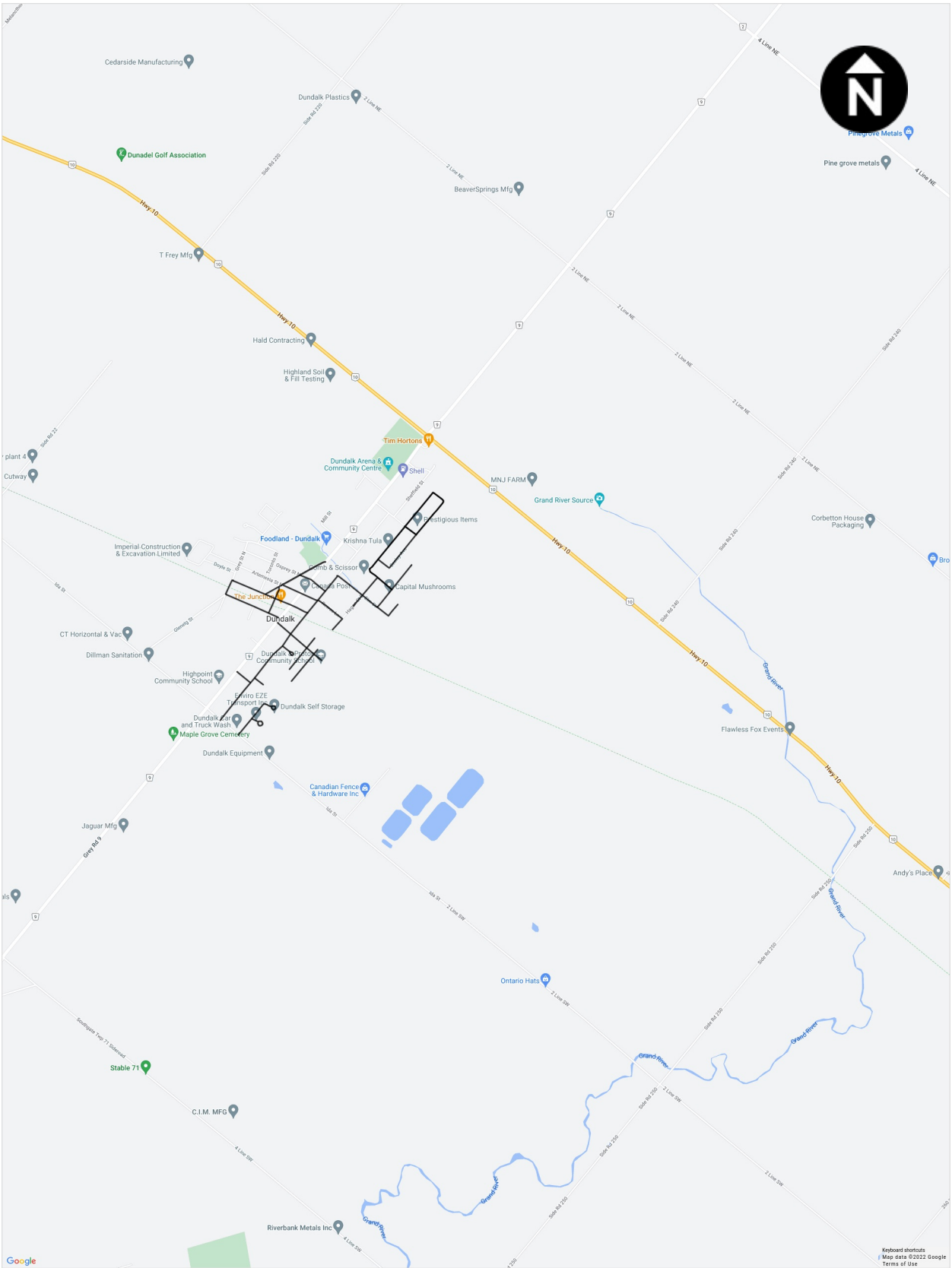
## Roadway Route

Total Length: 127.02 Lane Kilometres



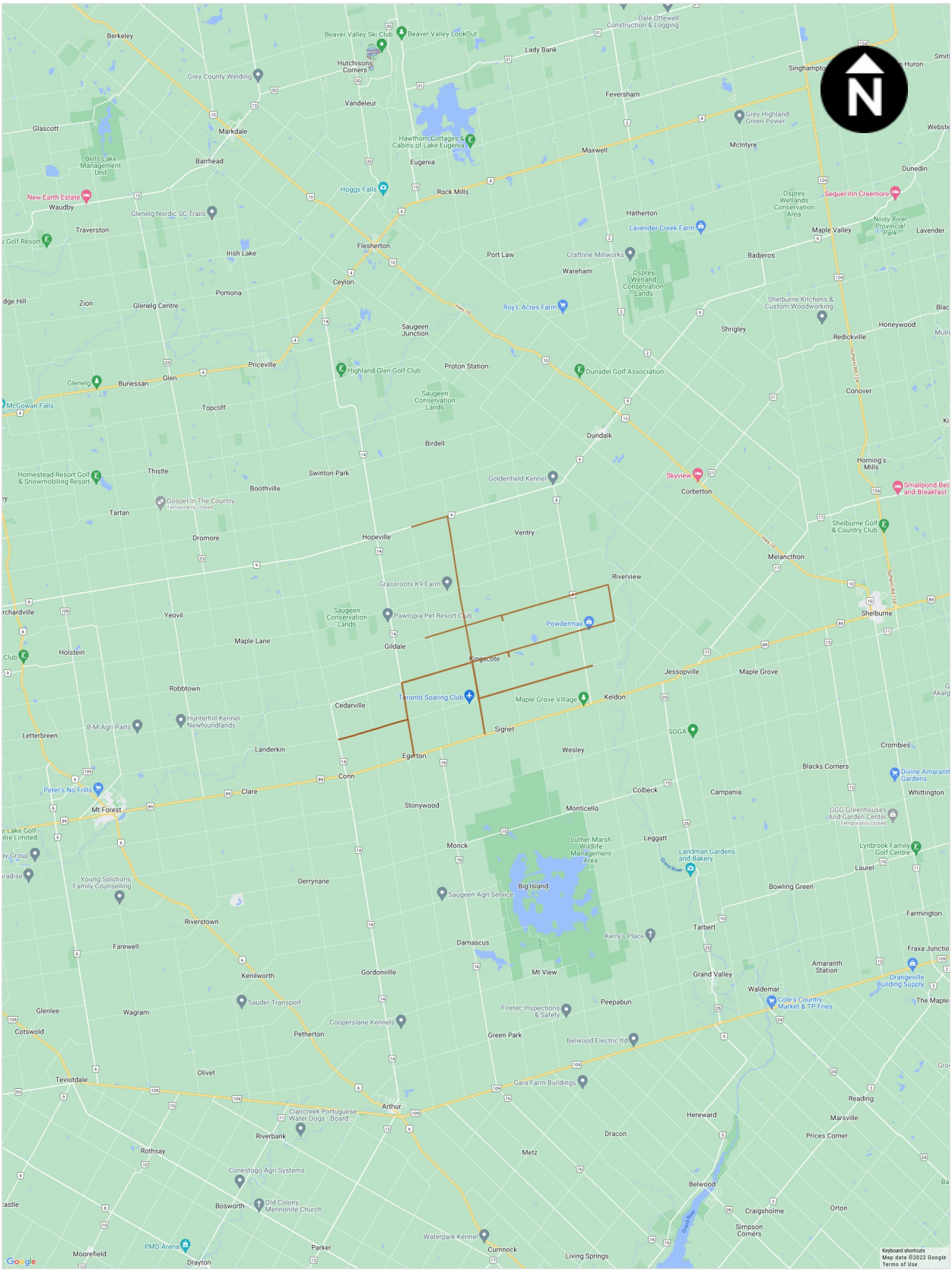






Unit 216  
Roadway Route

Total Length: 156.2 Lane Kilometres

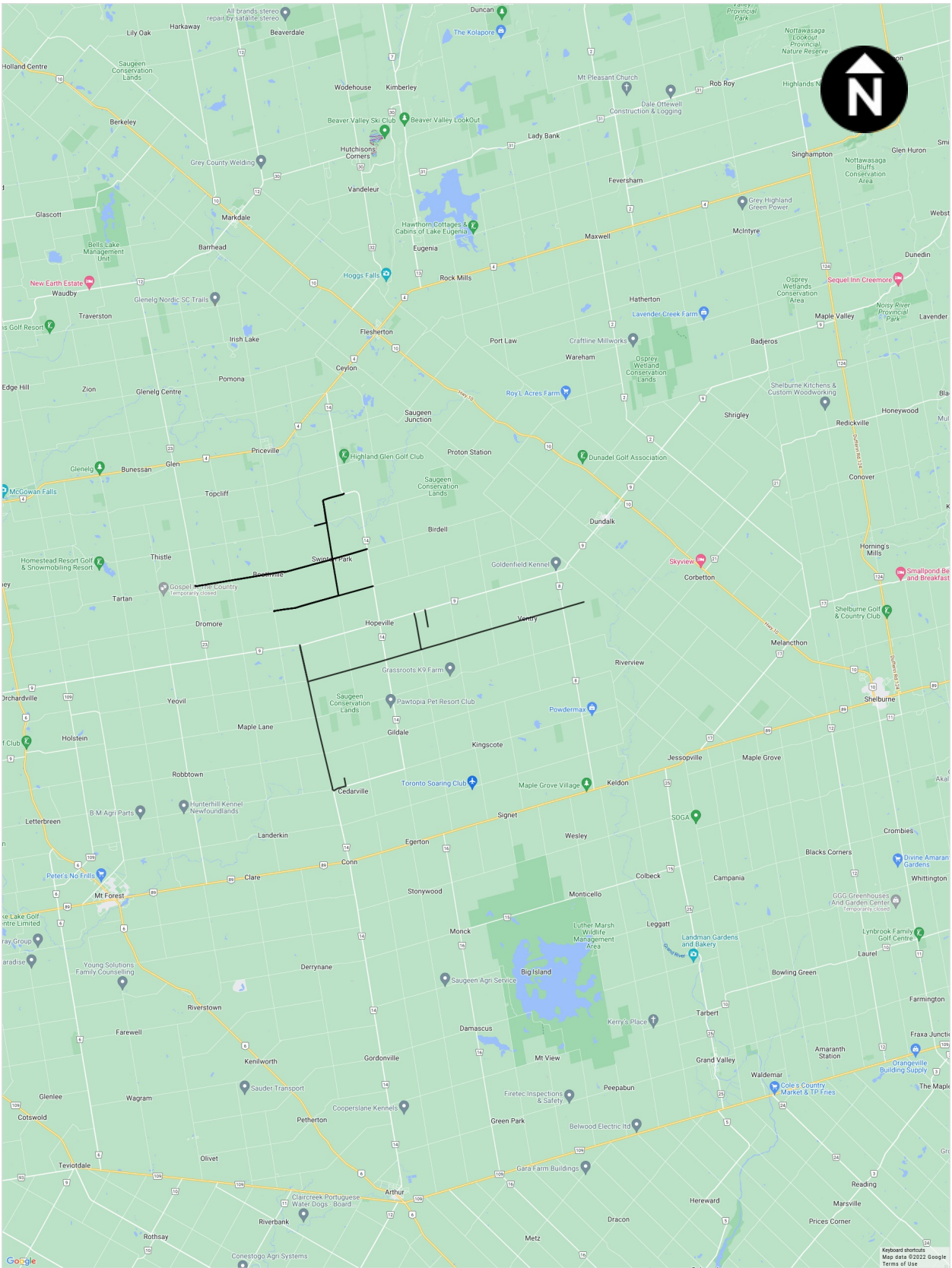






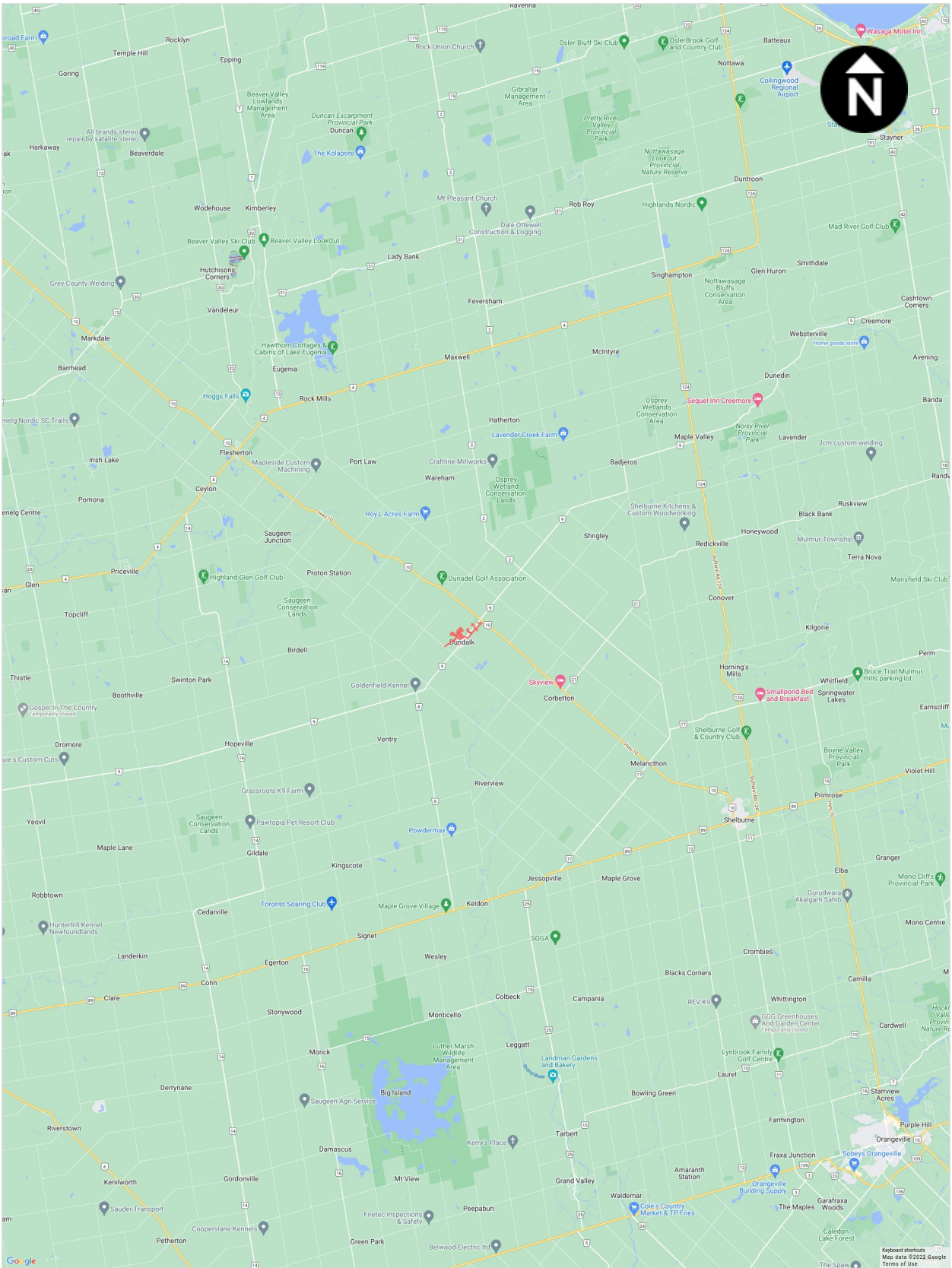
Unit 220  
Roadway Route

Total Length: 138.37 Lane Kilometres



Unit 222  
Roadway Route

Total Length: 13.05 Lane Kilometres







# **Appendix 3**

## Equipment List

<b>Equipment</b>	<b>Type</b>	<b>Owned By</b>	<b>Electronic Controller Installed</b>	<b>Calibration Date</b>	<b>Pre-Wet Capability</b>	<b>Anti-Icing Capacity</b>	<b>Infrared Thermometer installed</b>
Unit 100 - 2004 Volvo Grader 740G	Grader	Township of Southgate	N	N/A	N	N	N
Unit 101 - 2010 John Deere Grader 870G	Grader	Township of Southgate	N	N/A	N	N	N
Unit 105 - 2008 John Deere 870D	Grader	Township of Southgate	N	N/A	N	N	N
