

## Project Summary

<b>Number:</b>	INI-9011		
<b>Title:</b>	Rural Roads Generic		
<b>Asset Type:</b>	15061-TCA-cost - Paved Roads- Infra		
<b>Sub Department:</b>	1-300-(330-344) Roads Maintenance and Winter Control		
<b>Budget Year:</b>	2023		
<b>Scenario:</b>	Main	<b>Active:</b>	Yes
<b>Project Stage:</b>	Council Approval		
<b>Regions:</b>			
<b>Project Type:</b>	Infrastructure		

Description																																																		
<p>The annual Rural Roads Generic Capital Program supports the implementation of preventative maintenance and rehabilitation of the Municipality's road network in coordination with the Roads Needs Study and asset management modelling and includes in two separate lists the 5 year plan for the rural road rehabilitation as well as the road reconstruction.</p> <p>The various processes utilized to support the program are outlined below.</p> <p><u>Single Surface Treatment:</u> A preventative maintenance technique that preserves and reinforces existing pavement and surface treated roads, extending their life expectancy. Single surface treatment also creates a waterproof barrier and restores the skid resistance on the roadway. It is constructed by spraying a uniform single application of asphalt emulsion with a computerized distributor truck, followed by a layer of cover aggregate applied with a chip spreader. This is immediately followed by two pneumatic rubber tired rollers which sets the aggregate into the asphalt emulsion. The aggregate will continue to set with warm weather and traffic volumes. A single surface treatment layer is typically applied 3-5 years after a double surface treatment (DST). Additional layers of single surface treatment may be applied throughout the life span of a roadway, which is in good condition, to rejuvenate the surface on both asphalt and surface treated roadways.</p> <p><u>Double Surface Treatment:</u> A cost effective reconstruction technique for roadways that are at or near complete failure and are beyond repair by preventative maintenance techniques. The roadway is pulverized, graded and compacted prior to the addition of new granular material which is also graded and compacted (this work is completed by the Municipality in collaboration with contracted services) in preparation for the application of double surface treatment. Double surface treatment is achieved with two applications of single surface treatment, with the base lift utilizing a slightly larger aggregate mix. Fog seal is a finishing technique utilized on many types of road surfaces, including surface treatment. The Municipality is now applying fog seal on all Double Surface Treatment projects. The fog seal application seals nearly all the aggregate on the roadway, which reduces the amount of dust and stone loss post-surface treatment. Fog seal also enables the Municipality to reduce the risk of damage during the first few winter maintenance seasons.</p>	<p><u>Base Stabilization:</u> A preparation technique used to improve the physical and load bearing properties of a road base. Base stabilization can be achieved through the injection of a stabilizer, such as liquid chloride, or the placement of a geotextile material. The Municipality has utilized both methods with geotextile material being used for the first time in 2020. Base stabilization is utilized to correct poor base material without costly excavation, removal and replacement of road base material. Base stabilization allows the existing material to be utilized and therefore saves cost associated with trucking of removed and new materials. Base stabilization is used to address previous surface distresses, ride quality, loss of surface integrity and subgrade instability. Base stabilization is a preparation technique that must be covered with a wearing surface, such as surface treatment.</p> <p><u>Micro Surfacing:</u> A preventative maintenance technique used to extend the life of a roadway. Micro surfacing seals the existing road surface to prevent water from entering the road base, therefore reducing further deterioration. It also creates a road surface that is coarser texture for enhanced skid resistance and a safer wearing surface. Micro surfacing can be utilized to address and correct early stage or minor pavement distresses to increase the lifespan of the roadway. The micro surfacing process includes a mixture of materials (emulsified asphalt, aggregate, filler, water and additives) that are proportioned, mixed and spread with a specialized machine. Following a short curing period, traffic is provided access onto the new surface. Micro surfacing is utilized on roadways with minor surface defects or those that require a revitalization of skid resistance. Micro surfacing can also be overlaid on a road surface with more extensive surface defects that have been repaired through other methods (hot mix asphalt patching, crack sealing, etc.).</p> <p><u>Crack Sealing:</u> A preventative maintenance technique that fills existing cracks with flexible material which bonds to the existing asphalt and prevents the intrusion of water and debris into the crack, protecting it from further deterioration. Cracks are cleaned or routed and cleaned prior to the application of the warmed crack sealing material. Following this, a barrier material is applied to prevent tracking and allows immediate access to traffic following application. Crack sealing can be utilized on the surface of roadways which will remain as the surface or overlaid with a new surface course (such as micro surfacing or single surface treatment). It has been shown that 75% of unsealed cracks develop into potholes within 3 years, while only 1% on sealed cracks develop into potholes within 3 years.</p>																																																	
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Budget Year</th> <th>Total Expense</th> <th>Total Revenue</th> <th>Difference</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2023</td> <td style="text-align: right;">3,054,975</td> <td style="text-align: right;">3,054,975</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">2024</td> <td style="text-align: right;">3,207,724</td> <td style="text-align: right;">3,207,724</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">2025</td> <td style="text-align: right;">3,368,110</td> <td style="text-align: right;">3,368,110</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">2026</td> <td style="text-align: right;">3,536,515</td> <td style="text-align: right;">3,536,515</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">2027</td> <td style="text-align: right;">3,713,340</td> <td style="text-align: right;">3,713,340</td> <td style="text-align: center;">0</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">19,622,164</td> <td style="text-align: right; border-top: 1px solid black;">19,622,164</td> <td style="text-align: center; border-top: 1px solid black;">0</td> </tr> </tbody> </table>	Budget Year	Total Expense	Total Revenue	Difference	2023	3,054,975	3,054,975	0	2024	3,207,724	3,207,724	0	2025	3,368,110	3,368,110	0	2026	3,536,515	3,536,515	0	2027	3,713,340	3,713,340	0		19,622,164	19,622,164	0	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>GL Account</th> <th>Description</th> <th>Total Amount</th> </tr> </thead> <tbody> <tr> <td><b>Expense</b></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">Asset Cost</td> <td style="text-align: right;">3,054,975</td> </tr> <tr> <td></td> <td style="text-align: right;"><b>Total Expense:</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>3,054,975</b></td> </tr> <tr> <td><b>Revenue</b></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">Reserve for Roads Construction</td> <td style="text-align: right;">3,054,975</td> </tr> <tr> <td></td> <td style="text-align: right;"><b>Total Revenue:</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>3,054,975</b></td> </tr> </tbody> </table>	GL Account	Description	Total Amount	<b>Expense</b>				Asset Cost	3,054,975		<b>Total Expense:</b>	<b>3,054,975</b>	<b>Revenue</b>				Reserve for Roads Construction	3,054,975		<b>Total Revenue:</b>	<b>3,054,975</b>
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2023			Tanya Redden																																															

