



Winter Operations Planning Document for Town of Plympton-Wyoming (Winter Season 2016-2017)

Approved by Council: 14/12/2016

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A. Purpose

This winter operations plan sets out a policy and procedural framework for ensuring that the Town of Plympton-Wyoming 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 Town of Plympton-Wyoming. 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 Town of Plympton-Wyoming was endorsed by Mayor and Council on the 14 day of December 2017. Please see council resolution in Appendix 12.

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.

MMS stands for O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highway.

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.

Route of Representative Roads is another term used for a patrol route and is a selection of roads used to generally determine the overall conditions of the roads during the winter season.

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.

Superintendent of Public Works is generally the person who is on duty at the time directing the snow/ice removal operations of the Town of Plympton-Wyoming. These individuals may include: Director of Public Works, Superintendent of Public Works, Roads Foreman and/or any other individual who may be assigned the responsibilities of directing and overseeing winter maintenance activities.

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 Town of Plympton-Wyoming 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 Town of Plympton-Wyoming will strive to optimize the use of all winter maintenance materials as they pursue the goal of a safe and sustainable transportation system.

The Town of Plympton-Wyoming public works staff will strive, insofar as reasonably practical, to provide safe winter road conditions for vehicular and pedestrian traffic as set out in the O. Reg. 239/02: Minimum Maintenance Standards for Municipal Highway and within the resources established by the Council of the Town of Plympton-Wyoming.

2. Policy Statement

The Town of Plympton-Wyoming will conduct safe and sustainable snow clearing operations to ensure, insofar as reasonably practical, the safety and mobility of users of the municipal road network, in keeping with applicable provincial legislation. The Town of Plympton-Wyoming will provide efficient and cost effective winter maintenance to ensure, insofar as reasonably practical, 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. Overview of the Town of Plympton-Wyoming

- Type of Organization: Municipal
- Structural Level: Town
- Estimated Population (2011 Consensus): 7576
- Total Area: 318760000.0 Square metres
- Street Address: 546 Niagara St, N0N 1T0, Wyoming, ON
- Telephone: 519-845-3939
- Website: <http://plympton-wyoming.com>
- Superintendent of Public Works: Adam Sobanski, 519-845-3939
- Police:
 - Ontario Provincial Police, Lambton Detachment
 - Primary Phone: 519-882-1011
- Contractors:
 - Lloyd's Paving:
 - Primary Contact Person: Steven Batty, Phone: 519-331-0676
 - Contracted Tasks: Egremont Road recreation trails

4. Winter Maintenance Program

4.1. The System Maintained

The major activities related to winter maintenance are:

- Snow plowing
- Salt /sand application
- Snow removal
- De-icing

The Town of Plympton-Wyoming is responsible for winter maintenance on:

Road Category	Pavement Type and Area Type	Individual Length (Lane Kilometers)	Total Length (Lane Kilometers)
Class 3	Urban	7.0	7.0
Class 4	Rural	26.0	144.0
	Urban	8.0	
	Rural	53.1	
	Rural	56.9	
Class 5	Rural	.4	28.3
	Urban	12.2	
	Rural	2.7	
	Urban	13.0	
Class 6	Urban	9.5	69.4
	Rural	.5	
	Urban	3.3	
	Rural	54.0	
	Urban	2.1	

Recreation Trails: 2.5 kilometres

Sidewalks: 13.0 kilometers

A map of all roads and the associated classes is provided in Appendix 1.

4.2. Level of Service

The Town of Plympton-Wyoming provides the following level of service during the winter maintenance season, as set out in 4.3, in response to a winter event.

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 para. 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

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

Table Ice Accumulation

Class of Highway	Time
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

See Appendix 3B for details

4.2.2. Sidewalk & Recreational Trails Responsibility

The Town of Plympton-Wyoming clears all sidewalks greater than or equal to 1.2 meters in width and the recreational trail along Egremont Road west. Maintained sidewalks and recreational trails are generally cleaned once daily as resources allow. Any sidewalk less than 1.2 meters wide and the recreational trail along Oil Heritage Road are closed for the winter season.

4.2.3. Plowing Private Property

The Town of Plympton-Wyoming generally does not clear snow from private property.

4.3. Winter Season Maintenance

For Operational purposes, the Town of Plympton-Wyoming assumes the winter season commences on 2016-11-15 and is completed by 2017-03-31, 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 Town of Plympton-Wyoming 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 (salt, sand, liquid), replacement parts (for plows, solid and liquid application equipment) and contract equipment (plow trucks, spreader trucks, combination units).

Sometime prior to the winter season the Town of Plympton-Wyoming 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, catch basin, 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 Town of Plympton-Wyoming will:

- Post the winter shift schedule in accordance with the municipality's collective agreement
- 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 33 % 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 Town of Plympton-Wyoming will:

- Have the 66 % 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 as needed to meet MMS.
- Begin patrolling representative roads in all roads/areas that the organization is responsible for as needed to meet MMS.
- Respond to winter events as per the winter operations plan.

4.5. Winter Patrol

During the winter maintenance season, 4.3, Town of Plympton-Wyoming carries out a winter patrol on a route of representative roads twice daily, 7 days a week generally from December 15 to February 28 or as required, to meet MMS. Patrols of representative roads will generally occur early in the morning and in the evening. 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.

Appendix 2A shows the route of representative roads to be patrolled in winter.

Appendix 2B shows a Town of Plympton-Wyoming winter patrol tracking form to be used for all winter patrols.

4.6. Operations

4.6.1. Staffing and Hours of Work

The Town of Plympton-Wyoming has a full time employee assigned to each vehicle used for winter operations. Each vehicle is assigned a route for sanding/salting/plowing. The Town of Plympton-Wyoming adheres to the hours of service as dictated by Highway Traffic Safety Act, Reg. 555/06 (Ontario, Canada).

Staffing for Winter Maintenance				
Employee	Job Title	Reports to Facility	Assigned Routes	Assigned Equipment
Roberto Simone	Roads Foreman	Reece's Corners	Winter Patrol Route	
Dennis Reid	Seasonal Op.	Wyoming	Backhoe Wyoming	Backhoe
Joe Venoit	Operator 3	Wyoming	Sidewalks - Wyo	Sidewalk Plow
John Sharp	Seasonal Op.	Reece's Corners	Winter Patrol Route	Truck 2
Lloyd's Paving	Contractor		Egremont Rd - Trail	
Mark Wilson	Labourer	Reece's Corners	Truck 9	Truck 9
Rob Brooks	Utilities Foreman	Wyoming	Truck 11	Truck 11
Bob Burnley	Operator 1	Reece's Corners	Truck 3	Truck 3
Dave Minielly	Operator 1	Reece's Corners	Truck 6	Truck 6
Greg Atkinson	Operator 2	Reece's Corners	Truck 12	Truck 12
Jim Worsley	Operator 1	Reece's Corners	Truck 2	Truck 2
Robert Tower	Seasonal Op.	Reece's Corners	Winter Patrol Route	
Jeff Scott	Seasonal Op.	Reece's Corners	Winter Patrol Route	

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

- Roads Foreman generally for organizes all winter event responses.
- The Superintendent of Public Works generally oversees the response and provides direction and support as need to ensure compliance with MMS and the document.
- Superintendent of Public Works will receive issues and concerns of the citizens regarding snow and ice control efforts.
- Superintendent of Public Works, through the Roads Foreman, will generally be authority to which the field staff will communicate the field conditions to.
- Superintendent of Public Works, or designate, will be responsible for shift scheduling.
- Public Works staff, under the direction of the Superintendent of Public Works, will (when physically possible) be responsible for providing appropriate signage and or barricade in case a road has to be closed due to severe winter storm.
- Superintendent of Public Works will ensure media releases are sent to local news and radio stations advising of road closures.
- The Director of Public Works shall act as Superintendent of Public Works in their absence and may designate roles and responsibilities to Foremen and staff as appropriate.

4.6.2. Application Rates

The Town of Plympton-Wyoming strives to adhere to MTO Manual MBP-703 for the application of salt and sand to municipal roadways.

4.6.3. Equipment - Winter Maintenance Fleet and Routes

The Town of Plympton-Wyoming provides winter maintenance services on 11 routes, found in Appendix 3, with the equipment listed in **Appendix 7**.

4.6.4. Public Works Facilities

The Town of Plympton-Wyoming provides winter maintenance services from the Public Works facilities listed below.

4.6.4.1. Reece's Corners Public Work Facility

Facility Address: 5819 Oil Heritage Road, N0N 1T0, Wyoming, Ontario
Facility Phone: 519-845-0410

Equipment Storage Details:

- There is storage space available inside of this facility. It presently stores: 3- Tandem Axle Plows, 1- Single Axle Plow, 1- 1 Ton Plow-Sander, 1- Backhoe, 1- Loader, 1- 1 Ton Dump truck, 2- ½ ton Pickups
- There is storage space available outside of this facility. It presently stores: 2- motorgraders

Material Storage Details:

Sand and salt are currently stored in a wood frame shed with an approximate capacity of 500 tonnes.

Site Drainage Details:

- There is not a 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 a road side ditch

4.6.4.2. Wyoming Public Works Facility

Facility Address: 519-521 Front Street, N0N 1T0, Wyoming, Ontario

Facility Phone: 519-845-0149

Equipment Storage Details:

- There is storage space available inside of this facility. It presently stores: 1- single axle Plow, 2- ½ Ton Pickups, 1- Cargo Van, 1- Backhoe
- There is storage space available outside of this facility. No equipment is stored outside at this time.

