AGENDA
Township of North Dundas
636 St. Lawrence Street Winchester ON
Tuesday, October 20, 2020 7:00 PM

Page

1. Call Meeting to Order by Resolution

2. Adoption of Agenda

a) Additions, Deletions or Amendments
All matters listed under Consent Agenda, are considered to be routine and will be enacted by one motion. Should a Council member wish an alternative action from the proposed recommendation, the Council member shall request that this matter be moved to the appropriate section at this time.

3. Disclosure of Pecuniary Interest and General Nature Thereof

4. Adoption of Minutes

a) Regular Meeting October 6, 2020 — 4 - 14

5. Delegations

6. Closed Session

7. Open Session

8. Action Requests

a) Finance

b) Economic Development and Communications

c) Public Works

i. Declaration of Lagoon Boat as Surplus — 15

ii. Budget Amendment - Snow Plow Truck — 16 - 18

iii. Purchase of Catch Basins for improvements to the fleet garage drainage — 19 - 21

15. Petitions

16. Council Comments and Concerns

17. Unfinished Business

18. Ratification By-law

a) By-law No. 2020-51 167

19. Adjournment by Resolution

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

MINUTES

OCTOBER 6, 2020

A meeting of the Council of the Corporation of the Township of North Dundas was held in Council Chambers in Winchester Village on October 6, 2020 with Mayor Fraser in the Chair. Attendance was recorded at the entrance in accordance with COVID-19 recording procedures.

ROLL CALL: Mayor: Tony Fraser
Deputy Mayor: Allan Armstrong
Councillors: Gary Annable, Tyler Hoy, John Thompson
CAO: Angela Rutley
Treasurer: John Gareau
Economic Development Officer: Stephen Mann
Director of Public Works: Khurram Tunio
Director of Waste Management: Doug Froats
Director of Planning, Building & Enforcement: Calvin Pol
Director of Recreation and Culture: Meaghan Meerburg
Clerk: Jo-Anne McCaslin

1. Call Meeting to Order by Resolution
   Resolution No. 01 — Moved by Deputy Mayor Armstrong
   Seconded by Councillor Hoy
   THAT the meeting of the Council of the Corporation of the Township of North Dundas be hereby called to order at 7:00 pm.
   CARRIED

2. Adoption of Agenda
   Resolution No. 02 — Moved by Deputy Mayor Armstrong
   Seconded by Councillor Hoy
   THAT Council approve the agenda as presented.
   CARRIED

3. Disclosure of Pecuniary Interest and General Nature Thereof – NIL

4. Adoption of Minutes
   a) Regular Meeting - September 8, 2020
   Resolution No. 03 Moved by Councillor Annable
   Seconded by Councillor Thompson
   THAT the minutes of the regular meeting, including the In Camera minutes, of the Council of the Township of North Dundas, held September 8, 2020 be adopted as presented.
   CARRIED

   b) Special Meeting - September 16, 2020
   Resolution No. 04 Moved by Councillor Annable
   Seconded by Councillor Thompson
   THAT the minutes of the special meeting, including the In Camera minutes, of the Council of the Township of North Dundas, held September 16, 2020 be adopted as presented.
   CARRIED

   c) Public Meeting - September 22, 2020
   Resolution No. 05 Moved by Deputy Mayor Armstrong
   Seconded by Councillor Hoy
   THAT the minutes of the public meeting, of the Council of the Township of North Dundas, held September 22, 2020 be adopted as presented.
   CARRIED

   d) Regular Meeting - September 22 2020
   Resolution No. 06 Moved by Councillor Hoy
   Seconded by Councillor Annable
   THAT the minutes of the regular meeting, including the In Camera minutes, of the Council of the Township of North Dundas, held September 22, 2020 be adopted as presented.
   CARRIED

5. Delegations – NIL

6. Closed Session
   Resolution No. 07 Moved by Deputy Mayor Armstrong
   Seconded by Councillor Thompson
   THAT Council proceed in Camera pursuant to Section 239 (2) of The Municipal Act S.O. 2001
   (e) litigation or potential litigation, including matters before administrative tribunals, affecting the municipality or local board;
   (f) advice that is subject to solicitor-client privilege, including communications necessary for that purpose. Re: LPAT – Official Plan Appeal
   CARRIED

   In Camera Resolution No. 08

7. Open Session

   Resolution No. 09 Moved by Councillor Thompson
   Seconded by Councillor Hoy
   THAT Council move to Open Session at 7:13pm.
   CARRIED

8. Action Requests
   a) Finance
      i) Safe Restart Agreement Funding
      Resolution No. 10 Moved by Deputy Mayor Armstrong
      Seconded by Councillor Hoy
      WHEREAS the Ontario government has provided emergency assistance funding to municipalities through the Safe Restart Agreement to offset the financial impact due to the COVID-19 pandemic;

      AND WHEREAS the Province has specified funding must be used for operating costs and pressures due to COVID-19;

      AND WHEREAS due to the nature of the pandemic and the necessity to make physical retrofits to offices to accommodate staff and the public in a safe environment, capital costs will be incurred by municipalities;

      AND WHEREAS we have been advised by the Ministry of Finance that COVID-19 related capital expenditures are ineligible for Safe Restart Agreement funding;

      THEREFORE BE IT RESOLVED THAT the Council of the Township of North Dundas urges Ontario to allow capital expenditures under the Safe Restart Agreement, and that a copy of this resolution be forwarded to Premier Doug

Ford, Jim McDonell, MPP and the Association of Municipalities of Ontario (AMO).
CARRIED

b) Economic Development and Communications
   i) New Municipal Website RFP
   Resolution No. 11 Moved by Councillor Annable
   Seconded by Councillor Thompson
   THAT the Council of the Township of North Dundas acknowledge UpanUp as the vendor of choice to complete the redesign of the Township website www.northdundas.com for a price of $21,780 plus HST.
   CARRIED

c) Public Works – NIL

d) Waste Management
   i) List of Surplus Equipment
   Resolution No. 12 Moved by Councillor Hoy
   Seconded by Councillor Annable
   THAT the Council of the Township of North Dundas declare the following pieces of equipment to be surplus to the needs of the municipality and authorize the Director of Waste Management to sell the items.
   1999 EPCO Horizontal Baler and Phaze Converter
   Can Crusher (homemade)
   2008 Chevrolet Silverado 1 Ton
   1997 Homemade Trailer
   2009 International 4300
   CARRIED

e) Planning Building and Enforcement
   i) Interim Control Bylaw Regarding Cannabis Production
   Resolution No. 13 Moved by Deputy Mayor Armstrong
   Seconded by Councillor Thompson
   WHEREAS Health Canada is responsible for issuing licences and certificates for the growing of cannabis;

   AND WHERAS municipalities can regulate cannabis facilities through Zoning By-laws and Site Plan Control;

   AND WHEREAS North Dundas has four older Zoning By-laws which do not adequately address the land use impacts of cannabis cultivation, processing and production;

AND WHEREAS as per Section 38 of the Planning Act, an Interim Control By-law may be in effect for up to one year while a land use planning study is completed;

NOW THEREFORE BE IT RESOLVED THAT Council direct staff to undertake a land use planning report on the impact of cannabis cultivation, processing and production and consider additional options to regulate such uses within the Township within 1 year of the passing the proposed Interim Control By-law;

AND THAT Council direct staff to prepare an Interim Control By-law to prohibit any new or expanded cultivation, processing or production of cannabis in the Township;

AND THAT any prohibition arising from the Interim Control By-law shall not apply to the cultivation of up to 4 plants on any property for personal consumption;

AND THAT any prohibition arising from the Interim Control By-law shall not apply to cannabis cultivation, processing and production on lands zoned Industrial.
CARRIED

ii) Draft Approval Extension - 2379132 Ontario Inc.
Resolution No. 14 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy
WHEREAS 2379132 Ontario Inc. submitted a request to extend draft plan approval for a Plan of Subdivision (File 01-ND-S/2014) for Part of Lot 6, Concession 9, Former Township of Mountain (PIN 661000157);

NOW THEREFORE BE IT RESOLVED THAT the Council of the Township of North Dundas hereby recommends that the United Counties of Stormont, Dundas and Glengarry extend draft plan approval for Plan of Subdivision No. 01-ND-S/2014 for two years, as recommended by the Township Planning Division.
CARRIED

iii) Budget Amendment - Software Licence
Resolution No. 15 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy
THAT the Council of the Township of North Dundas approve

Budget Amendment #2020-09 in the amount of $6,816.00 to split the 2019 contract for Building and By-law Enforcement Software over two years.
CARRIED

f) Recreation and Culture

i) Budget Amendment for Morewood Fire Hall Ceiling Repair
Resolution No. 16 Moved by Councillor Hoy
Seconded by Councillor Annable
THAT the Council of the Township of North Dundas approve budget amendment #2020-11 for the repair of the Morewood Fire Hall ceiling for $10,000 + HST, to be financed from funds leftover from the Morewood Fire Hall roof replacement.
CARRIED

ii) 1 Mill St. Chesterville Lease Agreement
Resolution No. 17 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy
THAT the Council of the Township of North Dundas authorize the Mayor and CAO to execute the attached lease Agreement, with Etcetera Publications (Chesterville), for the office space located in the Chesterville Community Centre, 1 Mill St., Chesterville, for the term of October 16, 2020 until October 31, 2021.
CARRIED

iii) Arena Advertising
Resolution No. 18 Moved by Councillor Annable
Seconded by Councillor Thompson
THAT the Council of the Township of North Dundas authorize that fees for arena advertising be waived for the term of July 2020-July 2021.
CARRIED

iv) Budget Amendment for Pool Repairs
Resolution No. 19 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy
THAT the Council of the Township of North Dundas approve budget amendment #2020-10 for the repair of the Winchester Centennial Pool for $30,500 + HST and for the repair of the Chesterville Public Pool for $3,500 plus HST, to be financed from the General Working Reserve (2019 budget surplus).
CARRIED

v) September Community Grants
Resolution No. 20 Moved by Deputy Mayor Armstrong
Seconded by Councillor Thompson

THAT Council approve that the Winchester Skating Club and Chesterville & District Historical Society each be awarded a $400 Community Grant.
CARRIED

vi) Diversity Dundas Request for Use of the JSCH
Resolution No. 21 Moved by Councillor Annable
Seconded by Councillor Hoy
THAT the Council of the Township of North Dundas receive the letter of request submitted by Diversity Dundas for free use of the Joel Steele Community Hall for group meetings and approve option 3, outlined below.
CARRIED

vii) Winchester Lions Club Request for Use of the JSCH
Resolution No. 22 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy
THAT the Council of the Township of North Dundas receive the letter of request submitted by the Winchester Lions Club and authorize that the $140.00 rental fee for the Joel Steele Community Hall be waived, in support of the Winchester Lion's Club Annual North Dundas Christmas Fund Gifts & Food Hamper Program, scheduled for December 15th & 16th, 2020.
CARRIED

g) Fire – NIL

h) CAO

i) COVID19 - Staff Accommodation Policy
Resolution No. 23 Moved by Councillor Annable
Seconded by Councillor Thompson
That Council approve policy #85-2020 a COVID-19 Staff Accommodation Policy.
CARRIED

ii) Dry Hydrant Agreement
Resolution No. 24 Moved by Councillor Hoy
Seconded by Councillor Annable
That Council authorize the Mayor and CAO to execute an agreement with the Municipality of South Dundas and the United Counties of Stormont, Dundas and Glengarry regarding sharing the cost and joint use and maintenance of the dry hydrant installed within the limits of County Road 16.
CARRIED

i) Clerk

i) Chesterville and District Historical Society - Donation Request

Resolution No. 25 Moved by Deputy Mayor Armstrong
Seconded by Councillor Annable

THAT Council receive correspondence from the Chesterville and District Historical Society and authorize a donation in the amount of $1500. to be included in the 2021 municipal budget as requested.
CARRIED

9. Tenders and Quotations

a) Award of OSIM Bridge & Culverts Inspections

Resolution No. 26 Moved by Councillor Thompson
Seconded by Councillor Annable

THAT the Council of the Township of North Dundas accepts the proposal to complete OSIM Bridge and Culverts Inspections from TSI Inc. as the highest score proponent.
CARRIED

b) Award of Roads Needs Study

Resolution No. 27 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy

THAT the Council of the Township of North Dundas accepts the proposal to complete a Roads Needs Study by D.M. Wills Associates Ltd as the highest score proponent.
CARRIED

c) Award of Traffic Counts

Resolution No. 28 Moved by Councillor Thompson
Seconded by Councillor Annable

THAT the Council of the Township of North Dundas approves the proposal submitted by D. M. Wills Associates Limited for traffic counts in the amount of $10,900 plus HST.
CARRIED

d) Award of Guide Rails Replacements Installation Works

Resolution No. 29 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy

THAT the Council of the Township of North Dundas approves the budget amendment 2020-12 and award of the single source contract for Guide Rails Replacements / Installation Works to Peninsula Construction Inc. in the amount of $399,977.75 plus HST.
CARRIED

e) Bylaw No. 2020-46 Zoning Amendment 12054 County Road 3 Winchester
Resolution No. 30 Moved by Councillor Annable
Seconded by Councillor Thompson
THAT By-law No. 2020-46, being a By-law to amend the former Township of Winchester Zoning By-law No. 12-93, as amended, be read and passed in Open Council, signed and sealed this 6th day of October, 2020.
CARRIED

10. Key Information

FIN – 2021 Budget Update – Treasurer Gareau presented the 2021 proposed budget calendar and invited Council to bring forward any items that they would like to see included for consideration in the DRAFT budget and to provide any budget targets or highlights that they would like to set for the draft budget.

ED&C – COVID-19 Business Support Options – Economic Development Officer Mann provided a list of support programs offered to assist businesses through COVID-19.

PWS – Snow Plow Truck Unit #3207 – Director Tunio advised Council this vehicle will not pass the annual inspection required due to rust jacking of the frame and deterioration of the body. He advised Council the following vehicle is available and requested permission to purchase.

Resolution No. 31 Moved by Deputy Mayor Armstrong
Seconded by Councillor Thompson
THAT Council authorize the Director of Public Works to the purchase the following:
1 – 2021 Freightliner 114SD chassis from Francis Canada Truck Centre at the price of $136,750 plus HST, And
1 – Gincor/Viking plow equipment - $138,795 plus HST
Total Amount $275,545 plus HST

And that a budget amendment to confirm the financing will be presented at the October 20, 2020 meeting.
CARRIED

PB&E – CRINS-SINRC Report – Director Pol provided key information pertaining to an application for a new communications tower by Xplornet Communications to be located at the south end of Winchester. Council supported the proposed communications tower.

11. Consent Agenda

Resolution No. 32 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy

THAT Council authorize payment of accounts as per the attached Council Reports dated September 01, 2020 to September 15, 2020, Batch 148 to 155 in the amount of $$406,369.24
September 16, 2020 to September 30, 2020 Batch 160 in the amount of 2,584,898.97;
Ontario Wildlife Damage Compensation Program – 004749
Property Owner of 10135 McIntyre Rd $91.80
William Toll $50.00
And that all other items listed under the Consent Agenda be approved as recommended.
CARRIED

12. Boards and Committees

a) South Nation Conservation - Bill Smirle

Representative Smirle provided a detailed update on the activities and projects currently underway at South Nation. He noted the work at the Chesterville Dam (the largest water/river structure on the south Nation) has been completed.

Mr. Smirle also spoke on behalf of the Morewood Cenotaph Committee, advising to date the committee has raised approximately $25,000. On behalf of the committee, Mr. Smirle donated three flags which will be placed by the Memorial Painting in the Morewood Community Centre. Council gratefully received the flags.

Resolution No. 33 Moved by Councillor Hoy
Seconded by Councillor Thompson

THAT Council receive and file the South Nation Conservation Authority Update provided by North Dundas Representative, Bill Smirle.
CARRIED.

b) Dundas County Archives

Resolution No. 34 Moved by Councillor Annable
Seconded by Councillor Thompson

That Council receive and file the Dundas County Archives Newsletter Update provided by Archivist, Susan Peters.
CARRIED.

13. Motions and Notices of Motions

Notice of Motion – October 20, 2020 pertaining to Resolution 15 passed September 8th, 2020

Deputy Mayor Armstrong requested Council to reconsider the content of this resolution especially as it pertains to banning through truck traffic on Sandy Row. Council agreed.

Resolution No. 35 Moved by Councillor Hoy
Seconded by Councillor Annable

THAT Council agree to the notice of motion requested by Deputy Mayor Armstrong to reconsider the content of Resolution No. 15 passed at the September 8th regular meeting pertaining to banning of through truck traffic on Bridge Street and Sandy Row.
CARRIED

14. Petitions – NIL

15. Council Comments and Concerns – NIL

16. Unfinished Business – NIL

17. Ratification By-law

Resolution No. 36 Moved by Deputy Mayor Armstrong
Seconded by Councillor Hoy

THAT By-law No. 2020-49 to adopt, confirm and ratify matters dealt with by resolution, be read and passed in Open Council, signed and sealed this 6th day of October, 2020.
CARRIED

18. Adjournment by Resolution

Resolution No. 37 Moved by Councillor Annable
Seconded by Councillor Thompson

THAT Council adjourn at 9:20 pm to the call of the chair.
CARRIED

_____ _____

MAYOR CLERK

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Declaration of Lagoon Boat as Surplus

RECOMMENDATION:
THAT the Council of the Township of North Dundas declare the lagoon / pontoon boat to be surplus to the needs of the municipality and authorize the Director of Public Works to sell the item.

BACKGROUND:
With the installation of the alum tanks at the Chesterville and Winchester lagoons, the Township's pontoon boat is not required for alum dosage in the lagoons. OCWA (Township water and wastewater operator) currently has a 14-foot aluminum boat with alum tank at site, in case of an emergency. There is no place to store the pontoon boat, as the bay in the ambulance indoor garages are used to park snow plow trucks during winter season.

OPTIONS AND DISCUSSION:
1. **Approve the recommendation** – recommended. Approve the surplus equipment and authorize the Director of Public Works to post the item for sale on the Township's website.
2. **Do not approve the recommendation** – This option is not recommended.

FINANCIAL ANALYSIS:
Proceeds from the sale will be allocated back to the Public Works Department – Water and Sewer.

OTHERS CONSULTED:
CAO
OCWA
Fleet Mechanics

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Budget Amendment - Snow Plow Truck

RECOMMENDATION:
THAT the Council of the Township of North Dundas approves budget amendment #2020-13 for the award of the single source contract for the purchase of a 2021 snow plow truck to Francis Canada Truck Centre in the total amount of $281,568.41 plus HST.

BACKGROUND:
As per the Key Information Report on October 6, 2020, snow plow truck # 3207 is unable to pass the safety inspections. Council authorized the Director of Public Works to purchase a 2021 Freight Liner chassis and plow equipment in the total amount of $275,545 plus HST.

Staff performed the inspection of the 2021 truck on October 9, 2020 and requested an auto grease system, back-up camera and a swing blade installation as part of the purchase. Swing blades and back-up camera will be added within the original quoted price. However, Francis Canada Truck Centre requested an additional amount of $6,023.41 for a 58-point auto grease system installation for the chassis and plow.

The auto-grease system will significantly reduce maintenance efforts and improve longevity of the snow plow truck. It is recommended to purchase the snow plow truck in the total amount of $281,568.41 plus HST.

OPTIONS AND DISCUSSION:

1. **Approve the budget amendment in the amount of $288,000 including taxes to finance the purchase from Francis Canada Truck Centre** – recommended.

2. **Do not approve the budget amendment –** not recommended.

FINANCIAL ANALYSIS:
There is no tax impact. The 2021 snow plow truck is being funded through Roads Equipment reserve, 2020 Capital Roads budget and Development Charges (Public Works Licensed Vehicles), as per attached 2020-13 budget amendment.

OTHERS CONSULTED:

ATTACHMENTS:
Appendix #1 – Budget Amendment #2020-13

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

APPENDIX #1

Township of North Dundas
Addendum to Budget Resolution - October 20, 2020

Budget Amendment - 2020-13 - Transportation Services

Project	Account No.	2020 Original Budget	Revised Budget	Budget Amend-ment
Costs				
Tandem Plow Truck Purchase	1-5-3211-8000	-	288,000	288,000
		$ -	**$ 288,000**	**$288,000**
Financing				
Capital Roads	1-5-3101-8102	1,542,100	1,420,600	121,500
Transfer from Reserves - Roads Equipment (1-3-2000-8115)	1-4-3211-9000	-	121,500	121,500
Transfer from Development Charges (Public Works Licensed Vehicles) (3-3-2000-9590)	1-4-3211-9500	-	45,000	45,000
		$1,542,100	**$1,587,100**	**$288,000**

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Purchase of Catch Basins for improvements to the fleet garage drainage

RECOMMENDATION:

THAT the Council of Township of North Dundas approve budget amendment #2020-15 and single source the award for the purchase of (5) five catch basins in the amount of $13,640.14 plus HST from M CON Products Inc. for drainage improvements at the fleet garage.

BACKGROUND:

Health and Safety Committee has identified concern with water ponding at the fleet garage parking area. In order to prevent freezing and ice formation in ponding areas, a proper drainage system needs to be installed in the older portion of parking lot area.

Staff have recently cleared the side and back areas of the fleet garage to allow for installation of a storm sewer system comprising of catch basins and pipes. A quotation was received from M CON Products Inc. for the supply of catch basins, frame and grate as well as adjusters in the amount of $13,640.14 plus taxes. A budget amendment is attached for this purchase. Funds for the storm sewer pipes will be from approved 2020 catch basins / storm sewer budget line item. The storm sewer system will be installed by staff.

OPTIONS AND DISCUSSION:

1. **Approve the purchase of Catch Basins** – recommended.

2. **Do not approve the purchase of catch basins** – not recommended.

FINANCIAL ANALYSIS:

There is no tax impact. The purchase will be funded from a combination of existing 2020 budget and the Road Buildings reserve as per budget amendment #2020-15.

OTHERS CONSULTED:

ATTACHMENTS:

Budget Amendment #2020-15.

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

APPENDIX #1

Township of North Dundas
Addendum to Budget Resolution - October 20, 2020

Budget Amendment - 2020-15 - Transportation Services

Project	Account No.	2020 Original Budget	Revised Budget	Budget Amend-ment
Costs				
Purchase 5 Catch Basins	1-5-3300-8000	-	13,900	13,900
		$ -	**$ 13,900**	**$ 13,900**
Financing				
Transfer from Reserves (Roads - Buildings 1-3-2000-8116)	1-4-3300-9000	-	13,900	(13,900)
		$ -	**$ 13,900**	**$ (13,900)**

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Through Truck Traffic on Sandy Row and Bridge Street

RECOMMENDATION:
THAT the Council of the Township of North Dundas rescinds Resolution No. 15 dated September 8, 2020 relating to banning through truck traffic on Bridge Street and Sandy Row within South Mountain village limits; And upon further consideration of this matter Council now approve Option No. _____ as presented.

BACKGROUND:

On October 6 2020 Council passed the following resolution:

> THAT Council agree to the notice of motion requested by Deputy Mayor Armstrong to reconsider the content of Resolution #15, passed at the September 8th regular meeting, pertaining to ***"banning of through truck traffic on Bridge Street and Sandy Row"***

Input from the public regarding this matter was solicited for council consideration. The following summarizes comments received by the Director of Public Works:

1. *We realize that trucks can access to the east end, graveled section of Sandy Row. However, the condition of this gravel section of the road during our busiest delivery times – from January to June – is not conducive to big trucks travelling this route. The potholes make the road nearly impassible and the addition of more trucks on this stretch will only cause greater deterioration of the gravel road.*
2. *Against these heavy trucks going by there many times a day at a speed too high.*
3. *Even if these Trucks would travel at 30 to 40 KM per hr, when travelling from the new subdivision to school on Hwy 1 even that would be huge help.*

4. *There are a dozen or so older folks and younger either just out for a walk or walking dogs. A truck passing them very slowly would sure help. After all the slow speed required on this stretch from Subdivision to the school is less than a km.*

5. *Coons Cartage trucks may travel across bridge street 5-6 times month and the truck is almost 99% empty when crossing as we come back to the yard or leave from the yard.*

6. *Bridge Street is a shorter Route.*

7. *Travel through a school zone where traffic is much heavier than traffic on Bridge. St.*

8. *There is concern at the school 9-10 am and 3-4 pm with cars parking on Sandy Row to pick up drop off their children making Sandy Row dangerous for any one let alone a truck to go past the school. Parking on shoulder makes it a 3-lane road if you meet another vehicle.*

9. *The east end of Sandy Row is gravel. Travelling on gravel throws stones at cars passing, breaks windows in machinery being floated.*

OPTIONS AND DISCUSSION:

Option 1: Do not ban truck traffic on Sandy Row and Bridge Street
Option 2: Ban truck traffic on Bridge Street only
Option 3: Ban truck traffic on Sandy Row and Bridge Street

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Winter Level of Service Options

RECOMMENDATION:
THAT the Council of the Township of North Dundas approves hiring six (6) additional full-time contract operators from January 4, 2021 to March 30, 2021.

BACKGROUND:
On September 8, 2020 Council deferred approval of policy # 84-2020, being a Winter Maintenance and Salt Management Policy. The draft policy identified the following:

1. One (morning) run on snow plow routes during five-week days per week. Based on snow conditions, potential for few additional runs in the afternoon.

2. Either Saturday or Sunday snow clearing operation to allow for 36 hours break as reset, to be in compliance with hours of service.

The Council expressed desire to maintain consistent level of service for winter operations specifically during inclement weather conditions. In response, two options were considered to provide for both morning and afternoon snow clearing during weekdays as well as at least one run on Saturday and Sunday. The third option is based on the draft policy as presented in previous report.

Following provides brief details on three options. Please refer to Appendix A for shift schedule / weekly hours for these three options. This ensures we stay within driving hours of service.

<u>Option A:</u>

Introduce afternoon shift – Hire 6 additional full-time contract snow plow operators.

Main highlights of this option are as follows:

a. Winter operation will be performed by morning and afternoon regular 8-hour shifts. Winter operation on Saturday will be performed, if needed, by morning shift. Sunday winter operation will be performed by afternoon shift, if needed.

b. On clear days, allows for in-house snow removal in villages between sidewalk and roadway. We have a contractor available for this service on call, as needed – utilizing township staff will reduce this cost.
c. Possible two rounds on weekends, if needed.
d. Greatest flexibility to pick up snow from sidewalk even during storm events by overtime as well as cover sick time / vacation time.

Option B:

Introduce 14-hour shift each day – Hire 6 part-time contract (equivalent to 3 full-time contract) snow plow operators.

Benefits of this option are as follows:

a. Daily shift will be based on 14-hour shift, five days a week to provide for morning and afternoon winter operation services.
b. Hire contract operators (minimum 20 hours) to clear snow on weekends as well cover sick or vacation time during week days.
c. On clear days, in-house snow removal in villages between sidewalk and roadway, reducing costs for snow removal in villages.
d. Possible two rounds on weekends, if needed.

Hiring challenge with this option based for 20-hour minimum contract position, based on past experience.

Option C:

This option is as per draft Winter Policy, presented during September 8th, 2020 Council meeting:

a. Morning shift / run for winter operation during week days.
b. Allows for afternoon runs three times per week using overtime.
c. Snow operation on either Saturday or Sunday, but not both, using overtime.

OPTIONS AND DISCUSSION:

The draft winter policy will be updated based on approved option and will be brought to next Council meeting for consideration and approval.

1. **Approve the recommendation – Option A**– recommended as it maintains current level of service, as desired by the Council by initiating consistent afternoon shift in late December or early January during peak winter season.

2. **Do not approve the recommendation – Option B –** Staff will perform winter operation based on 14-hour shift schedule with the support of additional 6 contract operators. Hiring of operators based on minimum 20-hours per week is a challenge and hence this option is not recommended

3. **Do not approve the recommendation – Option C –** Staff to perform winter operations as per draft winter maintenance policy which allows for three afternoon runs per week, if needed.

FINANCIAL ANALYSIS:

It will cost approximately $103,000 to retain 6 operators full-time for 4 months (17 weeks), as per winter Option A. Some of the cost will be offset by reduction in overtime as well as reduction in snow removal costs in villages.

OTHERS CONSULTED:

ATTACHMENTS:

Appendix A - Weekly Hours Schedule

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

APPENDIX A - WEEKLY SCHEDULE – WINTER OPERATIONS

OPTION A – MORNING & AFTERNOON SHIFTS

Option A			Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
4 AM		Plow	6	6	6	6	6	6		**48**
OP1 to OP 10		Other	2	2	2	2	2	2		
3:30 PM		Plow	7	7	7	7	7		7	**48**
OP 11 to 16	Min. 40 hrs	Other	1	1	1	1	1		1	
									Total Week Hr	**768**

OPTION B – 14 HRS SHIFT

Option B		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
4 AM	Plow	6	6	6	6	6			**35**
OP1 to OP 10	Other	1	1	1	1	1			
2:30 PM	Plow	6	6	6	6	6			**35**
OP 1 to 10	Other	1	1	1	1	1			
OP 11 to 16	On-call	(min. 20 hrs)					10	10	**20**
								Total Week Hr	**820**

OPTION C – MORNING AND 1 WEEKEND RUN

Option C		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
4 AM	Plow	6	6	6	6	6	6		**48**
OP1 to OP 10	Other	2	2	2	2	2	2		
2:30 PM	Plow	6		6		6			**21**
	Other	1		1		1			
Tentative								Total Week Hr	**690**

Overtime – shown in red color

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Winter Maintenance and Salt Management Plan

RECOMMENDATION:
THAT the Council of the Township of North Dundas approve policy # 84-2020 being a Winter Maintenance and Salt Management Policy.

BACKGROUND:

During the September 8th, 2020 meeting, Council deferred the approval of Winter Maintenance and Salt Management Policy.

The Council desires to provide for same level of service as in the past including consistent snow clearing operation during inclement weather conditions, to the best extent possible. Hence, staff have reviewed three options to provide for snow clearing operations in the afternoon. The details on the options and recommended option are provided in the separate report (winter level of service options.)

With the anticipation, that the Council may approve the recommended option of afternoon shift, the draft Winter Maintenance and Salt Management Policy has been updated to reflect the following:

1. During and in anticipation of a snow storm event, the regular shift will start at 4:00 AM, to reduce overtime costs. During non-winter conditions, the regular shift will start at 7:00 AM to allow for pot hole repairs, snow removal etc. during day light conditions.

2. Afternoon shift for winter operation, if implemented, will commence from 3:30 pm.

3. Snow clearing operation (plow trucks/routes) may be limited to once per weekend, if needed, in case of consistent snow throughout previous week or anticipated following week, to be within hours of service requirements. However, afternoon shift, if implemented, will ensure snow clearing operations on Sundays. Whereas, morning shift will undertake snow clearing operations on Saturdays. Above schedules may change at the discretion of Director of Public Works.

4. The Public Works Department is responsible for maintaining/plowing snow from sidewalks in Winchester, Chesterville, Morewood and South Mountain. The Township may, remove the snow accumulated on areas between the sidewalk and main streets in Winchester and Chesterville on clear days, depending upon weather conditions. This will be completed as a low priority function, following the completion of the Township priority work on the driving surface. However, with the implementation of afternoon shift, snow removal will be performed on clear days. Snow removal in Winchester by the staff will be performed in conjunction with the current contract, as needed. The Patrol Foreman currently calls the snow clearing contractor in Winchester once or twice a week.

OPTIONS AND DISCUSSION:

Option 1: Approve the recommendation – recommended

In order to provide for an efficient and consistent level of service for winter operations, staff have prepared a draft winter maintenance and salt management plan (see attached). Based on Council and staff input, the policy will be finalized and posted on the Township's website prior to winter season to assist in communication and provide for consistent level of service.

Option 2: Do not approve the recommendation – not recommended

There will be inconsistent approach to Winter Maintenance level of service, continued increased number of complaints from residents as well as continued pressure on operators, resulting in non-conformance to Ontario Regulation 555.06 Hours of Service.

FINANCIAL ANALYSIS:
There will be additional cost with afternoon shift for winter operations.

There may be additional financial impacts due to increase in salt usage. This may be marginally offset by reduction in stone dust usage. Staff will continue to monitor through this winter and report actuals as part of 2021 budget.

According to the plan, the rate of application of salt on roads will be reduced, however, the number of roads to be treated with straight salt will increase for consistency and efficiency of winter operation.

Township spent additional $57,653.20 on snow removal through contractor in Winchester in 2019/2020 winter season.

OTHERS CONSULTED:
CAO
Patrol Foreman

ATTACHMENTS:
Winter Maintenance and Salt Management Plan

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

DRAFT

POLICY MANUAL	Policy No. 84-2020
Township of North Dundas	Effective Date: October 1, 2020
Subject: Winter Maintenance and Salt Management Plan	

Purpose:

To establish a policy to provide guidance with respect to the manner in which the Corporation of the Township of North Dundas will conduct roads winter maintenance operations in the municipality.

Background:

It is the Township of North Dundas Public Works Department's strategy to develop a Winter Maintenance and Salt Management Plan to achieve the Winter Maintenance Service objective:

"To deliver an efficient and cost-effective service for the roadways within the Township of North Dundas, which, so far as is reasonably practicable, enables the safe movement of all modes of transportation and pedestrian traffic with a minimum of delay throughout the winter period whilst limiting the environmental impact of the service."

Policy:

The Council of the Corporation of the Township of North Dundas hereby confirms that the policies set out in Sections 5.5.4, 3.5.1.9, 3.5.2.3 and 3.5.2.8 of the SDG Official Plan shall constitute the policy as required by Section 270(1)7 of the *Municipal Act, 2001* and that Schedule "A" attached hereto constitutes an integral part thereof;

Further, the Township of North Dundas shall strive to provide funding in the annual municipal budget to support winter maintenance level of service and salt management in the municipality.