Unit 113 - 2014 Trackless	Other	Township of Southgate	N	N/A	N	N	N
Unit 116 - 2016 John Deere Grader 870G	Grader	Township of Southgate	N	N/A	N	N	N
Unit 117 - 2018 Kubota Tractor	Other	Township of Southgate	N	N/A	N	N	N
Unit 121 2020 Trackless	Other	Township of Southgate	N	N/A	N	N	N
Unit 122 - 2020 John Deere Grader 870G	Grader	Township of Southgate	N	N/A	N	N	N
Unit 125 - 2022 Trackless	Other	Township of Southgate	N	N/A	N	N	N
Unit 205 - 2007 International Tandem	Tandem Axle	Township of Southgate	N	N/A	N	N	N
Unit 208 - 2008 Ford F550	Single Axle	Township of Southgate	N	N/A	N	N	N
Unit 209 - 2004 Sterling Tandem Spare Unit	Tandem Axle	Township of Southgate	N	N/A	N	N	N
Unit 212 - 2013 International 7600 Tandem	Tandem Axle	Township of Southgate	Y	2020-Oct-28	N	N	N
Unit 214 - 2014 International Tandem	Tandem Axle	Township of Southgate	Y	2016-Oct-28	N	N	N
Unit 215 - 2016 International S/A	Single Axle	Township of Southgate	N	N/A	N	N	N
Unit 216 - 2017 International 7600 Tandem	Tandem Axle	Township of Southgate	N	N/A	N	N	N
Unit 220 Wester	Tandem	Township of Southgate	N	N/A	N	N	N



In Star Tandem	Axle	of Southgate	N	N/A	N	N	N
Unit 222 - 2021 S/A International	Single Axle	Township of Southgate	N	N/A	N	N	N
Unit 312 - 2016 Ford 150	Other	Township of Southgate	N	N/A	N	N	Y
Unit 315 - 2018 Ford F150	Other	Township of Southgate	N	N/A	N	N	Y
Unit 318 - 2021 Chev 1500	Other	Township of Southgate	N	N/A	N	N	Y
Unit 319 - 2021 Chev 1500	Other	Township of Southgate	N	N/A	N	N	Y

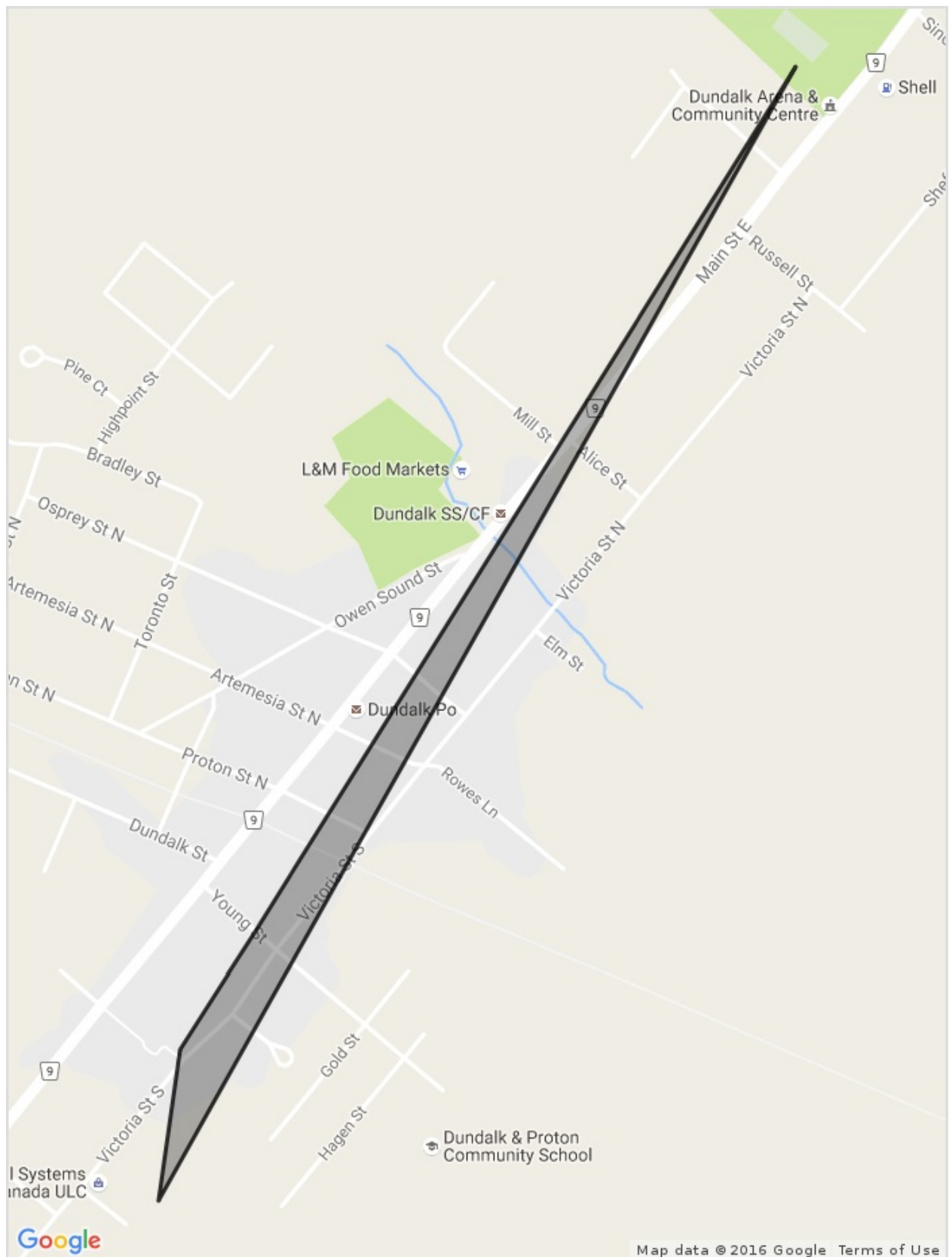
Equipment	Pre-Wet Capability	Anti-Icing Capacity	Other Features	Comments
Unit 100 - 2004 Volvo Grader 740G	N	N		
Unit 101 - 2010 John Deere Grader 870G	N	N		
Unit 105 - 2008 John Deere 870D	N	N		
Unit 113 - 2014 Trackless	N	N	- Has a spreader	
Unit 116 - 2016 John Deere Grader 870G	N	N		
Unit 117 - 2018 Kubota Tractor	N	N		This tractor completes snow cleaning in parking lots
Unit 121 2020 Trackless	N	N	- Has a spreader	
Unit 122 - 2020 John Deere Grader 870G	N	N		
Unit 125 - 2022 Trackless	N	N	- Has a spreader	
Unit 205 - 2007 International Tandem	N	N	- Has a spreader	
Unit 208 - 2008 Ford F550	N	N	- Has a spreader	
Unit 209 - 2004 Sterling Tandem Spare Unit	N	N	- Has a spreader	
Unit 212 - 2013 International 7600 Tandem	N	N	- Has a spreader	
Unit 214 - 2014 International Tandem	N	N	- Has a spreader	
Unit 215 - 2016 International S/A	N	N	- Has a spreader	
Unit 216 - 2017 International 7600 Tandem	N	N	- solid salt application ready,- Has a spreader	
Unit 220 Western Star Tandem	N	N	- Has a spreader	
			- solid salt	