Material Storage Details:

Less than 10 tonne of salt stored on site in a Quonset Hut.

Site Drainage Details:

- There is not a 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 an enclosed Municipal Drain

4.6.5. Parking Lots

The Town of Plympton-Wyoming provides winter maintenance services to the listed parking lots below.

4.6.5.1. Municipal Office / Foodland

Facility Address:

546 Niagara St, N0N1T0, Wyoming, Ontario

Hours of Operation:

Municipal Office: Monday - Friday 8:30 a.m.–4:30 p.m.

Foodland Grocery Store: Sunday - Saturday 8:00 a.m.–8:00 p.m.

Service Policy:

The noted parking lot is a priority on the Truck 11 plow route. Snow clearing operations are carried out early in the morning and throughout the day due to its heavy use.

- The lot is not used for storage or disposal of snow
- The drainage from this lot is not controlled

4.6.5.2. Wyoming Fire Hall

Facility Address:

530 Main Street, N0N1T0, Wyoming, Ontario

Service Policy:

The noted parking lot is a priority on the Wyoming Backhoe plow route. Snow clearing operations are carried out early in the morning and throughout the day to provide access to emergency responders.

- The lot is not used for storage or disposal of snow
- The drainage from this lot is not controlled

4.6.5.3. Wyoming Fair Grounds

Facility Address:

595 Main St, N0N1T0, Wyoming, Ontario

Hours of Operation:

December 2016	
1	Banquet
6	Card Party (afternoon) + Fair Board Meeting (7:30 p.m.)
8	Scott Woods Concert (7:00 p.m.)
9	Banquet
11	Christmas Party (afternoon)
16	Banquet (all day and evening)
17	Birthday Open House (afternoon)
20	Banquet
31	Wedding
January 2017	
3	Card Party (afternoon) + Fair Board Meeting (7:30 p.m.)
11	Banquet (evening)
16	Fair Board Meeting (7:30 p.m.)
17	Card Party (afternoon) + Banquet (evening)
25	Banquet (all day)
31	Card Party (afternoon)
February 2017	
3	4-H Chili Cook-Off
7	Fair Board Meeting (7:30 p.m.)
14	Card Party (afternoon)
20	Meeting (7:30 p.m.)
28	Card Party (afternoon)
March 2017	
4	Banquet
7	Fair Board meeting (7:30 p.m.)
14	Card Party (afternoon)
18	Wedding
20	Fair Board meeting (7:30 p.m.)
28	Card Party (afternoon)
31	Jimmy the Janitor concert (7:00 p.m.)
April 2017	

4	Fair Board meeting (7:30 p.m.)
11	Card Party (afternoon)
17	Fair Board meeting (7:30 p.m.)
25	Card Party (afternoon)
<i>*Preparations for meals is done the day before the event</i>	

Service Policy:

The noted parking lot is on the Wyoming Backhoe plow route. Snow clearing operations are carried out prior to and during the scheduled use of the facility or once daily if unoccupied.

- The lot is not used for storage or disposal of snow
- The drainage from this lot is not controlled

4.6.5.4. Mandaumin Library

Facility Address:

3019 Confederation line, N0N1T0, Mandaumin, Ontario

Hours of Operation:

Mon– 1:00 p.m.–7:00 p.m., **Tues**– 9:00 a.m.–12:00 p.m., **Wed**– 4:00 p.m.–7:00 p.m,
Sat– 2:00 p.m.–5:00 p.m.

Service Policy:

The noted parking lot is on the Truck 9 plow route. Snow clearing operations are carried out prior to and during the scheduled use of the facility or once daily if unoccupied.

- The lot is not used for storage or disposal of snow.
- The drainage from this lot is not controlled.

4.6.5.5. Camlachie Community Center

Facility Address:

6767 Camlachie Road, N0N1E0, Camlachie, Ontario

Hours of Operation:

December 2016	
9	Cards
10	Cards
11	Cards
13	Cards
16	Luncheon
17	Luncheon
18	Luncheon
22	Luncheon
26	Luncheon
31	New Years Party

Service Policy:

The noted parking lot is on the Truck 7 plow route. Snow clearing operations are carried out prior to and during the scheduled use of the facility or once daily if unoccupied.

- The lot is not used for storage or disposal of snow.
- The drainage from this lot is not controlled.

4.6.5.6. Camlachie Cultural Library and Museum

Facility Address:

6745 Camlachie Road, N0N1E0, Camlachie, Ontario

Hours of Operation:

Mon– 10:00 a.m.-12:00 a.m., 4:00 p.m.-8:00 p.m., **Tues**– 7:00 p.m.-8:00 p.m., **Wed**– 10:00 a.m.-11:00 a.m., 4:00 p.m.-8:00 p.m., **Sat**– 9:00 a.m.-1:00 p.m.

Service Policy:

The noted parking lot is on the Truck 7 plow route. Snow clearing operations are carried out prior to and during the scheduled use of the facility or once daily if unoccupied.

- The lot is not used for storage or disposal of snow.
- The drainage from this lot is not controlled.

4.6.5.7. Camlachie Fire Hall

Facility Address:

6715 Camlachie Road, N0N1T0, Camlachie, Ontario

Service Policy:

The noted parking lot is a priority on the Truck 7 plow route. Snow clearing operations are carried out early in the morning and throughout the day to provide access to emergency responders.

- The lot is not used for storage or disposal of snow.
- The drainage from this lot is not controlled.

4.6.5.8. Cemetery

Facility Address:

450 Isabella Street, N0N1T0, Wyoming, Ontario, Canada

Service Policy:

The noted parking lot is on the Wyoming Backhoe plow route. Snow clearing operations are carried out prior to a scheduled burial or once daily.

- The lot is not used for storage or disposal of snow.
- The drainage from this lot is not controlled.

4.6.6. Snow Removal and Disposal

The Town of Plympton-Wyoming does not have a dedicated disposal site in its jurisdiction.

4.6.7. Weather Monitoring

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

- Meteorological Services:

- **Weather Network -**
<http://www.theweathernetwork.com/weather/canada/ontario/plymptonwyoming>
- **Environment Canada -**
http://www.theweathhttp://weather.gc.ca/city/pages/on147_metric_e.htmlernetwork.com/weather/canada/ontario/plymptonwyoming
- Observations from municipal staff, communication with staff of adjacent municipalities;
- See Appendix 4 - Weather Monitoring Protocol for details

4.6.8. Communications

Maintaining reliable internal communications is a critical component of winter operations. *The Town of Plympton-Wyoming* uses the following:

- All winter maintenance vehicles are equipped with two way communications (radios, cell phone, etc.).
- The Town of Plympton-Wyoming provides an on-call phone which is staffed 24 hours a day, 7 days a week.
- All communications are directed to the on-call Supervisor who then transfers the information to the appropriate person via phone, email or text message.

All citizen issues concerning snow and ice control efforts will be routed to Superintendent of Public Works. The Superintendent of Public Works will determine appropriate follow-up responses to citizen inquiries.

The municipality provides external communication with the general public via:

- Media press releases
- Information posted on the municipality's web site (www.Plympton-Wyoming.ca)
- Other means of providing information on winter maintenance services and salt management practices).

4.6.9. Boundary Street Jurisdiction and Responsibility

The table below outlines the responsibilities of each agency has to the roads bordering with the Town of Plympton-Wyoming. The agencies listed in the table have first response maintenance responsibility to these roads. If the Town of Plympton-Wyoming has its snow routes open and serious problems remain on the boundary streets, The Town of Plympton-Wyoming snow plows may assist based upon the judgement of Superintendent of Public Works, with the exception of Provincial Highways.

Boundary Road	From	To	Responsible for Maintenance
Townsend Line	North Limit	Lakeshore Rd	Town of Plympton-Wyoming
Townsend Line	Lakeshore Road	Brush Road	County of Lambton
Brush Road	Townsend Line	Douglas Line	Municipality of Lambton Shores
Douglas Line	Brush Road	Forest Road	Plympton-Wyoming
Forest Road	Douglas Line	London Line	Province of Ontario

Forest Road	London Line	Churchill Line	County of Lambton
Churchill Line	Forest Road	Oil Heritage Rd	Township of Enniskillen
Churchill Line	Oil Heritage Rd	Mandaumin Rd.	County of Lambton
Mandaumin Rd.	Churchill Line	Lakeshore Rd.	County of Lambton
Mandaumin Rd.	Lakeshore Road	Egremont Rd.	Shared by Town of Plympton-Wyoming and City of Sarnia*

* The Town of Plympton-Wyoming is responsible to maintain the north bound lane

4.6.10. Callout Procedures

Operational decisions will be made by the Superintendent of Public Works or 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 Superintendent of Public Works or designate to respond to a winter event is warranted.

It is vital therefore that the Superintendent of Public Works or designate records the prevalent conditions and relevant information when he/she makes a decision.

The patrol person shall inform the Superintendent of Public Works or Winter Operations Plan Page 22 of 56 designate of changing of road and weather conditions observed in the field. When a winter event response is required the Superintendent of Public Works or designate will contact staff as per the shift schedule or the order of seniority. In the absence of the Superintendent of Public Works or designate the patrol person shall contact the On Call Supervisor who will then initiate a call out in response to a winter event.