Approved by Council Date: _____

Resolution #: _____

SCHEDULE A

PUBLIC WORKS DEPARTMENT

WINTER MAINTENANCE AND SALT MANAGEMENT PLAN

September, 2020

WINTER MAINTENANCE AND SALT MANAGEMENT PLAN

CONTENTS

Winter Maintenance and Salt Management Plan
for the
Township of North Dundas
Public Works Department

1.0 Introduction to the Winter Maintenance and Salt Management Plan

1.1 Purpose:

It is the Township of North Dundas Public Works Department's strategy to develop a Winter Maintenance and Salt Management Plan to achieve the Winter Maintenance Service objective:

"To deliver an efficient and cost-effective service for the roadways within the Township of North Dundas, which, so far as is reasonably practicable, enables the safe movement of all modes of transportation and pedestrian traffic with a minimum of delay throughout the winter period whilst limiting the environmental impact of the service."

1.2 Relevant Legislation:

- O. Reg. 239/02 Minimum Maintenance Standards for Municipal Highways
- Highway Traffic Act
- Employment Standards Act
- Occupational Health & Safety Act

1.3 Activity List:

Key activities are needed to provide a full winter maintenance service. The following is a brief summary:

- Precautionary salting
- Precautionary and post storm stone dusting/salting
- Plowing snow
- Snow clearance at intersections/junctions
- Heavy snow operations
- Reactive Treatments

1.4 Winter Maintenance Period:

1. The Winter Maintenance period will operate from October 1st to April 30th. During this period the regular hours will be 4:00 am to 12:30 pm in case of snow event or at the discretion of the Director of Public Works or their designate. Afternoon shift for winter operation, if implemented, will commence from 3:30 pm.

In case of clear conditions, operators in morning shift will be required to work from 7:00 am to 3:30 pm, at the discretion of the Director of Public Works or their designate.

Snow clearing operation (plow trucks/routes) may be limited to once per weekend, if needed, in case of consistent snow throughout previous week or anticipated following week, to be within hours of service requirements. However, afternoon shift, if implemented, will ensure snow clearing operations on Sundays. Whereas, morning shift will undertake snow clearing operations on Saturdays. Above schedules may change at the discretion of Director of Public Works.

1.5 Winter Maintenance and Salt Management Plan Distribution:

The Winter Maintenance and Salt Management Plan is a key document and will be issued to those shown in the distribution list in the Appendices; Appendix "A".

2.0 Policies and Responsibilities

2.1 Service Delivery Responsibilities:

The Public Works Department is responsible for providing the Winter Maintenance Service for the roadway operations within the boundaries of the Township of North Dundas Road System. This involves:

- Design of the Winter Maintenance and Salt Management Plan
- Annual production and distribution of the Winter Maintenance and Salt Management Plan
- Establishing treatment priorities for roadways
- Design of treatment routes for roadways
- Ensuring availability of resources, plant and materials
- Maintenance of operation equipment
- Ensuring availability of weather forecast service and condition monitoring systems
- Monitoring of highway conditions
- Decision making to commence Winter Maintenance operations and activities as necessary
- Day-to-day direction of operations
- Monitoring performance
- Providing accurate and timely information to relevant parties as required
- Maintaining comprehensive records for Winter Maintenance operations and activities
- Liaise with other Highway Authorities, Emergency Services and Police
- Implementing annual reviews of the service

2.2 Decision Making Process and Responsibilities:

Operational decisions will be made by the Director of Public Works and Patrol Foreman or their designate (Lead Hand) with the aid of available forecasting, Minimum Maintenance Standards, 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 to that decision making by the Director or Patrol Foreman or their designate. It is vital therefore that the Patrol Foreman records the prevalent conditions and relevant information when he/she makes a decision.

2.3 Responsibilities of the Patrol Foreman or their Designate:

The Patrol Foreman or their designate is responsible for monitoring the road and weather conditions for reaching an appropriate decision on the treatment for the roadway and for passing on this decision to the Operators.
The Patrol Foreman or their designate will be responsible for the timetable to clearly identify personnel involved in winter maintenance operations to encompass 24-hour coverage during the entire period. The Patrol Foreman will ensure the operations proceed in accordance with safe working procedures, hours of work, time off and on call.

The Patrol Foreman or their designate will audit the working practices of the winter maintenance operators to ensure compliance with winter maintenance standards and applications rates.

The Patrol Foreman or their designate will maintain a Daily Log and Patrol Record which will contain details of phone calls, decisions made and associated times. This log will be held on file by the Township.

The Director of Public Works and Patrol Foreman or their designate will be responsible for monitoring the weather as per MMS (Minimum Maintenance Standards). Upon request by the Patrol Foreman the Operator(s) shall monitor the weather for a total of three (3) times per day minimum and download the computerized weather report for filing.

As an example, the Patrol Foreman or their designate is responsible for at a minimum the following documentation:

- Patrol Foreman's Diary – will be kept up-to-date on a daily basis and once the diary is completed it will be retained for a retention period of twenty (20) years. The Patrol Foreman's diary will be made accessible for documentation in the event of a damage claim. Entries in the diary will be clear, concise and legible.

- Winter Patrol Record - the Patrol Foreman will complete this record for roads patrolled. This document will provide the date patrolled, roads completed, time, weather and road conditions, any accidents that are observed, who it was patrolled by and when the patrol was completed.

- Schedule – the Patrol Foreman will be responsible for scheduling his Operators.

- Material Usage Records – the Patrol Foreman must ensure that usage of material is recorded per each call out and reviewed for accuracy. The Patrol Foreman will use the compu–spread, if available, download information when reviewing the material usage which will be used when a discrepancy exists with a manual entry.

2.4 Operator Responsibilities:

Central to the success of any plan are the personnel involved. The Public Works Department Winter Maintenance Operators will be responsible for the Winter Maintenance Operation twenty-four (24) hours per day throughout the winter period.

The Operators at a minimum must complete the following records:

- Vehicle Inspection Report (Circle Check) – (as per the Vehicle Inspection Policy which applies at all times during the year, but referenced here for the purpose of the Winter Maintenance).

- As per the Highway Traffic Act, the Operator must perform a circle check prior to leaving the yard for each call out event. The Patrol Foreman will keep this record on file. No Operator will knowingly leave the yard if their vehicle or equipment has an identified mechanical/operational failure resulting from the completion of the circle check.

- Each vehicle and stone dusting/salting equipment will be inspected prior to every individual call out operation.

- The Operator ensures that their vehicle and stone dusting/salting equipment is cleaned sufficiently after each individual call out operation.

- Winter Operation Record – The Operator must complete a Winter Hours of Service for each round of a call out event.

- At the request of the Patrol Foreman, the Lead Hand or employee as designated by the Patrol Foreman shall patrol the representative roadways and document the patrol completion in their winter patrol record.

- Record of Duty Status / Hours of Service.

2.5 Operating Hours:

The Township adheres to the hours of work as set out in the Highway Traffic Act, Reg.4/93. The operators are required to track operating hours and report daily hours of service as per Highway Traffic Act, Reg. 555/06. Regular shift is eight (8) hours. When the driver has completed their extended thirteen (13) hours driving time in their on-duty time, they shall be sent home for the eight (8) hour off-duty period before driving the next shift. In addition to this, drivers are not allowed to work beyond seventy (70) hours in a seven (7) day work week. After seventy (70) hours, drivers need 36 hours consecutive off to reset to zero. Anytime, drivers have consecutive 36 hours off, the duty status reset to zero. Further, the Operator and Patrol Supervisors shall ensure the following:

a) The total off-duty time taken in the twenty hours is at least ten (10) hours,
b) The total driving time in the twenty hours does not exceed thirteen (13) hours;
c) The total on-duty time in the twenty hours does not exceed fourteen (14) hours;

Refer to following table for additional details:

Ontario Driving Limitations

For the 24-hour period "day," a driver cannot drive more than 13 hours.

Time	Condition
1. Off Duty Time - other than time in a sleeper berth	
2. Off Duty Time - in a sleeper berth	
3. Driving Time	**DRIVING = ≤ 13**
4. On Duty Time - other than driving time	

During the 24-hour period "day," a driver cannot drive after having been on-duty more than 14 hours.

Time	Condition
1. Off Duty Time - other than time in a sleeper berth	
2. Off Duty Time - in a sleeper berth	
3. Driving Time	**NO DRIVING AFTER ON DUTY = ≤ 14**
4. On Duty Time - other than driving time	

During the 24-hour period "day," a driver must be off-duty for 10 hours, which must include two hours that are not part of a mandatory off-duty period and are at least 30 minutes long.

Time	Condition
1. Off Duty Time - other than time in a sleeper berth	**OFF DUTY = ≤ 10** Off-Duty Periods must be at least 30 minutes long or they do not count toward the 10 hours.
2. Off Duty Time - in a sleeper berth	
3. Driving Time	
4. On Duty Time - other than driving time	

Daily Limits

2.6 Hours of Work:

The Township will operate as outlined below:

In case of Storm Event (Patrol/Operators): The regular working hours will begin at 4:00 a.m. and work until 12:30 p.m., Monday through Friday. At the discretion of Director, Operators will be able to work thirteen (13) hours until 3:30 p.m., under the limitation of operating hours. Afternoon shift, if implemented, will start at 3:30 pm.

In case of clear day (Patrol/Operators): The Operators will work 7:00 a.m. until 3:30 p.m., five (5) days a week, Monday through Friday. This work provides patrolling and maintenance of roads and vehicles. Afternoon shift, if implemented, will start at 3:30 pm.

Weekend (Patrol/Operators): The Weekend patrol will be at the discretion of the Patrol Foreman or their designate based on forecast and weather conditions. Morning weekday shift will be called in on Saturday, if needed and afternoon weekday shift will be called in on Sunday, if needed. In case of only Saturday or Sunday snow clearing operation, any one of the shifts can be called in at the discretion of Patrol Foreman or Director Public Works.

Emergency (Operators): During an unexpected event outside regular working hours (4:00 am to 3:30 pm), Operators will be called to assist with Road Maintenance, on an as needed basis.

2.7 Requirements for the Completion of Documents:

Please note that the forms as per the Winter Maintenance and Salt Management Plan which are to be completed by the Patrol Foreman(s) and operator(s) are not to be considered discretionary but mandatory.

However, it is duly noted that the Patrol Foreman/Lead Hand/Operator will **not** sustain "personal liability" for recording Township information.

The Township will retain the original copy of documents regardless of their appearance. Coffee stains or dirt on originals are preferable to copies of original documents. If a document requires correction, then a **single line** is to be placed through the incorrect information without making it illegible and continue writing on the original document. Initial corrections or a change in the colour of ink, in the case where you change writing pens.
Please assure that your writing is legible for others to read.

2.8 Date and Time Format:

The Township Public Works Department will adopt the following format for the purpose of documenting the date and time on documents or correspondence.

The date will be recorded as for example, 15/Sept./2020. It may be written in all numerical format except month.

The time shall be documented in the twenty-four (24) hour format. The recording of hours and minutes only will not be acceptable as the time could be misconstrued to represent either morning or evening.

2.9 List of Township Roads Employees:

The Township Public Works Department will create annually a list of all Township Public Works Employees/ Full-time/Part-time/Contract/Casual assigned to winter operations. Each employee will be asked to "Print" their name as well as provide a "Written Signature" and their driver's license number. Township will perform at a minimum once a year, a license verification, driver's license and CVOR abstract on each employee operating a Township vehicle for winter operations.

After the list has been completed, a signatory form will be completed by additional persons working for or with the Township Public Works Department.

2.10 Road Closures and Liaison with the Police:

When visibility declines to a point that it is hazardous to the driving public or snowplow operators to be on the roadway, snowplowing or ice control operations may be suspended. Suspended operations shall be resumed when visibility improves.

When weather conditions have rendered a route or roadway unsafe for use and the Director of Public Works or their designate determines the road must be closed to all traffic then this decision shall be provided to the Ontario Provincial Police and Emergency Services. Routes closed by Township instruction must be re-opened on Township instruction.

The Director of Public Works, Patrol Foremans, Public Works, Emergency Services (Fire and Ambulance), Ontario Provincial Police, Counties, Elected Officials and CAO, must be informed as soon as possible of roads closed by weather conditions. The Township will provide "Road Closure" signs and/or barricades to alert the public of the closed road. If at all possible, detours or diversion routes will be decided upon as a result of such a closure. In the event that a detour or diversion is not possible or will further endanger the travelling public by re-routing the traffic from a Township Road to a lesser travelled road, the Township will be held harmless from any motorist continuing forward on the "closed road" once so notified. The Township Public Works Department will be responsible for contacting the local media to notify the travelling public of the closed road(s) and the appropriate staff person to have it posted on the Township social media.

2.11 Salt Management – Objective:

Township will optimize the use of winter maintenance materials containing chlorides on all municipal roads while striving to minimize negative impacts to the environment. The Township staff will strive to provide safe winter road conditions for vehicular traffic as set out in this document.

2.12 Significant Weather Event:

As per the Ontario Municipal Act, a Municipality/Township may declare a significant weather event when a weather hazard, either forecasted or occurring, has the potential to pose a significant danger to users of the roadways in which the Municipality/Township have authority.

This declaration suspends the standard timelines required for Municipalities/Township to meet their winter maintenance objectives. All roadways are deemed in a state of repair with respect to snow accumulation and/or ice conditions, until the municipality declares the significant weather event has ended.

In each case, during the course of a declared significant weather event, the standard for addressing winter maintenance is to monitor the weather and deploy resources to address the issue, starting from the time the municipality deems it most appropriate to do so. When the municipality declares an event has ended, standard timelines for winter maintenance activities then begin.

Examples of Conditions when a significant weather event may be declared

- Significant snow accumulation during a twenty-four (24) hour period or back-to-back continuous events
- Ice formation that occurs without warning from the weather forecast
- High winds leading to blowing snow and large snow drifts
- Freezing temperatures when de-icing operations will not be effective

The declaration of a significant weather event is to notify the public that due to the forecasted or current weather conditions, caution is to be exercised when travelling on roadways, and that it may take longer than usual to restore the conditions back to a normal state of repair.

Notification of a significant weather event

Significant weather event notifications will be declared by the Public Works Director or their designate and will be posted on the Township's website and social media accounts.

3.0 Quality Control

3.1 Quality Management Regime:

Operational records are usually paper-based although where possible the Township of North Dundas will promote information being recorded electronically in a computerized system. Throughout the winter maintenance period, roads maintenance staff will produce and manage various reports as documented below and in the Appendices.

Major/minor incidents should be reported as soon as practically possible to the Patrol Foreman.

3.2 Information Recording and Analysis:

The Patrol Foreman completes record of action used and provides this information to Township's staff.

This information is required for every individual call out operation.

3.3 Budget and Material Monitoring:

Weekly figures for stone dust and salt usage by patrol route will be made available to Patrol Foreman and administrative staff who will in return provide a monthly financial statement and stock control report to the Director. These reports will be reviewed at the monthly meetings.

Inspection of salting operations and download of compu-spread information, if available, will be provided by the Fleet / Mechanics staff or Patrol Foreman, if possible, to ensure spreading rates, equipment speed, and route compliance.

Winter Materials Purchased Annually

Material	2019	2018	2017	3 year average
Solids	(tonnes)	(tonnes)	(tonnes)	(tonnes)
Rock Salt (NaCl)	2,300	2,400	2,380	2,360
Stone Dust (Mix)	5,660	4,700	5,150	5,170
Liquids				
Salt Brine (NaCl) (L)	N/A	N/A	N/A	N/A

Township trucks are not equipped with brine equipment.

4.0 Route Planning

4.1 Route Planning and Treatment Priorities:

Treatment priorities for the roadways within the Township of North Dundas have been devised to ensure effective, efficient coverage within the timescales defined in the Minimum Maintenance Standards. This system of coverage is readily adaptable to prevailing conditions.

For the purposes of this policy, the *highways* under the jurisdiction of the Township of North Dundas are classified according to the Table in Section 1(2) of O. Reg. 47/13, as follows:

4.2 Township Roads Maintenance Priority Class Categories:

Table 1 – Priority Class Categories

Posted Speed (AADT) Average Daily Traffic	91 - 100 km/h	81 - 90 km/h	71 - 80 km/h	61 - 70 km/h	51 - 60 km/h	41 - 50 km/h	1 - 40 km/h
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
Posted Speed (AADT) Average Daily Traffic	**91 - 100 km/h**	**81 - 90 km/h**	**71 - 80 km/h**	**61 - 70 km/h**	**51 - 60 km/h**	**41 - 50 km/h**	**1 - 40 km/h**
1,000 - 1,999	1	3	3	3	4	5	5
500 – 999	1	3	4	4	4	5	5
200 – 499	1	3	4	4	5	5	6
50 – 199	1	3	4	5	5	6	6
0 – 49	1	3	6	6	6	6	6

Based on 2013 traffic volumes, Township roads are classified under class 4 or 5

4.3 Service Standard 1 – Routine Patrolling:

1) The minimum standard for the frequency of patrolling of highways to check for conditions described in this Regulation is set out in the Table 2 to this section. O. Reg. 23/10, s. 3 (1).

2) If it is determined by the Township that the weather monitoring referred to in section 3.1 of the Minimum Maintenance Standards indicates that there is a substantial probability of snow accumulation on roadways, ice formation on roadways or icy roadways, the minimum standard for patrolling highways is, in addition to that set out in subsection (1), to patrol highways that the Township selects as representative of its highways, at intervals deemed necessary by the Township, to check for such conditions. O. Reg. 47/13, s. 2.

3) Patrolling a roadway consists of observing the roadway, either by driving on or by electronically monitoring the roadway, and may be performed by persons responsible for patrolling roadways or by persons responsible for or performing highway maintenance activities. O. Reg. 23/10, s. 3 (1).

Table 2 - Patrolling Frequency

	Winter Storm Condition	
Class	***Maximum Cycle***	***Desirable***
1	3 x every 7 days	2 x per day
2	2 x every 7 days	1 x per day
3	Once every 7 days	1 x per day
4	Once every 14 days	Once every 3 days
5-6	Once every 30 days	Once every 7 days

Township Patrolling of Representative Roads

Minimum patrolling of representative roads is as per table 2. Representative roads are Patrol Routes.

4.4 Service Standard 2 – Snow Accumulation

1) The Township of North Dundas has adopted the minimum maintenance standards for addressing snow accumulation as indicated below:
   a. after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in the Table 3 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 and within the time set out in Table 3,
      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 Table 3 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 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:
   1. Patrolling highways.
   2. Performing highway maintenance activities.
   3. 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 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;
   c. applying abrasive materials to the roadway; or
   d. any combination of the methods described in clauses (a), (b) 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.
   a. "Snow accumulation" means the natural accumulation of any of the following that, alone or together, covers more than half a lane width of a roadway:
      - New fallen snow
      - Wind-blown snow
      - Slush

Table 3 - Snow Accumulation

	Response to Snow Accumulation		**Surface Condition**		
Class	***Depth***	***Time***	***Lag time***	***Desired Condition***	***Minimum Condition***
1	2.5 cm	4 hours	12 hours	Safe & passable	Safe & passable

2	5 cm	6 hours	12 hours	Safe & passable	Safe & passable
3	8 cm	8 to 12 hours	18 hours	Safe & passable	Safe & passable
4	8 cm	12-16 hours	24 hours	Safe & passable	Safe & passable
5	10 cm	16-24 hours	24 hours	Safe & passable	Safe & passable

The Township does not maintain any Class 1, 2 or 3 roadways.

Given the Township roads are class 4 or 5, this allows for efficient winter plow operations and response commencing at 4:00 AM shift, subject to emergencies.

Please note that Safe and passable is defined as there may be some snow remaining but the surface can be safely travelled if done so in accordance with the conditions.

4.5 Service Standard 3 – Icy Roadways

The Township of North Dundas has adopted the minimum maintenance standards for treating icy roadways as indicated below:

1) The minimum standard for the prevention of ice formation on roadways is doing the following in the twenty-four (24) hour period preceding an alleged formation of ice on a roadway:
1. Monitor the weather in accordance with section 5.1.
2. Patrol in accordance with section 4.
3. 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 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 minimum 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 minimum 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, stone dust or any combination of salt and stone dust. O. Reg. 47/13, s. 5.

TABLE 4 - ICE FORMATION PREVENTION AND ICY ROADWAYS

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

O. Reg. 47/13, s. 5.

4.6 Winter Maintenance Operational Routes per Patrol:

As defined in Appendix 'D', the Winter Maintenance Routes may be subject to change by the Patrol Foreman or their designate in the event of an emergency.

Routes will be reviewed at the end of each winter season to determine whether changes are warranted.

A route is defined as a full surface.

4.6.1 Mountain Plow Route -Winchester Yard

Fawcett Road, Pavement, Class 4 Road
Van Camp Road, Pavement, Class 4 Road,
Development Road, Pavement, Class 4 Road,
Clark Road, Pavement, Class 4 Road,
Boundary Road, Class 4 Road,
Hyndman Road, Class 4 Road,
Shaw Road, Class 4 Road,

Ronson Road West , Class 5 Road,
Village of Mountain Streets, Class 4 Roads
Van Camp Road, Gravel, Class 5 Road,
Nelson Road, Class 4 Road,
Lough Road, Class 4 Road,
Nelson Road, dead end, Class 4 Road,
South Mountain Streets, Class 4 Road
Nation River Road, Class 4 Road,
Sandy Row, Class 4 Road,
Simzer Road, Class 5 Road,
Mulloy Road, Class 4 Road,

Total Route "Mountain" = 107.44 lane kms

4.6.2 **Hallville Plow Route** - Winchester Yard

Spruit Road, Class 4 Road,
Jennings Road, Class 5 Road,
Kerr's Ridge Road, Class 4 Road,
Hallville Streets, Class 4 Roads,
Loughlin Ridge Road, Class 4 Road,
French Settlement Road, Class 3 Road,
Belmeade Road, Class 4 Road,
Boundary Road, Class 4 Road,
Allen Road, Class 4 Road,
Development Road, Class 4 Road,
Church Road Class 4 Road,
Lillico Road, Class 4 Road,
Blaine Road, Class 5 Road,
Riddell Road Class 4 Road,
Shellian Lane, Class 4 Road
Coleman Cres. Class 4 Road
Travis Trail, Class 4 Road

Total Route "Hallville" = 97.68 lane kms

4.6.3 **Inkerman Plow Route -** Winchester Yard

Barkley Road, Class 4 Road,
Guy Road, Class 4 Road,
Levere Road, Class 4 Road,
Crowder Road, Class 4 Road,
Cameron Road, Class 4 Road,
Lough Road, Class 5 Road,
Pepperville Road, Class 4 Road
Norton Road, Class 4 Road,
McIntyre Road, Class 4 Road,
Bailey Road, Class 4 Road,
Village of Inkerman Streets, Class 4 Road,
McIntosh Road, Class 5 Road,
Timmins Road, Class 4 Road,
Moore Road, Class 4 Road,
Sandy Row, Class 4 Road,
Kirkwood Road, Class 4 Road,
Pemberton Road, Class 4 Road,
Cass Bridge Road, Class 5 Road,
Hogaboam Road, Class 4 Road,
Hollister Road, Class 4 Road,
Link Road, Class 5 Road,

Total Route "Inkerman" = 108.36 lane km

4.6.4 **Ormond Plow Route**

Route "Ormond" - Winchester Yard
Liscumb, Road, Class 4 Road,
County Road 3,
Cayer Road, Class 4 Road,
Rodney Lane, Class 4 Road,
Ormond Road, Class 4 Road,
Bisson Road, Class 4 Road,
Spruce Road, Class 4 Road,
Armstrong Road, Class 4 Road,
Merkley Road, Class 4 Road,
Jennings Road, Class 4 Road

Harmony Road, Class 4 Road,
Foresthill Road,, Class 4 Road,
Old Carriage Lane, Class 4 Road
Tudor Gate, Class 4 Road
Bridal Path, Class 4 Road
Elizabeth Street, Class 4 Road
Lafortune Drive, Class 4 Road
CountryLane, Class 4 Road,
Cloverdale Road, Class 4 Road,
Benson George Road, Class 5 Road,

Total Route "Ormond" = 95.04 lane kms

4.6.5 Morewood Plow Route

Route "Morewood" - Winchester Yard
Loucks Road Class 4 Road,
Connaught Road, Class 4 Road,
Kelly Road, Class 4 Road,
Finch-Winchester Boundary Road, Class 4
Wheeler Road, Class 5 Road,
Coyne Road, Class 4 Road,
Gibeault Road, Class 4 Road,
Coulthart Road, Class 4 Road,
McLaughlin Road, Class 4 Road,
Village of Morewood, Class 4 Road,
Carruthers Road, Class 4 Road,
Kyle Road, Class 5 Road
Stevens Road, Class 4 Road
Marionville Road/ Russell Boundary, Class 4 Road,
Dagenais Road, Class 5 Road,
Thompson Road, Class 4 Road,
Steen Road, Class 5 Road,
North Wing Road, Class 4 Road
South Wing Road, Class 4 Road
Lafleur Road, Class 5 Road,
Crump Road, Class 4 Road,
Thibault Court, Class 4 Road,
Kittle Road, Class 4 Road,

Total Route "Morewood" = 112.44 lane kms

4.6.6 Chesterville Plow Route

Route "Chesterville" - Winchester Yard
Loucks Road, Class 4 Road,
Froods Corner Road, Class 4 Road,
Byers Road, Class 4 Road,
Main Street N, Class 4 Road,
Howard Street, Class 4 Road,
Brannen Drive, Class 4 Road,
Industrial Drive, Class 4 Road,
Queen Street West , Class 4 Road,
Joseph Street, Class 4 Road,
John Street, Class 4 Road,
Francis Street, Class 4 Road,
Harper Road, Class 4 Road,
Emma Street, Class 4 Road,
McMillan Street, Class 4 Road,
King Street, Class 4 Road,
Queen Street East, Class 4 Road,
Ches Albert Street, Class 4 Road,
Ralph Street, Class 4 Road,
Water Street, Class 4 Road,
Victoria Street, Class 4 Road,
Ches Church Street, Class 4 Road,
Casselman Street, Class 4 Road,
Armstrong Place, Class 4 Road,
Mary Street, Class 4 Road,
College Street, Class 4 Road,
Faubert Avenue, Class 4 Road,
Thompson Road, Class 4 Road,
Streeterpete Road, Class 4 Road,
Erin Avenue, Class 4 Road,
Elizabeth Drive, Class 4 Road,
Tabitha Court, Class 4 Road,
Lori Lane, Class 4 Road,
William Street, Class 4 Road,
Riverside Drive, Class 4 Road,
Michael Street, Class 4 Road,
Pauline Street, Class 4 Road,
Martin Street, Class 4 Road,

Total Route "Chesterville" = 32.26 lane kms

4.6.7 Winchester Springs Plow Route

Route "Winchester Springs" - Winchester Yard
Nesbitt Road, Class 4 Road,
Winchester Springs Road, Class 4 Road,
Shay Road, Class 4 Road,
McMillan Road, Class 4 Road,
Forward Road, Class 4 Road,
Nation Valley Road, Class 4 Road,
River Road, Class 4 Road,
Ball Road, Class 5 Road,
Dillabough Road, Class 4 Road,
Limerick Road, Class 4 Road,
Webb Road, Class 4 Road,
St. Mary's Road, Class 4 Road
Droppo Road, Class 4 Road

Total Route "Winchester Springs" = 125.46 lane km

4.6.8 Winchester Plow Route

Route "Winchester" - Winchester Yard
Dawley Drive, Class 4 Road,
Winfield Ave, Class 4 Road,
Win Bailey Avenue, Class 4 Road,
Dufferin Court, Class 4 Road,
Dufferin Street West, Class 4 Road,
Holmes Street, Class 4 Road,
Annable Road, Class 4 Road,
Dufferin Street West, Class 4 Road,
Howard Street, Class 4 Road,
Whitney Street, Class 4 Road,
North Street, Class 4 Road,
Queen Street, Class 4 Road,
Centre Street, Class 4 Road,
Gladstone Street, Class 4 Road,
Alexander Street, Class 4 Road,
Wincrest Ave. Class 4 Road,
Beach Street, Class 4 Road,

MacDonald Cres. Class 4 Road,
York Court, Class 4 Road,
York Street, Class 4 Road,
Wickers Way, Class 4 Road,
Quart Court, Class 4 Road,
Anne Street, Class 4 Road,
Fred Street, Class 4 Road,
May Street, Class 4 Road,
Win Albert Street, Class 4 Road,
Clarence Street, Class 4 Road,
Victoria Street, Class 4 Road,
Caleb Street, Class 4 Road,
St Lawrence/County Rd 38, Class 3 Road
Church Street, Class 4 Road,
Louise Street N&S, Class 4 Road
Cass Cres. Class 4 Road,
Christie Lane, Class 4 Road
Henderson Cres. Class 4 Road
Gypsy Lane (portion) Class 4 Road
Wintonia Drive, Class 4 Road
James Street, Class 4 Road,
Lancaster Lane, Class 4 Road,
Arora Cres. Class 4 Road,
Total Route "Winchester" = 30.30 km lane km

4.7 Allocation of Vehicles, Equipment and Materials:

The Township Public Works Department will commit 50% of the winter truck fleet be ready for use by October 1st of each year.

Remainder of vehicles will be ready by October 15th of each year.

4.7.1 Roads Fleet Inventory:

Township Public Works Department vehicles may be dedicated to the Winter Maintenance fleet.

The following summary of vehicles are owned, operated and maintained by Township forces.

Equipment Classification	Number of Pieces
Graders	2
Loaders	1
Heavy Weight Vehicles (Tandem + Single Axle Trucks)	6+2
Light Weight Vehicles (1/2 ton)	4
Forklift	1
Backhoe	1
Sidewalk Plows	2
Pressure Washer	1
Asphalt Hot Box for pot holes / patches	1
Light Weight Vehicles (1 tons) – (4wd for Patrol & 2wd for hot box)	2

Location of Vehicles and Other Equipment:

Vehicles as listed in the table above are housed at Winchester Yard. However, in the case of an emergency, these vehicles may be deployed to one of the Township properties but will be returned to their normal operational site once the emergency has ceased.

4.7.2 Calibration Procedures:

Calibration of the mix/salting equipment (compu-spreads, application rates for mix and salting equipment, etc.) will be carried out annually before the start of the winter maintenance season and re-checked as deemed necessary. New equipment calibration performed by supplier upon delivery. For other equipment, calibration is performed by mechanic at the start of each season, after each time the stone dusting equipment has been worked on or modified and at least once more during the season or as required by patrol Foreman.

4.7.3 Fuel Stock and Locations:

Winchester Yard has mobile re-fueling tank on patrol light duty truck for diesel fuel. Diesel fuel usage is closely monitored through the diesel fuel stock entries. The Patrol Foreman reorders diesel fuel on an as-needed basis. The tanks house approximately 400 litres. Fuel for gas operated vehicles is purchased at local vendors (Guy Fuels) on credit.

4.7.4 Material Availability:

Stone dust and Salt are tendered on a (2) two-year contract and released early in the season once the previous winter maintenance season has ended. The successful

supplier must supply the Township on an as-needed basis over the course of the winter season (October through April). Stone dust shed(s) and salt domes are located at Winchester Yard and filled prior to the winter period. The stone dust domes and salt sheds are monitored closely by staff and usage is documented so that the facilities may be refilled prior to depletion.

The Township may purchase stone dust from the County as needed. The target mix for Stone Dust-Salt (Pre-Mix) for the Township use is 3 Stone dust:1 salt.

List of Stone dust Dome facilities:

Winchester Yard	straight Rock Salt
	Capacity of Dome – 1,100 tonnes

5.0 Weather Prediction and Information

5.1 Weather Prediction and Information Support:

The information used in decision making will be a combination of a road weather forecast and manual road condition checks.

The Patrol Foreman will discuss possible actions with the Equipment Operators and other Patrol Foremen. Further discussions may ensue should the forecast suggest extreme weather conditions.

The Patrol Foreman assesses the conditions on a continuing basis with the aid of the forecast, and upon the completion of each of the routes will consider the potential need for additional resources and deploy action accordingly.

6.0 Operational Procedures

6.1 Township Winter Maintenance Treatment Procedures:

During periods of adverse weather conditions or forecast predictions and where there may be uncertainty about the course of action required the Patrol Foreman or their designate and the Equipment Operator should consult the following guide:

Background: Each storm has individual characteristics and must be dealt with accordingly. Therefore, exceptions to this plan may occasionally be necessary.

While the Township may implement winter maintenance procedures and minimum maintenance standards it is also the responsibility of the travelling public to acknowledge adverse weather conditions and drive accordingly.

Motorists should drive their vehicles during adverse weather conditions with additional

caution and watchfulness, especially with respect to reduced traction and/or visibility. Motorists are advised to reduce their speed substantially below the posted speed limits during the periods of adverse conditions.

6.2 Standard Township Procedures for Winter Maintenance Operations:

The primary method of snow removal shall be by plowing. Salt or stone dust/salt may be used to preclude the formation of ice, enhance snow/ice removal or to improve traction. It can be expected that snow will be plowed into driveways as a normal part of snow removal operations.

The Township will not be responsible for snow or ice pushed or otherwise placed on the roadway or shoulders by others (sec. 181, Highway Traffic Act). The Township will not be responsible for damage to lawns on the Township road right of way or for the deposition of gravel in road ditches unless there are extenuating circumstances. These areas may be repaired on a case-by-case basis at the discretion of the Director of Public Works, or their designate.

A piece of Township snow removal equipment may damage a mailbox located in or immediately adjacent to the roadway. The Township will not repair damage to items if the damage is due to the force of the snow being discharged by the snow removal equipment. The Township may repair/replace personal property damaged by direct contact by its equipment on a case-by-case basis. Damaged mailboxes will be replaced with standard, conventional boxes or materials only, as the Township takes no responsibility for special installations or mail box designs which are installed on the Township road right of way.

Under no circumstances shall the Township use one of its pieces of equipment to push, pull or tow stranded, private vehicles from a roadway or ditch except in a life or health threatening situation. In such cases a Township employee may give brief assistance or call for emergency response. Likewise, no Township employee may use a Township vehicle or piece of equipment to perform snow or ice control operations on private or commercial property.

Sidewalks:

The Public Works Department is responsible for maintaining/plowing snow from sidewalks in Winchester, Chesterville, Morewood and South Mountain. The Township may, remove the snow accumulated on areas between the sidewalk and main streets in Winchester and Chesterville on clear days, depending upon weather conditions and resources. This will be completed as a low priority function, following the completion of the Township priority work on the driving surface. However, with the implementation of afternoon shift, regular snow removals may be performed

on clear days. Snow removal in Winchester by the staff will be performed in conjunction with the current contract, as needed. Patrol Foreman currently call the snow clearing contractor in Winchester once or twice a week.