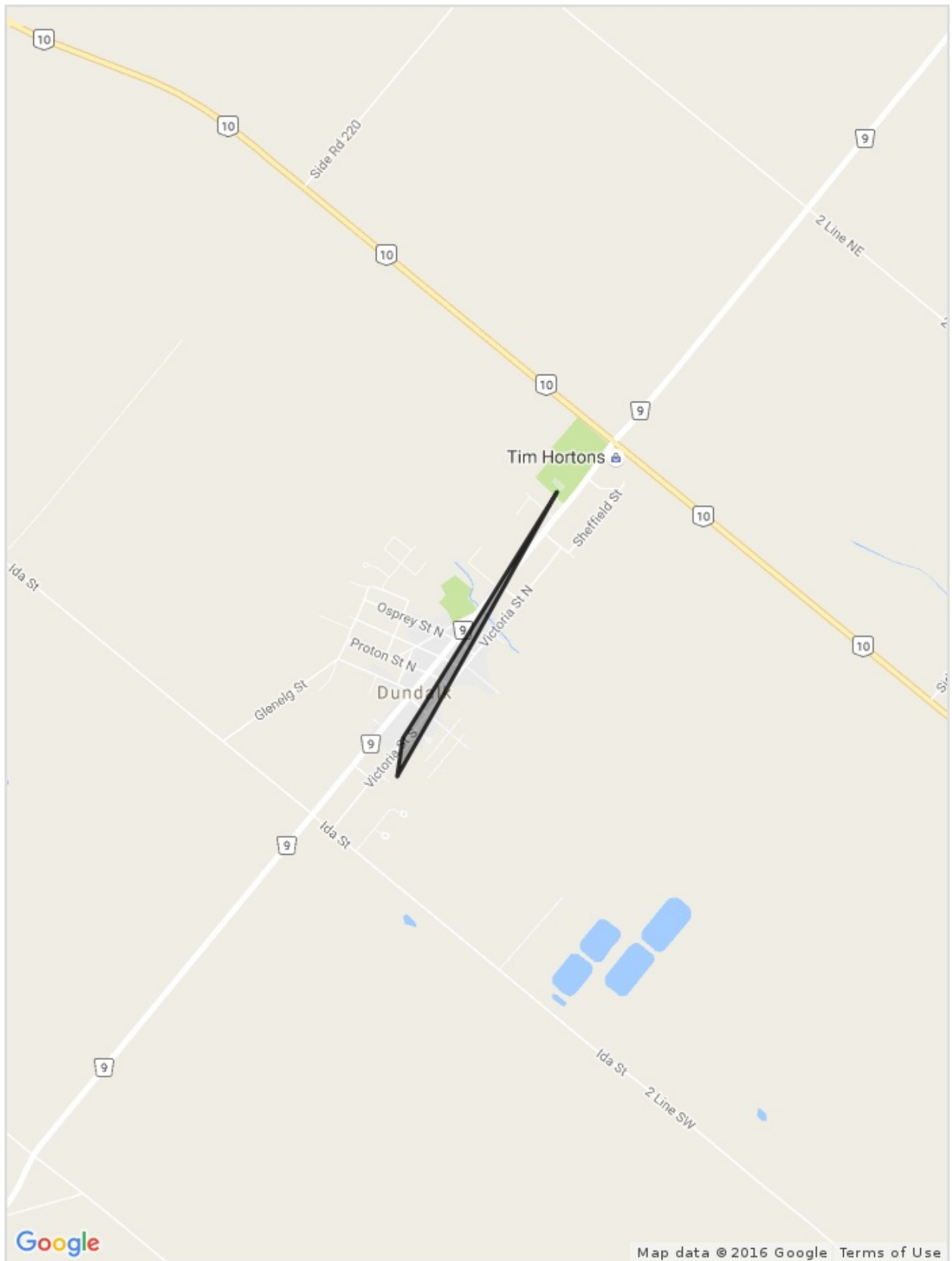
Unit 222 - 2021 S/A International	N	N	- Solid Salt application ready,- Has a spreader	
Unit 312 - 2016 Ford 150	N	N		
Unit 315 - 2018 Ford F150	N	N	- Has mounted mobile RWIS	Foreman Truck 315 patrols all roads within the Municipality
Unit 318 - 2021 Chevrolet 1500	N	N		
Unit 319 - 2021 Chevrolet 1500	N	N		