4.6.11. Road Closure and Procedures

In the event a road must be closed due to a severe winter storm, Ontario Provincial Police, Lambton Detachment will request signs be placed to close the road. Appropriate signage and barricade will be available at the patrol yard. Upon receiving a request from Ontario Provincial Police, Lambton Detachment to close a road to traffic, the Superintendent of Public Works or his/her designate will organize manpower and equipment to place the signs and barricades. The Superintendent of Public Works or his/her designate will contact the call centre and request that a media release (Appendix 8-A) be sent to the local news and radio stations 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 Superintendent of Public Works or his/her designate will advise Ontario Provincial Police, Lambton Detachment and request Ontario Provincial Police, Lambton Detachment permission to send the media release (Appendix 8-B).

4.6.12. Towing Illegally Parked Vehicles – Declaration Emergency Parking Ban

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 Superintendent of Public Works, or their designee. The Ontario Provincial Police, Lambton Detachment and media will be notified when the parking ban is initiated.

4.6.13. Operating Instructions and Safety Rules

All individuals (whether local staff or contracted) shall abide by operating instructions and safety rules as stated in Appendix 9-A.

4.7. Decommissioning Winter Operations

After the winter season identified in 4.3 expires, the Town of Plympton-Wyoming 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 33 % 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 Town of Plympton-Wyoming provides winter operations training for all staff involved in the delivery of winter services.

In the past year, individuals in the following positions within the organization have been trained:

- Manager(s)
- Supervisor(s)
- Operator(s)
- Patroller(s)
- Labourer(s)

It is compulsory for all staff, including contractor staff, to attend the training session. Staff, including contractors' employees, will verify that the training was received by signing the "Record of Training" included in Appendix 10.

The in-house staff is trained:

- By the Town of Plympton-Wyoming
- Through third-party training services, including:
 - Ontario Good Road Association, www.ogra.org
 - Association of Ontario Roads, www.aors.on.ca

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
- Yard and Equipment maintenance
- Winter Patrolling
- Hours of Work
- Minimum Maintenance Standards
- Weather Monitoring

See Appendix 10 for more details

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:

- CVOR Time Card
- Diary

For Patrollers:

- Winter Patrol Record
- Diary
- Weather

For Supervisors:

- Winter Patrol Records
- Diary
- Incident/Collision Reports
- Equipment Calibration Records
- Materials Purchased

In order to help improve decision-making for maintenance strategy, The Town of Plympton-Wyoming:

- Retains records of salt application rates of your fleets
- Has Automatic Vehicle Location (AVL) system installed on fleet

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.

Records will be forwarded to the Superintendent for retention.

See Appendix 5A and 5B for copy of Protocol and Form

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 Town of Plympton-Wyoming plans to undertake the improvements as listed in Table 1. This list will be review and updated annually.

- Equipment
 - 2016-2017 Season: Install and implement GPS and O&M software
- Facilities
 - 2019-2020 Season: Review and improve salt storage and snow disposal practices.
- Safe and Sustainable Salt Management
 - 2017-2018 Season: Develop and implement standard operating procedures for the application of salt, equipment calibrations and tracking.
- Material Usage
 - 2017-2018 Season: Develop and implement standard operating procedures for the application of salt, equipment calibrations and tracking.
- Documentation
 - 2017-2018 Season: Develop and implement standard operating procedures for the application of salt, equipment calibrations and tracking.

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 Town of Plympton-Wyoming 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 nex winter season and with sufficient lead time to implement any changes, the Town of Plympton-

Wyoming shall train staff on the changes to equipment and/or winter maintenance policies, practices, and procedures.

2011-2012 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 & Materials used:

	Benchmark			% Change Yr to Yr	% Change over BM	Notes
	2011-2012	2014-2015	2015-2016			
Total Snow Accumulation in cm	-	-	-	-	-	
Total Days with measurable snow fall	-	-	-	-	-	
Total Days with Freezing Rain	-	-	-	-	-	
Total Continuous Winter Event Response	-	-	34	-	-	
Total Spot Winter Event Response	-	-	-	-	-	
Total Staff Hours of Winter Maintenance		3021.5	2076	-31%	252%	
Total Road Salt Purchased (Tonnes)	590	1128.89	825.98	-27%	40%	
Total Winter Sand Purchased (Tonnes)	812	2360.35	1992.704	-16%	238%	
Total Winter Events Where MMS Were Met or Exceeded	-	-	34	-	-	
Total Complaints Received Regarding Winter Maintenance	-	-	-	-	-	

7. Additional Details

8. Distribution of this Plan

This Plan shall be distributed to the following:

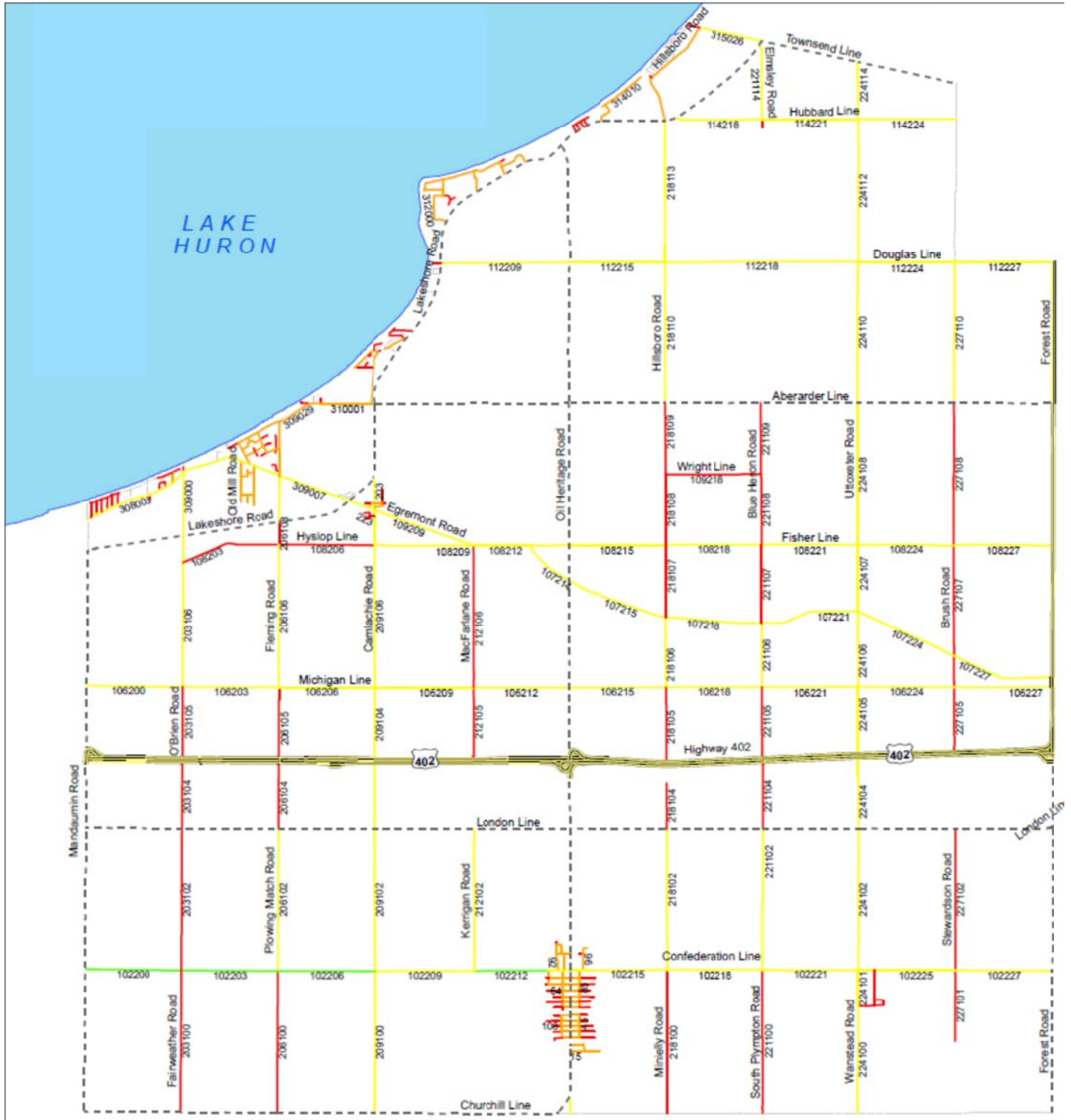
- Mayor and City Council
- Chief Administrative Officer
- Public Works Director
- Public Works Staff