6.3 Rates for Salt and Stone Dust

In addition to the Minimum Maintenance Standards as set out by the Township the following procedures are provided as a guideline for winter maintenance operations.

Some snowpack or ice, no precipitation	55 kg / ln km salt	55 kg/ ln km salt	130 kg / ln km stone dust-salt mix (2:1)	Yes
Mostly snow pack or ice covered or light precipitation (2 to 5cm)	55 kg / ln km salt	55 kg / ln km salt	130 kg / lnkm stone dust-salt mix (2:1)	Yes
Snow packed or iced over, or heavy precipitation (5cm or higher)	55 kg / ln km salt	65 kg / ln km salt	130 kg / ln km-stone dust -salt mix (2:1)	Yes
Freezing Rain	65 kg/ ln km salt	130 kg / ln km stone dust-salt mix (2:1)	130 kg / ln km stone dust-salt mix (2:1)	n/a
Gravel Road	130 kg / ln km stone dust – salt mix (3:1)	130 kg / ln km stone dust – salt mix (3:1)	130 kg / ln km stone dust – salt mix (3:1)	Yes
Snow Condition / Pavement Temperature	-8 C and above	-9 to -12 C	-13 C and below	Plowing

Minimum Application Rates – kg/ lane km:

Note: Patrol Foreman or their designate can make adjustments as necessary based on local climate.

Conventional Stone Dust / Stone duster

- Two-way salting or stone dusting/salting shall be the Township standard unless weather conditions or circumstances dictate otherwise.

6.4 Contract Routes:

The Township of North Dundas will review the need for contract truck routes annually.

The contracted routes will be awarded by tender process. The Township presently does not have winter contracts. Contract trucks will be called out by the Patrol Foreman or their designate, if needed, subject to approval of Director of Public Works.

6.5 Environmentally Sensitive Areas

It is necessary to understand the impacts of the Township winter maintenance policies and practices on environmentally and agriculturally sensitive areas. The following measures are employed to assist the Township in identifying environmentally sensitive areas within the Township:

- Identify wetlands, streams and valleys, environmentally sensitive areas, pond, lakes, reservoirs, woodlands, fish, wild life, plant habitat, threatened and endangered species, flood plains and hazard lands, and areas of natural and scientific interest adjacent to salt storage areas.
- Liaise with conservation authorities.
- Seek guidance from federal/provincial ministries and/or agencies, when necessary.

The Township salt storage and facilities lie outside the ten (10) year capture zone and environmentally sensitive features, so salt storage is not a significant concern.

7.0 Training

7.1 Training Provided to Winter Operators and Applicable Roads Staff

The Township Public Works Department will endeavour to provide the following training to its staff:

a) Full Time Roads staff will be given the opportunity to receive First Aid/CPR Training
b) All Roads staff will be given WHMIS training
c) All Roads Staff will be provided with access and knowledge on Occupational Health and Safety
d) All Operators will be provided with third party Snow Plow Driver training

8.0 Continuous Improvement Practices and Strategies

8.1 Monitoring and Updating

An annual review of the Winter Maintenance and Salt Management Plan by management and staff will occur at the end of each winter season. As a result of this review the plan will be updated to include any changes in Department Policy, strategies, and new techniques or equipment to be used in the upcoming winter season. Changes made to

the plan will be incorporated in the annual fall maintenance session in preparing for the upcoming winter control season.

8.2 Performance Measures

Consider performance measures to determine whether the objectives of the salt management plan have been met. Achievement, year-over-year, will be measured against the benchmark / previous four (4) years average. Some of the indicators may include:

Monitoring the severity of the winter season:

- Total annual cm of snow accumulation
- Total number of days with measurable snowfall
- Total number of days with freezing rain
- Total number of continuous winter event responses
- Total number of spot winter event responses
- Total number of winter event hours

Monitoring the salt used

- Tonnes of salt purchased annually
- Percent of applications where discharge rates were exceeded
- Total tonnes of salt applied annually per lane km

Ensuring customer satisfaction

- Total number of complaints received regarding winter operations
- Percent of complaints that resulted in a response

Measuring the success of the plan

- Percent of the goals, if any, set out in the plan that were met

8.3 Level of Services Policy

The Township currently maintains a winter maintenance level of service as per this document that meets or exceeds Ontario Regulation 239/02.

8.4 Equipment Calibration and Verification

- Properly calibrated equipment is one of the keys to the effective placement of de-icing material on municipal roads.
- Applications rates for all materials are outlined in this document and are subject to annual review.
- Prior to the winter season and each year thereafter, all spreaders will have their calibration verified and will be calibrated as needed. During the winter season the

equipment will be checked and recalibrated once mid-season and each time there has been work on the vehicle's hydraulic system.

- Prior to the winter season and each year thereafter all routes will be benchmarked for the theoretical amount of winter materials required.

8.5 Equipment Washing

Equipment washing is intended to reduce the amount of chlorides, oil, grease and grit that is discharged back into the environment.

- An oil/water separator is in place at the patrol yards and vehicle washing happens indoors.

8.6 Material Delivery and Handling

In the fall season, salt and stone dust is delivered and stockpiled. Winter stone dust is mixed with salt and all material conveyed to indoor storage, if not already done so.

- Ensure all deliveries of stone dust, and salt are covered while in transport, and schedule deliveries in good weather if feasible.
- Ensure the loading areas are swept clean following the transfer of the material.
- Ensure proper records are kept that include weigh tickets

8.7 Storm Response

Patrol Foreman have decision-making authority for winter road maintenance during winter storm events that includes, but is not limited to, combinations of precipitation, air and pavement temperatures, time of day and traffic volume. The patrol staff have the ability to call in plow operators on an as-needed basis given the current road conditions, factors to be considered are:

- Type of storm event;
- Air and/or pavement temperature during event
- At end or after the storm event; temperature rising, temperature falling
- Time of day; effect of heat gain during daylight hours
- Time of day; traffic volumes assist in breaking the bond of snow/ice with the pavement
- Wind direction
- Drifting conditions; do nothing and let the wind blow the snow across the road
- Frost penetration in the road base contributing to pavement temperature

8.8 Technological Review

Existing and new technology should be continuously monitored to determine applicability in the current policy and procedures with a view to altering them for continuous improvement in response to winter storm events.
Technological improvements should be periodically reviewed for the following aspects of salt management:

- Pre-wetting
- Direct liquid application or anti-icing
- Impact of different liquids on the equipment used for application
- GPS for vehicle locating and data transfer
- Electronic spreader controls with capability for solids, liquids, and data transfer via GPS
- New spreader equipment with liquid capabilities
- Environment protection at snow dumps to prevent discharge of debris and chemicals directly into a watercourse with the melt water
- Use of RWIS for localized weather and pavement temperature forecasting
- Use of infrared thermometers for measuring pavement temperature
- Use of pavement temperature as a tool in determining when and what material is to be used

9.0 Conclusion

9.1 Final Statement:

The Winter Maintenance and Salt Management Plan Policy laid out above is to establish goals and guidelines for the Township of North Dundas Public Works Department employees regarding winter maintenance of snow and ice control. It is not to be construed to create any duty to a specific individual or employee but is to act as a guideline for winter maintenance operations for the Township of North Dundas. The policy can be updated from time-to-time at the discretion of Director Public Works in consultation with the CAO. Updates will be documented and reported to the Council for consideration and input.

10.1

Appendix "A"

Distribution List

Name	Title	Telephone Number
Angela Rutley	CAO	Office: 613-774-2105 ext. 231 arutley@northdundas.com
Khurram Tunio	Director of Public Works	Office: 613-774-2105 ext. 292 Cell: 613-614-2450 ktunio@northdundas.com
John Oswald	Patrol Foreman	Office: 613-774-2105 ext.229 Cell: 613-229-3552 joswald@northdundas.com
Barry Giberson	Lead Land	Cell: 613-795-1545
Roads Staff	Operators / Laborer	Office: 613-774-2105

10.2

Appendix "B"

Contact List

Name	Title	Contact Information
Angela Rutley	CAO	Office: 613-774-2105 ext. 231 arutley@northdundas.com
Khurram Tunio	Director of Public Works	Office: 613-774-2105 ext. 292 Cell: 613-614-2450 ktunio@northdundas.com
John Oswald	Patrol Foreman	Office: 613-774-2105 ext.229 Cell: 613-229-3552 joswald@northdundas.com

Barry Giberson	Lead Hand	Cell: 613-795-1545
Roads Staff	Operators / Labourers	Office: 613-774-2105
Ontario Provincial Police	In Case of Emergency/ Road Closure	24 Hr. Service – 613 774 2603
Emergency Medical Service	Acting Chief Wayne Markell, 601 Campbell Street, Cornwall	Office: 613-930-2787 x 2384 Cell: 613-551-7340
Stephen Mann	Economic Development and Communications Officer	P: 613-774-2105 ext.244 C: 613-229-7179

10.3

Appendix "C"

Copies of Records/Reports to be Completed by Patrol Foremen and/or Operators (See attached)

a. Routine Patrol Record

b. Winter Patrol Record

c. Patrol Foreman's Diary (typical – not attached)

d. Samples Record of On-Duty Status as referenced in 2.4, Hours of Work Record and Highway Traffic Act, Hours of Service

e. Winter Weather / Operation Record (forecast records, not attached)

f. Daily Inspection Report

10.3.a. Patrol Record – Corporation of the_____of _____

Date of Patrol:	Weather			
	Clear	□	Wind	Light □ Moderate □ Strong □
Start of Patrol (Time) End of Patrol (Time)	Partly Cloudy	□		Direction _____
	Overcast	□	Visibility	Good □ Fair □ Poor □
Patrolled by: (Please Print)	Rain	□	Air Temperature	
	Snow	□		
Signature:	Freezing Rain	□		
	Fog	□		

Blank space = Acceptable

Condition Codes		Action Required
N/A	Not applicable	No action required
	Acceptable	No action required
M	Marginal - a defect observed, that does not create a hazard	Monitor defect
NS	Observed Defect Needs Service	Schedule repair to comply with MMS or LOS

Patrol Results

Location			**Roadways and Bicycle Lanes**										**Roadside**			**Bridges**		**Traffic Signs & Signals**							
Road Name	From	To	Maintenance Class	Potholes	Shoulder Drop off	Cracks	Debris	Drainage	Embankment Washout	Surface Discontinuity	Curb & Gutter	MH Frame & Cover	CB Frame & Grate	Grass	Trees & Shrubs	Guiderail	Bridge Deck Spalls	Surface Discontinuity	Safety Devices	Warning signs	Regulatory Signs	Information Signs	Street Name Signs	Traffic Signal	Warning Beacons	**Comments**

10.3.b. Winter Patrol Record – Corporation of the___of _____

Date of Patrol:	Weather						
	Clear	□	Time	Wind	Light □ Moderate □ Strong □		
Start of Patrol (Time) End of Patrol (Time)	Partly Cloudy	□	Time		Direction _____		
	Overcast	□	Time	Visibility	Good □	Time	
Patrolled by: (Please Print)	Rain	□	Time		Fair □	Time	
	Snow	□	Time		Poor □	Time	
Signature:	Freezing Rain	□	Time	Weather Comment:			
	Fog	□	Time				

Condition Codes		Action Required
✓	Observed Condition requiring a Winter Event Response	Schedule operations to comply with MMS or LOS
X	Observed Condition No Response Required	No Action required
N/A	Not applicable	No Action required

Results of the Patrol of Representative Roads

Location			**Road Surface, Separated or Conventional Bicycle Lanes, Sidewalk Condition**																			
Road Name	From	To	Maintenance Class	Pavement Temperature	Air Temperature	Bare & Dry	Bare & Wet	Partially Snow Covered	Partially Snow Packed	Partially Ice Covered	Snow Covered	Snow Packed	Ice Covered	Drifting	Black Ice	Frost	Slush	Are there sidewalks on this road section? (yes/no)	Are there bike lanes on this road section? (yes/no)	Does the sidewalk require service	Does the bike lane require service	Comments

10.3.d

RECORD OF DUTY STATUS (This document cannot be used as a driver's daily log. See instructions inside the front cover.

Driver's Name		Company	
Location		Address	

Accumulated hours of past 14 days

	/	/	/	/	/	/	/	/	/	/	/	/	/	/	Date
Off-duty															Off-duty
Driving															Driving
On-Duty (not driving)															On-Duty (not driving)

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Midnight 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11	Total Hours	Date
Off-Duty	Off-duty	Mo.
Driving	Driving	Day
On-Duty (not driving)	On-Duty (not driving)	Cycle 1__ 2__

Record of Duty Status - Hours of Service

Record of Duty Status for Local Driver (Operating within 160 km of terminal) 7 Day Cycle

Driver Name: ____________________

Date:						Start Location:										End Location:									
Duty Status	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
Off Duty																									
On Duty - Driving																									
On Duty - Not Driving																									
Remarks																									
																	7 Day ON DUTY Total								

Date:						Start Location:										End Location:									
Duty Status	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
Off Duty																									
On Duty - Driving																									
On Duty - Not Driving																									
Remarks																									
																	7 Day ON DUTY Total								

Date:						Start Location:										End Location:									
Duty Status	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
Off Duty																									
On Duty - Driving																									
On Duty - Not Driving																									
Remarks																									
																	7 Day ON DUTY Total								

Date:						Start Location:										End Location:									
Duty Status	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
Off Duty																									
On Duty - Driving																									
On Duty - Not Driving																									
Remarks																									
																	7 Day ON DUTY Total								

Date:						Start Location:										End Location:									
Duty Status	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
Off Duty																									
On Duty - Driving																									
On Duty - Not Driving																									
Remarks																									
																	7 Day ON DUTY Total								

Mandatory Off Duty Time - Minimum of 10 hours off duty required, 8 hours must be consecutive
On Duty Driving - Maximum of 13 Hours in a shift
On Duty Status - Driving and Non Driving - Maximum of 14 hours in a shift - 8 consecutive hours off duty required
Shift Duration - Maximum of 16 hours from the start of shift - 8 consecutive hours off duty required
7 Day Cycle - Maximum of 70 hours On Duty in 7 consecutive days - 24 consecutive hours off duty required

Sheet must be completed in full and submitted to Supervisor

10.3.f. Daily Vehicle/Equipment Inspection Report (CVOR) – to be used in conjunction with Schedule 1

Daily Vehicle / Equipment Inspection Report

This vehicle inspection must be completed each day prior to movement of any vehicle or equipment.
This completed report must be carried in the vehicle and submitted to your supervisor at the end of shift.

DATE	TIME AM/PM	LOCATION	INSPECTED BY		SIGNATURE
UNIT NO.	VEHICLE PLATE	ODOMETER	TRAILER NO.	TRAILER PLATE	PRE-TRIP ☐ POST TRIP ☐
DRIVER 1 NAME		SIGNATURE	DRIVER 2 NAME		SIGNATURE

Defects Noted				Schedule 1	Additional Inspection Items		
Major	Minor		✓	Refer to Schedule 1 Major/Minor Defects	Defect	✓	Item
		1		Air Brake System			Ownership
		2		Cab			Insurance
		3		Cargo Securement			License Plate/Sticker
		4		Coupling Devices			CVOR
		5		Dangerous Goods			Radio
		6		Driver Controls			Gauges
		7		Driver Seat			Electronics
		8		Electric Brake System			Fluid Levels
		9		Emergency Equipment and Safety			Body Damage
		10		Exhaust System			Beacons/Arrow Board
		11		Frame and Cargo Body			Harness/Plow/Wing
		12		Fuel System			Plow/Sander Controls
		13		General			Sander/Spinner
		14		Glass and Mirrors			Other:
		15		Heater/Defroster			Other:
		16		Horn			Other:
		17		Hydraulic Brake System	Inspection Notes:		
		18		Lamps and Reflectors			
		19		Steering			
		20		Suspension System			
		21		Tires			
		22		Wheels, Hubs and Fasteners			
		23		Windshield Wiper/Washer			

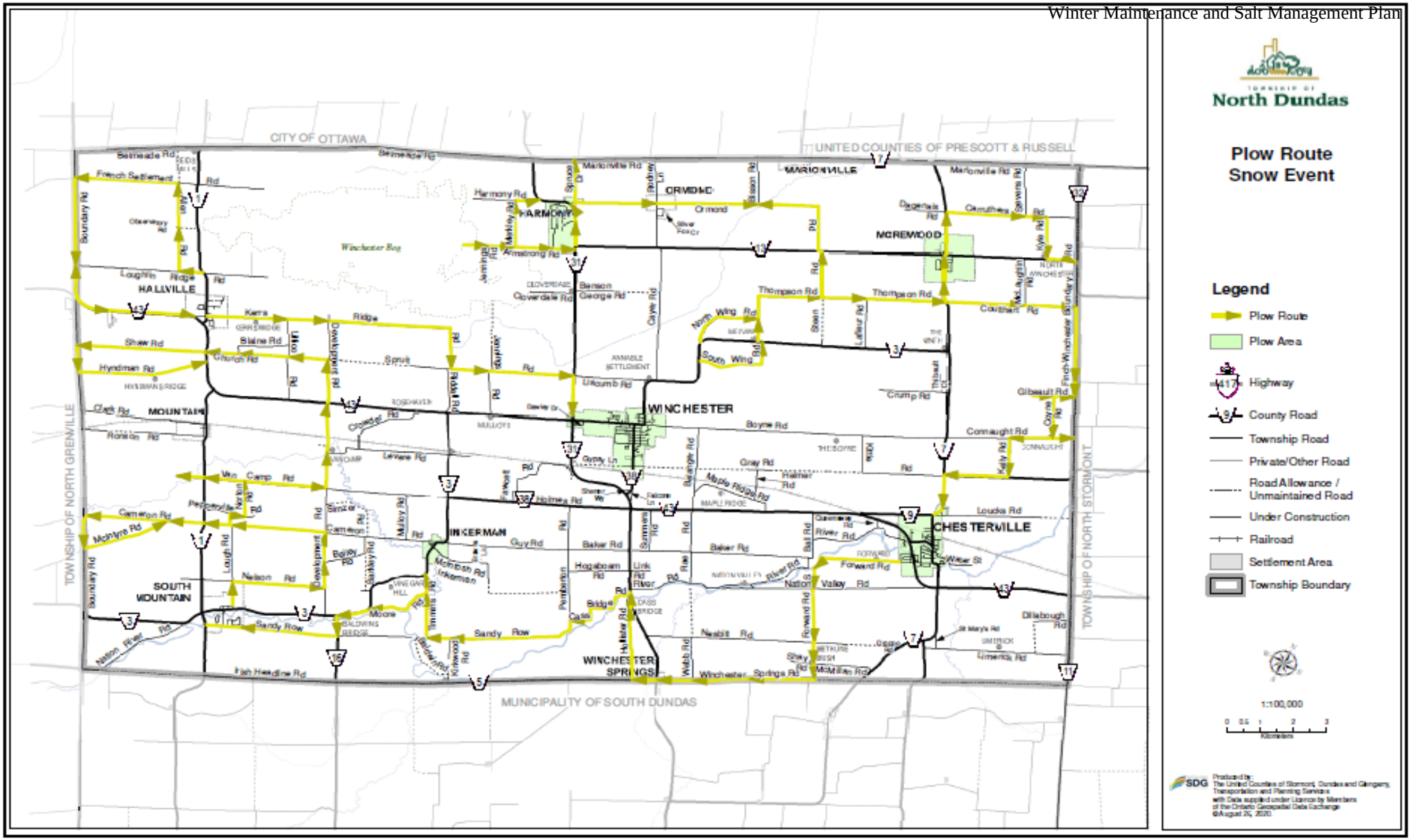
Fleet Technician Comments/Repairs Completed: Date:

Fleet Technician Signature:

10.4

Appendix "D"

Winter Patrol Route Drawings
(See attached)


North Dundas
Plow Route
Snow Event
Legend
Plow Route
Plow Area
417 Highway
9 County Road
Township Road
Private/Other Road
Road Allowance / Unmaintained Road
Under Construction
Railroad
Settlement Area
Township Boundary
1:100,000
0 0.5 1 2 3
Kilometers
CITY OF OTTAWA
UNITED COUNTIES OF PRESCOTT & RUSSELL
MUNICIPALITY OF SOUTH DUNDAS
TOWNSHIP OF NORTH GRENVILLE
TOWNSHIP OF NORTH STORMONT
HALLVILLE
MOUNTAIN
SOUTH MOUNTAIN
WINCHESTER
WINCHESTER SPRINGS
INKERMAN
CHESTERVILLE
MOREWOOD
MARIONVILLE
ORMOND
HARMONY
Winchester Bog
Produced by:
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Transportation and Planning Services
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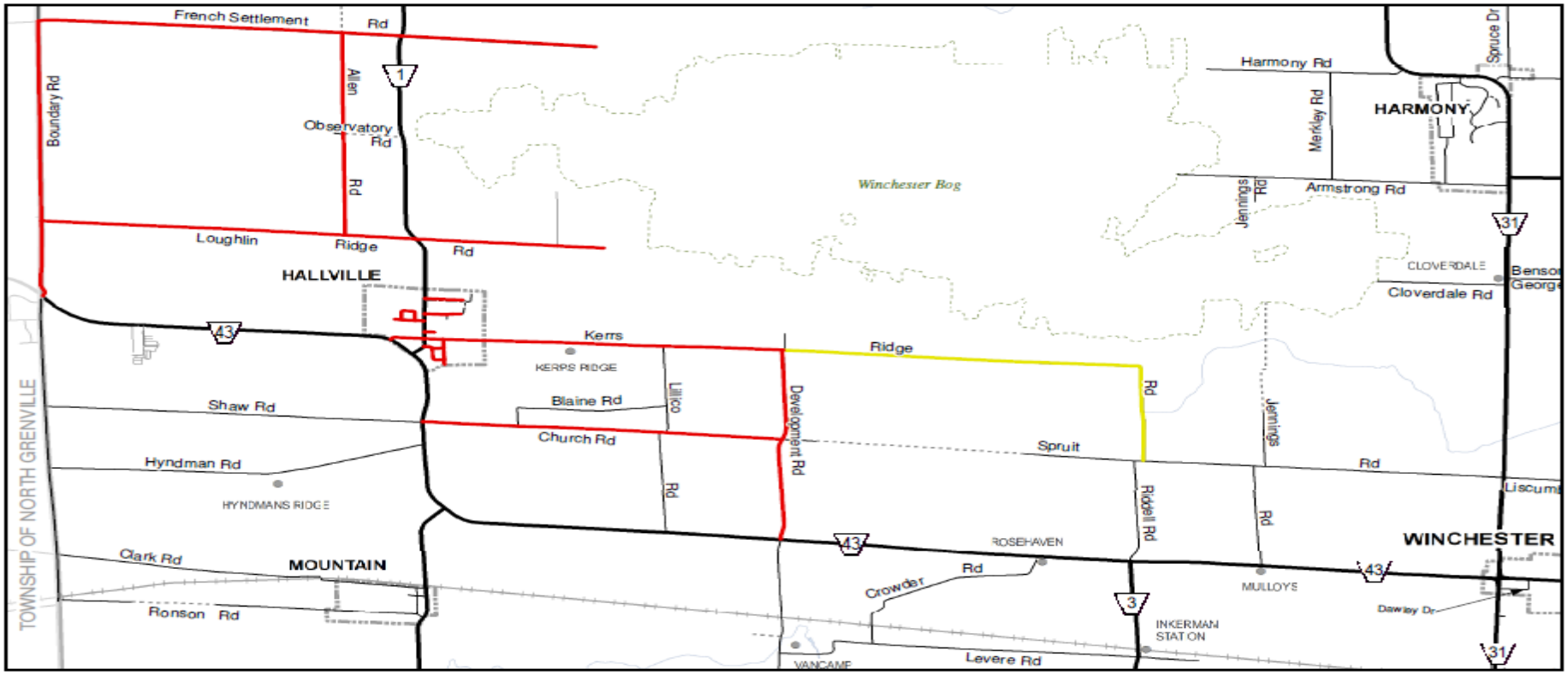
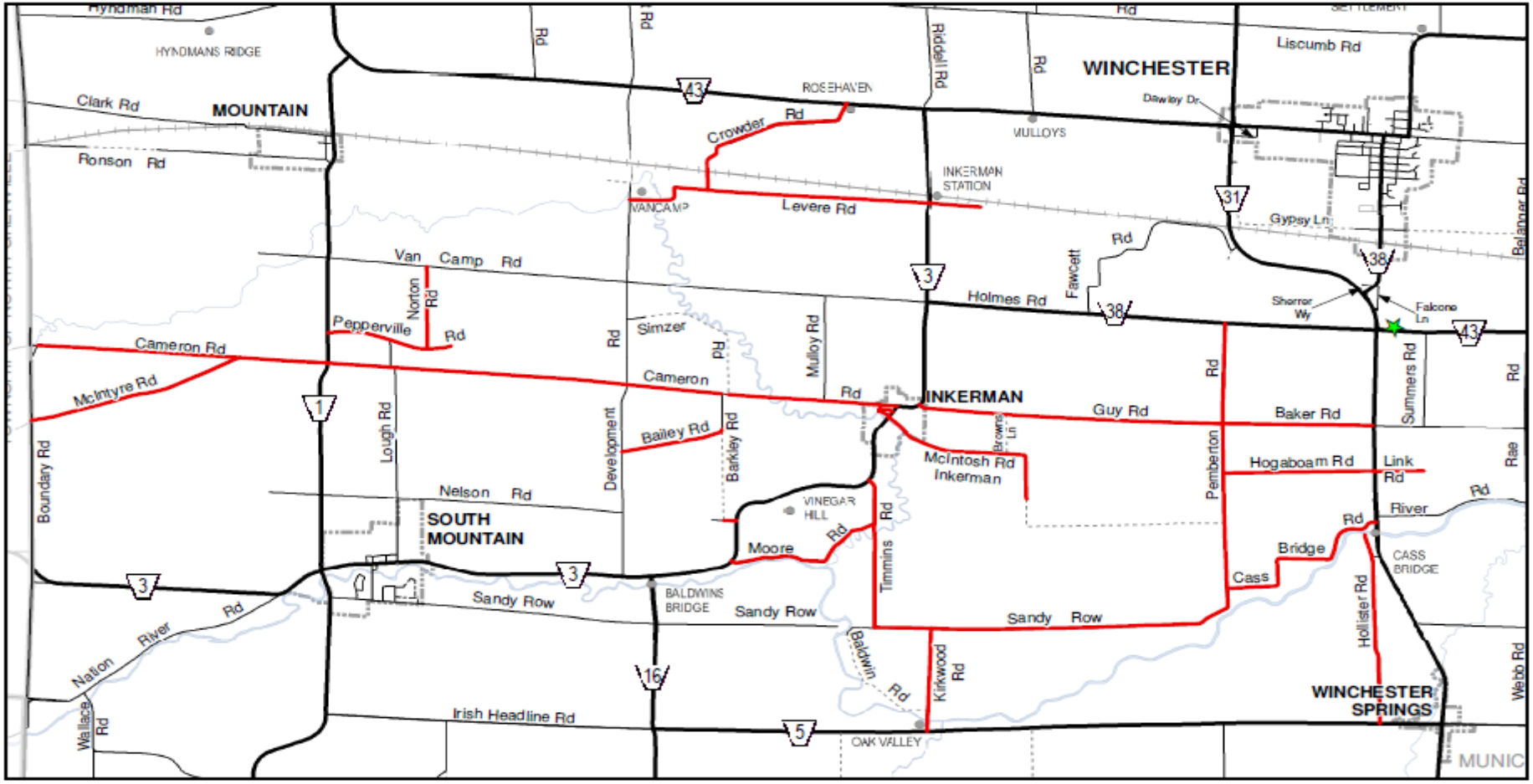
North Dundas

Snow Plow Route - Hallville - 3204



North Dundas

Snow Plow Route - Inkerman



Legend

Snow Plow Route

Surface Type

- Pavement
- Gravel

- County Road
- Township Road
- Private/Other Road

- Road Allowance / Unmaintained Road
- Under Construction
- Railroad
- Settlement Area

1:70,000

0 0.5 1 2 3 Kilometers

SDG

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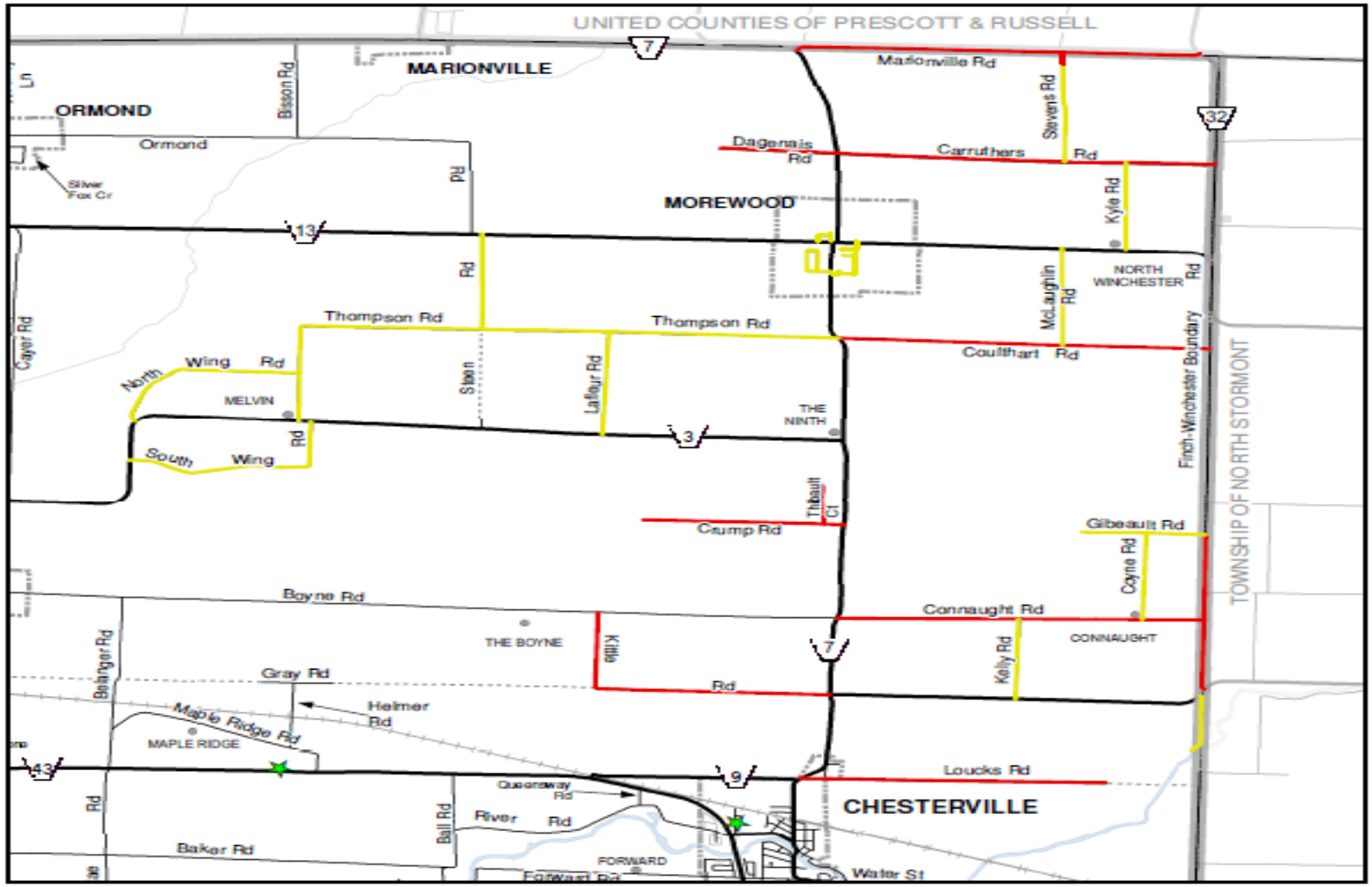
Snow Plow Route - Morewood - 3212



Legend

Snow Plow Route Surface Type

- Pavement
- Gravel
- Patrol Garage
- Settlement Area
- 9 County Road
- Township Road
- Private/Other Road
- Road Allowance / Unmaintained Road
- Under Construction
- Railroad