Legend Y = Yes N = No

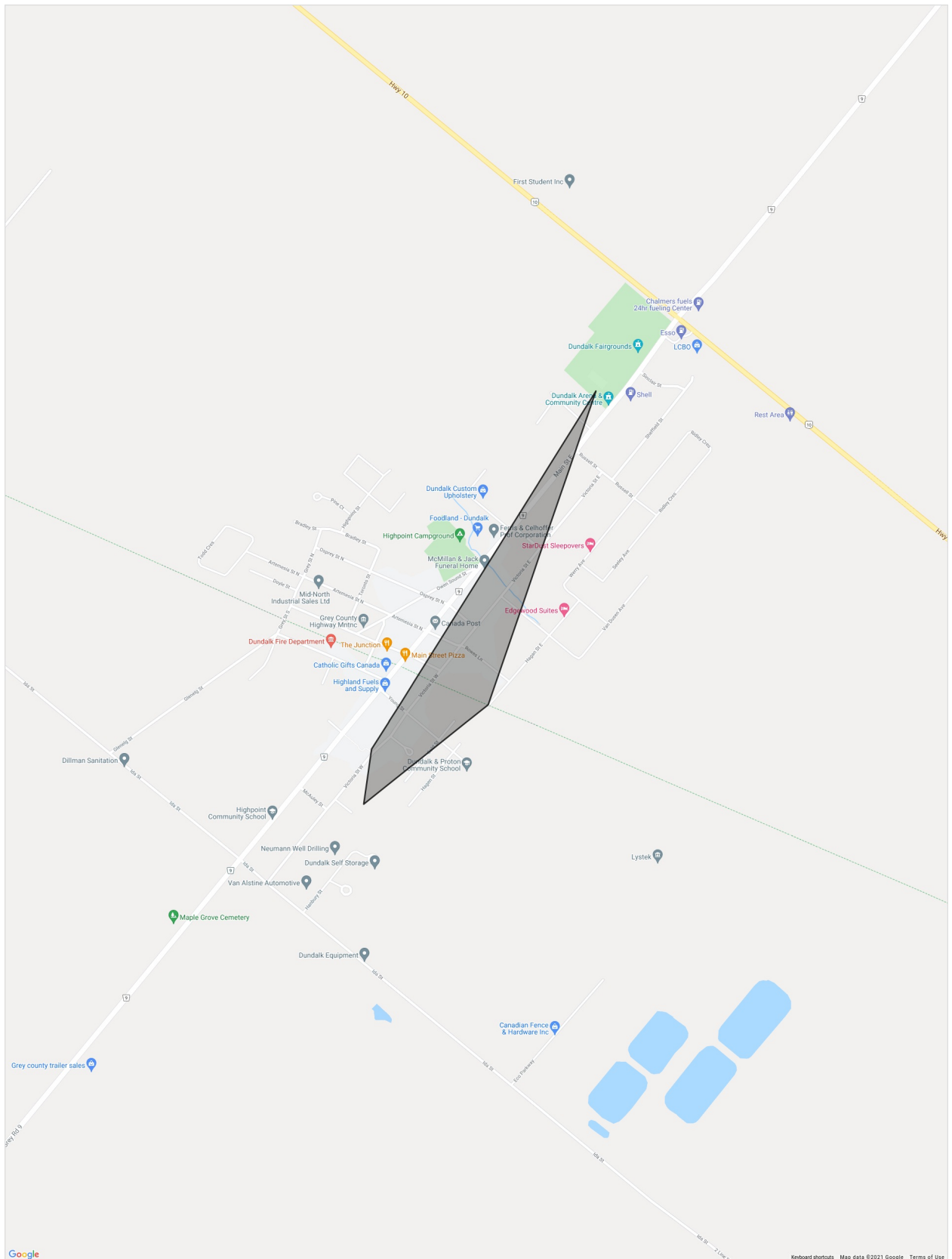
# **Appendix 4-1**

Vulnerable Area  
(Dundalk Wells)









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# **Appendix 5-1**

Media Release  
Road Closed



The Township of Southgate

Date \_\_\_\_\_

Time \_\_\_\_\_

**Media Release**

Due to a severe winter storm *Ontario Provincial Police - Grey County* advise that the following roads in the Township of Southgate are impassable due to (reason, e.g. “drifting and blowing snow”) and have been closed to traffic.

Street Name	From	To

Ontario Provincial Police - Grey County advise that these roads will remain closed until the storm subsides and driving conditions improve.