9. Disclaimer

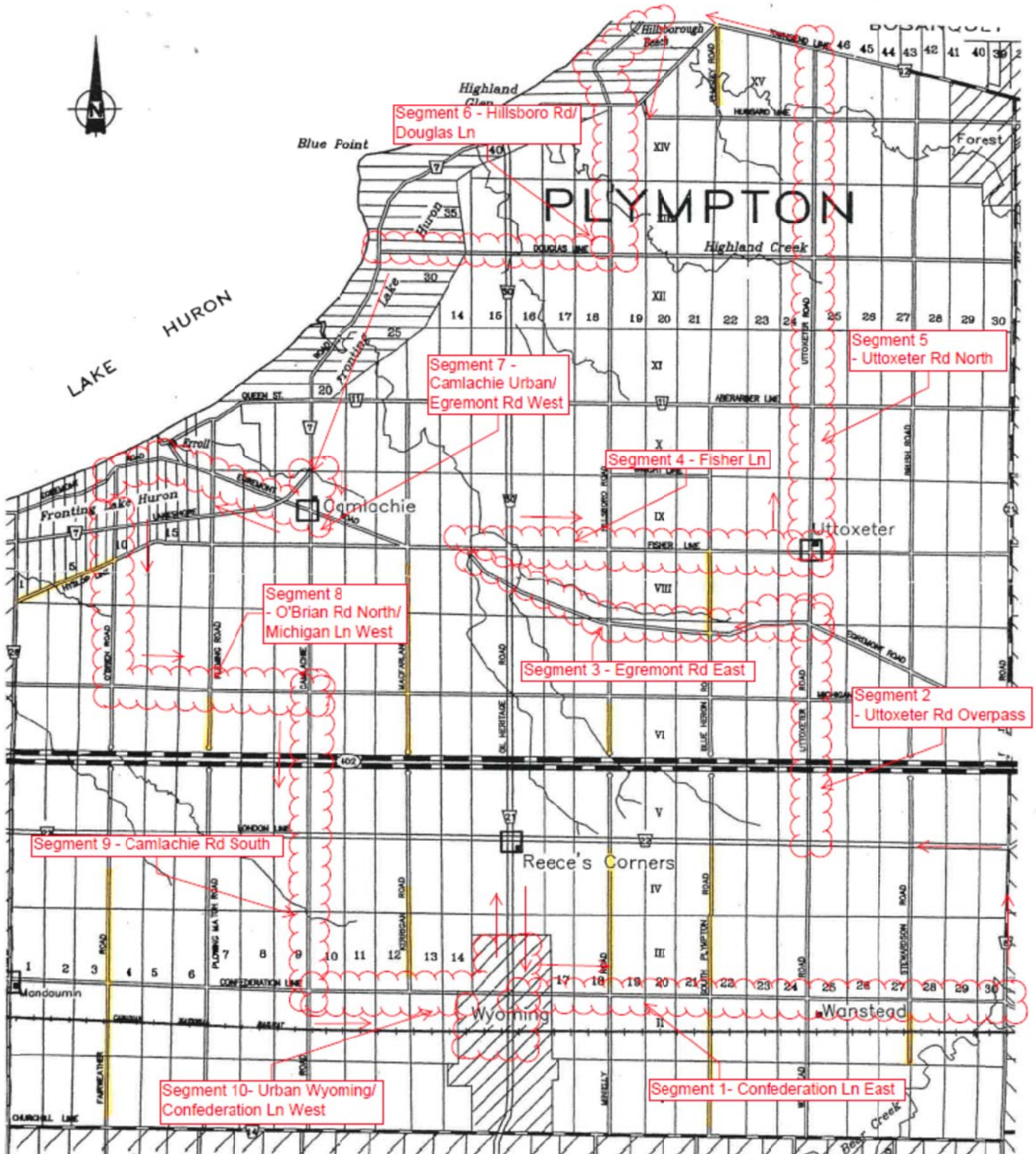
This Manual may be affected by at least one or more of the following events which could delay or alter snow and ice control by the Town of Plympton-Wyoming:

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 – Road Classification Map



Appendix 2A – Winter Patrol Route



Appendix 2B – Winter Patrol Tracking Form



Winter Patrol Tracking Form

Date D/M/Y	Time	Segment	Weather	Wind	Visibility	Temp Air/Sur	Road Conditions	Comments/Concern/Actions
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						
/ /201_	AM	1 2 3 4 5	Clear PC OC Rain FR Snow Fog	D= N E S W Light Mod Strong	Poor Fair Good	/	Bare Wet PIC IC PSP SP PSC SC Drifting	
/ /201_	PM	6 7 8 9 10						

Definitions

Date: is to be recorded in a numerical format, ie 22/12/2014

Time: is recorded at the end of each segment or at the point of comment/concern/action

Segments: are identified in winter patrol map

Weather Conditions: PC = Partly Cloudy, OC = Overcast, FR = Freezing Rain. Select the most appropriate condition. You may select multiple conditions

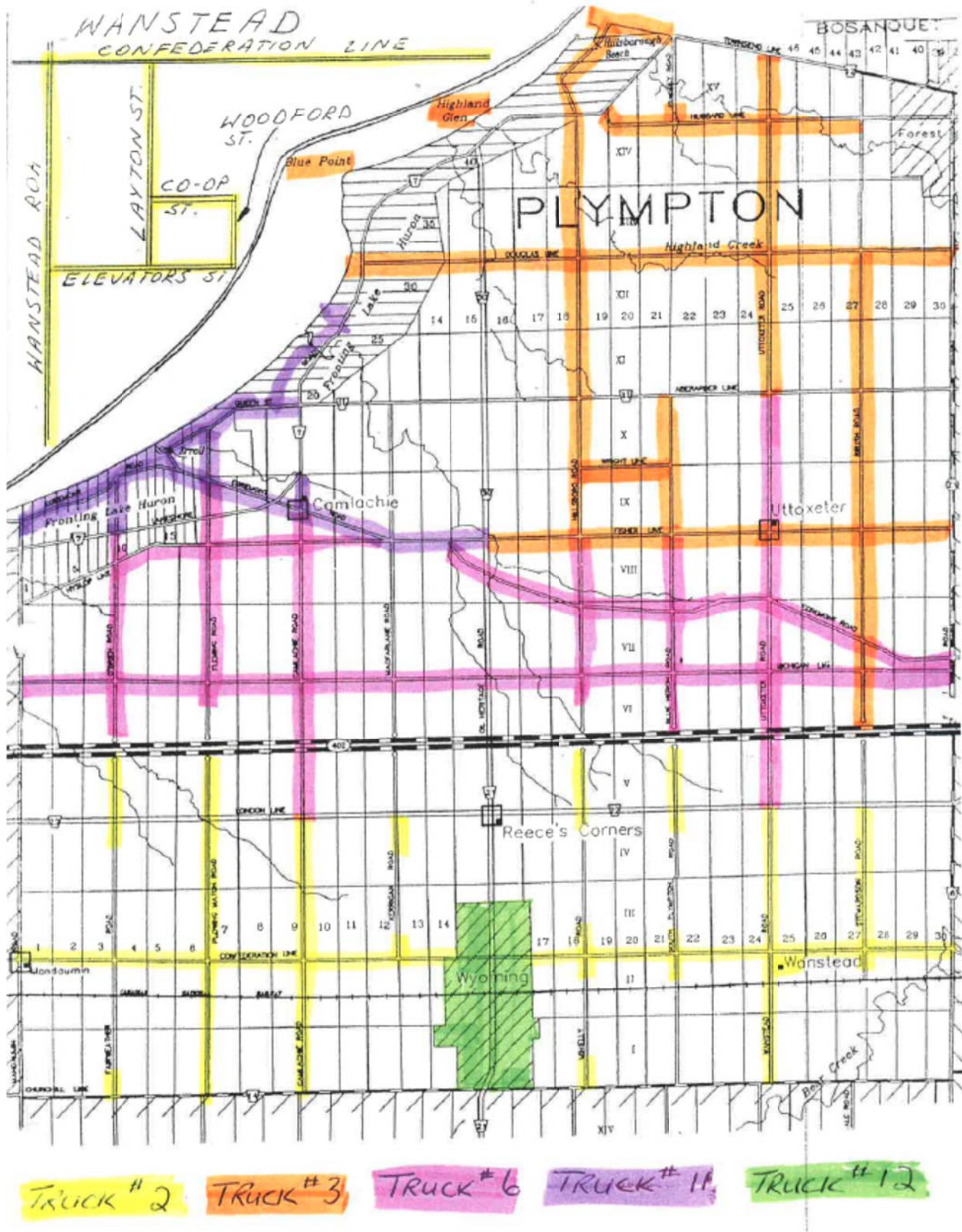
Wind: D= Direction, N = North, E = East, S = South, W = West, Mod = Moderate. Select the most appropriate description. You may select multiple directions ie NE = North East

Temperature (Temp): The temperature is to be recorded in Celsius. Air temperature (**Air**) is to be obtained using a mobile reading device (vehicle mounted/hand held) or a forecasting service (radio/internet). Road surface temperature (**Sur**) is to be and obtained using a mobile reading device (vehicle mounted/hand held).

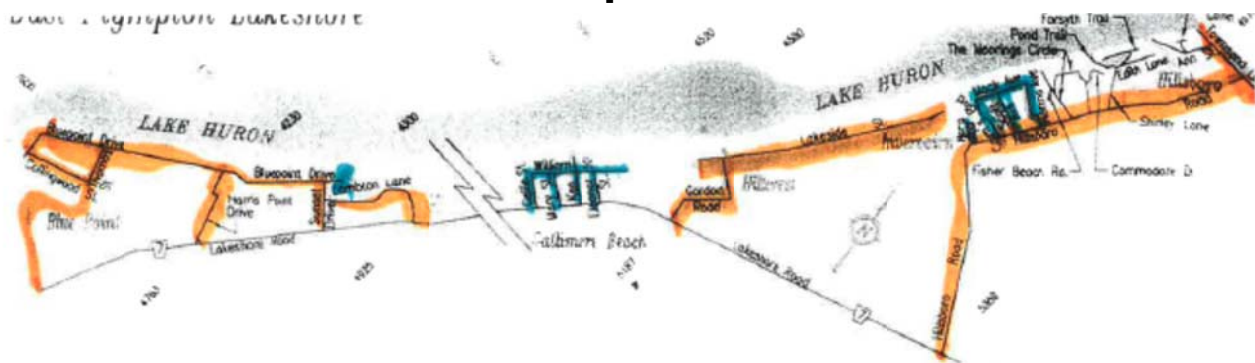
Road Conditions: PSC = Partially Snow Covered, SC = Snow Covered, PSP = Partially Snow Packed, SP = Snow Packed, PIC = Partially Ice Covered, IC= Ice Covered and Other = described in comments. Select the most appropriate condition. You may select multiple conditions.