1:70,000

0 0.5 1 2 3 Kilometers

SDG

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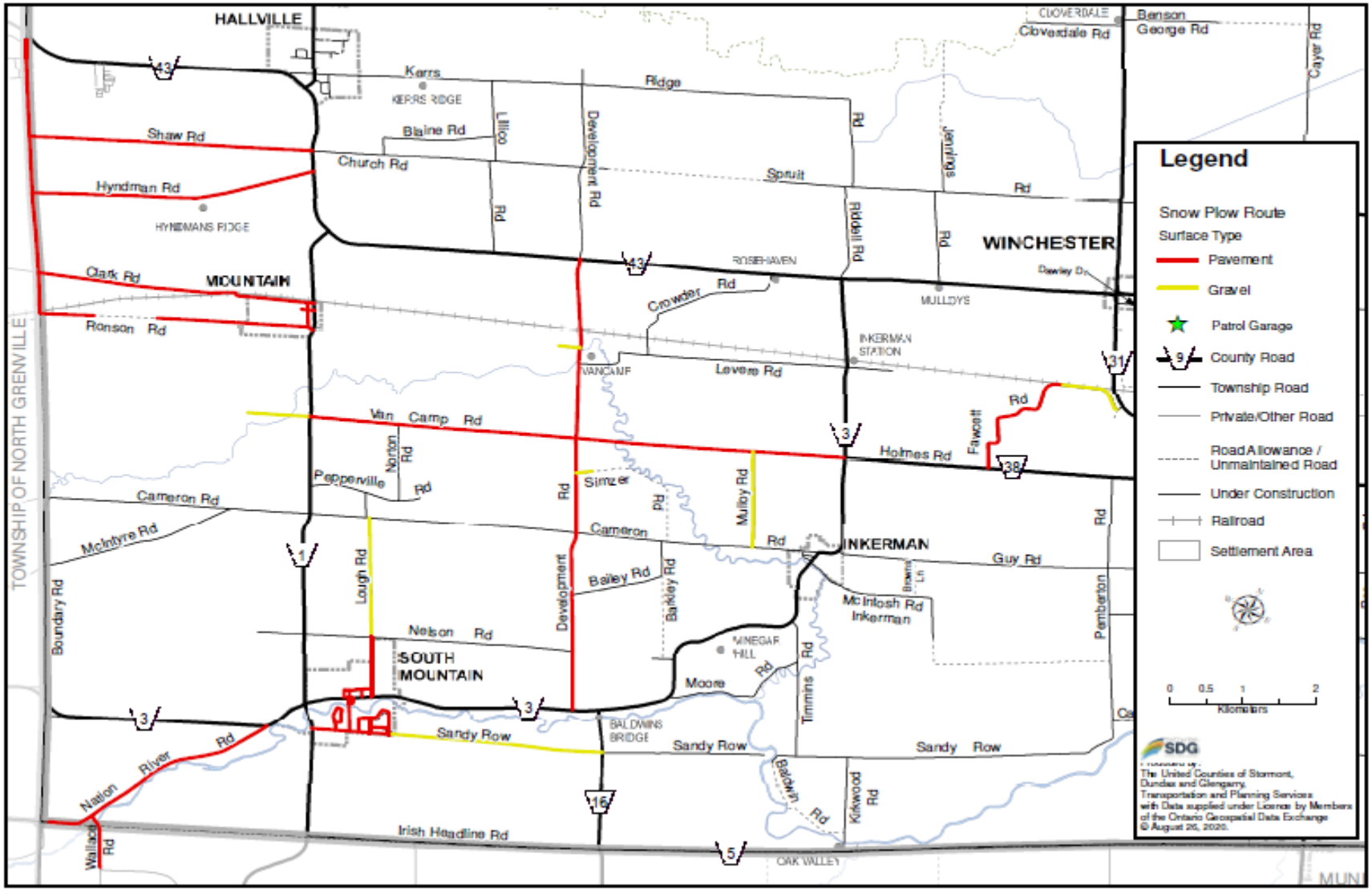
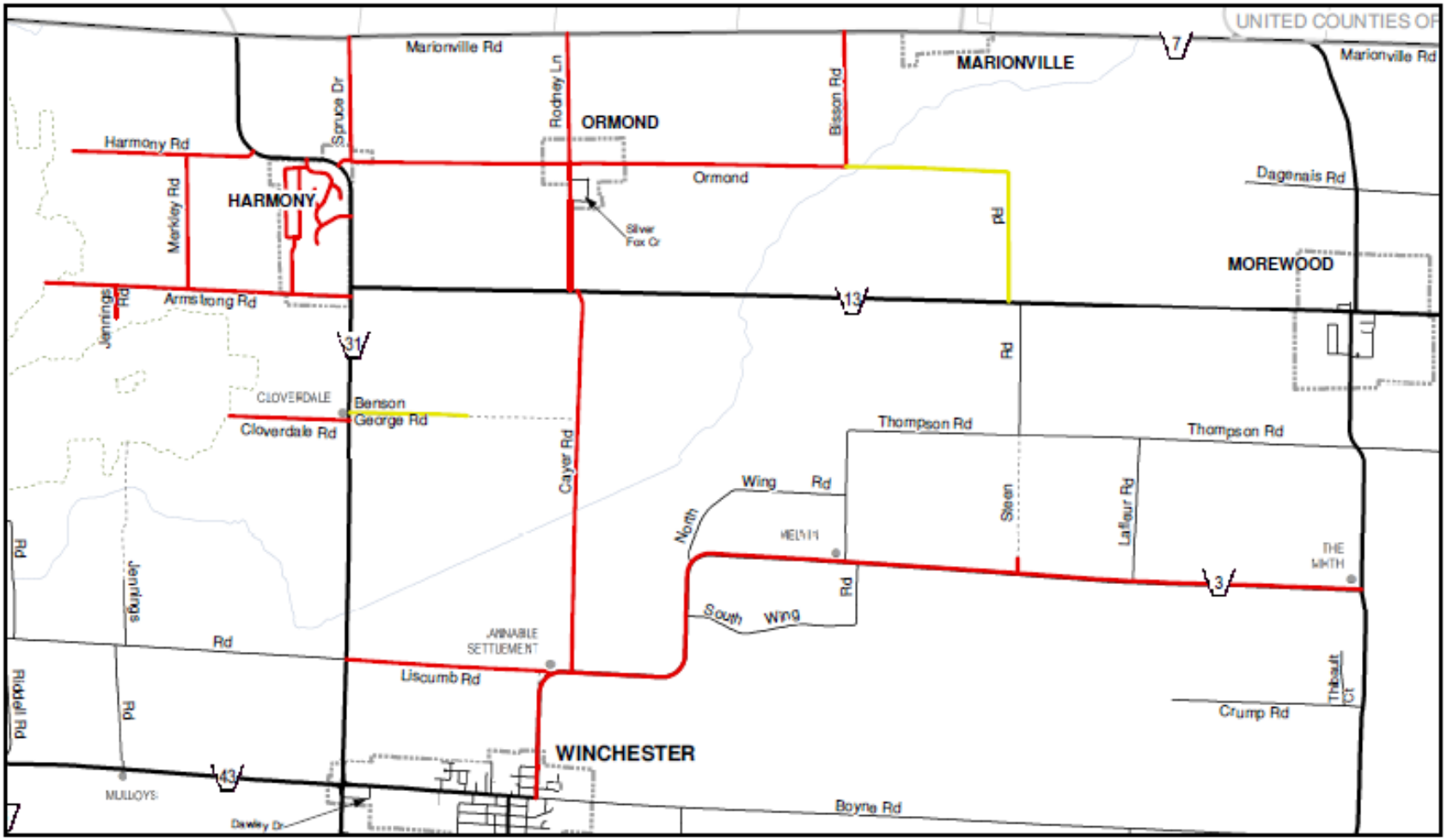
North Dundas

Snow Plow Route - Mountain - 3203



North Dundas

Snow Plow Route - Ormond - 3210



Legend

Snow Plow Route

Surface Type
- Pavement
- Gravel

- 9 County Road
- Township Road
- Private/Other Road
- Road Allowance / Unmaintained Road
- Under Construction
- Railroad
- Settlement Area

1:60,000

0 0.5 1 2 3 Kilometers

SDG

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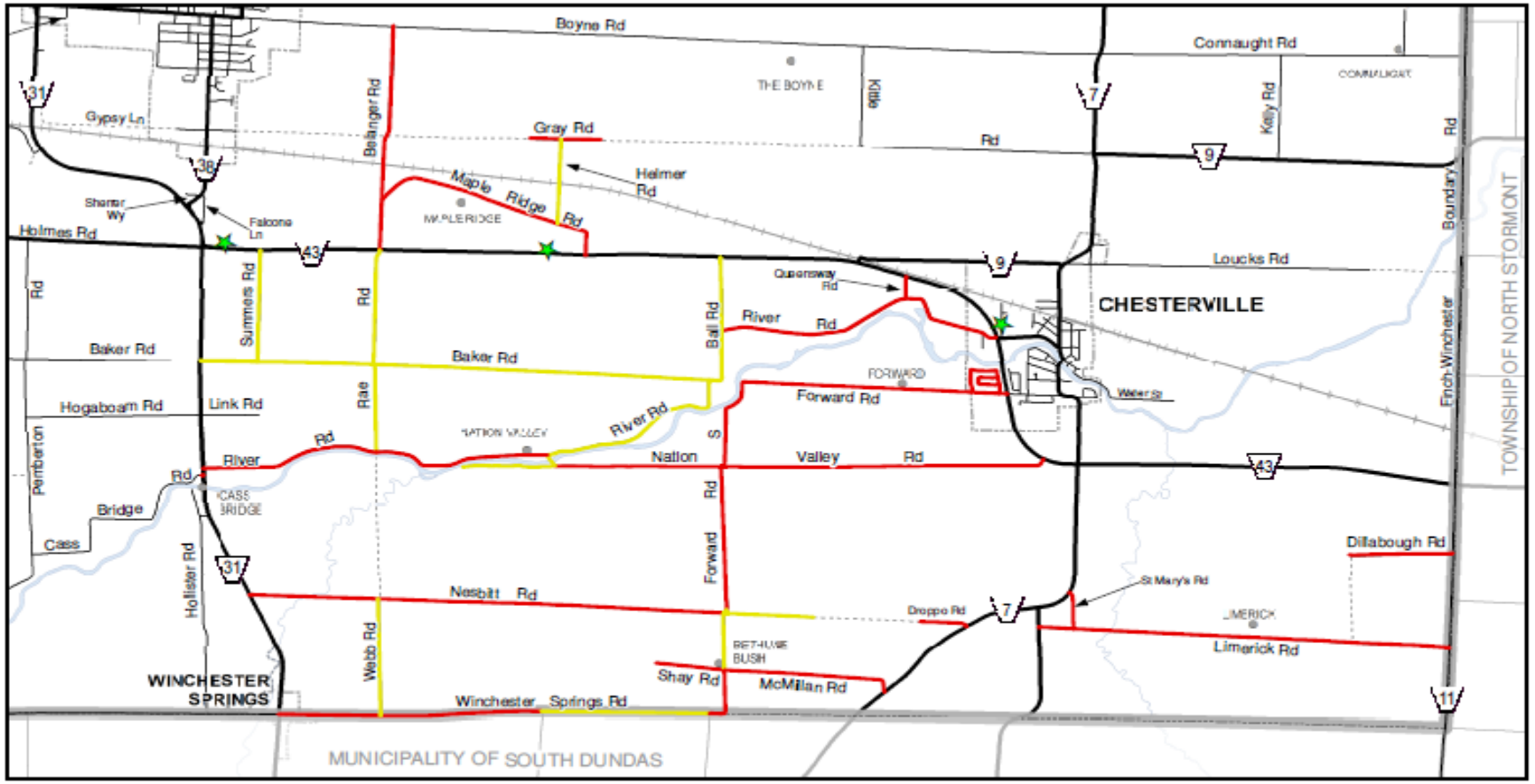
North Dundas

Snow Plow Route - Winchester Springs - 3208



Legend

Snow Plow Route
Surface Type
- Pavement
- Gravel

- Patrol Garage
- County Road
- Township Road
- Private/Other Road

- Road Allowance / Unmaintained Road
- Under Construction
- Railroad
- Settlement Area

1:60,000

0 0.5 1 2 3 Kilometers

SDG

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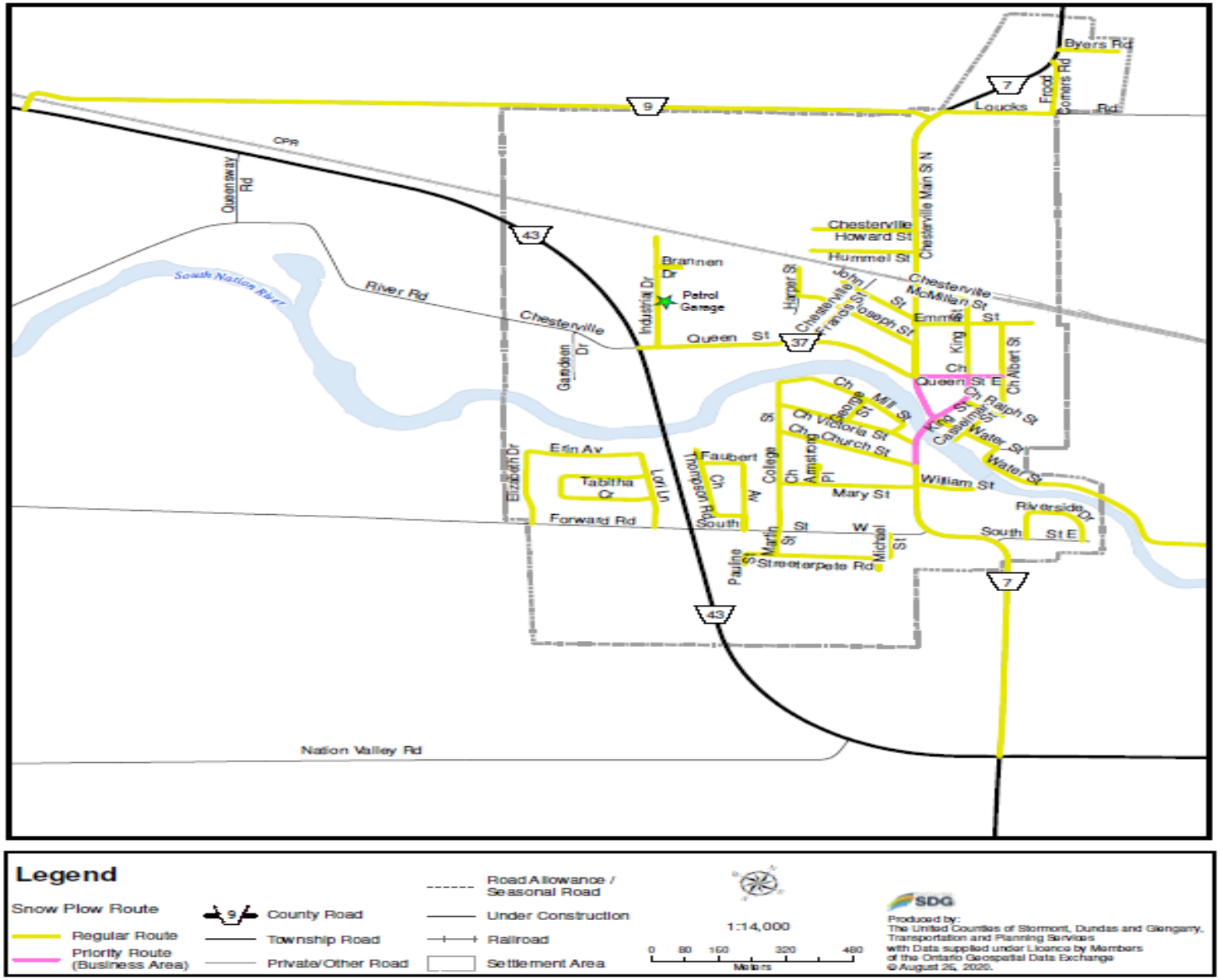
North Dundas

Snow Plow Route - Chesterville



Legend

Snow Plow Route
- Regular Route
- Priority Route (Business Area)

- 9 County Road
- Township Road
- Private/Other Road
- Road Allowance / Seasonal Road
- Under Construction
- Railroad
- Settlement Area

1:14,000

0 80 160 320 480 Meters

SDG

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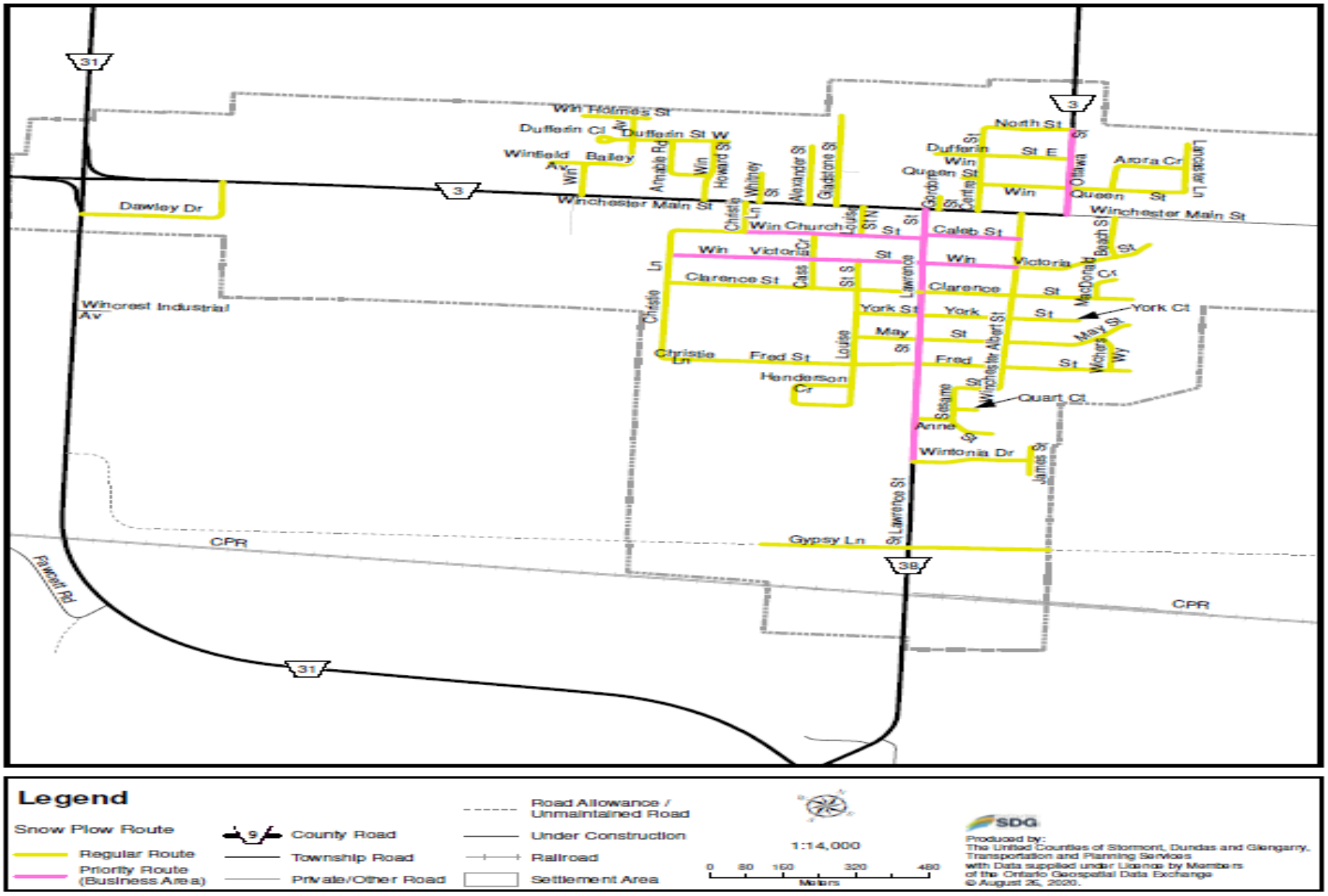
North Dundas

Snow Plow Route - Winchester



ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Water and Wastewater Servicing Study

RECOMMENDATION:

THAT the Council of the Township of North Dundas receive the draft Water and Wastewater Servicing Study – Technical Memorandum dated October 9, 2020; And

THAT the Council of the Township of North Dundas endorse the preliminary recommendations, subject to further review or refinements, and direct staff to draft updates to By-law NO. 60-2014 and By-law NO. 2020-23 for Council consideration.

BACKGROUND:

J. L. Richards has prepared a draft technical memorandum for the water and wastewater servicing upgrades to accommodate growth from the year 2020 to the year 2040 within the Township of North Dundas in the villages of Winchester and Chesterville, as per following assumptions. Refer to attached memorandum for additional details.

Scenario	Winchester		Chesterville	Total	
	Number of Added Units	Population Increase From Previous Scenario	Population Increase From Previous Scenario	Population	Population Increase From Existing (2019)
Existing *(2019)*	n/a	n/a	n/a	**4,355**	n/a
Near Term *(1-5 year)*	273	509	294	**5,158**	803
Mid Term *(5-10 year)*	220	450	293	**5,901**	1,546
Long Term *(10-20 year)*	403	750	587	**7,238**	2,883
Build-Out *(20+ year)*	(20.56 ha)	1,161	0	**8,399**	4,044

The memorandum considered following design parameters:

Future Water Flow Projection – Design Parameters		
Parameter	**Residential**	**Commercial**
Population Density (per unit)*	2.5 person/unit	n/a
Population Density (per hectare)	35 person/ha	n/a
Average Day Flow	350 L/cap/day	28,000 L/ha/day
Maximum Day Flow	2.0 x Average Day	1.5 x Average Day
Peak Hour Flow	1.5 x Maximum Day	1.8 x Maximum Day

*The Wellings of Winchester development (Phases 1-5) was assigned a population density of 1.17 person/unit for 1-bedroom units and 1.62 person/unit for 2-bedroom units.

The memorandum considered various servicing options to expand, replace and upgrade water and wastewater servicing infrastructure.

J.L. Richards has also prepared a separate memorandum related to existing water capacity model, see attached. Based on model results, the existing water distribution system is operating in accordance with the pressure and flow recommendations of the current MECP Water Design Guidelines. The future water capacity expansion options and associated costs will be presented through a separate report to the Council for consideration.

OPTIONS AND DISCUSSION:

1. **Endorse the preliminary recommendations as identified in the attached draft Water and Wastewater Servicing Study – technical memorandum -** recommended. The following summarizes the recommendations from the study:

CONCEPTUAL LEVEL UPGRADES		**Class 'D' Opinion of Probable Cost (OPC)**
Type	**Description**	
UPGRADES 0 to 5 Years		
sewage Pumping Station Upgrades	Option 2A – Same Main St. SPS upgrade as Option 1, but forcemain outlet extended along Main St., east of Gladstone St.	$4.1M
	Options 2A and 2B – Bailey Ave. SPS building and equipment replacement at end of service life	$750,000
	Total Sewer	**$4.85M**
Watermain Upgrades	New 300 mm diameter watermain loop approximately 1030 m (excluding 750 m through new development property) of 300 mm diameter watermain connection between Main St. West and Fred St.	$750,000

Watermain Storage and Pumping Station Upgrades	Chesterville Reservoir - 450 m^3 water storage expansion and pumping station upgrade	$1M
	Total Water	**$1.75M**
UPGRADES 5 to 10 Years		
	Options 1, 2A and 3A – Main St. W, Bailey Ave. SPS outlet sewers: Upgrade 155 m section of sanitary sewer with 300 mm diameter sewer	$200,000
	Total Sewer	**$200,000**
Watermain Upgrades	St. Lawrence St. 300 mm diameter watermain upgrade between the Winchester Reservoir and Pumping Station and Gordon Street (current extent of 300 mm diameter watermain from the Winchester elevated tank). Accompanies Winchester water storage and pumping station upgrades.	$1.5M
Water Storage and Pumping Station	Water storage expansion of 1,400 m^3 and booster pump upgrade at the Winchester Reservoir and Pumping Station.	$2M
	Total Water	**$3.5M**
UPGRADES 10 to 20 Years		
Sanitary Sewer Capacity Upgrades	Options 1 to 3 – Main St. W. upstream of Main St. SPS: Upgrade 200 m section of sanitary sewer with 300 mm diameter sewer	$250,000
	Options 1 to 3 – Easement: Upgrade 51 m section of sanitary sewer with 300 mm diameter sewer. To be confirmed in future based on field survey and actual future wastewater flows	$75,000
Sewage Pumping Station Upgrades	Options 1 to 3 – Ottawa St. SPS, increase capacity (current ECA capacity 90 L/s) to accommodate the build-out demand scenario (127 L/s from 90 L/s). It is assumed equipment upgrades can be accommodated in the existing building footprint and forcemain. .	$750,000
Sewage Treatment System	Increase lagoon treatment capacity by adding end of pipe treatment such as a Moving Bed Bioreactor (MBBR) and/or increase existing lagoon depth to increase storage volume. Timing and remaining treatment capacity to be periodically reviewed in the future based on receiving wastewater flow as growth occurs.	$15M

	Total Sewer	**$16.075M**
UPGRADES BUILD-OUT		
Watermain Upgrades	Main St W. upgrade watermain to 300 mm diameter from Wellings of Winchester to St. Lawrence St. Establishes a trunk watermain loop through Winchester to improve fire flow availability.	$1.5M
	Fred St. upgrade watermain to 300 mm diameter from Fred St. Easement connection to St. Lawrence St. Establishes a trunk watermain loop through Winchester to improve fire flow availability.	$500,000
TOTAL OVERALL CONCEPTUAL-LEVEL OPC		$28M

2. **Do not approve the preliminary recommendations** – not recommended.

FINANCIAL ANALYSIS:

The preliminary recommended option will require financial review and updates to the following:

60-2014 - Water Sewer Capital Charge By-law
2020-23 - Allocation Water Sewer By-law

OTHERS CONSULTED:
CAO

ATTACHMENTS:
Water and Wastewater Servicing Study
Hydraulic Water Model Analysis

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

TECHNICAL MEMORANDUM

J.L. Richards
& Associates Limited
700 - 1565 Carling Avenue
Ottawa, ON Canada
K1Z 8R1
Tel: 613 728 3571
Fax: 613 728 6012

To: Khurram Turino, M.Eng., P.Eng.
Director of Public Works
Township of North Dundas

From: Annie Williams, P.Eng.
Mark Buchanan, P.Eng.

Re: **Township of North Dundas**
Water and Wastewater Servicing Study

Date: October 9, 2020

JLR No.: 28855-001

CC: Angela Rutley, Township of North Dundas
Mary-Lynn Plummer, Township of North Dundas

BACKGROUND

J.L. Richards & Associates Limited (JLR) carried out a Water and Wastewater Servicing Study for the Township of North Dundas (Township) to assess the ability of existing infrastructure to support future growth and development. The findings of this servicing study indicate that municipal infrastructure works, including but not limited to the items listed below, are required to fully service the anticipated future development throughout the Township:

- Watermains and appurtenances to connect to existing and proposed future developments;
- Forcemains and sanitary sewers to connect to existing and proposed future developments;
- Watermain capacity upgrades to accommodate increased demand;
- Sanitary sewer capacity upgrades to accommodate increased demand;
- Upgrades to existing pumping station(s);
- New sewage pumping stations; and
- Additional water tank storage.

The purpose of this memorandum is to assess the impact of projected future development on the existing water and wastewater infrastructure in the Township, identify conceptual-level upgrade requirements to accommodate this growth, and prepare an opinion of probable cost (OPC) of the conceptual-level upgrades. Generally, the methodology associated with this study comprises the following:

- Consult with the Township to confirm the expected development areas for near term, mid term, long term and build-out scenarios;
- Estimate future water and sanitary system flows based on projected future development identified by the Township;
- Update existing water and sanitary system models based on the projected future flows;
- Identify conceptual-level upgrades required for major infrastructure (i.e., trunk sewers, pumping stations, lagoon) for the future scenarios; and
- Prepare a conceptual-level (Level ‘D’) OPC for all major infrastructure upgrades.

It is important to note that the results of this study are *highly* dependent on the extent and rate of growth that the Township is projecting and also on the assumptions used in determining future water and wastewater flows associated with this growth. In some cases, both the growth rate combined with the assumptions made regarding the type of growth and application of standard guidelines may be perceived as conservative estimates of the timing for implementation of the resulting infrastructure – which may in fact be the case. However, with the lack of any other information related to growth rate, extent and type, the application of

standard guidelines was deemed appropriate for the purposes of this assignment. If the Township can provide additional site specific information, it is possible that the timing for implementation of the required infrastructure upgrades and expansions to support the future growth could be extended further out.

PROJECTED FUTURE DEVELOPMENT

Based on Census data, the population of the Township was reported as 2,394 for Winchester and 1,677 for Chesterville in 2016, giving a total population of 4,071 in 2016. The existing 2019 population was calculated based on a 1.5% average annual growth rate for Winchester and a 3.5% average annual growth rate for Chesterville. The future growth projections in Winchester were established with the Township based on the number of anticipated units for future residential areas and the land area in hectares for the future commercial areas. The projected population increase associated with future residential development was calculated based on a residential population density of 2.5 persons/unit. Note the Wellings of Winchester development had a more specific population projection as explained in the next section. For the build-out scenario, the number of projected residential units is currently unknown, so a population density of 35 persons/ha was assigned based on parcel area that is comparable to Winchester's existing density. The future growth projections in Chesterville were estimated using the 3.5% average annual growth rate based on the 2016 population (equal to approximately 59 additional people per year) up to the long term scenario, and the build-out scenario was assumed to remain unchanged from the long term scenario.

Refer to the "North Dundas Drinking Water Supply System Capacity Expansion Class EA Technical Memorandum No. 1 – Population Growth and Development Projections (Rev. 1)" (JLR, February 14, 2020) in Attachment 1 that provides a detailed summary of the future development areas and their corresponding populations. Figures No. 1 to 4 depict the future development area locations over the near, mid, long term and build-out planning horizon.

Future commercial development was not included in the population projections, but their anticipated water demands were accounted for in the assessment as presented in the next section. It is important to note that guidelines for commercial water consumption values, when limited information is available, are generally more conservative to account for unknown types of development and the large variation in use; therefore, there may be opportunities to refine the projected flows with further details as part of a Master Plan. This could potentially have a significant impact on the timing for capital works projects. It was also assumed that the population of all existing developments would remain constant under future scenarios. Based on these assumptions, the projected populations for each scenario were estimated and are summarized in Table 1 below.

Table 1: Population Projections

Scenario	Winchester		Chesterville	Total	
	Number of Added Units	Population Increase From Previous Scenario	Population Increase From Previous Scenario	Population	Population Increase From Existing (2019)
Existing *(2019)*	n/a	n/a	n/a	**4,355**	n/a
Near Term *(1-5 year)*	273	509	294	**5,158**	803
Mid Term *(5-10 year)*	220	450	293	**5,901**	1,546
Long Term *(10-20 year)*	403	750	587	**7,238**	2,883
Build-Out *(20+ year)*	(20.56 ha)	1,161	0	**8,399**	4,044

WATER DISTRIBUTION SYSTEM – FLOW PROJECTIONS

EXISTING CONDITIONS

JLR developed a new hydraulic water model for the Township (Winchester and Chesterville) in support of the Water Supply Expansion Municipal Class EA. Refer to the memorandum "Township of North Dundas – Hydraulic Water Model" (JLR, August 28, 2020).

From the above-noted memorandum, the modelled water demands for existing conditions were based on monthly average day demand data provided by the Township over the past five (5) years (2015 – 2019). The demands were distributed throughout the Township based on parcel count. Peaking factors from the Ministry of the Environment, Conservation and Parks (MECP) Design Guidelines for Drinking Water Systems (2008), herein referred to as the MECP Design Guidelines, were used to estimate the total maximum day and peak hour demand. Two (2) high water users were accounted for in Winchester: Lactalis (formerly Parmalat) and the Winchester District Memorial Hospital. The peak hour demand for Lactalis is unchanged from the maximum day demand as this value is understood to remain consistent and represents the upper limit of water demand from the Lactalis site. Table 2 summarizes the existing water demands in the model.

Table 2: Existing (2019) Water Demand Summary

Water User	Water Demand Scenario		
	Average Day (L/s)	Maximum Day (L/s)	Peak Hour (L/s)
Lactalis (formerly Parmalat)	14.68	22.02	22.02
Winchester District Memorial Hospital	0.70	1.05	1.90
Township of North Dundas (Winchester & Chesterville, including high water users)	27.90	55.80	66.08

FUTURE CONDITIONS

The design parameters used to calculate the future water demands are summarized in Table 3. All design parameters are in accordance with the MECP Design Guidelines or other assumptions are made where necessary. The MECP does not specify peaking factors for commercial areas, hence the City of Ottawa Design Guidelines for Water Distribution (July 2010) were used.

Table 3: Future Water Demand Design Parameters

Future Water Flow Projection – Design Parameters		
Parameter	**Residential**	**Commercial**
Population Density (per unit)*	2.5 person/unit	n/a
Population Density (per hectare)	35 person/ha	n/a
Average Day Flow	350 L/cap/day	28,000 L/ha/day
Maximum Day Flow	2.0 x Average Day	1.5 x Average Day
Peak Hour Flow	1.5 x Maximum Day	1.8 x Maximum Day

*The Wellings of Winchester development (Phases 1-5) was assigned a population density of 1.17 person/unit for 1-bedroom units and 1.62 person/unit for 2-bedroom units.

For Chesterville, the population growth (additional number of people) was assigned the residential average day flow of 350 L/cap/day, and this additional consumption was added to the existing demands.

It is noted that some specific areas were exceptions to the aforementioned design parameters, summarized as follows:

- The Wellings of Winchester (development 11) include a total of 500 units within all five (5) phases. These units were assigned more specific population densities based on their 1-bedroom and 2-bedroom unit counts. Phases 1-2 (development 11a) are incorporated in the near term scenario, Phase 3 (development 11b) is incorporated in the mid term scenario, and Phases 4-5 (development 11c) are incorporated in the long term scenario.
- Area A (which includes several individual residential units) within the long term scenario was divided and proportionally assigned to the nearest representative model node based on unit count.
- The high water user Lactalis was assigned a future average day demand of 16.2 L/s (1,400 m^3/d) and a future maximum day and peak hour demand of 24.3 L/s (2,100 m^3/d). These demands remained the same for all future scenarios. The peak hour demand is unchanged from the maximum day demand as this value is understood to remain consistent and represents the upper limit of water demand from the Lactalis site.

Based on these design parameters and the existing and projected water demands under near term (1-5 year), mid term (5-10 year), long term (10-20 year) and build-out (20+ year), the following water demand projections were calculated:

Table 4: Water Demand Projections

Demand Scenario	Average Day L/s *(m^3/day)*	Maximum Day L/s *(m^3/day)*	Peak Hour L/s *(m^3/day)*
Existing *(2019)*	27.90 *(2,410.6)*	55.80 *(4,821.1)*	66.08 *(5,709.3)*
Near Term *(1-5 year)*	34.23 *(2,957.7)*	66.92 *(5,782.3)*	82.33 *(7,113.3)*
Mid Term *(5-10 year)*	40.48 *(3,497.7)*	77.80 *(6,722.3)*	100.11 *(8,649.2)*
Long Term *(10-20 year)*	49.79 *(4,301.6)*	94.47 *(8,162.2)*	126.85 *(10,960.2)*
Build-out *(20+ year)*	54.49 *(4,708.1)*	102.98 *(8,897.7)*	140.43 *(12,133.2)*

It is noted that the type of units expected within various residential areas and the specific type of commercial use expected within future commercial lands can have a significant influence on the water demands projected for the future scenarios. With limited information currently available regarding the details of future developments, design guideline values for the projected flows have been used to identify various upgrades. Based on our experience, guideline values are generally considered conservative to account for unknowns when limited information is available and there may be opportunity to refine the projected demand details as part of a future assignment.

WATER DISTRIBUTION SYSTEM – WATER MODELLING

The hydraulic water model was used to assess the water distribution system under existing, near term, mid term, long term, and build-out demand conditions, and to determine if capacity upgrades to the existing watermains will be required to accommodate the anticipated growth.