## **Appendix 5-2**

### Media Release Severe Weather



The Township of Southgate

**Date** \_\_\_\_\_

**Time** \_\_\_\_\_

### **Media Release**

Due to a severe winter storm *Ontario Provincial Police - Grey County* advise that many roads in the Township of Southgate are impassable due to drifting and blowing snow. *Ontario Provincial Police - Grey County* advise that you do not drive until the storm subsides and driving conditions improve.

*(Sometimes it is physically impossible to place signs and barricades to close a road, in this instance use this release when the roads have NOT been physically been closed by the placement of signs and barricades or an officer is present to redirect traffic)*



# **Appendix 6**

## **Operating Instructions and Safety Rules**

The Township of Southgate  
OPERATING INSTRUCTIONS AND SAFETY RULES

1. WORK HOURS

For major storm events, one 12 hour shifts will be established at the discretion of the  
Public Works Foreman / Fleet Manager

2. SAFETY PROCEDURES

Safety is paramount during any snow storm. The following safety rules will be observed by all equipment operators.

A. Check your snow removal equipment prior to leaving the yard and also the following:

- 1) All work lights and emergency lights
- 2) Two-way radio
- 3) Snow plow and frame for damage
- 4) Sander
- 5) Rear view mirrors
- 6) Flags and reflectors
- 7) Windshield wipers
- 8) Heater and defroster
- 9) All necessary mapping for snow and ice removal
- 10) Vehicle Inspection Items
- 11) Liquid dispensing apparatus

B. Report any non-working equipment to a Fleet Manager immediately.

C. Use reasonable caution in operation of snow removal equipment.

D. Drive cautiously.

E. Utilize caution when operating in cramped quarters with parked cars on a street.

F. Know your route and any fixed objects covered by snow.

G. Obey all traffic laws.

H. Do not follow traffic too closely.

I. Slow down prior to turning—your plow will tend to push you where it wants to go.

J. Equipment involved in snow and ice control operations is emergency equipment, but you as the operator, must obey all traffic laws and provide right-of-way to other vehicles.

K. Do not attempt to tow private automobiles—offer assistance by way of radio contact to the Public Works Foreman.

L. Utilize caution when operating deicing equipment. Watch for overhead obstructions.

M. Lower box when necessary.

### 3. ACCIDENTS

Report all moving vehicle accidents immediately to your Supervisor. Depending on the severity of the accident and availability due to storm related issues, the Ontario Provincial Police (OPP) will typically be called to evaluate the accident. Prior to leaving duty on the shift, a Motor Vehicle Accident Report from the OPP should be received. Your Supervisor will attempt to interview the driver at the end of the shift or within 24 hours after return to normal duties.

### 4. CARE AND USE OF EQUIPMENT

The snow plow operator is responsible for routine maintenance of the vehicle. Report any maintenance needed to the Fleet Manager. Check vehicle before and after use for any maintenance needed or damage to equipment. Fill out Operations Daily Inspection Check Sheet. The vehicle should be refuelled at the end of each operator's shift.

### 5. RADIO COMMUNICATIONS

Operators are to take duty instructions from the Public Works Foreman. The Police may report road conditions or other issues to the Public Work's Foreman. It will be the role of the Public Works Foreman to direct all winter maintenance related operations.

### 6. DAILY REPORTS

Upon completion of the shift, operators will be required to fill out a Daily Report sheet. This sheet will document location, date, mileage, and material usage.

### 7. SIGNIFICANT WEATHER EVENT

The Township of Southgate may at times declare a significant weather event. A significant weather event means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within the Township.

A weather hazard means the weather hazards determined by Environment Canada

as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program.

The Township of Southgate may declare a significant weather event relating to snow accumulation on roadways and bicycle lanes; ice formation on roadways and icy roadways; and snow accumulation, ice formation and icy sidewalks.

The standard for treating significant weather events declarations is to:

- Monitor the weather as set out in the Winter Plan and, if deemed practical, deploy resources to address the event starting from the time that the Township deems appropriate to do so.
- Following the end of a weather hazard in respect of which a significant weather event ends, the Township shall declare the end of the significant weather event and address the conditions as in the Winter Plan.
- Declaration of a significant weather event beginning and ending shall be communicated by posting on the Township website, social media, Facebook and municipal511.

# **Appendix 7-1**

## Record of Training



The Township of Southgate

### Record of Training

This statement certifies that the below named individual has successfully completed the in-house Winter Operations Training program as required by The Township of Southgate Winter Operations Plan.

The Winter Operations Training program is comprised of the following modules:

- ☐ Equipment Circle Check
- ☐ Equipment Calibration
- ☐ Record Keeping
- ☐ Health and Safety
- ☐ Level of Service – policies, practices and procedures
- ☐ Identification of Plow Routes – including variations for year to year and issues identified along the route
- ☐ De-icing chemicals – application rates, storage and handling
- ☐ Identification of road salt vulnerable areas and the procedures to follow in those areas
- ☐ Yard and Equipment maintenance

Employee Name \_\_\_\_\_ (Please print name)

Employee Signature \_\_\_\_\_ Date \_\_\_\_\_

Trainer Signature \_\_\_\_\_ Date \_\_\_\_\_

Supervisor Signature \_\_\_\_\_ Date \_\_\_\_\_



## **Appendix 7-2**

Record of Training – Night Patroller



The Township of Southgate

### **Record of Patroller Training**

This certifies that \_\_\_\_\_ (employee name) has successfully completed the in-house Winter Operations –Patroller Training as required by the Township of Southgate Winter Operations Plan.