Comments/Concerns/Actions to include an approximate location such as a street address or cross road (IE: Large 1m drifts from 789 to 1234 Michigan Ln, Forman contacted)

Appendix 3A – Plow Route Map 1



Appendix 3A – Plow Route Map 2



MAP 11
Central Plympton Lakeshore



MAP 12
Camlachie



MAP 13
West Plympton Lakeshore



LEGEND

KING'S HIGHWAY		ONTARIO PROVINCIAL POLICE	CONSERVATION AREAS
COUNTY ROAD		HOSPITAL	MUNICIPAL OFFICE
MUNICIPAL ROAD		AIRFIELD	COUNTY ADMINISTRATION
NORTH-SOUTH NUMBERS			

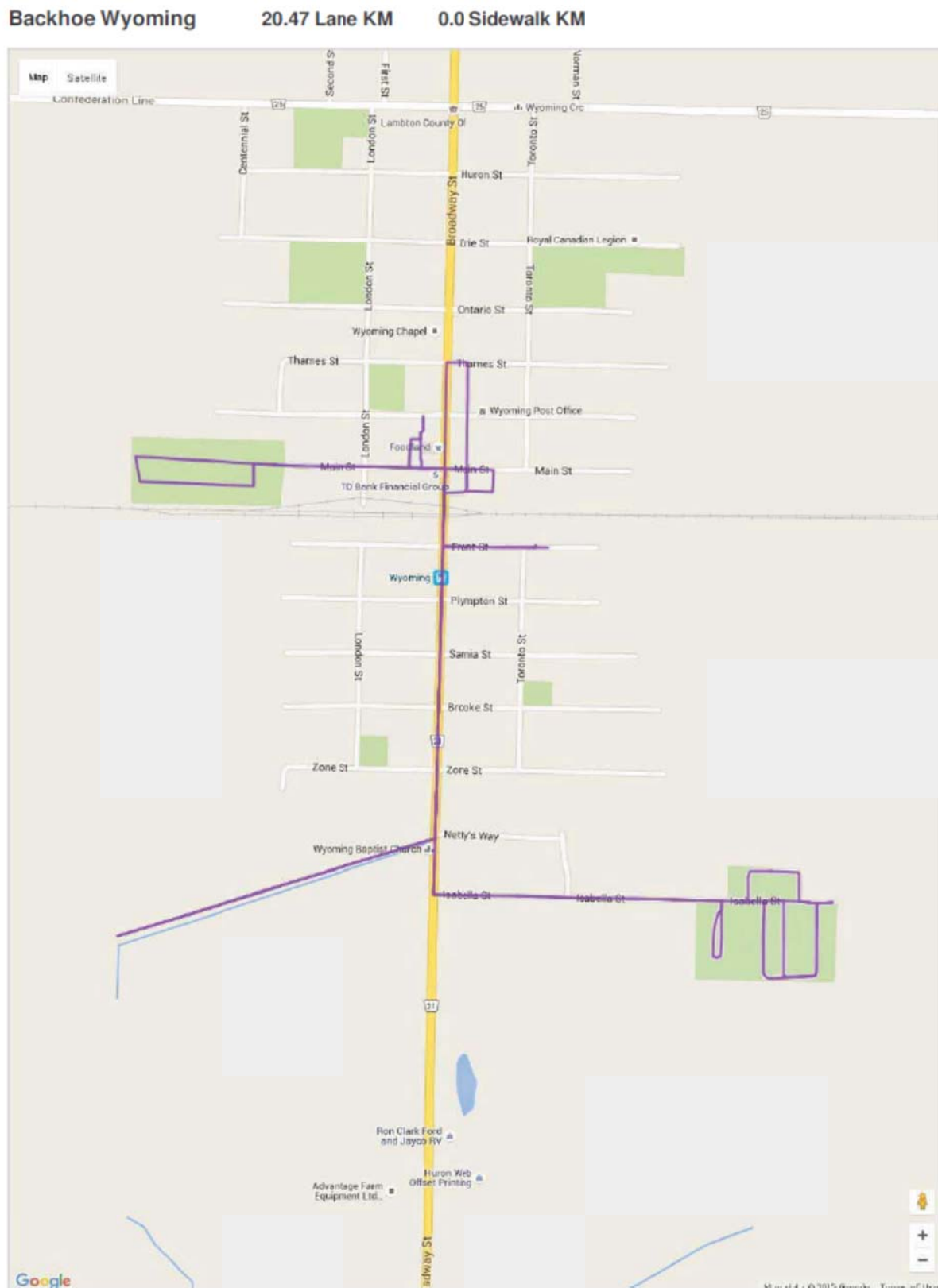
TRUCK # 3

TRUCK # 6

TRUCK # 7

TRUCK # 11

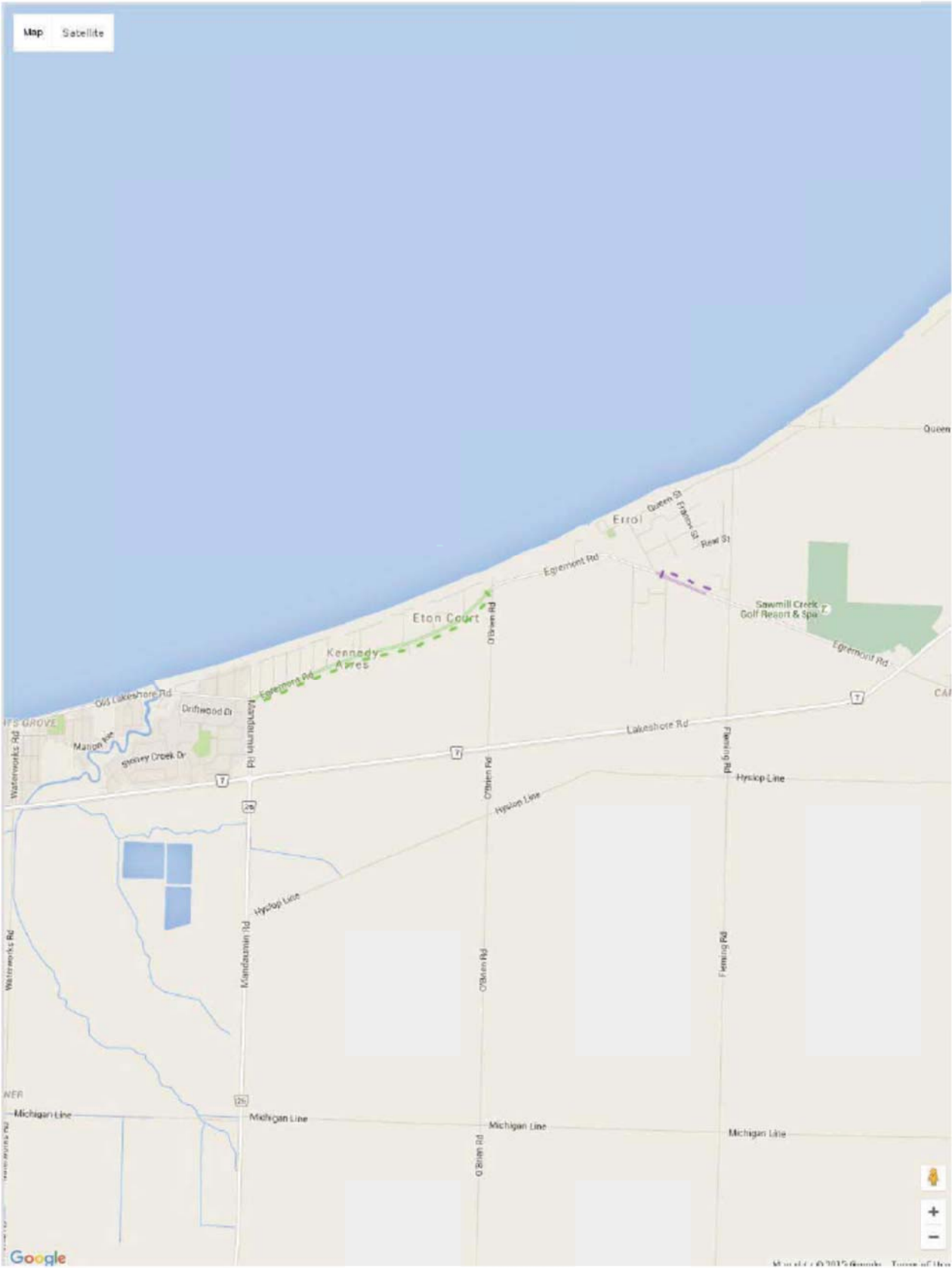
Appendix 3B – Sidewalk Plow Route

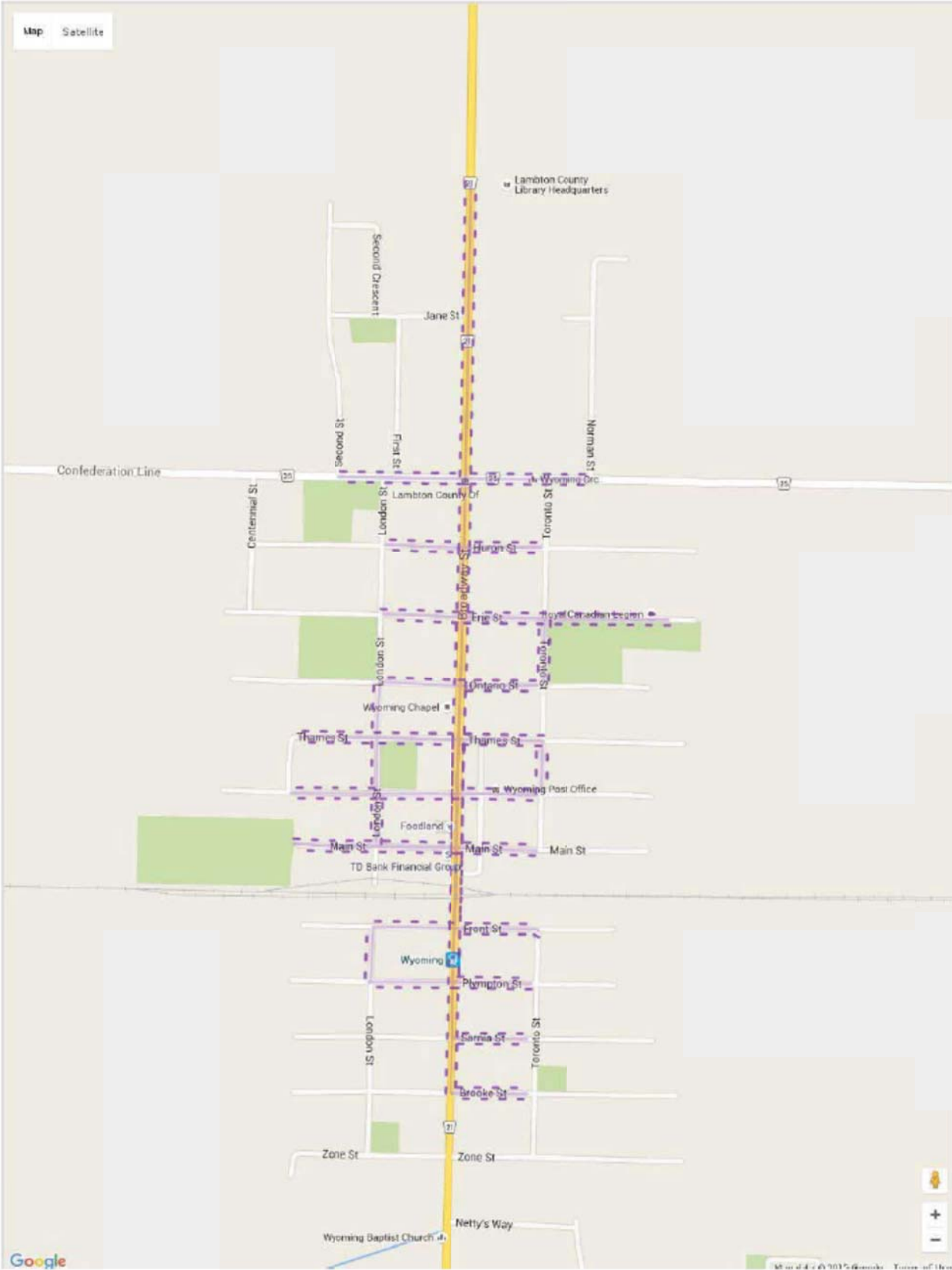


Sidewalks Egremont
Road

0.0 Lane KM

2.48 Sidewalk
KM





Appendix 3B – Snow Plow Route Priority Protocol



Snow Plow Route Priority Protocol as of November 1, 2016

The following is a general guideline to be used when determining winter maintenance priorities:

1. Paved roads with high traffic counts or road classification
2. High risk areas (low visibility, steep grades, prone to drifting or icing)
3. Urban areas
4. Rural areas with low traffic or road classification

When determining winter maintenance priorities, O. Reg. 239/02: MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS must always be adhered to.

Appendix 4 – Weather Monitoring Protocol



Weather Monitoring Protocol as of November 1, 2016

The forecast will be monitored by the On-Call Supervisor (OCS) which may be the Superintendent of Public Works, Roads Foreman, or Utilities Foreman, using the Snowman/SimpleCity application from Operasoft and Frank Cowan Co. The application can be accessed at:

<http://snowman.operasoft.ca/>

Training on the Snowman/SimpleCity application will be provided to all winter operations staff.

Weather monitoring will be carried out three times daily during the winter season as per O. Reg. 239/02: Minimum Maintenance Standard for Municipal Highways.

Appendix 5A – Winter Event Tracking Protocol



Winter Event Tracking Protocol as of November 1, 2016

Winter Events shall be tracked by each Foreman by documenting winter maintenance activities performed by themselves and staff under their direction in their daily diary and complete the attached Winter Event Tracking Form.

The Winter Event Tracking Forms shall be provided to Superintendent of Public Works at the end of each winter season.

For the purposes of Winter Event Tracking Form the following definitions apply as described in the Town of Plympton-Wyoming Winter Operation Plan:

Winter Event is a weather condition affecting roads such as snowfall, wind blown 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 manpower and equipment that plow/salt/sand the entire system.

Spot Winter Event Response is a response to a winter event with only a part deployment of manpower 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.

Appendix 5B – Winter Event Tracking Form



Town of Plympton-Wyoming

Winter Event Tracking Form 2016/2017

October 2016							November 2016							December 2016						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
						1			1	2	3	4	5					1	2	3
2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31
30	31																			

January 2017							February 2017							March 2017						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7				1	2	3	4				1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25
29	30	31					26	27	28					26	27	28	29	30	31	

April 2017							May 2017							June 2017						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
						1		1	2	3	4	5	6					1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	