EXISTING CONDITIONS

The hydraulic water model was updated to reflect the 'existing' conditions of the current water distribution system. It was then used to simulate the performance of the current system under existing flow conditions. The following operating conditions were assumed for these simulations:

- The existing average day scenario assumes that no pumps are operating, while the Winchester elevated storage tank level is at 113.17 m (tower start elevation provided from OCWA) and the Chesterville elevated storage tank level is at 110.77 m.
- The existing maximum day plus fire flow scenario assumes that several pumps (in Winchester: Well 1, Well 5, Well 6, Well 7B, Reservoir Duty Pump 1; and in Chesterville: Well 5, Well 6, Reservoir High Capacity Pump 3) are operating, while the Winchester elevated storage tank level is at 113.17 m and the Chesterville elevated storage tank level is at 110.77 m. In addition, the Winchester reservoir level is at 78.81 m and the Chesterville reservoir level is at 71.80 m.
- The existing peak hour scenario assumes that several pumps (in Winchester: Well 1, Well 5, Well 6, Well 7B, Reservoir Duty Pump 1; and in Chesterville: Well 5, Well 6, Reservoir Duty Pump 1) are operating, while the Winchester elevated storage tank level is at 113.17 m and the Chesterville elevated storage tank level is at 110.77 m. In addition, the Winchester reservoir level is at 78.81 m and the Chesterville reservoir level is at 71.80 m.

Note that under the average day, maximum day and peak hour scenarios, the following MECP Design Guidelines are applicable:

- The maximum pressure at any point in the distribution system in unoccupied areas shall not exceed 689 kPa (100 psi), and in occupied areas shall not exceed 552 kPa (80 psi).
- Maximum Day: Pressure is to be within the range of 345 kPa (50 psi) and 480 kPa (70 psi).
- Maximum Day + Fire Flow: Residual pressure at any point in the distribution system shall not be less than 140 kPa (20 psi).
- Peak Hour: Pressure is to be above 275 kPa (40 psi).

A fire flow rate of 45 L/s has been targeted for this study as a reasonable level of service to meet the minimum water supply flow rate in accordance with the Ontario Building Code for a typical two storey single family home.

A summary of the results of these simulations is provided in Table 5.

Table 5: Hydraulic Water Model Results – Existing Conditions

Demand Scenario	General Results	Notes
Average Day	Good. Pressure Range: 248(36) – 418 (61) kPa (psi)	These results are for the junctions and hydrants in the Winchester and Chesterville pressure zones only. All pumps are off in this simulation. Only two (2) hydrants experience pressures below 275 kPa and there are no customer connections in the vicinity of these hydrants.
Maximum Day + Fire Flow	Good. Fire Flow Availability: 26-314 L/s	These results are for the hydrants in the Winchester and Chesterville pressure zones only. Normal pumps are operating in this simulation, with the exception of the Chesterville reservoir where only one high capacity pump is operating. There are twenty-one (21) hydrants which are currently expected to have lower fire flow availability (less than 45 L/s). These hydrants are located along dead-end watermains or at the outer extents of the distribution system. All other nodes have expected fire flow availability in excess of 45 L/s.
Peak Hour	Good. Pressure Range: 276(40) – 548 (79) kPa (psi)	These results are for the junctions and hydrants in the Winchester and Chesterville pressure zones only. Normal pumps are operating in this simulation. All nodes experience pressures above 275 kPa.

FUTURE CONDITIONS

The future near term, mid term, long term, and build-out water demands were added to the model under average day, maximum day and peak hour conditions, in accordance with the locations and units identified in Figures No. 1 to 4. In addition to using the same operating conditions as those used in the existing conditions simulations (described above), the following assumptions were made for the future model simulations:

- A 200 mm diameter PVC watermain loop was modelled within each future residential development area. Assumed future watermains were extended from existing dead end streets or the most likely connection points. Continuous looping through several phases of large residential developments was also assumed where applicable. Future residential demands were assigned to a single representative junction node within the development parcel. Elevations for these junction nodes were based on existing topography obtained from satellite imagery.
- Future commercial demands were assigned to the nearest junction node in the model along the existing watermain network.
- A 300 mm diameter PVC watermain was modelled in all future scenarios to create a loop between Main Street West and Fred Street, through the future Wellings of Winchester residential development. This will provide expected fire flows to achieve targeted rate of 45 L/s and increase water supply redundancy on the west side of Winchester. Currently the west side of Winchester is serviced by a single 200 mm diameter watermain. A watermain break of potential future maintenance would impair water service to the west service area for the west area for the duration of the repair or maintenance. For reference the City of Ottawa requires that 50 units or more to be looped by redundant water service in the event of a potential water break or maintenance.

- A 300 mm diameter watermain upgrade was modelled on St. Lawrence Street between Gypsy Lane and Main Street West / Gordon Street in the mid term, long term, and build-out scenarios, to provide a larger diameter trunk connection between the Winchester reservoir and the elevated storage tank. An increase in the Township's storage capacity is warranted in the mid term scenario and this upgrade will allow for increased pumping capacity between the Winchester reservoir and the elevated storage tank. A new storage tank with equivalent operating levels was modelled at the Winchester Reservoir site and the existing booster pump was used for the presented simulation results, in order to maintain a consistent pump curve for comparison. When the water storage is expanded with the assumed construction of a new at-grade storage tank, the booster pump is expected to be upgraded as well. Water storage and distribution system upgrades are discussed in more detail in later sections.

Note that for the maximum day demand + fire flow simulations, the results are first presented for all scenarios without the Wellings of Winchester loop to Fred Street and without any upgrade on St. Lawrence Street, in order to establish a base line to assess watermain upgrades. The results with the assumptions listed above are presented afterwards, followed by the results for a final simulation (as later described) under build-out conditions.

The following tables summarize the model results for the Winchester and Chesterville pressure zones based on the percentage of junctions in the model within each stated pressure range or available fire flow range, in order to compare system performance across the existing and future development scenarios. Model schematics for all scenarios are included in Attachment 2.

Average Day Demand

Table 6 presents the average day simulation results for existing and future scenarios.

Table 6: Hydraulic Water Model Results - Average Day Demand

Average Day Demand						
Pressure (kPa)		Existing	Future			
From	To		Near Term	Mid Term	Long Term	Build-out
			1-5 year	*5-10 year*	*10-20 year*	*20+ year*
	<=275	0.5%	0.5%	0.5%	0.5%	0.5%
>275	<=350	26.5%	26.6%	27.1%	29.9%	30.3%
>350	<=480	73.0%	72.9%	72.4%	69.6%	69.3%
>480	<=550	0.0%	0.0%	0.0%	0.0%	0.0%
>550	<=700	0.0%	0.0%	0.0%	0.0%	0.0%
>700		0.0%	0.0%	0.0%	0.0%	0.0%

Under average day demand, system pressures under future conditions are expected to decrease slightly from existing conditions due to increased demands, but are mostly anticipated to remain comparable to existing conditions and above the minimum recommended pressure of 275 kPa (40 psi), in accordance with the MECP Design Guidelines. Only two (2) hydrants do not achieve 275 kPa: hydrant H-194 along the transmission main from Well #7 (topographical high point), and hydrant H-174 near Well #6. No customers are connected to the water distribution system in the vicinity of these two hydrants.

Peak Hour Demand

Table 7 presents the peak hour simulation results for existing and future scenarios.

Table 7: Hydraulic Water Model Results – Peak Hour Demand

Peak Hour Demand						
Pressure (kPa)		Existing	Future			
From	To		Near Term	Mid Term	Long Term	Build-out
			1-5 year	*5-10 year*	*10-20 year*	*20+ year*
	<=275	0.0%	0.3%	0.3%	0.3%	0.5%
>275	<=350	17.5%	20.4%	19.7%	24.6%	26.5%
>350	<=480	79.4%	76.2%	80.1%	75.2%	73.0%
>480	<=550	3.2%	3.1%	0.0%	0.0%	0.0%
>550	<=700	0.0%	0.0%	0.0%	0.0%	0.0%
>700		0.0%	0.0%	0.0%	0.0%	0.0%

Under peak hour demand, overall system pressures under future conditions are expected to decrease slightly from existing conditions due to increased demands, but are mostly anticipated to remain comparable to existing conditions and above the minimum recommended pressure of 275 kPa (40 psi), in accordance with the MECP Design Guidelines. The pressure results are seen to increase slightly in the mid term scenario due to the watermain upgrade on St. Lawrence Street. Junction node J-263 (Lactalis) yields a consistent model pressure result of less than 275 kPa under future scenarios, due to the high water demand assigned to this node which is located at a dead-end 150 mm diameter water service. It is recommended that the Lactalis water service configuration and details be reviewed for any opportunities to refine the model to more accurately represent the site servicing at this facility. The two hydrants which experienced low pressures in the average day demand simulation (H-194 and H-174) are expected to experience pressures slightly above but close to 275 kPa, and no customers are connected to the water distribution system in the vicinity of these two hydrants.

Maximum Day Demand + Fire Flow

Table 8 presents the maximum day plus fire flow simulation results for existing and future scenarios, assuming that there is no 300 mm diameter watermain loop between Main Street West and Fred Street through the Wellings of Winchester, and assuming that there is no 300 mm diameter watermain upgrade on St. Lawrence Street. This table establishes a base line of available fire flows throughout the Township assuming that future growth is accommodated solely by the existing water distribution system and watermain extensions required for residential development.

Table 8: Hydraulic Water Model Results – Maximum Day Demand + Fire Flow Without Loop to Fred Street or St. Lawrence Street Upgrade

Maximum Day Demand + Fire Flow						
Available Fire Flow (L/s)		Existing	Future			
From	To		Near Term	Mid Term	Long Term	Build-out
			1-5 year	*5-10 year*	*10-20 year*	*20+ year*
	<=30	2.3%	2.2%	2.2%	3.0%	2.9%
>30	<=45	7.3%	6.6%	7.8%	13.2%	12.5%
>45	<=75	41.7%	40.5%	39.0%	36.2%	32.9%
>75	<=100	22.0%	23.8%	22.9%	18.7%	22.5%
>100	<=150	20.2%	18.9%	21.6%	23.0%	23.3%
>150	<=250	6.0%	7.5%	6.1%	5.5%	5.4%
>250		0.5%	0.4%	0.4%	0.4%	0.4%

It is noted that the existing water distribution system is not expected to provide adequate water storage starting in the mid term scenario as calculated in accordance with the MECP Design Guidelines, and the available fire flow is severely limited in some areas (such as the Wellings of Winchester) without the connection to Fred Street.

Table 9 presents the maximum day plus fire flow simulation results for existing and future scenarios, assuming the installation of a 300 mm diameter watermain loop between Main Street West and Fred Street through the Wellings of Winchester starting in the near term, and assuming the construction of a 300 mm diameter watermain upgrade on St. Lawrence Street to accompany the increased storage at the Winchester Reservoir (discussed in the next sections).

Table 9: Hydraulic Water Model Results – Maximum Day Demand + Fire Flow With Loop to Fred Street (Near Term +) and St. Lawrence Street Upgrade (Mid Term +)

Maximum Day Demand + Fire Flow						
Available Fire Flow (L/s)		Existing	Future			
From	To		Near Term	Mid Term	Long Term	Build-out
			1-5 year	*5-10 year*	*10-20 year*	*20+ year*
	<=30	2.3%	1.8%	1.7%	2.6%	2.5%
>30	<=45	7.3%	6.2%	6.1%	6.0%	5.0%
>45	<=75	41.7%	36.1%	33.8%	32.8%	29.2%
>75	<=100	22.0%	23.8%	22.5%	21.3%	22.9%
>100	<=150	20.2%	22.5%	17.3%	21.7%	25.0%
>150	<=250	6.0%	9.3%	14.7%	12.3%	12.1%
>250		0.5%	0.4%	3.9%	3.4%	3.3%

Under maximum day demand, fire flow availability under future conditions is expected to remain comparable to existing conditions. There are some hydrants which are expected to have fire flow availabilities less than 45 L/s. These hydrants are located along dead-end watermains or at the outer extents of the distribution system. In comparison to the base line results presented in Table 8, the fire flows are improved with the connection to Fred Street and the St. Lawrence Street watermain upgrade.

Table 10 presents the maximum day plus fire flow simulation results for the build-out scenario, assuming the installation of a full 300 mm diameter watermain loop within Winchester. This includes the loop to Fred Street and the St. Lawrence Street watermain upgrade as mentioned previously, but also includes a 300 mm diameter watermain upgrade on Main Street West and the 300 mm diameter watermain upgrade on Fred Street, as discussed in the next section.

Table 10: Hydraulic Water Model Results – Maximum Day Demand + Fire Flow With Full 300 mm diameter Watermain Loop in Winchester

Maximum Day Demand + Fire Flow		
Available Fire Flow (L/s)		Future
From	To	Build-out
		20+ year
	<=30	2.1%
>30	<=45	5.4%
>45	<=75	28.3%
>75	<=100	19.6%
>100	<=150	18.8%
>150	<=250	20.8%
>250		5.0%

Table 10 shows that the full 300 mm diameter watermain loop in Winchester will improve the available fire flows. It is noted that the increased storage capacity at the Winchester Reservoir would also be accompanied by a pump upgrade, which could increase the available fire flows experienced throughout Winchester.

POTENTIAL WATERMAIN UPGRADES

The current water distribution system in Winchester includes a 200 mm diameter PVC watermain along Main Street West. Any disruption along this length of watermain would result in a significant reduction in the level of service experienced in the west end of Winchester, since this watermain is the sole feed from the elevated tank to the west end. A 300 mm diameter watermain upgrade along Main Street West from approximately 100 m east of Dawley Drive to Gordon Street would be a beneficial upgrade to the Winchester system as a whole. This work could be done in conjunction with the proposed sanitary sewer forcemain construction along Main Street West as described in the wastewater section. This upgrade would provide improved fire flow availability to all areas in the west end, such as the future Wellings of Winchester residential development. Additionally, the potential loop from Main Street West to Fred Street through the Wellings of Winchester would provide a redundant water supply to the west end.

There is an existing asbestos cement watermain along St. Lawrence Street in Winchester ranging from 150 mm in diameter to 200 mm in diameter. This watermain could be upgraded to a 300 mm diameter watermain between Gypsy Lane and Main Street West / Gordon Street, providing a larger diameter trunk connection between the Winchester reservoir and the elevated storage tank. An increase in the Township's storage capacity (accompanied with a booster pump upgrade) is warranted in the mid term scenario and this upgrade will allow for increased pumping capacity between the Winchester reservoir and the elevated storage tank.

There is an existing 150 mm diameter asbestos cement watermain and an existing 200 mm diameter PVC watermain along Fred Street. This watermain could be upgraded to a 300 mm diameter watermain between the easement (approximately 100 m east of Christie Lane) and St. Lawrence Street, which would complete an overall 300 mm diameter trunk watermain loop throughout Winchester if combined with the aforementioned watermain upgrades.

While the foregoing model results indicate that the existing distribution system is expected to provide a comparable level of service under the assessed future development conditions, it is recommended that a Water Distribution System Master Plan be developed to evaluate and select the preferred trunk water servicing routes and options. Since additional water storage is required to address a future storage deficit, a Master Plan would be beneficial in the selection of the preferred water storage configuration and location as it relates to the distribution system. Subject to the appropriate Municipal Class Environmental Assessment (Schedule B Class EA), a future at-grade water storage reservoir and booster pump upgrade is anticipated to address the future water storage requirements while potentially increasing system redundancy and supplementing fire flow availability.

Figures 5 to 9 depicts the aforementioned potential watermain upgrades and anticipated timing.

WATER STORAGE – CAPACITY REVIEW

For water storage, both Winchester and Chesterville have an elevated storage tank and an at-grade storage reservoir. Table 11 summarizes the existing storage within the Township.

Table 11: Existing Water Storage Capacity

Storage Facility	Existing Capacity (m^3)
Winchester Water Tower	2,300
Winchester Storage Reservoir	400
Winchester Storage Capacity	***2,700***
Chesterville Water Tower	567.5
Chesterville Storage Reservoir	407
Chesterville Storage Underground Suction Well	122
Chesterville Storage Capacity	***1,096.5***
Total Storage Capacity	3,796.5

According to MECP Design Guidelines, the storage volume requirements are calculated as follows:

Total Treated Water Storage Requirement = A + B + C

A = Fire Storage
B = Equalization Storage (25% of max day demand)
C = Emergency Storage (25% of [A + B])

Table 12 and Table 13 summarize the estimated water storage requirements under the existing and future scenarios based on the MECP Design Guidelines. The storage capacities were assessed for Winchester and Chesterville separately because it is understood that their storage facilities are not used interchangeably to supply both systems (i.e., the Winchester elevated tank does not provide storage to Chesterville).

The equivalent populations in Winchester were taken as the actual populations as per the growth projections for each future scenario. For the build-out population, the four (4) future residential areas were assigned with a population density of 35 persons/ha while the single future commercial area's average day water demand was converted to an equivalent population based on 350 L/cap/day. Also added was the Lactalis property by using its parcel area (6.2 ha) and converting it to an equivalent residential population assuming 35 persons/ha. The total equivalent populations as presented in the table were used to interpolate the required fire flows and durations from Table 8-1 of the MECP Design Guidelines, hence the fire storage (A) could be calculated. The equalization storage (B) was calculated based on the demands in Winchester only. From the deficit calculation which deducts the existing storage presented in Table 11 from the required storage presented in Table 12, it can be seen that additional storage capacity will be required in the mid term scenario.

Table 12: Estimated Water Storage Requirements (Winchester)

Scenario	Equivalent Pop'n	Fire (A)	Equalization (B)	Emergency (C)	Total Required Storage	Surplus/ (Deficit)
	No. ppl	m^3	m^3	m^3	m^3	m^3
Existing (2019)	2719	762	1023	446	2231	469
Near Term (1-5)	3228	817	1212	507	2536	164
Mid Term (5-10)	3678	865	1396	565	2826	(126)
Long Term (10-20)	4428	959	1653	653	3264	(564)
Build-out (20+)	5590	1425	1837	816	4078	(1378)

For this Study the preferred serving option is a second at-grade storage tank at the Winchester Reservoir site with the same operating levels as the existing at-grade tank. The existing site allocated space for future reservoir addition. A Schedule B Class EA will be required to determine the preferred water storage option and configuration. Based on preliminary calculations and assuming an equivalent tank height to the existing Winchester at-grade storage tank, a 19 m tank diameter would provide an additional storage volume of approximately 1,400 m^3, which would satisfy the anticipated build-out storage requirement. Although the previously presented model results were based on the existing booster pump at the reservoir to provide a similar comparison across scenarios, it is expected that the booster pump would be upgraded in conjunction with the new storage tank. This upgrade would increase the pumping capacity from the reservoir to the elevated tank, and could improve fire flows throughout Winchester.

The equivalent populations in Chesterville were taken as the actual populations assuming a 3.5% average annual growth rate up to the long term scenario. The build-out population was assumed to be unchanged from the long term population. There are no high water users in Chesterville. The total equivalent populations as presented in the table were used to interpolate the required fire flows and durations from Table 8-1 of the MECP Design Guidelines, hence the fire storage (A) could be calculated. The equalization storage (B) was calculated based on the demands in Chesterville only. From the deficit calculation which deducts the existing

storage presented in Table 11 from the required storage presented in Table 13, it can be seen that additional storage capacity will be required in the near term scenario.

Table 13: Estimated Water Storage Requirements (Chesterville)

Scenario	Equivalent Pop'n	Fire (A)	Equalization (B)	Emergency (C)	Total Required Storage	Surplus/ (Deficit)
	No. ppl	m^3	m^3	m^3	m^3	m^3
Existing (2019)	1853	650	182	208	1040	56
Near Term (1-5)	2147	700	233	233	1167	(70)
Mid Term (5-10)	2440	732	285	254	1270	(174)
Long Term (10-20)	3027	795	388	296	1478	(382)
Build-out (20+)	3027	795	388	296	1478	(382)

The additional storage facility will be either a new water tower or an increased storage capacity at the Chesterville Reservoir and Pumping Station. A Schedule B Class EA will be required to determine and refine the preferred water storage option and configuration. Based on preliminary calculations, a 9.75 m tank diameter and a 6 m tank height would provide an additional storage volume of approximately 450 m^3, which would satisfy the anticipated build-out storage requirement.

SUMMARY OF WATER DISTRIBUTION SYSTEM REVIEW

A summary of the results from the above model simulations and water storage tank capacity reviews is provided in Table 14.

Table 14: Conceptual-Level Upgrades to Water System based on Water Distribution System Review

WATER DISTRIBUTION SYSTEM ASSESSMENT CONCLUSIONS		Projected Timeline	Municipal Class Environmental Requirements
Type	**Description**		
Watermain Extension Loop	300 mm diameter watermain connection between Main St. West and Fred St, through the future Wellings of Winchester development.	0 to 5 years	Schedule B – Acquire property to establish new road allowance
Watermain Upgrade	300 mm diameter watermain upgrade on St. Lawrence Street between the Winchester Reservoir and Pumping Station and Gordon Street (current extent of 300 mm diameter watermain from the Winchester elevated tank).	5 to 10 years (to accompany storage and pump upgrade)	Schedule A+ – Notify residences of upgrade in established road allowance
Watermain Network Recommendation	Upgrades to provide a 300 mm diameter trunk watermain loop in Winchester (includes Main Street West and Fred Street).	Build-out	Schedule A+ – Notify residences of upgrade in established road allowance
Water Storage & Pump Upgrades	Additional water storage and booster pump upgrade in Winchester to accommodate mid term, long term, and build-out water demand scenarios. It has been assumed that one (1) new 1,400 m^3 water storage tank will be built within the mid term.	5 to 10 years	Schedule B – Expand water storage and increase pumping capacity.
Water Storage Upgrades	Additional water storage in Chesterville to accommodate near term, mid term, long term, and build-out water demand scenarios. It has been assumed that one (1) new 450 m^3 water storage tank will be built within the near term.	0 to 5 years	Schedule B – Expand water storage and increase pumping capacity.

SANITARY SYSTEM - FLOW PROJECTIONS AND SERVICING REVIEW

The current sanitary sewer system was simulated the Township existing SewerCAD® model under existing to 5 year, 5 to 10 year, 10 to 20 year and Build-out 20+ year sewage flow demand conditions, to determine if capacity upgrades of the existing sewers and other related infrastructure are required.

SANITARY SYSTEM – FLOW PROJECTIONS

The table below summarizes the design parameters used to calculate the sanitary sewer flow demands for the projected future developments and phasing contained in Attachment 1. Design parameters are in accordance with recommendations contained in the MECP Sewer Design Guidelines and City of Ottawa Sewer Design Guidelines.

Table 15: Sanitary System Design Parameters

RESIDENTIAL:	
Average Flow	350 L/cap/day
Peaking Factor (minimum 2, maximum of 4)	$1 + \frac{14}{4 + \sqrt{\frac{Population}{1000}}}$
INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL (ICI):	
Average Flow	28,000 L/ha/day
Peaking Factor	1.4
INFILTRATION:	
Peak Extraneous Flow (Collection System)	0.28 L/ha/s
Extraneous Flow (Treatment System)	90 L/cap/day

Based on the above table, the following sanitary sewer flows were determined for each projected future development:

Table 16: Projected Sanitary Sewer Flows

Development	Type / Magnitude of Development	Peak Residential Flow	Peak ICI Flow	Extraneous Flow	Cumulative Total Flow
		L/s	L/s	L/s	L/s
TIMING – EXISTING TO 5 YEARS:					
5 – Main St. South Side	Commercial – 0.42 ha	-	0.19	0.12	**0.31**
6 – Main St. North Side	Commercial – 0.20 ha	0.33	0.25	0.15	**0.73**
10 – Dawley Dr.	Commercial – 0.81 ha	-	0.37	0.23	**0.60**
11A – Wellings PH 1 - 2	Residential – 150 units	3.24	-	1.89	**5.13**
11A – Wellings PH 1 - 2	Commercial – 2.28 ha	1.03	-	0.64	**1.67**
12 – Main St. South Side	Commercial – 0.77 ha	-	0.35	0.22	**0.57**
13 – Main St. South Side	Residential Infill – 15 units	0.62	-	0.67	**1.29**
14 – Winfields Subdivision	Residential – 9 units	0.37	-	0.13	**0.51**
18 – New Dundas Manor	Commercial – 1.94 ha	-	0.88	0.54	**1.42**
20 – Guy Racine PH 3	Residential – 8 units	0.32	-	0.20	**0.53**
21B – Queen St.	Residential – 36 units	1.46	-	0.48	**1.94**
22A – Winchester Meadows	Residential – 22 units	0.89	-	0.62	**1.51**
24B – High Density Apt.	Residential – 21 units	0.86	-	0.38	**1.24**
28A & B – Wintonia Dr. / James St.	Residential – 12 units	0.49	-	0.29	**0.78**
SUB-TOTAL – EXISTING TO 5 YEARS		**9.61**	**2.04**	**6.56**	**18.23**
TIMING – 5 TO 10 YEARS:					
2A – HWY #31	Commercial – 1.13 ha	-	0.51	0.32	**0.83**
3 – HWYs #31 and 43	Commercial – 1.12 ha	-	0.51	0.31	**0.82**
4 – HWY #31 John Deere	Commercial – 6.17 ha	-	2.80	1.73	**4.53**
11B – Wellings PH 3	Residential – 86 units	1.85	-	0.81	**2.66**
19 – Old Dundas Manor	Commercial – 1.19 ha	-	0.71	0.44	**1.15**
22B – Winchester Meadows	Residential – 22 units	0.89	-	0.42	**1.31**
24A – Woods Development	Residential – 78 units	3.16	-	0.56	**3.72**
25A – Woods Development	Residential – 19 units	0.78	-	0.77	**1.55**
29A – St. Lawrence St.	Residential – 15 units	0.62	-	0.48	**1.10**
SUB-TOTAL – 5 TO 10 YEARS		**7.30**	**4.53**	**5.84**	**17.67**

TIMING – 10 TO 20 YEARS:					
A – Existing Not Connected	Residential/Commercial – 28 units	1.13	1.44	3.28	**5.85**
2B – HWY #31	Commercial – 1.22 ha	-	0.55	0.34	**0.89**
7 – Motel Property	Residential – 14 units	0.57	-	0.52	**1.09**
8 – Country Kitchen	Residential – 7 units	0.29	-	0.24	**0.53**
9A – Main St. North Side	Commercial – 5.07 ha	-	2.30	1.42	**3.72**
11C – Wellings PH 4 to 5	Residential – 264 units	5.64	-	2.42	**8.06**
16 – Main St. South Side	Commercial – 0.74 ha	-	0.34	0.21	**0.54**
21A – Seniors Complex	Residential – 54 residents	0.88	-	0.24	**1.12**
25B – Fred St.	Residential – 36 units	1.46	-	0.69	**2.15**
29B – Esper Lane	Residential – 51 units	2.07	-	0.93	**3.00**
30 – St. Lawrence St.	Commercial – 4.56 ha	-	2.07	1.28	**3.35**
31 – St. Lawrence St.	Commercial – 0.41 ha	-	0.19	0.11	**0.30**
SUB-TOTAL – 10 TO 20 YEARS		**12.04**	**6.89**	**11.68**	**30.60**
TIMING – BUILD-OUT 20+ YEARS:					
9B – Main St. North Side	Commercial – 5.53 ha	-	2.51	1.55	**4.06**
15 – Winfields PH 2	Residential – 4.31 ha	2.46	-	1.21	**3.67**
23 – Main St. East	Residential – 9.80 ha	5.59	-	2.74	**8.33**
26 – Anne St.	Residential – 3.36 ha	1.91	-	0.94	**2.85**
27 – St. Lawrence St.	Residential – 3.09 ha	1.77	-	0.87	**2.64**
SUB-TOTAL – 10 TO 20 YEARS		**11.73**	**2.51**	**7.31**	**18.91**

SEWAGE PUMPING STATIONS – EXISTING SUMMARY

There are three sub-area Sewage Pumping Stations (SPS) within the Village of Winchester that pump wastewater from low lying service areas into gravity sewers located downstream at higher elevations. These gravity sewers convey the flows to either an additional sub-area pumping station or to the Ottawa Street SPS (the main SPS). Figure 1 illustrates the location of each station. The following section provides a general description of each of the sub-area pumping stations followed by a summary table listing the existing capacity at each SPS.

St. Lawrence Street Sanitary Pumping Station

The St. Lawrence Street SPS is located at 583 A St. Lawrence Street and receives wastewater from upstream gravity sewers located south of Fred Street. The C of A for the St. Lawrence Street SPS was not available; however, based on the pump curve, the PS is equipped with 3 hp pump(s) each with a best efficiency point of 19.8 L/s at 6.46 m Total Dynamic Head (TDH). The pumping rate is confirmed by the flows from a previous

OCWA draw down test (21.2 L/s). The PS is equipped with a mechanical bar screen to protect pumps from large debris. The wet well is also equipped with floats that are used to start and stop the pumps depending on the level of raw sewage within the wet well; an alarm is also triggered at a high level setpoint. Wastewater is pumped via a 150 mm diameter forcemain that outlets near the intersection of Fred Street and St. Lawrence Street to upstream gravity collection system.

Bailey Avenue Sanitary Pumping Station

The Bailey Avenue SPS is located at 586 Main Street and receives wastewater from upstream gravity sewers, including flows pumped from the Main Street West PS. According to the ECA, the Bailey Avenue SPS is equipped with two submersible pumps and has a firm pumping capacity of 31.4 L/s at a TDH of 25 m. The pumping rate is confirmed by the flows from a previous OCWA draw down test (29.2 L/s). This PS is also equipped with a mechanical bar screen to protect pumps from large debris. Floats have been installed in the wet well to control starting and stopping of the pumps depending on the level of wastewater within the wet well; an alarm is also triggered at a high level setpoint. Wastewater is pumped via a 150 mm diameter forcemain outlets near the intersection of Main Street and Louise Street to upstream gravity collection system.

Main Street West Sanitary Pumping Station

The Main Street SPS is located on the south side of Main Street, approximately 500 m east of County Road No. 31, and receives wastewater from various properties in the west service area. According to current ECA the Main Street West SPS is equipped with two submersible pumps and has a firm pumping capacity of 6 L/s at a TDH of 13 m, however, OCWA advised the duplex pump arrange includes a larger 6 L/s pump and smaller 3.5 L/s pump. OCWA advised that a January 2020 draw down test yielded an operating pump rate of 4.5 L/s. Prior to installation of the 6 L/s pump, the Township has reported that the pump impellers were recently replaced to address on-going clogging issues due to settling of debris and rags within the wet well. The wet well has a diameter of 2.44 m and the inlet is equipped with a trash basket for removal of debris. An ultrasonic transducer and backup floats are provided for pump control and alarms. Wastewater is pumped via a 100 mm diameter 350 m long forcemain to an upstream maintenance hole along Main Street where it is conveyed to the Bailey Avenue SPS for further pumping.

Ottawa Street Sanitary Pumping Station

The main sewage pumping station (Ottawa Street PS) is located at 475 Ottawa Street near the intersection of Dufferin Street and Ottawa Street. The pumping station receives raw wastewater from the entire collection system and pumps it via a 1,300 m long 350 mm diameter forcemain to the inlet structure at the sewage treatment lagoon. According to the current ECA, the pumping station is equipped with three sewage pumps rated at 90 L/s each; however, based on a previous assessment completed by Stantec Consulting Limited in 2006, the actual pump capacities may be somewhat less (72 L/s). Nevertheless, it is assumed that two pumps operated simultaneously can provide a flow of at least 90 L/s, and therefore, a firm capacity of 90 L/s is used for this Study. The station is also equipped with a standby generator located within a separate building that is reportedly able to provide sufficient power to run two pumps simultaneously. According to the ECA, the emergency standby diesel generator is rated at 50 kW; however, from the previous assessment (Stantec, 2006), the nameplate reportedly rates the equipment at 77 kW.

The PS is equipped with a manually cleaned bar screen with bars spaced at 6 cm. The wet well is equipped with ultrasonic transducer for level monitoring and control. A magnetic flowmeter is used to measure the flowrate and volume of wastewater discharged to the lagoon. A summary of the pumping system equipment as presented in the Winchester Operations Manual is provided in Table 4.1.

Table 17: Ottawa St. Sewage Pumping Station Equipment and Capacity

Component	Size/Capacity (1)	
Pumps	Number:	3
	Capacity:	70 L/s
	Type:	Wemco Hydrostal Pump
	Model:	E5K-1-E2M-
	TDH:	15.5 m
	Speed:	1750 RPM
Motors	Number:	3
	Size:	25 HP
	Type:	Hawker Pump Motor – L284T6
	Electrical	575 V, 23.2 A, 60 Hz
Diesel-generator	Capacity:	50 kW (based on C of A)

Notes:
1. Information details as reported in Winchester Operations Manual

The foregoing description of each existing SPS is summarized in the following table.

Table 18: Summary of Existing Sewage Pumping Stations

Pumping Station	ECA No.	Pump Operation (1)	TDH (m) (1)	Rated Capacity (L/s) (1)	Operational (L/s)
Main St. West SPS	9743-B9ALZN (2019)	Two submersible pumps - duty/standby	13	6 (2)	4.5 (2)
Bailey Ave. SPS	4037-6CAMCT (2005)	Two submersible pumps - duty/standby	25	31.4	29.2
St. Lawrence St. SPS		Two submersible pumps - duty/standby	6.46	19.8	21.2
Ottawa St. SPS	5312-88TK5R (2010)	Three dry pit sewage pumps	-	90	72 (single pump)

(1) According to the referenced ECAs.

(2) Rated capacity according to current ECA; OCWA staff advised there is a larger (6 L/s) and smaller (3.5 L/s) pumps installed. January 2020 pump test estimated 4.5 L/s pumping rate.

SANITARY SEWER SYSTEM – CAPACITY REVIEW

The Township's current SewerCAD® model previously prepared and updated by JLR (refer to Township of North Dundas – Winchester Wastewater Capacity Assessment, June 14, 2019) was used to assess the

capacity of the sanitary sewer system under the development scenarios, incorporating the projected flows from Table 15. For this review, the following assumptions/exclusions were made:

- The existing sanitary sewer design model previously developed by JLR was updated with new development scenarios identified by the Township;
- An increase in the size of the sewer was assumed to be needed if the flow estimated by the model exceeded the theoretical full flowing capacity of the existing sewer;
- New development areas remain tributary to the nearest availability sanitary sewer; and
- Pipe sizing for sewer replacements used for the conceptual-level OPC assumed that the existing pipe slope is maintained, except for Main Street West sewer upgrades that are described in Options 3A and 3B below.