The Winter Operations –Patroller Training workshop includes the following modules:

- ☐ Weather monitoring and forecasting results including: Road Weather Information System, Value Added Meteorological Service, eutectic temperature, pavement temperature, dew point
- ☐ Winter Shift Schedules
- ☐ Record Keeping
- ☐ Health and Safety
- ☐ Level of Service – policies, practices and procedures
- ☐ Identification of Plow Routes – including variations for year to year and issues identified along the route
- ☐ De-icing chemicals – usage, application rates, storage and handling
- ☐ Identification of road salt vulnerable and/or susceptible areas and the procedures to follow in those areas
- ☐ Call-out procedures
- ☐ Emergency contacts
- ☐ Yard and Equipment maintenance

Employee Name \_\_\_\_\_ (Please print name)

Date of Training \_\_\_\_\_

Location of Training \_\_\_\_\_

Trainer Signature \_\_\_\_\_

Supervisor Signature \_\_\_\_\_

# **Appendix 8-1**

(No Winter Maintenance Roads 2022-2023)

Southgate No Winter Maintenance Roads	
Road Name	Notes
Southgate Rd 04	Grey Rd 8 - East 0.93
Southgate Rd 10	Hwy 6 - Sdrd 33
Southgate Sdrd 07	SG RD 14 - Grey Rd 9
Southgate Sdrd 07	Grey Rd 9 - SG RD 22
Southgate Rd 19	SG RD 12 - SG RD 14
Southgate Rd 19	Hwy 89 - SG RD 10
Southgate Rd 21	SG RD 10 - Grey Rd 9
Southgate Sdrd 41	SG RD 14 - Grey Rd 9
Southgate Sdrd 41	SG RD 04 - Wellington St
Southgate Sdrd 47	SG RD 12 - SG RD 14
Southgate Sdrd 47	SG RD 04 - Hwy 89
Southgate Sdrd 55	SG RD 14 - Grey Rd 9
Southgate Sdrd 57	Grey Rd 9 - SG RD 26
Southgate Sdrd 61	SG RD 10 - Grey Rd 9
Southgate-Glenelg Townline	SG Sdrd 47 east 1.1 km
Southgate Sdrd 47	SG RD 04 - SG RD 08
Southgate Sdrd 55	SG RD 08 - SG RD 10
Southgate Sdrd 55	Hwy 89 - north 200 m
Southgate Sdrd 21	Hwy 89 - north
Southgate-Glenelg Townline	SG Sdrd 61- west 1 km
Southgate Sdrd 19	SG RD 24 - north
Southgate Sdrd 71	SG RD 26 - north
Lake Road	SG RD 26 - west 83 m
Homestead Road	SG RD 26 - east 135 m
Southgate Sdrd 07	Hwy 89 - north

## **Appendix 8-2**

(Dundalk Winter Activity Report)

The Dundalk Public Works Team will complete this form for reporting Winter Activity.



### **DAILY WINTER ACTIVITY REPORT**

Date: \_\_\_\_\_ Location: Dundalk  
 Morning Temperature: \_\_\_\_\_ Snowfall: \_\_\_\_\_  
 Freezing Rain: Yes or No  
 Present Road Conditions: \_\_\_\_\_ Time: \_\_\_\_\_  
 Present Sidewalk Conditions: \_\_\_\_\_ Time: \_\_\_\_\_

Activity	Plow Unit #	Start Time	Finish Time	Signs OK	Quantity of Sand Used	Quantity of Salt Used	Operators Signature Completing Task
Snow Plowed All Streets	215						
Sand/Salt Mixture All Streets							
Sand/Salt Mixture Corners Only							
Sand Salt Parking lots							
Route A - Blown / Plowed							
Route A - Salted							
Route B - Blown / Plowed							
Route B - Salted							
All Sidewalks Sanded/Salted							
Additional sections to route A:							
Additional section to route B:							
Works Garage / Fire Hall Snow Blown							
Proton St Parking Lot Snow Blown							
Credit Union Parking Lot Snow Blown							
Artemesia St. Parking Lot Snow Blown							
Holland St Parking Lot Plowed/Blown							
Proton St Back Alley Snow Blown							
Medical Centre Parking Lot Snow Blown							
Library Parking Lot Snow Blown							
MacIntyre Building Parking Lot Snow Blown							

Activity	Plow Unit #	Start Time	Finish Time	Signs OK	Quantity of Sand Used	Quantity of Salt Used	Operators Signature Completing Task
Townhall Steps Shovelled & Salted							
New Library Sanded/Salted							
Transfer Station Blown/ Sanded							
Arena Parking Lot Plowed & Snow Blown							
Hog Barn Parking Lot Plowed & Snow Blown							
Arena Parking Lot Sanded/Salted							
Hog Barn Parking Lot Entrance Sanded/Salted							

Details of Sign Problems :

1 \_\_\_\_\_ Location: \_\_\_\_\_  
2 \_\_\_\_\_ Location: \_\_\_\_\_  
3 \_\_\_\_\_ Location: \_\_\_\_\_  
4 \_\_\_\_\_ Location: \_\_\_\_\_  
5 \_\_\_\_\_ Location: \_\_\_\_\_

Resolution of above Sign Problems :

1 \_\_\_\_\_ Repaired by: \_\_\_\_\_  
2 \_\_\_\_\_ Repaired by: \_\_\_\_\_  
3 \_\_\_\_\_ Repaired by: \_\_\_\_\_  
4 \_\_\_\_\_ Repaired by: \_\_\_\_\_  
5 \_\_\_\_\_ Repaired by: \_\_\_\_\_

Other Activities Completed :

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