30																				



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.
TOTAL 2016/2017 = _____



Spot Winter Event Response is a response to a winter event with only a part deployment of manpower and equipment or with full deployment to only part of the system.
TOTAL 2016/2017 = _____

Appendix 6 – Traffic Accidents, Incidents and Complaints Tracking Protocol



Traffic Accidents, Incidents and Complaints Tracking Protocol as of November 1, 2016

All know/received Accidents, Incidents and Complaints on or regarding Town of Plympton-Wyoming Roads are to be documented in daily diaries and the details of each reported to The On-Call Supervisor (519-331-2068) as soon as reasonable possible. The OCS will review the details to determine a course of action and forward the information to the Customer Service Clerk to be logged. Person wishing to lodge a complaint shall be directed to contact the Municipal Office during regular business hours on the OCS if the complaint is of an urgent nature.

Appendix 7 – Equipment List

Equipment	Type	Owned By	Electronic Controller	Calibration Date	Pre-Wet Capability	Anti-Icing Capacity	Infrared Thermometer Installed	Route	Location	Operator
Backhoe 1	Other	Town of P.W.	No	N/A	N	N	N	Backhoe Wyoming	Wyoming	Dennis Reid
Grader 1*	Grader	Town of P.W.	No	N/A	N	N	N		Reece's Corners	
Sidewalk Plow	Other	Town of P.W.	No	N/A	N	N	N	Sidewalks Wyoming	Wyoming	Joe Venoit
Sidewalk Plow	Other	Contractor	No	N/A	N	N	N	Egremont Rd. Rec. Trail	N/A	Lloyd's Paving
Truck 11	Single Axle	Town of P.W.	Yes	22-09-16	N	N	N	Truck 11	Wyoming	Rob Brooks
Truck 12	Single Axle	Town of P.W.	Yes	22-09-16	N	N	N	Truck 12	Reece's Corners	Greg Atkinson
Truck 2	Tandem Axle	Town of P.W.	Yes	22-09-16	N	N	N	Truck 2	Reece's Corners	Jim Worsley
Truck 3	Tandem Axle	Town of P.W.	Yes	22-09-16	N	N	N	Truck 3	Reece's Corners	Bob Burnley
Truck 6	Tandem Axle	Town of P.W.	Yes	22-09-16	N	N	N	Truck 6	Reece's Corners	Dave Minielly
Truck 9	Other	Town of P.W.	Yes	N/A	N	N	N	Truck 9	Reece's Corners	Mark Wilson
Truck 7**	Other	Town of P.W.	Yes	N/A	N	N	Y			
Truck 1**	Other	Town of P.W.	Yes	N/A	N	N	N			

*Back-up for Heavy Snow

**Patrol Truck

Appendix 8A – Road Closed Media Release



To: Ontario Provincial Police – Lambton Detachment
Camlachie, Wyoming & Forest Fire Departments
CCAC
Marcotte Disposal
School Board Transportation
Hydro One
Blackburn Radio Sarnia
OMI

From: Plympton-Wyoming Public Works Department

Re: Road Closure Notice

Date: November 4, 2016

ROAD CLOSURE NOTICE

Please be advised that **Queen Street** will be closed to traffic between Fleming Road and Frances St. to allow for drain repairs.

This area will be closed from approximately November 7th to November 8th, 2016.

Emergency vehicles, school buses, farming equipment and garbage/recycle trucks **will not** be able to pass through the construction zone.

Local traffic will have restricted access but should expect delays.

The Town of Plympton-Wyoming apologizes for any inconvenience.

Public Works Department
Town of Plympton-Wyoming

Appendix 8B – Severe Weather Media Release

Date _____

Time _____

Media Release

Due to a severe winter storm Ontario Provincial Police, Lambton Detachment advise that many roads in the Town of Plympton-Wyoming are impassable due to drifting and blowing snow. Ontario Provincial Police, Lambton Detachment 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 9-A – Operating Instructions and Safety Rules

The Town of Plympton-Wyoming

OPERATING INSTRUCTIONS AND SAFETY RULES

1. **WORK HOURS**

For major storm events, two 12 hour shifts will be established at the discretion of the Superintendent of Public Works.