WASTEWATER COLLECTION SYSTEM – CAPACITY REVIEW

A review the wastewater collection system capacity that included gravity sewers and pumping stations was completed to compare the existing capacities to the demands estimated by the sanitary sewer model and projected sanitary sewer flows from Table 16. Based on the review, it is anticipated that certain gravity sewer sections, namely along Main Street West and all four (4) SPS will require an upgrade and/or expansion to meet the future build-out flow demands. Anticipated gravity sewer upgrades are triggered when the projected peak flow exceed the sewer's theoretical conveyance capacity. Similarly, pumping station upgrades are triggered when projected peak flows exceed the rated pumping capacity. Model results are contained in Attachment No. 3. A list of wastewater system upgrades applied in the model are summarized in the following section.

WASTEWATER SERVICING OPTIONS

Based on the anticipated growth areas and existing servicing constraints, particularly in the west end, wastewater servicing options were developed to assess future pumping station, forcemain and sewer upgrades, summarized as follows (refer to Figures 5 to 9):

Option 1 – Upgrade Existing Wastewater System

Maintains the existing configuration of the wastewater system by upgrading sewers and SPS in their current location.

Option 2A – Upgrade Main St. West SPS and extend forcemain along Main Street East of Gladstone Street

Similar to Option 1, however, the proposed capacity upgrades to the Main St. West SPS include extending the forcemain along Main Street to outlet east of Gladstone Street, the same forcemain outlet location as the Bailey Avenue SPS. Gravity sewers upgrades are required downstream of the extended Main St. Option 2A allows wastewater collected at the Main St. West SPS to bypass the existing Bailey Avenue SPS and mitigate future capacity upgrades required at this station by Option 1.

Option 2B – Upgrade Main St. West SPS and reroute forcemain to Clarence Street

Similar to Option 2A, however, the Main St. West SPS forcemain would be extended along Main Street, through the Community Centre property, the Christie Lane easement and along Clarence Street to Louise Street (refer to Figure 5). The rerouted forcemain will require upgrades to the existing Clarence St. sanitary sewers. Option 2B allows wastewater collected at the Main St. West SPS to bypass the existing Bailey Avenue SPS and mitigate future capacity upgrades required at this station by Option 1.

Option 3A – Relocated Main St. West SPS and Decommission Bailey Avenue SPS (Main Street Outlet)

The intent of this option is to simplify wastewater operations in the west end by maintaining a single SPS instead of two SPS (i.e., Main St. West and Bailey Ave. SPS). Similar to Option 2A, however, the Main St. West SPS would be relocated approximately 300 m east along Main Street west. The relocated SPS would allow gravity sewers to be extended from the east and west along Main Street to centralize pumping from a single pumping station and allow future decommissioning of the Bailey Avenue SPS. Gravity sewers would be extended the same distance to convey wastewater to the new SPS location. Also, the wet well depth would be increased to allow future gravity sewers to be extend at a deeper elevation along Main Street from Bailey Avenue SPS to this new SPS. Timing of the future gravity sewers could be coordinated to align with anticipate condition/equipment replacement at the Bailey Avenue SPS.

Option 3B – Relocated Main St. West SPS and Decommission Bailey Avenue SPS (Clearance Street Outlet)

Similar to Option 3A, however, the Main St. West SPS forcemain would follow the same route as described in Option 2B and outlet at the intersection of Clearance Street and Louise Street (refer to Figure 5).

Each potential wastewater servicing option was simulated in the existing SewerCAD® model. For each option a summary table lists expected sanitary sewer upgrade and highlights in orange the anticipated timing of upgrades:

Option 1: Maintain Existing Configuration and Upgrade Collection System

Gravity sewer upgrades are anticipated in four areas throughout the system at various times and consist of upgrading the existing pipe diameter at the current location (refer to Figures 5 to 9 for sewer upgrade locations).

Table 19: Option 1 - Gravity Sewer Upgrades

Street	Existing			Project Peak Flow (L/s)			
	Dia. (mm)	Length (m)	Theoretical Conveyance Capacity (L/s)	0-5 years	5-10 years	10-20 years	Build-out
Bailey Ave. MH 37 - 41	200	24	20	28	36	50	53
Main St. W MH 40 - 37	200	177	21 to 26	19 to 20	27 to 28	41 to 42	44 to 45
Main St. W MH 28 - 26	250	155	35 to 39	33	41 to 42	55 to 56	62
Main St. W MH 437 – 434	250	200	26 to 30	15 to 16	23	37	37 to 40
Easement b/w May St. and York St.	250	51	22	17	18	24	29

For the 10 to 20 year and build-out sewer upgrades anticipated along the Easement between May Street and York Street, additional field investigation is warranted to confirm the sewer invert elevations along with future review of the projected peak wastewater flows to confirm peak sewage flow in this sewer section. At this location the expected flow exceeds the pipes theoretical conveyance capacity, however, the hydraulic grade level (HGL or water level in the pipe), is 1 cm below the sewer obvert elevation (top of pipe). Therefore, it is

expected the future peak flow will remain within the sewer and may not warrant a sewer upgrade. Refer to Figure 5 for sewer upgrade locations.

Pumping station upgrades are expected at all locations under build-out conditions with timing of upgrades highlighted in orange.

Table 20: Option 1 - Pumping Station Upgrades

Pumping Station	Rated Capacity (L/s)	Projected Peak Flow (L/s)				Peak Flow Capacity Surplus/(Deficit) (L/s) at Build-out
		0-5 years	5-10 years	10-20 years	Build-out	
Main Street	6	19	27	41	44	(38)
Bailey Ave.	31.4	32	41	55	62	(31)
St. Lawrence	21	11	12	18	24	(3)
Ottawa Street	90	72	87	109	127	(37)

Main St. West SPS and Baily Avenue SPS will require significant upgrades to accommodate the projected wastewater flow. It is anticipated that new, enlarged pumping stations and wet wells will be required at both locations along with upgrade forcemains. Bailey Avenue SPS upgrades will require additional investigation to assess the feasibility to double the current rated pumping capacity on the existing constrained site in close proximity to neighbouring residential development. It is recommended that St. Lawrence Street SPS upgrades be reassessed in the 10 to 20 year time frame to confirm that the projected peak flow warrant upgrades as the rated capacity is 3 L/s of the projected build-out peak flow rate. Similarly, Ottawa SPS upgrades are anticipated in the 10 to 20 year time frame and are expected to include upgrade pumping and electrical equipment to accommodate the increased peak flow, based on a capacity deficit of 37 L/s compared to the 90 L/s rated capacity.

Option 2A or 2B: Upgrade Main St. West SPS and bypass Bailey Avenue SPS

Option 2A reduces the number of gravity sewer upgrades required in Option 1 by extending the upgraded Main St. West SPS forcemain approximately 1,150 m along Main Street, east of Gladstone Street, which bypasses the Bailey Avenue SPS. The proposed outlet Maintenance Hole (MH) would be the same as the current Bailey Avenue SPS forcemain outlet. The timing of associated gravity sewer upgrades of this option are summarized as follows:

Table 21: Option 2A - Gravity Sewer Upgrades Main St. West SPS outlet to Main Street, east of Gladstone Street

Street	Existing			Project Peak Flow (L/s)			
	Dia. (mm)	Length (m)	Theoretical Conveyance Capacity (L/s)	0-5 years	5-10 years	10-20 years	Build-out
Main St. W MH 28 - 26	250	155	35 to 39	33	41 to 42	55 to 56	62
Main St. W MH 437 - 434	250	200	26 to 30	15 to 16	23	37	37 to 40
Easement b/w May St. and York St.	250	51	22	17	18	24	29

Option 2B has a comparable number of gravity sewer upgrades, but requires an approximately 1,500 m long forcemain from Main St. West SPS to the intersection of Clarence Street and Louise Street. In addition, the new forcemain alignment would travel through the existing community centre property and along the walking path easement between residential units along Christine Lane (refer to Figure 5). It is recommended that further investigation be completed to assess the viability of the proposed forcemain route, particularly spatial constraints in the easement that already contains a buried sanitary sewer.

Table 22: Option 2B - Gravity Sewer Upgrades Main Street West SPS outlet to Clarence Street and Louise Street

Street	Existing			Project Peak Flow (L/s)			
	Dia. (mm)	Length (m)	Theoretical Conveyance Capacity (L/s)	0-5 years	5-10 years	10-20 years	Build-out
Clarence St. MH 105 - 102	300	207	29 to 83	24	32	46	49
Main St. W MH 437 - 434	250	200	26 to 30	15 to 16	23	37	37 to 40
Easement b/w May St. and York St.	250	51	22	17	18	24	29

Pumping station upgrades for Options 2A and 2B are the same, with Bailey Street SPS not requiring future capacity upgrades. This is one less pumping station upgrade than outlined for Option 1. Bailey Avenue SPS's maximum rated capacity would be reduced and future end of service life equipment replacements could be designed to meet the lower capacity requirements.

Table 23: Options 2A and 2B – Pumping Station Upgrades Summary

Pumping Station	Rated Capacity (L/s)	Projected Peak Flow (L/s)				Peak Flow Capacity Surplus/(Deficit) (L/s)
		0-5 years	5-10 years	10-20 years	Build-out	
Main St.	6	19	27	41	44	(38)
Bailey Ave.	31.4	14	15	15	19	12
St. Lawrence	21	11	12	18	24	(3)
Ottawa St.	90	72	87	109	127	(37)

Options 3A or 3B: Upgrade Main Street SPS and Decommission Bailey Avenue SPS

Option 3A is similar to Option 2A, but with new deeper gravity sewers installed along Main Street West between Bailey Avenue SPS and the new upgrade Main Street SPS. Installation of the gravity sewers would centralize wastewater collection at one SPS in the west end of town and allow Bailey Avenue SPS to be decommissioned in the future. New and regraded sanitary sewers would consist of extending the existing 300 mm dia. Main Street West sewers 286 m to a new Main St. W SPS location along with regrading and deepening approximately 260 m of sewers located between Bailey Ave. SPS and the relocated Main St. West SPS (refer to Figure 5).

Timing of the Bailey Avenue SPS decommission could be coordinated with end of service life of the building and equipment. However, further geotechnical investigation is recommended to review the feasibility of Option 3A based on soil type, bedrock excavation and groundwater. It is anticipated that 260 m of the new gravity sewers would be constructed approximately 6 to 7 m below grade, which is at or near the limits of conventional open trench installation. The feasibility of excavation, engineered trench shoring requirements, bedrock removal and/or groundwater constraints should be assessed to confirm feasibility and refine opinions of probable construction costs.

Table 24: Option 3A - Gravity Sewer Upgrades Main Street West SPS outlet to Main Street, east of Gladstone Street

Street	Existing			Project Peak Flow (L/s)			
	Dia. (mm)	Length (m)	Theoretical Conveyance Capacity (L/s)	0-5 years	5-10 years	10-20 years	Build-out
Main St. W MH 28 - 26	250	155	35 to 39	33	41 to 42	55 to 56	62
Main St. W MH 437 – 434	250	200	26 to 30	15 to 16	23	37	37 to 40
Easement b/w May St. and York St.	250	51	22	17	18	24	29
New/Regraded Sewer Upgrades							
Extend Main St. W. to Relocated SPS	300	286	63	19	27	41	44
Main St. W. from Bailey Ave. to Relocated SPS	250	260	39	14	15	15	19

Options 3B gravity sewer upgrades are similar to Option 3A, however, the Main Street SPS forcemain outlet is located at the Clarence Street and Louise Street intersection, as described in Option 2B.

Table 25: Option 3B - Gravity Sewer Upgrades Main Street West SPS outlet to Clarence Street and Louise Street

Street	Existing			Project Peak Flow (L/s)			
	Dia. (mm)	Length (m)	Theoretical Conveyance Capacity (L/s)	0-5 years	5-10 years	10-20 years	Build-out
Clarence St. MH 105 - 102	300	207	29 to 83	24	32	46	49
Main St. W MH 437 – 434	250	200	26 to 30	15 to 16	23	37	37 to 40
Easement b/w May St. and York St.	250	51	22	17	18	24	29
New/Regraded Sewer Upgrades							
Extend Main St. W. to Relocated SPS	300	286	63	19	27	41	44
Main St. W. from Bailey Ave. to Relocated SPS	250	260	39	14	15	15	19

Options 3A and 3B pumping station upgrades are the same as Options 2A and 2B, however the Main Street SPS needs to be relocated and requires a deeper wet well to drain the new gravity sewers. It is proposed to relocate the SPS approximately 286 m east to mitigate the wet well depth and length of deep gravity sewers to allow Bailey Avenue SPS to be decommissioned in the future. Land acquisition for the new SPS needs to be reviewed as part of this option along with the additional geotechnical considerations summarized under Option 3A gravity sewers to confirm construction feasibility.

Table 26: Options 3A and 3B – Pumping Station Upgrades Summary

Pumping Station	Rated Capacity (L/s)	Projected Peak Flow (L/s)				Peak Flow Capacity Surplus/(Deficit) (L/s)
		0-5 years	5-10 years	10-20 years	Build-out	
Main St.	6	19	27	55	62	(56)
Bailey Ave.	31.4	14	15	N/A	N/A	N/A
St. Lawrence	21	11	12	18	24	(3)
Ottawa St.	90	72	87	109	127	(37)

SEWAGE TREATMENT SYSTEM – CAPACITY REVIEW

In early 2019, JLR, along with the Township of North Dundas (Township) and Ontario Clean Water Agency (OCWA) completed a Municipal Class Environmental Assessment (Class EA) associated with upgrades to the Winchester Sewage Treatment System (STS). The STS consists of a seasonally discharged lagoon-based

system (lagoon), including three primary facultative treatment cells operated in parallel (Cells 1, 2 and 3), one polishing cell (Cell No. 4), and one post-aeration cell (Cell No. 5). The lagoon treatment system has a C of A rated capacity of 2,220 m^3/day (C of A No. 5312-88TK5R).

At the time of the Class EA, population projections were reviewed with the Township and it was determined that the population within Winchester was anticipated to increase by approximately 948 people by 2038. Based on a population of 2,394 and an average day flow of 1,381 m^3/d, the estimated per capita flow at the time of the report was approximately 577 L/cap/day inclusive of inflow and infiltration (I&I). The 20-year design average day flow (ADF) for the Winchester STS assumed that the ratio of wastewater flow from future residential and commercial developments would remain similar to the proportion of residential and commercial flows that were previously generated.

As part of the current servicing study, population projections were re-developed based on new information available from the Township, and the average wastewater flows for various phasing (0-5 years, 5-10 years, 20 years, and 20+ years) were determined. The following table identifies the wastewater ADF for each phase, which includes residential (350 L/cap/day), commercial (28,000 L/ha/day) and a typical I&I flow (90 L/cap/day).

Table 27: Sewage Treatment System Future Capacity Comparison

Phasing	Projected Population Increase (Persons)	Projected increase ADF (m^3/d)	Existing ADF (m^3/d)	Projected Wastewater ADF[1] (m^3/d)	Rated Capacity (m^3/d)	Treatment Capacity Surplus/ (Deficit) (m^3/d)
0-5 Years	539	347	1,381	1,728	2,220	492
5-10 Years	989	824		2,205		15
10-20 Years	1740	1,580		2,961		(741)
20+ Years	2464	1,898		3,279		(1059)

1. The projected wastewater ADF is estimated based on an assumed current average day flow of 1,381 m^3/d which is an average of the annual average day wastewater flow from 2012-2016.

It is noted that based on the higher projected population increase for the servicing study compared to the Class EA, the above suggests that the capacity of the lagoon could be exceeded during the 10-20 Year period if the projected development and connections are realized within this timeframe. As noted elsewhere in this study, it is recommended that the Township review the actual growth and wastewater flows generated on a periodic basis and re-evaluate the need and timing for capacity increases to the STS. Generally, capacity upgrades are triggered when a treatment facility reaches approximately 80% of the current functional or production capacity. This early identification allows time to accommodate the required planning and design between the anticipated need and the implementation of the upgrades.

At a high level potential future options to increase lagoon treatment capacity consist of adding end of pipe treatment such as a Moving Bed Bioreactor (MBBR) and/or increase existing the lagoon area. OCWA advised that deepening the lagoon to increase storage capacity likely is not a feasible option as bedrock was encountered during the original lagoon construction.

It is important to note that the results of this study are *highly* dependent on the extent and rate of growth that the Township is projecting and also on the assumptions used in determining resulting future wastewater flows associated with this growth. As the Township receives more site specific information, it is possible that the projected wastewater flows could be refined and timing for implementation of the required infrastructure upgrades/expansion to support the future growth could be extended further out.

SUMMARY OF SANITARY SYSTEM REVIEW

A summary of the conclusions resulting from the above sanitary sewer model simulations, and SPS capacity review are provided in Table 28.

Table 28: Conceptual-Level Upgrades to Sanitary System

SANITARY SYSTEM UPGRADES		Projected Timeline	OPC Included in Study?	Municipal Class Environmental Requirements
Type	**Description**			
Sewage Pumping Station Upgrades	Options 1, 2A and 2B – Main St. SPS, increase capacity (current ECA capacity 6 L/s) to accommodate the build-out demand scenario (44 L/s from 6 L/s). It is assumed that a forcemain upgrade along with a new pumping station and wet well are required.	0 - 5 years	Yes	Schedule B – Increase sewage pumping station capacity that requires new building/wet well
	Option 1 – Bailey Ave. SPS, increase capacity (current ECA capacity 31 L/s) to accommodate the build-out demand scenario (62 L/s from 31 L/s). It is assumed that a forcemain upgrade along with a new pumping station and wet well are required.	0 - 5 years	Yes	Schedule B – Increase sewage pumping station capacity that requires new building/wet well
	Options 1 to 3 – Ottawa St. SPS, increase capacity (current ECA capacity 90 L/s) to accommodate the build-out demand scenario (127 L/s from 90 L/s). It is assumed equipment upgrades can be accommodated in the existing building footprint and forcemain.	10 to 20 Years	Yes	Schedule A+ – Notify residences of upgrade contained in existing building and wet well
	Options 2A and 2B – Bailey Ave. SPS building and equipment replacement at end of service life	0 - 5 years	Yes	Schedule A – Equipment replacement in existing facility
	Options 3A and 3B – New Main St. SPS rated for 62 L/s. New forcemain to either Main St. W. or Clarence St. and decommission Bailey Ave. SPS. Likely requires land acquisition for new Main St. SPS location.	0 - 5 years	Yes	Schedule B – Increase sewage pumping station capacity that requires new building/wet well
Sanitary Sewer Capacity Upgrades	Option 1 – Bailey Ave: Upgrade 24 m section of sanitary sewer with 300 mm dia. sewer	0 - 5 years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Option 1 – Main St. W: Upgrade 177 m section of sanitary sewer with 300 mm dia. sewer	5 to 10 Years	Yes	

	Options 1, 2A and 3A – Main St. W, Bailey Ave. SPS outlet sewers: Upgrade 155 m section of sanitary sewer with 300 mm dia. sewer	5 to 10 Years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Options 1 to 3 – Main St. W. upstream of Main St. SPS: Upgrade 200 m section of sanitary sewer with 300 mm dia. sewer	10 to 20 Years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Options 1 to 3 – Easement: Upgrade 51 m section of sanitary sewer with 300 mm dia. Sewer. To be confirmed in future based on field survey and actual future wastewater flows	10 to 20 Years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Options 2B and 3B – Clarence St.: Upgrade 207 m section of sanitary sewer with 450 mm dia. sewer	5 to 10 Years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Options 3A and 3B – New 286 m of regraded 300 mm dia. sanitary sewers extension along Main St. W.	0 - 5 years	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
	Options 3A and 3B – New 260 m of regraded deep (~7m) 250 mm dia. sanitary from Bailey Ave. SPS to relocated Main St. SPS.	10 to 20 years* Coordinate with Bailey Ave. SPS equipment replacement	Yes	Schedule A+ – Notify residences of upgrade in established road allowance
Sewage Treatment System	Increase lagoon treatment capacity by adding end of pipe treatment such as a Moving Bed Bioreactor (MBBR) and/or increase the existing lagoon area. Timing and remaining treatment capacity to be periodically reviewed in the future based on receiving wastewater flow as growth occurs.	10 to 20 Years	Yes	Schedule C – Increase rated capacity of wastewater treatment system

SUMMARY OF ASSUMPTIONS FOR PREPARING OPINIONS OF PROBABLE COST

An Opinion of Probable Cost (OPC) with a Class 'D' (Indicative Estimate) level of accuracy was developed for the conceptual-level upgrades required to service the projected future developments. The OPC was developed based on past experience on similar projects, professional judgment, and equipment costs provided by suppliers.

In preparing the OPC, the following assumptions were made:

- The estimated costs for various items are order-of-magnitude only and are based on the experience and current (2020) unit prices in the construction industry.
- All costs, including those for future years, are expressed in 2020 dollars and exclude HST. If these costs are to be used for long-range cash-flow projections, the implications for potential future trends of inflation and interest must be applied accordingly.
- Conceptual level of order-of-magnitude OPC may range by ± 30%. The scope of the required upgrades are to be confirmed through a Master Plan and/or Municipal Class EA, followed by preliminary and detailed design; costs will vary depending on the scope considered for implementation.
- The estimated costs do not include engineering costs.
- Estimated costs for various items were obtained from the City of Ottawa Master Spec Code List (December, 2018).
- Bedrock and groundwater levels were assumed deeper than the excavations, and therefore, no costs for rock removal, water taking and discharge have been included in the OPC.

This OPC is based on our best professional judgement and experience at the time, which may not reflect actual construction costs that are dependent on available labour, equipment, materials, market conditions or Contractor's method of pricing at the time of tendering. Where appropriate, Class Environmental Assessments should be completed to better understand the scope (cost, magnitude, timeline) of the required upgrades.

Table 29 below provides an overview of the conceptual-level upgrades considered within the OPC to service the development scenarios. Figures 5 to 9 provide an overview of the conceptual-level upgrades of the distribution and sanitary system as well as the location of the existing water and wastewater treatment systems.

Table 29: Opinions of Probable Cost for Conceptual-Level Upgrades

CONCEPTUAL LEVEL UPGRADES		Class 'D' Opinion of Probable Cost
Type	**Description**	
UPGRADES 0 to 5 Years		
Sanitary Sewer Capacity Upgrades	Option 1 – Bailey Ave: Upgrade 24 m section of sanitary sewer with 300 mm dia. sewer	$50,000
	Options 3A and 3B – New 286 m of regraded 300 mm dia. sanitary sewers extension along Main St. W.	$450,000
Sewage Pumping Station Upgrades	Options 1 – Main St. SPS, increase capacity (current ECA capacity 6 L/s) to accommodate the build-out demand scenario (44 L/s from 6 L/s). Upgrade anticipated to include a new forcemain, new pumping station and wet well.	$2.5M - $3.5M
	Option 2A – Same Main St. SPS upgrade as Option 1, but forcemain outlet extended along Main St., east of Gladstone St.	$3.1M – $4.1M
	Option 2B – Same Main St. SPS upgrade as Option 1, but forcemain outlet extended to intersection of Clarence St. and Louise St.	$3.5M - $4.5M
	Option 1 – Bailey Ave. SPS, increase capacity (current ECA capacity 31 L/s) to accommodate the build-out demand scenario (62 L/s from 31 L/s). Upgrade anticipated to include a new forcemain, new pumping station and wet well. .	$3.75M - $4.75M
	Options 2A and 2B – Bailey Ave. SPS building and equipment replacement at end of service life	$750,000
	Options 3A – New Main St. SPS rated for 62 L/s. New forcemain outlet extended along Main St. east of Gladstone St. Decommission Bailey Ave. SPS. Likely requires land acquisition for new Main St. SPS location.	$5M - $6M
	Options 3B – New Main St. SPS rated for 62 L/s. New forcemain outlet extended to intersection of Clarence St. and Louise St. Decommission Bailey Ave. SPS. Likely requires land acquisition for new Main St. SPS location.	$5.5M - $6.5M

Watermain Upgrades	New 300 mm dia. watermain loop approximately 1030 m (excluding 750 m through new development property) of 300 mm diameter watermain connection between Main St. West and Fred St.	$750,000
Watermain Storage and Pumping Station Upgrades	Chesterville Reservoir - 450 m^3 water storage expansion and pumping station upgrade	$1M
UPGRADES 5 to 10 Years		
Sanitary Sewer Capacity Upgrades	Option 1 – Main St. W: Upgrade 177 m section of sanitary sewer with 300 mm dia. sewer	$250,000
	Options 1, 2A and 3A – Main St. W, Bailey Ave. SPS outlet sewers: Upgrade 155 m section of sanitary sewer with 300 mm dia. sewer	$200,000
	Options 2B and 3B – Clarence St.: Upgrade 207 m section of sanitary sewer with 450 mm dia. sewer	$275,000
Watermain Upgrades	St. Lawrence St. 300 mm dia. watermain upgrade between the Winchester Reservoir and Pumping Station and Gordon Street (current extent of 300 mm diameter watermain from the Winchester elevated tank). Accompanies Winchester water storage and pumping station upgrades.	$1.5M
Water Storage and Pumping Station	Water storage expansion of 1,400 m^3 and booster pump upgrade at the Winchester Reservoir and Pumping Station.	$2M
UPGRADES 10 to 20 Years		
Sanitary Sewer Capacity Upgrades	Options 1 to 3 – Main St. W. upstream of Main St. SPS: Upgrade 200 m section of sanitary sewer with 300 mm dia. sewer	$250,000
	Options 1 to 3 – Easement: Upgrade 51 m section of sanitary sewer with 300 mm dia. Sewer. To be confirmed in future based on field survey and actual future wastewater flows	$75,000
	Options 3A and 3B – New 260 m of regraded deep (~7m) 250 mm dia. sanitary from Bailey Ave. SPS to relocated Main St. SPS.	$600,000

Sewage Pumping Station Upgrades	Options 1 to 3 – Ottawa St. SPS, increase capacity (current ECA capacity 90 L/s) to accommodate the build-out demand scenario (127 L/s from 90 L/s). It is assumed equipment upgrades can be accommodated in the existing building footprint and forcemain. .	$750,000
Sewage Treatment System	Increase lagoon treatment capacity by adding end of pipe treatment such as a Moving Bed Bioreactor (MBBR) and/or increase existing lagoon depth to increase storage volume. Timing and remaining treatment capacity to be periodically reviewed in the future based on receiving wastewater flow as growth occurs.	$15M
UPGRADES BUILD-OUT		
Watermain upgrades	Main St W. upgrade watermain to 300 mm dia. from Wellings of Winchester to St. Lawrence St. Establishes a trunk watermain loop through Winchester to improve fire flow availability.	$1.5M
	Fred St. upgrade watermain to 300 mm dia from Fred St. Easement connection to St. Lawrence St. Establishes a trunk watermain loop through Winchester to improve fire flow availability.	$500,000
TOTAL OVERALL CONCEPTUAL-LEVEL OPC		$28M - $31M

Based on review of the OPCs, it is expected that Option 2A would provide the most economical option to accommodate the projected build-out future development.

KEY CONSIDERATIONS FROM DESKTOP REVIEW

Based on the findings of the desktop water and wastewater servicing review, a list of recommendations and key considerations are summarized as follows:

Water Servicing

- The Lactalis water service configuration and details be reviewed for any future opportunities to refine the Township's water model to more accurately represent the site servicing at this facility.

- A Water Distribution System Master Plan be developed to evaluate and select preferred trunk water servicing routes and options. Since additional water storage is required to address a future storage deficit, a Master Plan would be beneficial in the selection of the preferred water storage configuration and location as it relates to the distribution system.

Wastewater Servicing

- The St. Lawrence Street SPS upgrades be reassessed in the 10 to 20 year time frame to confirm that the upgrades remain warranted as the projected build-out peak flow rate is within 3 L/s of the current rated capacity.

- Option 2A is expected to be the most economical option to accommodate the build-out wastewater flow from the identified future development areas.

- Under Option 1 the Bailey Avenue SPS upgrades will require additional investigation to assess the feasibility to double the current rated pumping capacity to 62 L/s on the existing constrained site and in close proximity to neighbouring residential development.

- Options 2B and 3B further investigation of the proposed forcemain route through the Christie Lane easement should be completed to assess the viability, particularly spatial constraints as the easement already contains a buried sanitary sewer.

- For the 20 year and build-out sewer upgrade anticipated along the Easement between May Street and York Street additional field investigation is warranted to confirm the sewer invert elevations along with future refinement of the projected peak wastewater flows.

- Options 3A and 3B further geotechnical investigation is recommended to review the feasibility of excavation, engineered trench shoring requirements, potential bedrock removal and/or groundwater constraints and refine opinions of probable construction costs. It is anticipated that 260 m of the new gravity sewers would be constructed approximately 6 to 7 m below grade, which is at or near the limits of conventional open trench installation.

- The Township should continue to review the actual growth and wastewater flows generated on a periodic basis and re-evaluate the need and timing for capacity increases to the STS. Additional investigation is required to assess constraints of increasing lagoon depth, treatment requirements and increased discharge period in order to achieve the anticipate build-out treatment capacity.

It is noted that the type of units expected within various residential areas and the type of commercial use expected within future commercial lands have a significant influence on the water demands and wastewater flows projected for the development scenarios. With limited information regarding the details of the intended future developments, design guideline values for the projected flows have been used to identify the various upgrades. Based on our experience, guideline values tend to be more conservative to account for unknowns when limited information is available, and therefore, there may be opportunities to refine the projected flows with further details as information becomes more available.

Furthermore, the upgrades identified through this review and their associated costs are largely attributed to future developments that are currently non-committed. Therefore, as these infrastructure upgrades are development driven, it would be expected that the majority of the costs to upgrade the infrastructure would be borne by the developers.

It is recommended that the Village undertake a more in-depth Master Plan for their water and wastewater systems to further define the projected future developments, the projected flows (both water and wastewater) and the resulting infrastructure upgrade requirements and the timing for those upgrades based on additional information. A more in-depth capacity assessment review of the STS could also be undertaken to determine the potential expandability of the STS based on projected demands and to assess constraints based on increase lagoon depth, treatment objectives and release rates. As noted, since additional water storage is required to address a future storage deficit, a Master Plan would be beneficial in the selection of the preferred water storage configuration and the specific location as it relates to the distribution system. A Master Plan would also assist in establishing additional capital costs and timing that could be used to ensure that any Development Charges By-law is appropriate to accommodate sustainable growth within the Township.

J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:

Annie Williams., P.Eng.
Civil Engineer

Prepared by:

Mark Buchanan, P.Eng.
Associate, Senior Civil Engineer

Reviewed by:

Matt Morkem, P.Eng.,
Senior Civil Engineer

AW/MB:jd
Attach.