2. **SAFETY PROCEDURES**

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

A. A Circle check (example attached) of all snow removal equipment must be performed prior to leaving the yard and will generally include 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 Supervisor 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 Dispatch or Supervisor.

L. Utilize caution when operating de-icing equipment. Watch for overhead obstructions.

M. Lower box when necessary.

3. ACCIDENTS

Report all moving vehicle accidents involving municipally owned & operated equipment or vehicles immediately to your Supervisor. Depending on the severity of the accident and availability due to storm related issues, the (Police Department) will typically be called to evaluate the accident. Prior to leaving duty on the shift, a Workplace Employee Incident/Accident Report (example attached) should be filled out. Your Supervisor will attempt to interview the driver at the end of the shift or within 24 hours after return to normal duties.

Accident forms are generally available at all Public Works facilities or the Municipal Office.

4. CARE AND USE OF EQUIPMENT

The snow plow operator is responsible for routine maintenance of the vehicle. Report any maintenance needed to your Supervisor. Check vehicle before and after use for any maintenance needed or damage to equipment. Fill out Circle Check forms before leaving yard. The vehicle should be refuelled at the end of each operator's shift.


5. RADIO COMMUNICATIONS

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

6. DAILY REPORTS

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

Appendix 9-B – Circle Check Form



**The
"CHECKER"®**

Original
Inspection
System®

DUMPTRUCK / HAULER & TRAILER Inspection Check-List # 2-202R

CARRIER NAME: _____ OPERATOR NAME: _____

TRUCK/TRACTOR: _____ LICENSE PLATE # _____ STATE/PROV. _____

Inspection Info: DATE: _____ TIME: _____ AM/PM LOCATION: _____

Odometer: Start _____ mi/km Finish: _____ mi/km Hourmeter (if equipped): _____

HOURS: Start _____ AM/PM Finish _____ AM/PM FUEL ADDED: _____ Gallons/Litres

(NOTE: Driver must sign here if the vehicles and/or trailers were inspected by another person)

Vehicle and/or Trailer # 1 _____

Vehicle and/or Trailer # 2 _____

Vehicle and/or Trailer # 3 _____

DUMPTRUCK/HAULER & TRAILER INFO

	#1	#2	#3
License Plate #			
State/Prov. (plated)			
Date & Time	_____ am/pm	_____ am/pm	_____ am/pm
Location (of inspection)			
Hub Odometer	_____ mi/km	_____ mi/km	_____ mi/km
Inspector Name			
I declare this trailer has been inspected as per applicable regulations and requirements.			
Inspector Signature	<input type="checkbox"/> CHECK Box	<input type="checkbox"/>	<input type="checkbox"/>
DEFECTS FOUND	NO Yes	NO Yes	NO Yes

TRUCK/TRACTOR INSPECTION INFO

✓ if OK, Identify DEFECTS with X and Circle

LAMPS/REFLECTORS

Lights/Lamps _____

Reflectors, Tape _____

Alarms / Warnings _____

Controls / Switches _____

Wiring / Connections _____

GLASS and MIRRORS

Windows, Glass _____

Windshield Wiper/Washer _____

Wiper Blades _____

Washer Fluid _____

Mirrors-Outside/Inside _____

Heater/Defroster/Air _____

BRAKES

Air Brake System _____

Electric Brake System _____

Hydraulic Brake System _____

Pedal, Booster _____

Parking Brake, ABS _____

Failure Warning Light _____

Warning Signal _____

Compressor _____

Low Pressure/Vacuum _____

Pressure, Lines, Gauges _____

Vacuum Gauge _____

Hydraulic Brake Fluid _____

Air Brake Adjustment & Connections _____

☐ ☐ OTHER: _____

WHEELS, HUBS and FASTENERS

Wheel, Mud Flaps _____

Hubs, Rims, Fasteners, Lugs _____

Tires, Tread, Inflation, Wear _____

Fifth Wheel _____

MISCELLANEOUS OUTSIDE VEHICLE

Fuel System _____

Exhaust System _____

Coupling Devices/Towing _____

Bumper/Underride Protection _____

Suspension System _____

Air Bags, Springs _____

Cargo Securement, Covering _____

Booster Shock Absorber/Lock _____

Engine Compartment/Trans. _____

Fluids, Oils, Levels, Pressures _____

Frame and Cargo Body _____

Cab, Doors, Body, Locks, _____

Valid Inspection Decal _____

INSIDE VEHICLE

Driver Seat, Security _____

Driver Controls, Pedals, Levers _____

Steering _____

Horn, Instruments, Gauges _____

Alarms, Back-up _____

Communication/Radio _____

Documents-insur/Licenc/Reg _____

Emergency Equipment/Safety _____

Fire Extinguisher, Spill Kit _____

Dangerous Goods _____

Placards, Markers, Warnings _____

General _____

Pre-Trip Post-Trip

✓ if OK, Identify DEFECTS with X and Circle

	Pre	Post	Trailer #
Load Security, Load Covering, Load/Weight Distribution			1 2 3
Load/Trailer Tarps, Screens, Tie Downs, Straps			1 2 3
Loads -Salt, Sand, Rock, Gravel, Asphalt, Dirt, Other			1 2 3
Dumpbox—Raising, Tilting, Lowering, Controls, Levers			1 2 3
Dumpbox—Power Take-Off, Trailer Bed, Tracks, Roll-Off			1 2 3
Tailgate, Gates, Bed, Operation, Hinges, Latches, Locks			1 2 3
Plow Blade, Scraper, Wings, Deflector, Cutting Edge			1 2 3
Spreader, Auger, Mixer, Sander, Paver, Heater, Other			1 2 3
Winch, Cable, Tension Devices, Rings, Ropes, Access.			1 2 3
Safety Chains, Locks, Slings, Binders, Blocks, Ramp			1 2 3
Air, Elect., Hydraulic, Cylinders, Pins, Rams, Discharge			1 2 3
Lights, Reflectors, Tape, Beacons, Backup, Alarms			1 2 3
Load/Vehicle/Edge Markers, Tools, Shovels, Other			1 2 3
TRAILER (if applicable)			
Air Brake System			1 2 3
Electric Brake System			1 2 3
Cargo Securement			1 2 3
Suspension System			1 2 3
Lamps and Reflectors			1 2 3
Tires, Inflation, Tread, Wear, Mud Flaps, Other			1 2 3
Wheels, Hubs and Fasteners, Lugs, Rims			1 2 3
Dangerous Goods, Placards, Documentation, Warnings			1 2 3
Emergency Equipment & Safety Devices, Flares, Markers			1 2 3
General			1 2 3

DRIVER/INSPECTOR COMMENTS: REPAIRS REQUIRED? YES NO _____

I declare that the above vehicle has been inspected as per applicable regulations and requirements. ☐ No Major or Minor defects were found. ☐

DRIVER/INSPECTOR # 1 - NAME & SIGNATURE

NAME: _____

SIGNATURE: _____

VEHICLE INSPECTION REPORT REVIEWED - DATE: _____

NAME: _____

SIGNATURE: _____

REPAIRS PERFORMED? YES NO VEHICLE OK? YES NO

MAINTENANCE VEHICLE INSPECTION REPORT

REPAIRS REQUIRED? YES NO

MAINTENANCE/DEFECTS REPAIRED: _____

MAINTENANCE NAME: _____

MAIN. SIGNATURE: _____ Date: _____

SCHEDULE 1

SYSTEMS and COMPONENTS for TRUCK, TRACTOR and TRAILERS

Minor Defect(s) are Outside of Red Border Areas — **MAJOR Defect(s) are INSIDE Red Border areas with Bold Letters.**



Part 1. AIR BRAKE SYSTEM

- A—audible air leak
- B—slow air pressure build-up rate
- C—pushrod stroke of any brake exceeds the adjustment limit**
- D—air loss rate exceeds prescribed limit**
- E—inoperative towing vehicle (tractor) protection system**
- F—low air warning system fails or system is activated**
- G—inoperative service, parking or emergency brake**

Part 2. CAB

- A—occupant compartment door fails to open
- B—any cab or sleeper door fails to close securely**

Part 3. CARGO SECUREMENT

- A—insecure or improper load covering
- B—insecure cargo**
- C—absence, failure, malfunction or deterioration of required cargo securement device or load covering**

Part 4. COUPLING DEVICES

- A—coupler or mounting has loose or missing fastener
- B—coupler is insecure or movement exceeds prescribed limit**
- C—coupling or locking mechanism is damaged or fails to lock**
- D—defective, incorrect or missing safety chain or cable**

Part 5. DANGEROUS GOODS

- A—dangerous goods requirements not met**

Part 6. DRIVER CONTROLS

- A—accelerator pedal, clutch, gauges, audible and visual indicators or instruments fail to function properly

Part 7. DRIVER SEAT

- A—seat is damaged or fails to remain in set position
- B—seatbelt or tether belt is insecure, missing or malfunctions**

Part 8. ELECTRIC BRAKE SYSTEM

- A—loose or insecure wiring or electrical connection
- B—inoperative breakaway device**
- C—inoperative brake**

Part 9. EMERGENCY EQUIPMENT & SAFETY DEVICES

- A—emergency equipment is missing, damaged or defective

Part 10. EXHAUST SYSTEM

- A—exhaust leak, except as described in Column 3 (below)
- B—leak that causes exhaust gas to enter the occupant compartment**

Part 11. FRAME and CARGO BODY

- A—damaged frame or cargo body
- B—visibly shifted, cracked, collapsing or sagging frame member**