N

BOYNE RD

BANK ST

WINCHESTER MAIN ST

ST LAWRENCE ST

OTTAWA ST SPS

BAILEY ST SPS

MAIN WEST SPS

ST. LAWRENCE ST SPS

3 31 43

1 2a 2b 3 4 5 6 7 8 9a 9b 10 11a 11b 11c 12 13 14 15 16 17 18 19 20 21a 21b 22a 22b 23 24a 24b 25a 25b 26 27 28 29a 29b 30 31

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Hydrant
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Watermain
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody
- Development Areas
- Additional Potential Development Areas
- Existing Development to be connected
- Future Commercial
- Future Residential

0 125 250 500 Meters

PROJECT:

NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY

NORTH DUNDAS, ONTARIO

DRAWING:

WINCHESTER POTENTIAL DEVELOPMENT AREAS

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DESIGN:	SJ
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CHECKED:	JM/MB
JLR #:	28855-001

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FIGURE 1

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 DevelopmentAreas.mxd

Plot Date: Friday, February 14, 2020 1:41:13 PM

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3

BOYNE RD

21b

22a

OTTAWA ST SPS

24b

14

BAILEY ST SPS

13

20

ST. LAWRENCE ST SPS

18

28

ST LAWRENCE ST

17

WINCHESTER MAIN ST

12

MAIN WEST SPS

31

1

6

5

10

11a

43

BANK ST

BANK ST

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Hydrant
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Watermain
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody

Near Term Growth (1-5 years)

- Residential
- Commercial

0 125 250 500 Meters

PROJECT:

NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY

NORTH DUNDAS, ONTARIO

DRAWING:

POTENTIAL DEVELOPMENT AREAS - NEAR TERM (1-5 YEARS)

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JLR #:	28855-001

DRAWING #: FIGURE 2

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 NearTerm.mxd

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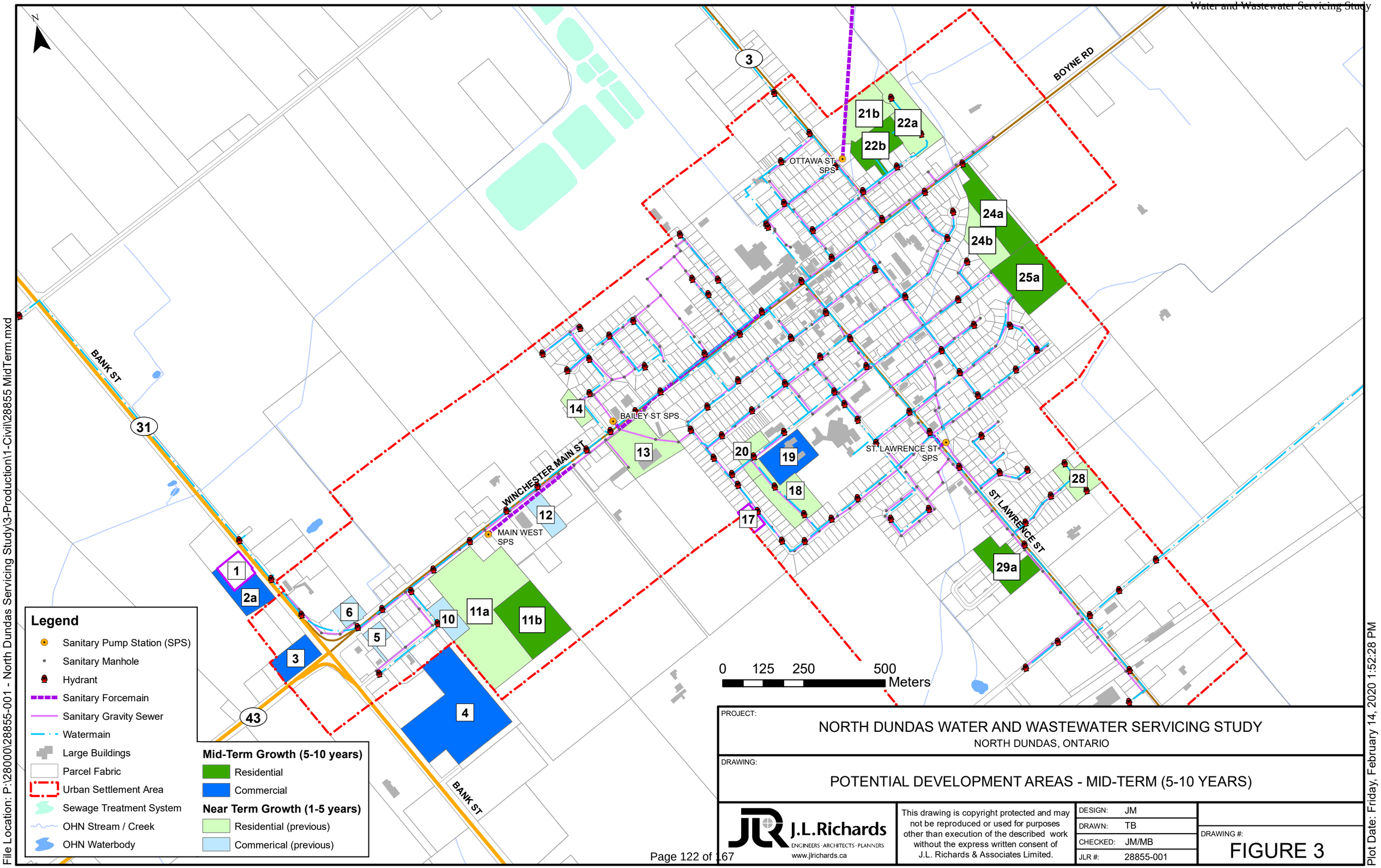

PROJECT:
NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY
NORTH DUNDAS, ONTARIO

DRAWING:
POTENTIAL DEVELOPMENT AREAS - MID-TERM (5-10 YEARS)

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FIGURE 3

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 MidTerm.mxd

Plot Date: Friday, February 14, 2020 1:52:28 PM

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BOYNE RD

BANK ST

WINCHESTER MAIN ST

ST LAWRENCE ST

OTTAWA ST SPS

BAILEY ST SPS

MAIN WEST SPS

ST. LAWRENCE ST SPS

3 21a 21b 22a 22b 23 24a 24b 25a 25b 26 27 28 29a 29b 30 31 15 14 13 16 20 19 18 17 12 9a 9b 31 2b 1 2a 8 7 6 5 10 11a 11b 11c 4 3

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Hydrant
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Watermain
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody

Long Term Growth (10-20 years)
- Residential
- Commercial

Build-Out (20+ years)
- Residential/Commercial

Near & Mid-Term Growth (1-10 years)
- Residential (previous)
- Commerical (previous)

0 125 250 500 Meters

PROJECT:
NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY
NORTH DUNDAS, ONTARIO

DRAWING:
POTENTIAL DEVELOPMENT AREAS - LONG TERM & BUILD-OUT
(10-20 YEARS & 20+ YEARS)

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CHECKED:	JM/MB
JLR #:	28855-001

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FIGURE 4

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 LongTerm.mxd

Plot Date: Friday, February 14, 2020 1:56:38 PM

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Upgrades

- 1-5 Year
- 5-10 Year
- 10-20 Year
- Build-out 20+ Year

5 - 10 Year
Ottawa St. SPS upgrade

1 - 5 Year
Options 1, 2A andb3A
- Main St. Sewer Upgrade

Build-out 20+ Year
300mmØ watermain upgrade

1 - 5 Year
Option 2A - Main St. SPS
forcemain upgrade Main St.

1 - 5 Year
Option 1 - Bailey St. SPS upgrade
Option 3 - Decommission

1 - 5 Year
Option 1 - Main St.
Sewer Upgrade

Build-out 20+ Year
Option 3 - Regrade sewer to
decommission Bailey St. SPS

1 - 5 Year
Main West SPS upgrades

5 - 10 Year
Ottawa St. SPS upgrade

1 - 5 Year
Option 2B - Main St. SPS
forcemain upgrade
Clarence St.

1 - 5 Year
300mmØ watermain loop

5 - 10 Year
Options 2B & 3B.
Clarence St. Sewer Upgrade

Build-out 20+ Year
300mmØ watermain upgrade

10 - 20 Year
Options 2B & 3B.
Clarence St. Sewer Upgrade

Build-out 20+ Year
St Lawrence SPS upgrade

5 - 10 Year
300mmØ watermain upgrade

5 - 10 Year
1,400 m³ water storage expansion
and booster pump upgrades

OTTAWA ST SPS
BAILEY ST SPS
MAIN WEST SPS
ST. LAWRENCE ST SPS

BOYNE RD
BANK ST
WINCHESTER MAIN ST
ST LAWRENCE ST

3 31 43

1 2a 2b 3 4 5 6 7 8 9a 9b 10 11a 11b 11c 12 13 14 15 16 17 18 19 20 21a 21b 22a 22b 23 24a 24b 25a 25b 26 27 28 29a 29b 30 31

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Lagoon Outfall
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody
- Development Areas
- Additional Potential Development Areas
- Existing Development to be connected
- Future Commercial
- Future Residential

0 125 250 500 Meters

PROJECT:
NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY
NORTH DUNDAS, ONTARIO

DRAWING:
WINCHESTER WATER AND WASTEWATER UPGRADES

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JLR #:	28855-001

DRAWING #:
FIGURE 5

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 FutureUpgrades.mxd

Plot Date: Wednesday, September 2, 2020 1:48:40 PM

N

Upgrades

1 - 5 Years

1 - 5 Years
Options 1, 2A and 3A
- Main St. Sewer Upgrade

1 - 5 Years
Option 2A - Main St. SPS
forcemain upgrade Main St.

1 - 5 Years
Option 1 - Bailey St. SPS upgrade

1 - 5 Years
Option 1 - Main St.
Sewer Upgrade

1 - 5 Years
Main West SPS upgrades

1 - 5 Years
Option 2B - Main St. SPS
forcemain upgrade
Clarence St.

1 - 5 Years
300mmØ watermain loop

OTTAWA ST SPS

BAILEY ST SPS

MAIN WEST SPS

ST. LAWRENCE ST SPS

BOYNE RD

WINCHESTER MAIN ST

ST LAWRENCE ST

BANK ST

3 31 43

1 2a 2b 3 4 5 6 7 8 9a 9b 10 11a 11b 11c 12 13 14 15 16 17 18 19 20 21a 21b 22a 22b 23 24a 24b 25a 25b 26 27 28 29a 29b 30 31

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Lagoon Outfall
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody
- Development Areas
- Additional Potential Development Areas
- Existing Development to be connected
- Future Commercial
- Future Residential

0 125 250 500 Meters

PROJECT:
NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY
NORTH DUNDAS, ONTARIO

DRAWING:
WINCHESTER WATER AND WASTEWATER UPGRADES - 1-5 YEARS

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JLR #:	28855-001

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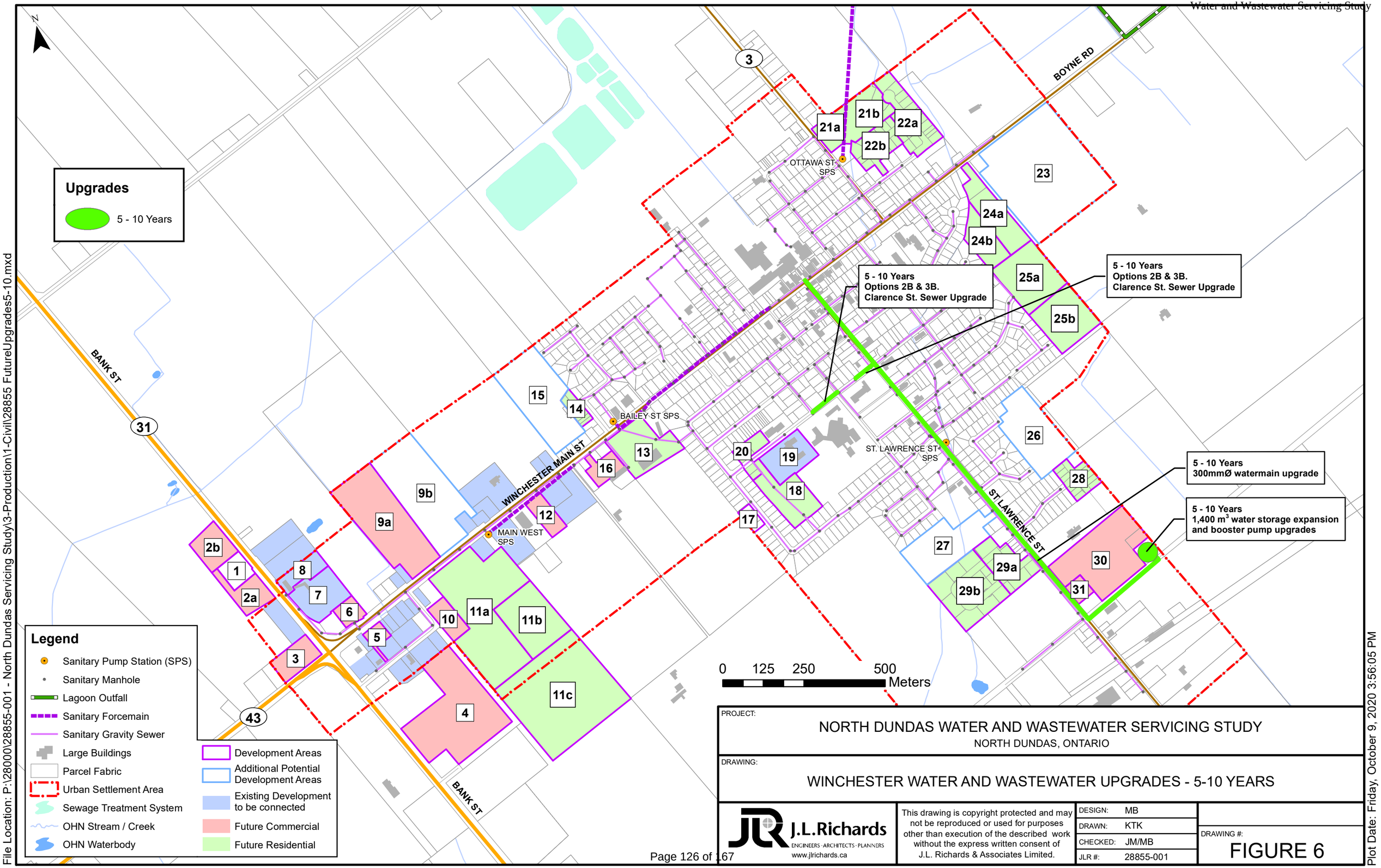
FIGURE 5

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 FutureUpgrades1-5.mxd

Plot Date: Friday, October 2, 2020 8:36:27 AM



PROJECT:

NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY

NORTH DUNDAS, ONTARIO

DRAWING:

WINCHESTER WATER AND WASTEWATER UPGRADES - 5-10 YEARS

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JLR #:	28855-001

DRAWING #:

FIGURE 6

N

Upgrades

10 - 20 Years

10 - 20 Years
Sewage Treatment
System upgrades

10 - 20 Years
Ottawa St. SPS upgrade

10 - 20 Years
Option 3 - Regrade sewer to
decommission Bailey St. SPS

10 - 20 Years
Options 1 to 3
Main St. West Sewer upgrade

10 - 20 Years
Easement sewer upgrade

BOYNE RD

BANK ST

WINCHESTER MAIN ST

ST. LAWRENCE ST

OTTAWA ST SPS

BAILEY ST SPS

MAIN WEST SPS

ST. LAWRENCE ST SPS

3 31 43

1 2a 2b 3 4 5 6 7 8 9a 9b 10 11a 11b 11c 12 13 14 15 16 17 18 19 20 21a 21b 22a 22b 23 24a 24b 25a 25b 26 27 28 29a 29b 30 31

Legend

- Sanitary Pump Station (SPS)
- Sanitary Manhole
- Lagoon Outfall
- Sanitary Forcemain
- Sanitary Gravity Sewer
- Large Buildings
- Parcel Fabric
- Urban Settlement Area
- Sewage Treatment System
- OHN Stream / Creek
- OHN Waterbody
- Development Areas
- Additional Potential Development Areas
- Existing Development to be connected
- Future Commercial
- Future Residential

0 125 250 500 Meters

PROJECT:

NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY

NORTH DUNDAS, ONTARIO

DRAWING:

WINCHESTER WATER AND WASTEWATER UPGRADES - 10-20 YEARS

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CHECKED:	JM/MB
JLR #:	28855-001

DRAWING #:

FIGURE 7

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 FutureUpgrades10-20.mxd

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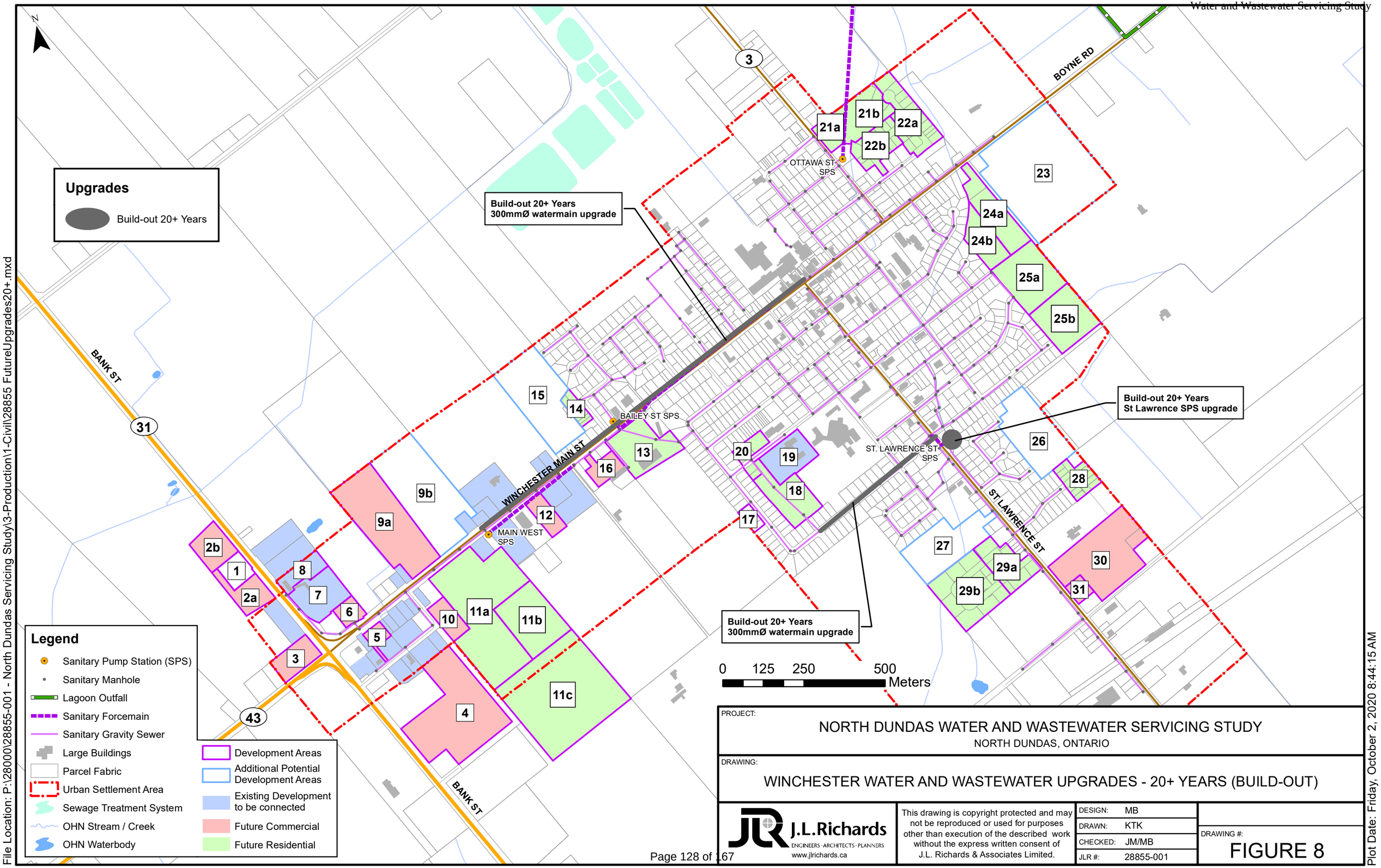

PROJECT:
NORTH DUNDAS WATER AND WASTEWATER SERVICING STUDY
NORTH DUNDAS, ONTARIO

DRAWING:
WINCHESTER WATER AND WASTEWATER UPGRADES - 20+ YEARS (BUILD-OUT)

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CHECKED:	JM/MB
JLR #:	28855-001

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FIGURE 8

File Location: P:\28000\28855-001 - North Dundas Servicing Study\3-Production\1-Civil\28855 FutureUpgrades20+.mxd

Plot Date: Friday, October 2, 2020 8:44:15 AM

Attachment 1

GROWTH PROJECTIONS MEMORANDUM

Attachment 2

HYDRAULIC WATER MODEL SCHEMATICS

Attachment 3

HYDRAULIC SEWER MODEL SCHEMATICS

ACTION REQUEST – Clerk	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Complaint Policy

RECOMMENDATION:
THAT the Council of the Township of North Dundas adopt policy # 83-2020, being a Public Complaint Resolution Policy to formalize the Township of North Dundas' current complaint process.

BACKGROUND:
The Ombudsman of Ontario and the Integrity Commissioner suggest that every Ontario municipality should have a general complaint policy. This policy formalizes the process that has been followed internally. Once approved, the policy and complaint form will be posted on the Township's website.

OPTIONS AND DISCUSSION:
1. **Adopt the policy –** recommended. This formalizes our process and ensures we are compliant with the directive from the Ombudsman Ontario.

2. **Do not adopt the policy** - not recommended.

FINANCIAL ANALYSIS:
N/A

OTHERS CONSULTED:
CAO
Department Heads

ATTACHMENTS:
Policy #83-2020

PREPARED BY:

Jo-Anne McCaslin, CMO
Municipal Clerk

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

POLICY MANUAL	Policy No. 83-2020
For the Township of North Dundas	Effective Date:
Subject: Public Complaint Resolution Policy	Department: All Departments

Purpose:

This policy provides guidelines and standards for the efficient handling and resolution of complaints made by members of the public. This policy, in conjunction with *Policy #61-2015 Accessible Formats and Communication Support*, will assist the Township in providing excellent service to the public. This policy is based on suggestions from the Ontario Ombudsman and the Municipality's Integrity Commissioner with respect to content and process.

Scope:

It is important to note that for the purpose of this policy, a complaint is defined as:

> *An expression of dissatisfaction related to operations, a municipal service or program, facility, or staff member, where a citizen believes that the municipality has not provided a service experience to the customer's satisfaction at the point of service delivery and a satisfactory response or resolution has not been achieved. The issue remains unresolved.*

Types of Complaints:

Informal Complaints:

Informal complaints may be made in person, by phone, letter, email or fax. Informal complaints are logged into the Township's electronic tracking system (Access E-11) for distribution to the appropriate Department Head for action and resolution. It is the responsibility of respective Department Head or their designate to communicate with the complainant to attempt to resolve issues or concerns. Early and informal resolution of complaints is encouraged.

Formal Complaints:

If after communicating with the respective Department Head or their designate, the complainant feels that their concern has not been satisfactorily resolved, complainants may lodge a formal complaint with the Township by completing Schedule "A" of this policy. This form must be completed in full and submitted to the Clerk. Anonymous complaints will not be accepted.

This policy does **NOT** address:

1. By-law concerns/complaints. These must be made directly to the Planning, Building and Enforcement Department on the appropriate form.

Public Complaint Resolution Policy

2. Complaints and alleged breaches of the Code of Conduct or the Municipal Conflict of Interest Act by Council Members or Local Board Members. These complaints must be completed on the appropriate form, available on the Township's website, and filed with the Clerk. The Clerk will forward the matter to the Integrity Commissioner who will assess the complaint in accordance with the Township's current Integrity Commissioner Agreement.

3. Complaints about closed meetings. These must be completed on the appropriate form available on the Township's website and filed with the Clerk. The Clerk will forward the matter to the Municipal Investigator, who will assess the matter in accordance with the Township's current Municipal Investigator Agreement.

4. Complaints concerning contractors, or volunteers working on behalf of the Township. These must be addressed by the service provider.

5. Matters that are handled by tribunals, courts of law, quasi-judicial boards, etc. or matters that are minor, frivolous or vexatious (as determined by the Clerk or designate), or that occurred more than two years ago.

For example, complaints regarding garbage pick-up, or the condition of a street surface, would only qualify as formal complaints if the matter cannot be resolved informally (i.e. contacting the municipal office with concerns and giving the appropriate department an opportunity to resolve the issue). By-law or parking infractions do not qualify as a complaint under this policy.

Definitions:

In this Policy:

- **CAO** means the Chief Administrative Officer of the Township of North Dundas.
- **Clerk** means the Clerk or Designate of the Township of North Dundas.
- **Complainant** means the individual filing the complaint with the Township.
- **Council** means the Council of the Township of North Dundas.
- **Designate** means a person who has received delegated authority.
- **Director** means a Director/Department Head of the Township of North Dundas.
- **Employee** means an employee of the Township of North Dundas.
- **Township** means the Corporation of the Township of North Dundas.
- **Vexatious & Frivolous** means it is pursued in a manner that is reasonably perceived to be malicious, intended to embarrass or harass the recipient, or intended to be a nuisance.

Process:

The Clerk will receive all formal complaints that have been submitted on the complaint form "Schedule A" and may delegate the authority to investigate a complaint to his/her or his designate. Any individual named in a complaint cannot investigate that complaint.

Public Complaint Resolution Policy

Department Heads:
If a complaint is made against a Department Head or the Clerk, the Chief Administrative Officer (CAO) shall conduct the investigation and respond accordingly.

CAO:
If a complaint is made against the Chief Administrative Officer, the Mayor shall consult with Council and may designate a solicitor, or other qualified individual at arm's length from the municipality, to investigate.

Receipt and Acknowledgement:
The Clerk shall acknowledge in writing that a formal complaint has been received within ten (10) business days of receipt of the complaint. The Clerk shall give each record a number and maintain a file of the complaint in compliance with the Township's Records Retention Policy. If a municipal employee was the subject of the complaint, a copy of the complaint shall be retained in their personnel file.

Decision re: Formal Complaints
Within thirty (30) calendar days of date of the acknowledgement letter, the Clerk shall ensure a response in writing to the complainant following consultation with the appropriate Department Head.

The response shall include:
- Whether the complaint was substantiated;
- If the complaint is not substantiated, provide reason(s) for the decision;
- Any actions the municipality has or will take as a result of the complaint; and
- A request for feedback on the complaint process

If the Clerk or his/her designate is unable to provide a response within thirty (30) calendar days, they shall notify the complainant of the delay and provide an estimate of when a response will be provided.

Decisions made by the Clerk in consultation with the Department Head, to delay the response, may not be appealed to Municipal Council.

Appeal Process:
Once the municipality has communicated the decision to the complainant; there is no appeal process at the municipal level. Unresolved issues can be directed by way of a delegation to Council or addressed at the Provincial level through the Ontario Ombudsman.

Public Complaint Resolution Policy

Township of Township of North Dundas
Complaint Form
Schedule "A"

Your Name:		**Complaint # (internal use)**	(YYYY-###)
Phone Numbers:		**Date:**	(YYYY/MM/DD)
Home:			
Work:			
Cell:			
E-mail Address:			
Mailing Address:	_____ _____ _____ _____		

What is your complaint? Please include relevant date(s), time(s), location, and background information, including municipal employees you have contacted regarding this matter. Additional information, such as relevant photographs, can be attached to this form. Please attach an additional sheet if required.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Public Complaint Resolution Policy

How could the situation be improved?

_____

_____

_____

Additional information:

Office Use Only:	
Received by:	Date:
Forwarded to:	Date:
Acknowledgement Letter ☐ Sent Date: _____ Staff Name: _____	Additional Correspondence ☐ Sent Date: _____ Staff Name:

Public Complaint Resolution Policy

Action Taken: All written responses must be filed with the Clerk to form an official complaint record with the Township.
Final Response Letter ☐ Sent Date:

Thank you for taking the time to explain your concern. We will provide a response to your concern within thirty (30) business days of receiving your complaint. If you have any questions about the process, please contact the Clerk at 613-774-2105

ACTION REQUEST – Clerk	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	2021 Council Meeting Schedule

RECOMMENDATION:
THAT Council adopt the 2021 Schedule of Regular Council Meetings as presented.

BACKGROUND:
Procedural By-law 2020-19 states a proposed meeting schedule will be presented by the Clerk to Council for approval in October. As per 6.2 of Procedural By-law, Council reserves the right to dispense with or alter the time, day of place of any meeting by resolution. Changes to this schedule shall be posted on the Township's website

January 19	April 13	June 8	September 14	November 9
February 9	April 27	June 22	September 28	November 23
March 9	May 11	July 13	October 12	December 14
March 23	May 25	August 10	October 26	

Note: This report shall constitute public notice of the above-noted meetings.

OPTIONS AND DISCUSSION:
1. **Approve the meeting schedule as listed** – recommended.
2. **Do not approve the meeting schedule –** not recommended.

OTHERS CONSULTED:
CAO

ATTACHMENTS:
2021 Council Meeting & Conference Dates.

PREPARED BY:

Jo-Anne McCaslin, CMO
Municipal Clerk

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

2021 Council Meeting & Conference Dates

(Subject to change with notice)

January 19

January 25-26 ROMA ANNUAL CONFERENCE (VIRTUAL)

February 9

February 21-24 OGRA ANNUAL CONFERENCE (TORONTO)

March 9 & 23

April 13 & 27

May 11 & 25

June 8 & 22

July 13

August 10

August 15-18 AMO ANNUAL CONFERENCE (LONDON)

September 14 & 28

OEMC ANNUAL CONFERENCE (TBD)

October 12 & 26

November 9 & 23

December 14

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Budget Amendment and Award of Tender for Three 2021 Model Year Trucks

RECOMMENDATION:
THAT the Council of the Township of North Dundas award Public Works Tender # 07-2020, for the purchase of three trucks, to Myers Kemptville Chevrolet Buick GMC in the amount of $114,925 plus HST and approve financing in accordance with budget amendments #2020-14 and 2020-16, as attached.

BACKGROUND:
Public Works and Fire Services released joint tender for the purchase of three trucks. The two fire vehicles were identified in 2020 budget. The Public Works truck is a replacement of the vehicle that was stolen and damaged and therefore being replaced through our insurance coverage. PW 07-2020 Tender for three trucks closed on September 18, 2020. One bid was received and evaluated for financial and technical specifications.

The submission meets or exceeds technical requirements.

Based on technical evaluation criteria and financial proposal, the bid is found to be satisfactory, and Myers Kemptville Chevrolet Buick GMC is recommended for the award of the tender in the total amount of $114,925 plus HST. The attached bid sheet from Myers Kemptville Chevrolet Buick GMC provides pricing breakdown on the three trucks.

After purchase, lights and tool box will be installed on truck # 1 at a cost of approximately $2000, and emergency lighting will be installed on truck #2 and 3 (Winchester & Mountain Fire Station) at a cost of approximately $5,000 each.

OPTIONS AND DISCUSSION:
1. **Approve the Recommendation and award PW07-2020 tender & installation of lights** – recommended**.**
2. **Do not approve the recommendation and re-tender in 2021** – not recommended

FINANCIAL ANALYSIS:
There is no impact on taxes. Refer to attached budget amendments 2020-14 and 2020-16 for details on budgets and financing of three 2021 trucks.

OTHERS CONSULTED:
CAO
Finance
Fleet Mechanic

ATTACHMENTS:
Myers Kemptville Chevrolet Buick GMC Bid Sheet
Budget Amendment 2020-14
Budget Amendment 2020-16

PREPARED BY:

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

REVIEWED & APPROVED BY:

Angela Rutley, BBA
CAO

Appendix B

PRICING AND COMPLETION SCHEDULE

1. Pricing

Truck One Truck Two Truck Three Discount for purchase of all 3 trucks (if applicable)	$ 36581.00 $ 36139.60 $ 42205.00 $
SUBTOTAL	$ 114925.00
HST	$ 14940.25
TOTAL	$ 129865.25

2. HST

HST Registration Number is: _____

OR

Operates as a Small Trader with the Federal Government: _____

NOTE! THESE ARE 2021 SPECIFIC ORDERS

3. Completion

The timeframe for **commencement** of the project will be when notified (indicate # days after notification of award of the Work).

The timeframe for **completion** of the project will be 8-12 weeks (indicate # days after commencing the Work).

SUBJECT TO FACTORIES OPERATING

APPENDIX #1

Township of North Dundas
Addendum to Budget Resolution - October 20, 2020

Budget Amendment - 2020-14 - Transportation and Fire Services

Project	Account No.	2020 Original Budget	Revised Budget	Budget Amend-ment
Costs				
Truck 1 - Public Works				
Purchase 1/2 Ton Truck - 4 x 4 - Regular Cab - 8 Foot Box	1-5-3218-8000	-	37,300	37,300
		$ -	**$ 37,300**	**$ 37,300**
Truck 2 - Mountain Fire Station				
Purchase 1/2 Ton Truck - 4 x 4 - 4 Door - 6.5 Foot Box	1-5-2020-8000	30,600	36,800	6,200
		$ 30,600	**$ 36,800**	**$ 6,200**
Truck 3 - Winchester Fire Station				
Purchase 3/4 Ton Truck - 4 x 4 - 4 Door - 6.5 Foot Box	1-5-2030-8000	53,500	43,000	(10,500)
		$ 84,100	**$ 43,000**	**$ (10,500)**
Financing				
Truck 1 - Public Works				
Insurance Proceeds	1-4-3000-7950	-	36,665	36,665
Transfer from Reserves - Roads Equipment (1-3-2000-8115)	1-4-3218-9000	-	635	635
		$ -	**$ 37,300**	**$ 37,300**
Truck 2 - Mountain Fire Station				
Donation from Others	1-4-2020-8005	15,300	15,300	-
Transfer from Reserves - Fire TND (1-3-2000-8020)	1-4-2020-9000	462,844	469,044	6,200
		$478,144	**$484,344**	**$ 6,200**
Truck 3 - Winchester Fire Station				
Sale of Assets	1-4-2030-8000	1,000	1,000	-
Transfer from Reserves - Fire TND (1-3-2000-8020)	1-4-2030-9000	28,500	36,000	7,500
Development Charges - Fire Vehicles	1-4-2030-9500	24,000	6,000	(18,000)
		$ 53,500	**$ 43,000**	**$ (10,500)**

APPENDIX #1

Township of North Dundas
Addendum to Budget Resolution - October 20, 2020

Budget Amendment - 2020-16 - Transportation and Fire Services

Project	Account No.	2020 Original Budget	Revised Budget	Budget Amend-ment
Costs				
Truck 1 - Public Works				
Lights for New Truck	1-5-3218-8000	-	2,000	2,000
		$ -	**$ 2,000**	**$ 2,000**
Truck 2 - Mountain Fire Station				
Lights for New Truck	1-5-2020-8000	-	5,000	5,000
		$ -	**$ 5,000**	**$ 5,000**
Truck 3 - Winchester Fire Station				
Lights for New Truck	1-5-2030-8000		5,000	5,000
		$ -	**$ 5,000**	**$ 5,000**
Financing				
Truck 1 - Public Works				
Transfer from Reserves - Roads Equipment (1-3-2000-8115)	1-4-3218-9000	-	2,000	2,000
		$ -	**$ 2,000**	**$ 2,000**
Truck 2 - Mountain Fire Station				
Donation from Others	1-4-2020-8005	15,300	17,800	2,500
Transfer from Reserves - Fire TND (1-3-2000-8020)	1-4-2020-9000	462,844	465,344	2,500
		$478,144	**$483,144**	**$ 5,000**
Truck 3 - Winchester Fire Station				
Transfer from Reserves - Fire TND (1-3-2000-8020)	1-4-2030-9000	-	5,000	5,000
		$ -	**$ 5,000**	**$ 5,000**

ACTION REQUEST – Public Works	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	By-law No. 2020-53 Renewal of OCWA Contract Agreement

RECOMMENDATION:
THAT the Council of the Township of North Dundas adopt By-law 2020-53, being a by-law to execute an agreement between the Corporation of the Township of North Dundas and Ontario Clean Water Agency for seven (7) years with an option for an additional four (4) year term.

BACKGROUND:
OCWA has provided operational and maintenance services for our water and wastewater systems for many years (since 1959). The Township's water and wastewater service operation contract with Ontario Clean Water Agency (OCWA) will expires at the end of 2020. The renewal of the contract will provide operation and maintenance services at the Water and Wastewater Treatment Facilities.

OCWA currently provides annual reports as per regulations. OCWA commits to working with the Township to develop a report template that meets the needs of the Township which will include details required for the asset management program.

OPTIONS AND DISCUSSION:

OCWA has offered the following renewal options:

1. **Approve the service agreement for Seven (7) years plus an additional four (4) year term** – recommended.

   This would allow OCWA and the Township the opportunity to review the services and the contract terms at the end of the initial seven-year period and negotiate any required adjustments if necessary. This longer-term option provides the greatest flexibility for the Township and supports long-term budget planning while promoting a sustainable funding model.

   Staff recommend agreement for seven (7) years with an option to renew for additional four (4) year term, subject to review, providing greater flexibility to the Township.

2. **Approve the service agreement for an eleven (11) year contract term** – not recommended.

   An eleven-year term ensures that the next contract renewal discussions do not fall in a municipal election year. The longer term provides the least risk for the Township and supports long-term budget planning while promoting a sustainable funding model.

3. **Do not execute the agreement** – not recommended**.**

FINANCIAL ANALYSIS:

OCWA's price for 2021, the first year of the renewal term is **$805,138**.

Annual Price	
Chesterville Water	$210,749
Chesterville Wastewater	$128,719
Winchester Water	$253,934
Winchester Wastewater	$211,736

Due to changes in the markets and in their provision of services, OCWA is proposing an increase of 4.15% to the Annual Price for water and wastewater services at the Township. This increase includes a 2% CPI adjustment to the 2020 Annual Price as well as increases to the costs for chemicals and insurance.

OTHERS CONSULTED:
Khurram Tunio
Angela Rutley
Stephane Barbarie
Aimée Hennessy

A copy of the agreement is in the Council office for review.

ATTACHMENTS:
By-Law 2020-53
OCWA Renewal Letter

PREPARED BY: Mary Lynn Plummer

RECOMMENDED BY: **REVIEWED & APPROVED BY:**

Khurram Tunio, M. Eng., P. Eng.
Director of Public Works

Angela Rutley, BBA
CAO

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

BY-LAW NO. 2020-53

A By-law to authorize the Mayor and the Chief Administrative Officer to execute an agreement between the Corporation of the Township of North Dundas and the Ontario Clean Water Agency

WHEREAS the Corporation of the Township of North Dundas desires to execute an agreement with the Ontario Clean Water Agency for the operation and maintenance of the water and wastewater facilities for seven (7) years plus an option for an additional four (4) year term.

NOW THEREFORE the Council of the Corporation of the Township of North Dundas enacts as follows:

1. That the Corporation of the Township of North Dundas enter into and execute an agreement with the Ontario Clean Water Agency (O.C.W.A.) for the operation and maintenance of the water and wastewater facilities for an seven (7) years plus an option for an additional four (4) year term.

2. That the Mayor and the Chief Administrative Officer are hereby authorized and instructed to sign the said agreement and related documents on behalf of the Corporation of the Township of North Dundas.

3. That this by-law shall come into force and effect on January 1, 2021.

READ and passed in Open Council signed and sealed this 20th day of October, 2020.

_____
MAYOR

_____
CLERK

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

20 Bennett Street, Suite 200
Carleton Place, Ontario K7C 4J9
Tel: 613-253-1590 Fax: 613-253-8069
www.ocwa.com

September 21, 2020

Township of North Dundas
636 St. Lawrence Street, P.O. Box 489
Winchester, Ontario K0C 2K0
Attention: Angela Rutley, CAO

Re: Renewing our Services Agreement

The Township of North Dundas is an important part of our business operations within the Seaway Valley Cluster. There are many benefits to continuing services with a trusted and reliable partner such as OCWA. We offer secure knowledge in the integrity of our operations and our comprehensive understanding of the Township's facilities and systems.

Renewing our agreement is an opportunity to review our partnership, bring forward best practices, and commit to meeting future challenges together. The Ontario Clean Water Agency (OCWA) and the Township of North Dundas have built a great partnership. Through our many years working together, we have provided cost-effective water and wastewater treatment services for your residents while protecting the environment and your long-term interests.

The current Services Agreement between the Township and OCWA expires on December 31, 2020. Going forward, OCWA would be honoured to continue our active role as your trusted provider and partner. OCWA will continue to earn your trust by demonstrating value for service through good governance, transparent processes, open communications and accountable decision making.

1.0 Explaining the Annual Price

For each system, the direct operating costs were estimated based on our history of operations and with a refreshed analysis of all activities involved in the production of drinking water and in the treatment of wastewater for the Township. Our local operating history along with our knowledge operating more than 800 facilities/systems throughout Ontario, offers the Township assurances that our proposed price is a sound reflection of the true costs of operating the Township's systems.

1.1. Increases to the Annual Price

Due to changes in the markets and in our provision of services, OCWA is proposing an increase of 4.15% to the Annual Price for water and wastewater services at the Township. The increase includes a 2% CPI adjustment to the 2020 Annual Price as well as increases to the costs for chemicals and insurance as detailed below.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Chemical Costs

Over the past couple of years, the costs of alum have seen a market increase of 40%. As such, the Annual Price for alum will increase by $12,650.

Insurance Costs

The insurance market has also experienced significant increases over the last couple of years. As stated in OCWA's letter to the Township of April 9, 2020, there are impacts for both deductible levels and premium costs. For the 2021 operating year, we have been notified by our brokers of more increases, including a 40% increase on Property, a 35% increase on Boiler & Machinery and a 30% increase on Consultants Environmental Liability insurance. With the cumulative increases for 2020 and 2021, the Annual Price for the Township's insurance premium has increased by $5,405.

2.0 The Annual Price

OCWA's proposed price for 2021, the first year of the renewal term is **$805,138**.

Chesterville Water	$210,479
Chesterville Wastewater	$128,719
Winchester Water	$253,934
Winchester Wastewater	$211,736

2.1. Proposed Length of Term with Fixed Annual Adjustment

OCWA and the Township have historically renewed with five (5) year renewal terms. OCWA would like to propose we enter into an eleven (11) year term with a fixed percentage annual increase of 2% for every year of the agreement term. This means that the annual price for every year of the services agreement shall increase by 2% over the previous year's annual price on a cumulative basis. A review of the last ten years of CPI increases averages the CPI at 2.01%.

We believe that a longer term provides the least risk for the Township and supports long-term budget planning while promoting a sustainable funding model.

An eleven year term ensures that the next contract renewal discussions do not fall in a municipal election year. Understanding that this long-term commitment may be seen as risky, we would like to offer the option to break the term up into seven (7) years plus an additional four (4) year term. This would allow OCWA and the Township the opportunity to review the services and the contract terms at the end of the initial seven year period and negotiate any required adjustments if necessary.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

3.0 Commitments for a Renewed Partnership

We will continue to work to earn the trust of the Township by demonstrating value for service through good governance, transparent processes, and accountable decision-making. OCWA will provide the highest level of value throughout the term of the proposed service agreement by delivering reliable, quality services at a fair and equitable cost.

Throughout our long standing partnership, OCWA has worked with and supported the Township through many changes and upgrades to your water and wastewater systems. We will continue to provide our support through the current and future developments with our local, regional and corporate support services. With our O&M experience and additional support services, the Township of North Dundas has access to our ancillary functions outside of our O&M services such as Energy Management, Engineering Services, Process Optimization, Asset Management and SCADA specialists.

We look forward to continuing to service the Township and its residents for many years to come.

Sincerely,

Aimée Hennessy
Business Development Manager

cc. Stéphane Barbarie, Senior Operations Manager

ACTION REQUEST – CAO	
To:	Mayor and Members of Council
Date of Meeting:	October 20, 2020
Subject:	Lease Amending Agreement - Hydro One

RECOMMENDATION:
THAT By-law 2020-50 being a by-law to authorize the Mayor and Clerk to enter into a lease amending agreement with Hydro One Networks, be read and passed in Open Council, signed and sealed this 20th day of October, 2020.

BACKGROUND:
Hydro One Networks has been a tenant in the municipal building at 636 St. Lawrence Street since November, 2000. Their current lease expires October 31, 2020.

Negotiations have taken place between the Hydro One representative and the CAO. The following changes are included in the lease amending agreement:

1) Permission for Hydro One to install electric vehicle charging stations in the yard at no cost to the Township.
2) Permission for Hydro One to install an additional trailer for meeting room/lunch room space in the yard.
3) An increase in the space allocation in the warehouse and the corresponding increase in the shared building costs.
4) An increase in the annual rent of 11% or approximately $14,700 annually.
5) Installation of separate metering on the trailers occupied by Hydro One to enable the Township to invoice Hydro One for the additional electricity used by these trailers.
6) An additional optional renew terms of 5 years, ending on October 31, 2030.

Attached is the lease amending agreement that extends their lease for another five years, until November 1, 2025.

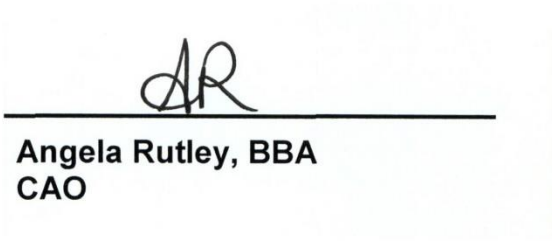
OPTIONS AND DISCUSSION:
1. **Approve the by-law and lease amending agreement** - recommended. Hydro One is a valued tenant and employer in our community.

2. **Do not approve the by-law and lease amending agreement** – not recommended. This would risk losing Hydro One as tenants.

FINANCIAL ANALYSIS:
This provides rental income for a portion of the municipal building and cost sharing of expenses. The lease increases the rent by approximately $14,700 annually. This new rate will be reflected in the 2021 budget. The increased rate for November and December was not included in the 2020 budget and will result in additional revenue of $2,450.

ATTACHMENTS:
By-law No. 2020-50
Lease Amending Agreement – Appendix A

PREPARED BY:



Angela Rutley, BBA
CAO

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

BY-LAW NO. 2020-50

Being a By-law to authorize the Mayor and Clerk to enter into a Lease Amending Agreement with Hydro One Networks Inc.

WHEREAS the *Municipal Act, 2001,* as amended, provides that the powers of a municipal corporation are to be exercised by its Council;

AND WHEREAS the *Municipal Act*, *2001*, as amended, provides that the powers of the Council shall be exercised by by-law;

AND WHEREAS the Council of the Township of North Dundas is desirous to enter into a lease amending agreement with Hydro One Networks Inc. for premises occupied at 636 St. Lawrence Street, Winchester.

NOW THEREFORE the Council of the Corporation of the Township of North Dundas enacts as follows:

1. That the Corporation of the Township of North Dundas enter into a lease amending agreement with Hydro One Networks Inc. for the lease of premises known municipally as 636 St. Lawrence Street, Winchester, Ontario, as per the terms of the Amending Lease Agreement dated October 9, 2020 shown as Schedule “A” attached hereto and forming part of this by-law;

2. That the Mayor and Clerk be hereby authorized to complete the necessary actions to give effect to the contract.

3. That any other By-laws inconsistent with this By-law are hereby repealed in their entirety.

READ and passed in Open Council, signed and sealed this 20th day of October, 2020.

_____
MAYOR

_____
CLERK

Appendix A

LEASE AMENDING AGREEMENT

THIS AGREEMENT dated this 9th day of October, 2020

B E T W E E N:

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

hereinafter collectively called the "Landlord"

OF THE FIRST PART

-and-

HYDRO ONE NETWORKS INC.

hereinafter called the "Tenant"

OF THE SECOND PART

WHEREAS:

1. The Corporation of the Township of North Dundas, as landlord and Hydro One Networks Inc., as tenant entered into a lease dated November 1, 2000 for the lease of the premises known municipally as 636 St. Lawrence Street, Winchester, Ontario and more particularly described in the said lease for an initial term of Three (3) years commencing November 1, 2000 and terminating on October 31, 2003 (the "Original Lease").

2. The Lease contained two renewal options of two (2) and five (5) years respectively, which options have been exercised by the Tenant. The first renewal was for the period commencing November 1, 2003 and terminating October 31, 2005 (the "First Renewal Period") and the second renewal term was for the period commencing on November 1, 2005 and terminating October 31, 2010 (the "Second Renewal Period").

3. The Tenant has exercised both the First Renewal Period and the Second Renewal Period.

4. The Landlord and Tenant agreed to amend the Original Lease by a Lease Amending Agreement dated May 25, 2006 (the "First Amending Agreement").

5. The Landlord and Tenant agreed to amend the Original Lease by a Lease Amending Agreement dated February 14, 2012 whereby the Tenant was permitted to retroactively renew the Original Lease for a third renewal for the period commencing on November 1, 2010 and terminating on October 31, 2015 (the "Third Renewal Period") and was granted a Fourth Renewal Period for an additional Five (5) years commencing on November 1, 2015 (the "Second Amending Agreement").

6. The Landlord and Tenant agreed to amend the Original Lease by a Lease Amending Agreement dated April 26, 2016 whereby the Tenant was permitted to retroactively renew the Original Lease for a fourth renewal for the period commencing on November 1, 2015 and terminating on October 31, 2020 (the "Fourth Renewal Period") and was granted a Fifth Renewal Period for an additional Five (5) years commencing on November 1, 2020 (the "Third Amending Agreement").

7. The Original Lease, the First Amending Agreement, the Second Amending Agreement and the Third Amending Agreement shall collectively be referred to herein as the "Lease".

8. The Landlord and the Tenant have agreed to amend the Lease on the terms and conditions hereinafter set forth.

NOW THEREFORE THIS AGREEMENT WITNESSES THAT in consideration of the sum of Two Dollars ($2.00) now paid by each party to the other and the respective covenants and agreements of the parties hereinafter contained (the receipt and sufficiency of which are hereby acknowledged by the parties hereto), the parties hereto agree as follows:

1. Any capitalized word or term not otherwise defined herein shall have the meaning given thereto in the Lease.

2. Notwithstanding that the Tenant did not provide the Landlord with Three (3) months prior written notice of its intention to exercise the Fifth Renewal Period, the parties hereto agree that the Term of the Lease is hereby renewed for a period of Five (5) years commencing on November 1, 2020 and shall terminate on October 31, 2025.

3. The Tenant shall be entitled to renew the Lease for an additional successive term of Five (5) years commencing on November 1, 2025 and shall terminate on October 31, 2030 upon the same terms and conditions contained in the Lease save and except for the rent payable and this option to renew (the "Sixth Renewal Period").

4. The section titled "Rent" on page 2 of the Lease is hereby amended by adding the following paragraph to the end of the section:

   "The parties agree that the net annual rent payable by the Tenant for the Fifth Renewal Period shall be $8.10 per square foot and shall be calculated based on the Rentable Area, being 14,773.40 square feet."

5. The Landlord consents to the Tenant installing at its sole cost electric vehicle charging stations (the Charging Stations") and associated infrastructure generally as shown on Schedule "A" attached hereto. The Tenant shall install a check meter on the electrical service to the Charging Stations and the Tenant shall be responsible for the cost of electricity used by the Charging Stations.

6. The Landlord and Tenant shall work cooperatively to facilitate the installation of the Tenant's trailer (the "Trailer") generally in the area shown in yellow on Schedule "B" attached hereto. The Tenant will install check meters on the electrical service to the Trailer and any other Tenant-owned trailers that are installed on the Premises to allow for utilities to be billed to the Tenant.

7. This Agreement shall be read together with the Lease and the parties confirm that, except as modified herein, all covenants and conditions in the Lease remain unchanged, unmodified and in full force and effect.

8. This Agreement shall enure to the benefit of and be binding upon the parties and their legal representatives, heirs, executors, administrators, successors and permitted assigns, as the case may be.

IN WITNESS WHEREOF, the parties hereto have caused this Lease Amending Agreement to be executed by the signatures of their proper officers duly authorized in that behalf.

HYDRO ONE NETWORKS INC.

Per: _____
Name: Bryan Brennan
Title: Manager, Facilities & Real Estate Acquisition

I have the authority to bind the Corporation

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

Per: _____
Print Name:
Print Title:

Per: _____
Print Name:
Print Title:

I/We have the authority to bind the Corporation

Schedule “A”

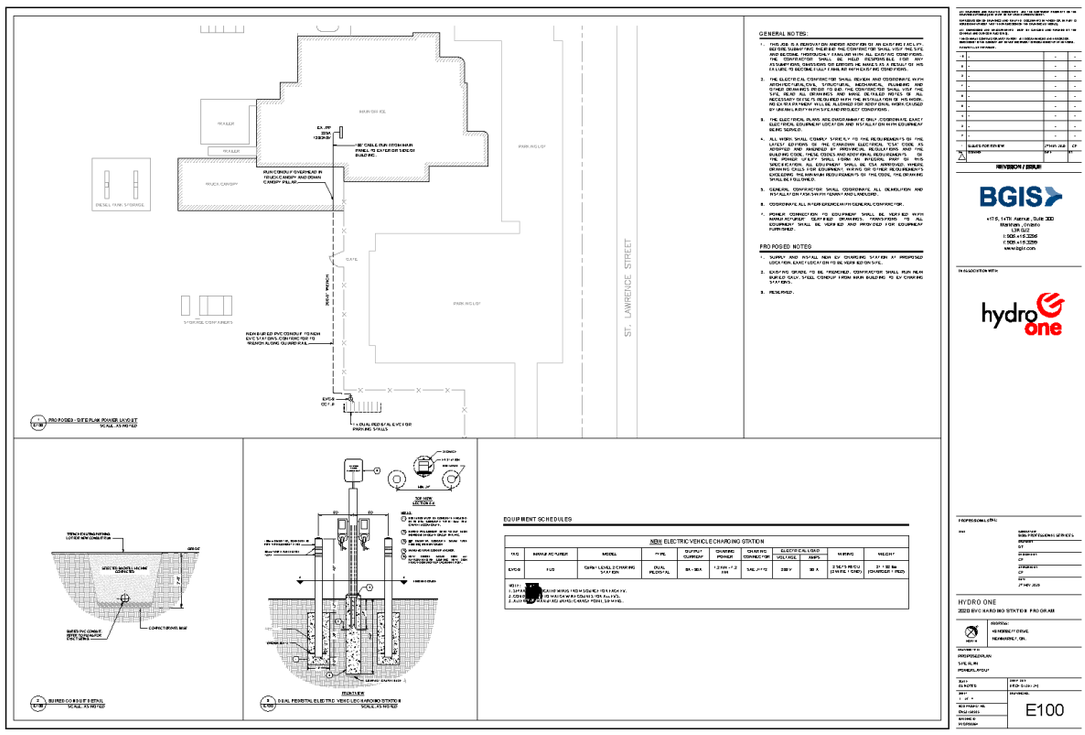
Hydro One
EV Charger Installation

636 ST. LAWRENCE STREET
WINCHESTER, ON.
ENS3158931

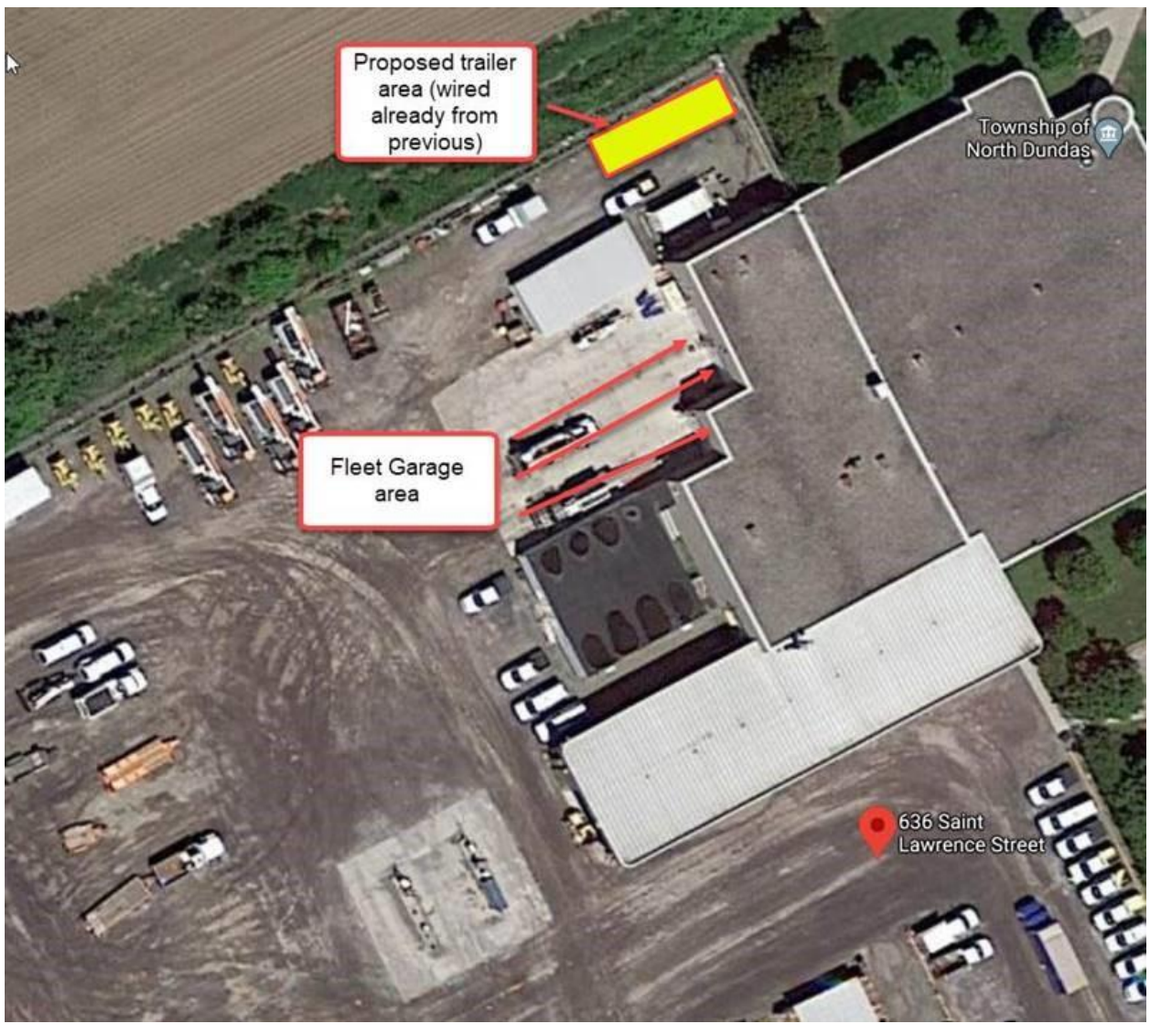
ELECTRICAL
ISSUED FOR REVIEW
22 MAY 2020

DRAWING INDEX

E001	PROPOSED PLAN - SITE PLAN POWER LAY OUT


GENERAL NOTES:
PROPOSED NOTES
EQUIPMENT SCHEDULES
ST. LAWRENCE STREET
HYDRO ONE
E100

Schedule “B”


Proposed trailer area (wired already from previous)
Township of North Dundas
Fleet Garage area
636 Saint Lawrence Street

Cunningham Swan
LAWYERS

Tony E. Fleming
Direct Line: 613.546.8096
E-mail: tfleming@cswan.com

April 9, 2020

BY E-MAIL: jmccaslin@northdundas.com

Council – Township of North Dundas
c/o Jo-Anne McCaslin, Deputy CAO/Clerk
636 St. Lawrence Street
Winchester, ON K0C 2K0

Dear Members of Council:

Re: Integrity Commissioner Services - Annual Report – 2019
Township of North Dundas; Our file No. 27227-7

Background

In 2019, Tony Fleming of Cunningham Swan in Kingston, Ontario, was appointed as the Integrity Commissioner for the Township of North Dundas in accordance with section 223.3(1) of the *Municipal Act*, 2001, S.O. 2001, c. 25 (the "Act").

This report summarizes the services provided by the Integrity Commissioner to the Township of North Dundas in 2019, in accordance with section 223.6 (1) of the *Act*. The purpose of this report is to highlight the mandate of the Integrity Commissioner and to inform Council and the public about changes to the Act that affect the process of the Integrity Commissioner and subsequently, Councils and Local Boards.

Role of the Integrity Commissioner

The Act mandates that the Integrity Commissioner is responsible for providing the following functions:

1. The application of the code of conduct for members of council and the code of conduct for members of local boards.

2. The application of any procedures, rules and policies of the municipality and local boards governing the ethical behaviour of members of council and of local boards.
3. The application of sections 5, 5.1 and 5.2 of the *Municipal Conflict of Interest Act* ("MCIA") to members of council and of local boards.
4. Requests from members of council and of local boards for advice respecting their obligations under the code of conduct applicable to the member.
5. Requests from members of council and of local boards for advice respecting their obligations under a procedure, rule or policy of the municipality or of the local board governing the ethical behaviour of members.
6. Requests from members of council and of local boards for advice respecting their obligations under the MCIA.
7. The provision of educational information to members of council, members of local boards, the municipality and the public about the municipality's codes of conduct for members of council and members of local boards and about the MCIA.[1]

Codes of Conduct

Prior to March 1, 2019, Codes of Conduct for members of Councils and Local Boards were optional. On March 1, 2019 the Province mandated that requirement.[2] Along with that mandate, Ontario Regulation 55/18: Codes of Conduct – Prescribed Subject Matters, requires municipalities to include specific provisions within those Codes of Conduct:

1. Gifts, benefits and hospitality.
2. Respectful conduct, including conduct toward officers and employees of the municipality or the local board, as the case may be.
3. Confidential information.
4. Use of property of the municipality or of the local board, as the case may be.[3]

The Integrity Commissioner notes that although not required by the Province, it is essential that municipalities include a complaint protocol within their Codes of Conduct. Courts have indicated that an Integrity Commissioner relies on the Code of Conduct together with the complaint protocol as the 'home statute' of the Integrity Commissioner.[4]

[1] *Municipal Act*, section 223.3(1).
[2] *Municipal Act*, section 223.2(1).
[3] *Municipal Act*, O. Reg. 55/18, section 1.
[4] *Michael Di Biase v City of Vaughan*, 2016 ONSC 5620 at para. 43.

We note the following important details regarding our initial process in relation to the complaint protocol:

1. The Integrity Commissioner may attempt to resolve all or part of a complaint as part of our preliminary review process; and
2. The Integrity Commissioner may reformulate complaints or applications for inquiry if necessary, to better reflect the intent of the complainant or applicant.[5]

Integrity Commissioner Activity re: Township of North Dundas

If Council requires ongoing training under the Code of Conduct and the MCIA, Mr. Fleming is available upon request. Individual members may request advice from the Integrity Commissioner at any time. Council or members may contact Mr. Fleming in the following ways:

1) Council may pose a question to the Integrity Commissioner in writing regarding the broad obligations of all members (not specific to any one member);
2) Individual members may request advice in writing from the Integrity Commissioner in accordance with the Act.

There have been no complaints under the Code of Conduct or applications for inquiry under the MCIA submitted to the Integrity Commissioner for the Township of North Dundas. We have also received no requests for advice from individual members. Still, we feel it is of great importance to highlight our process and imperative messages gleaned from cases around the Province to date.

Resolution of Complaints

As referenced above, the Integrity Commissioner begins the process with a preliminary review of all complaints and applications for inquiry. Where possible, we attempt to resolve disputes informally without the necessity of an investigation or inquiry. We do so where such a resolution is in the best interest of the public. Complaints and applications are dismissed if determined to be frivolous, vexatious or without merit. Applications for inquiry are dismissed if they are determined to be outside of the statutory 6-week requirement as set out in the MCIA.

Although it is not always possible to pursue an informal resolution, we will make every effort to do so where there is the potential for such a resolution. This opportunity is not lost after an investigation or inquiry begins. However, it becomes more difficult where the parties (the complainant/applicant and the member), either individually or collectively, are opposed to an informal resolution.

[5] *Ibid*, at para. 43.

There may also be circumstances where complaints contain facts that require a thorough investigation or inquiry and report in order to provide guidance to members and the public about certain types of behaviour or incidents that generate several complaints which highlight areas of obvious public concern. In these circumstances, a public report may assist in a wider resolution of such complaints or applications, or answer questions that may avoid future complaints or misunderstandings about the role of Council.

Confidentiality

The Integrity Commissioner includes only the information in his reports that is necessary to understand the findings. In making decisions about what information to include, the Integrity Commissioner is guided by the duties set out in the Municipal Act.

Section 223.5(1) of the Act sets out the Integrity Commissioner's duty to maintain confidentiality throughout any process:

> **Duty of confidentiality**
> **223.5** (1) The Commissioner and every person acting under the instructions of the Commissioner shall preserve secrecy with respect to all matters that come to his or her knowledge in the course of his or her duties under this Part.

This requirement applies to every person acting under the instruction of the Integrity Commissioner as well. Our process includes notifying the complainant or applicant, the named member(s), and any witnesses that they must keep the process confidential as required under section 223.5(1).

If a member were to share details of a complaint process with any other individual prior to the Integrity Commissioner issuing a public report, the Integrity Commissioner may view that act as a breach of the confidentiality provisions of the Code of Conduct. Further, any information not included in the report of the Integrity Commissioner remains confidential and ought to be treated as such by all parties.

Finally, any advice provided by the Integrity Commissioner to a member is confidential and the member has no obligation to share that advice with Council or any other person. The Integrity Commissioner may not release any advice that has been provided to a member without their consent. Should the member share part of the advice on their own, the advice no longer enjoys the cloak of confidentiality and the Act allows the Integrity Commissioner to release the full text of the advice at their discretion.

Independent Role of the Integrity Commissioner

Council has assigned to the Integrity Commissioner the duty to independently conduct investigations and inquiries. The Integrity Commissioner is bound by the statutory

framework to undertake a thorough investigation or inquiry in an independent manner. The findings of any report represent the Integrity Commissioner's final decision.

Investigative Process

Our process for all investigations and inquiries includes:

1. Reviewing the merits of the complaint or application to determine if it is:
    a. Frivolous;
    b. Vexatious; or
    c. Without merit.
2. Following this initial review (and barring any finding under paragraph 1(a) through (c)), we conduct a more thorough preliminary review that allows the named member an opportunity to respond and provides the complainant with the opportunity to respond to the member's reply. The member is then provided with one last opportunity to respond to the reply comments of the complainant.
3. Following these steps and any additional steps the Integrity Commissioner deems necessary to complete the preliminary review, the Integrity Commissioner reviews all materials and submissions to that point and decides whether to explore any opportunity for an informal resolution or move on to the investigation/inquiry stage.
4. If there is an investigation or inquiry, the Integrity Commissioner interviews those witnesses he deems relevant to the allegations, and collects all information deemed relevant to the process.
5. At the completion of the investigation or inquiry, the Integrity Commissioner issues a public report of his findings to Council for their acceptance and consideration on any recommended sanctions or penalties.

Investigation Reports

If Council finds itself in the position where it receives a report from the Integrity Commissioner, Council is performing an adjudicative function and it is required to act with a greater degree of neutrality than it normally would for other business that may come before it. It may debate the recommendations of the Integrity Commissioner only, but not the findings.

Council must avoid going "behind" the findings of the Integrity Commissioner or challenging the lines of inquiry or analysis undertaken by the Integrity Commissioner. Council does not have the benefit of the detailed investigation undertaken, as it is impossible to distill all the interviews and documents into one report. The Integrity Commissioner exercises his discretion to report only those facts that are most relevant; which is not to say that other facts were not considered when drafting the report. Any attempt to challenge the findings of the report undermines the integrity of the process and the conclusions of the report. That type of

action is unfair to the complainant or applicant, the member, and witnesses, and is beyond the scope of Council's authority under the Municipal Act.

We note that if the Integrity Commissioner recommends a financial sanction (suspension of pay up to 90 days), then the member (even though he or she would have a resulting pecuniary interest) is entitled to attempt to influence Council's decision on that recommended financial sanction. However, the member is not entitled to participate in any other portion of the debate, must still declare a conflict at the outset of Council's consideration of the report, and may not vote.[6]

Closing Remarks

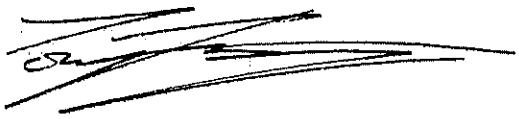
We thank the Township of North Dundas for the opportunity to act as its Integrity Commissioner. We remind members that the Integrity Commissioner is available to provide advice in accordance with the Act regarding a member's obligations under the Code of Conduct and the MCIA. We note that this service provides members with the proactive ability to avoid potential complaints by requesting and acting on advice which may apply to the circumstances of the member.

Members are held to the highest standards of office in their elected positions and we thank members for their continued attention to the ethical obligations expected of them.

Please contact us with any follow-up questions. In the meantime, please find enclosed a copy of the up-to-date Certificate of Insurance for the Township of North Dundas.

Sincerely,

Cunningham, Swan, Carty, Little & Bonham LLP



Tony E. Fleming, C.S.
LSO Certified Specialist in Municipal Law
(Local Government / Land Use Planning)
Anthony Fleming Professional Corporation
TEF:am
Enclosures

[6] Section 5(2.10) of the *Municipal Conflict of Interest Act*.

THE CORPORATION OF THE TOWNSHIP OF NORTH DUNDAS

BY-LAW No. 2020-51

Being a By-law of the Corporation of the Township of North Dundas to adopt, confirm and ratify matters dealt with by resolution.

WHEREAS the *Municipal Act, 2001,* as amended, provides that the powers of the Corporation of the Township of North Dundas, shall be exercised by By-law.

AND WHEREAS in many cases, action which is taken or authorized to be taken by the Township of North Dundas does not lend itself to the passage of an individual By-law;

NOW THEREFORE the Council of the Township of North Dundas enacts as follows:

1.0 That the Minutes of the Regular Meeting including the In Camera Meeting held on October 6th, 2020 of the Council of the Township of North Dundas, be hereby adopted.

2.0 That the actions of the Township of North Dundas at the Regular Meeting held on October 20th , 2020 in respect of each motion, resolution and other action taken by the Township of North Dundas at its meeting are, except where the prior approval of the Local Planning Appeal Tribunal or other authority is required by law, hereby adopted, ratified and confirmed as if all such proceedings were expressly embodied in this By-law.

3.0 That where no individual By-law has been or is passed with respect to the taking of any action authorized in or by the above-mentioned minutes or with respect to the exercise of any powers by the Township of North Dundas in the above-mentioned minutes, then this By-law shall be deemed for all purposes to be the By-law required for approving and authorizing and taking of any action authorized therein and thereby or required for the exercise of any powers therein by the Township of North Dundas.

4.0 That the Mayor and Members of Council of the Township of North Dundas are hereby authorized and directed to do all things necessary to give effect to the said action of the Township of North Dundas to obtain approvals where required and except as otherwise provided, the Mayor, or in the absence of the Mayor the alternate Head of Council, and the Municipal Clerk, or in the absence of the Municipal Clerk, the Deputy Clerk, are hereby directed to execute all documents necessary on behalf of the Township of North Dundas.

READ and passed in Open Council, signed and sealed this 20th day of October, 2020.

_____
MAYOR

_____
CLERK