Part 12. FUEL SYSTEM

- A—missing fuel tank cap
- B—insecure fuel tank**
- C—dripping fuel leak**

Part 13. GENERAL

- A—serious damage or deterioration that is noticeable and may affect the vehicle's safe operation**

Part 14. GLASS and MIRRORS

- A—required mirror or window glass fails to provide the required view to the driver as a result of being cracked, broken, damaged, missing or maladjusted
- B—required mirror or glass has broken or damaged attachments onto vehicle body

Part 15. HEATER / DEFROSTER

- A—control or system failure
- B—defroster fails to provide unobstructed view through the windshield**

Part 16. HORN

- A—vehicle has no operative horn

Part 17. HYDRAULIC BRAKE SYSTEM

- A—brake fluid level is below indicated minimum level
- B—brake boost or power assist is not operative**
- C—brake fluid leak**
- D—brake pedal fade or insufficient brake pedal reserve**
- E—activated (other than ABS) warning device**
- F—brake fluid reservoir is less than 1/4 full**
- G—parking brake is inoperative**

Part 18. LAMPS and REFLECTORS

- A—required lamp does not function as intended
- B—required reflector is missing or partially missing

When use of lamps is required:

- C—failure of both low-beam headlamps**
- D—failure of both rearmost tail lamps**

At all times:

- E—failure of a rearmost turn-indicator lamp**
- F—failure of both rearmost brake lamps**

Part 19. STEERING

- A—steering wheel lash (free-play) is greater than normal
- B—steering wheel is insecure, or does not respond normally**
- C—steering wheel lash (free-play) exceeds prescribed limit**

Part 20. SUSPENSION SYSTEM

- A—air leak in air suspension system
- B—a broken spring leaf
- C—suspension fastener is loose, missing or broken
- D—damaged, (patched, cut, bruised, cracked to braid or deflated) air bag or insecurely mounted air bag**
- E—cracked or broken main spring leaf or more than one broken spring leaf**
- F—part of spring leaf or suspension is missing, shifted out of place or is in contact with another vehicle component**
- G—loose U-bolt**

Part 21. TIRES

- A—damaged tread or sidewall of tire
- B—tire leaking, if leak cannot be heard
- C—flat tire**
- (C.1) - tire leaking, if leak can be felt or heard**
- D—tire tread depth is less than wear limit**
- E—tire is in contact with another tire or any vehicle component other than mud-flap**
- F—tire is marked "Not for highway use"**
- G—tire has exposed cords in the tread or outer sidewall area**

Part 22. WHEELS, HUBS and FASTENERS

- A—hub oil below minimum level (when fitted with sight glass)
- B—leaking wheel seal
- C—wheel has loose, missing or ineffective fastener**
- D—damaged, cracked or broken wheel, rim or attaching part**
- E—evidence of imminent wheel, hub or bearing failure**

Part 23. WINDSHIELD WIPER / WASHER

- A—control or system malfunction
- B—wiper blade is damaged, missing or fails to adequately clear driver's field of vision

When use of wipers or washer is required:

- C—wiper or washer fails to adequately clear driver's field of vision in area swept by driver's side wiper**

Appendix 9-C – Workplace Employee Incident/Accident Report



Workplace Employee Incident / Accident Report

Note: This form is to be completed by the department supervisor. This form is not to be completed by the employee. If this is a critical injury as defined by the Occupational Health and Safety Act, please contact your supervisor or manager immediately. Ontario regulation 834/92 defines "critical injury" as an injury of a serious nature that involves one or more of the following: *Places life in jeopardy, produces unconsciousness, results in substantial blood loss, involves the fracture of a leg or arm, involves the amputation of a leg, arm, foot or hand, consists of burns to major portion of the body, or causes the loss of sight in an eye. Critical injury accidents are to be reported immediately to the Supervisor and Ministry of Labour.*

WORKER IDENTIFICATION

Last Name: _____

First Name: _____

Street Address: _____

City/Town: _____

Province: _____ Postal Code: _____

FACILITY Where Worker Employed: _____

DEPARTMENT Where Worker Employed: _____

**PLEASE
CHECK
APPROPRIATE
BOX
OR
BOXES**

First Aid Only	
No Lost Time	
Did Not See Dr.	
Saw Dr.	
Lost Time	

Position: _____

PLEASE INDICATE ONE BELOW

Full Time	
Part Time	
Student	
Other (Specify)	

PLEASE INDICATE ONE BELOW

Regular Work Shift	
In Training	
Temporary Transfer	

DETAILS OF INJURY

Date of Injury				Hour	Date Reported				Hour
day	mo.	year		a.m.	day	mo.	year		a.m.
				p.m.					p.m.
Date and Hour Last Worked					Normal Working hours on Last Day				
day	mo.	year		a.m.	From:		To:		
				p.m.					

DETAILS OF INCIDENT (check all that apply)	
Type of incident: <input type="checkbox"/> Struck or contact by <input type="checkbox"/> Assault <input type="checkbox"/> Caught in, on or between <input type="checkbox"/> Repetition <input type="checkbox"/> Over exertion/strain <input type="checkbox"/> Fire/Explosion <input type="checkbox"/> Exposure <input type="checkbox"/> Motor Vehicle Incident <input type="checkbox"/> Fall (Specify)	Was the accident/illness: <input type="checkbox"/> Sudden Specific Event <input type="checkbox"/> Gradually Occurred Over Time <input type="checkbox"/> Critical Injury
Witness or person who may have seen or heard something: (Include name, address, telephone) <div style="border: 1px solid black; height: 30px; margin-top: 5px;"></div>	

AREA OF INJURY							
<input type="checkbox"/> Eyes <input type="checkbox"/> Head <input type="checkbox"/> Face <input type="checkbox"/> Teeth <input type="checkbox"/> Neck	<input type="checkbox"/> Chest <input type="checkbox"/> Upper Back <input type="checkbox"/> Lower Back <input type="checkbox"/> Pelvis	<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>	<u>Left</u>	<u>Right</u>
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Shoulder <input type="checkbox"/> Arm <input type="checkbox"/> Elbow <input type="checkbox"/> Forearm <input type="checkbox"/> Wrist	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Hip <input type="checkbox"/> Thigh <input type="checkbox"/> Knee <input type="checkbox"/> Lower Leg <input type="checkbox"/> Ankle	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Hand <input type="checkbox"/> Fingers <input type="checkbox"/> Eye <input type="checkbox"/> Foot <input type="checkbox"/> Toe <input type="checkbox"/> Ear
<input type="checkbox"/> Other: _____ <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>				<input type="checkbox"/> Property Damage: _____ <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>			

Describe in detail the following: PLEASE PRINT

A) Describe the sequence of events that lead to the accident/illness/property damage and what the worker was doing at the time:

B) Where did the incident occur?

C) Describe the type, weight, and size of equipment, materials or resident involved:

D) Type of injury (ie: scrape, strain, fracture, cut):

E) To whom was the injury reported? (Name and Position):

To your knowledge, has the employee had a previous similar disability/incident? ☐ Yes ☐ No
If YES, provide details:

Has the accident investigation report been completed? ☐ Yes ☐ No
If YES, please attach a copy.

HEALTH CARE:

Specify the MEDICAL FACILITY or DR.'S OFFICE where treatment was received:

Treating Physician's Name and Address:

NOTE: If worker is to receive Medical Treatment, please provide the worker with the appropriate correspondence.

What steps have been taken to prevent reoccurrence?

COMMENTS:

If additional comments are required please attach a separate sheet.

Employee Signature:

Supervisor's Signature:

Date: (dd-mm-yy)

Ontario regulation 834/92 defines "critical injury" as an injury of a serious nature that involves one or more of the following: *Places life in jeopardy, produces unconsciousness, results in substantial blood loss, involves the fracture of a leg or arm, involves the amputation of a leg, arm, foot or hand, consists of burns to major portion of the body, or causes the loss of sight in an eye. Critical injury accidents are to be reported immediately to the Supervisor and Ministry of Labour.*

Appendix 10 – Record of Training



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 Town of Plympton-Wyoming Winter Operations Plan.

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

- Winter Shift Schedule
- Equipment Circle Check
- Equipment Calibration
- Emergency Contacts
- Call out Procedures
- 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)

Employee Signature _____ Date _____

Trainer Signature _____ Date _____

Supervisor Signature _____ Date _____

Appendix 11 – Disclaimer

OGRA and Salt Institute DISCLAIMER:

The information and statements contained within this document do not constitute legal advice. They are not intended to take the place of legal advice. All users are encouraged to consult with their own legal counsel with respect to the information and statements contained herein. Furthermore, the information and statements contained in this document are solely the opinion of OGRA and the Salt Institute. They are not intended to establish, and they should not be viewed as establishing, legal standards, requirements or policies. They may not be applicable in every situation or circumstance. They are not intended to cover all proper methods or approaches. OGRA, the Salt Institute, and their members and officers disclaim all liability for the accuracy and completeness of the information and statements contained in this document and disclaim all warranties, express or implied, to incorrect application or usage of the information and statements.

Appendix 12 – Council Resolution

Please be advised that the following motions were passed during the Regular Council Meeting held December 14th 2016:

Motion #3 - *Moved by Netty McEwen, Seconded by Don Nelson that the report by Adam Sobanski, Superintendent of Public Works, dated December 9th 2016 regarding the 2016-2017 Winter Operations Plan be received and that the Winter Operations Plan be approved.*

Motion Carried.