## 2023 RURAL ROADS GENERIC (INI-9011)

	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
SST	Black Road (East of 1052 to Doxsee Rd)	6.00	0.75	4,500
SST	Bongards Crossroad (CR7 to CR8)	6.20	3.00	18,600
SST	Chapmans Crescent (entire length)	6.00	0.50	3,000
SST	County Road 19 (Cunningham Rd to CA 1450)	6.40	2.50	16,000
SST	Cowan Road (entire length)	6.50	0.18	1,170
SST	Georges Road (entire length)	5.00	1.30	6,500
SST	Gore Road (CR23 to Weese)	5.70	4.80	27,360
SST	Hubbs Road (Valley Rd to Victoria Rd)	5.50	1.70	9,350
SST	Lakeside Drive (Melville to CA 622)	5.60	3.00	9,350
SST	Long Point Road (CA5221 to East of CA 5526)	5.50	1.50	16,800
SST	Miller Road (CR17 to Old Milford Rd)	6.40	2.00	12,800
SST	Morgan Road (Hwy 62 to Gilead Rd)	6.00	1.90	11,400
SST	Murphy Road (CR10 to CR13)	6.00	2.30	13,800
SST	Ridge Road (CA 608 to CR12)	6.70	5.10	34,170
SST	Scotts Mill Road (from Old Milford Rd to Crowes Rd)	6.20	1.10	6,820
SST	Smokes Point Road (CR33 to End)	6.40	3.20	20,480
SST	Station Road (both ends from CR1 and CR33)	6.50	1.80	11,700
		<b>Total SST</b>	<b>36.63</b>	<b>223,800</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
Micro	County Road 1 (East of CA 3408 to CR2)	8.00	1.00	8,000
Micro	County Road 12 (Stanley St to CA 634)	6.80	2.00	13,600
Micro	County Road 3 (Old Orchard Rd East End to CA 3072)	7.00	1.00	7,000
Micro	County Road 3 (CA 3472 to CR33)	7.00	4.30	30,100
Micro	County Road 33 (CA 15490 to CA 16057)	9.00	3.00	27,000
		<b>Total Micro</b>	<b>11.30</b>	<b>85,700</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
DST	Doxsee Road (South of Black Road to Jericho Road)	6.30	1.50	9,450
		<b>Total DST</b>	<b>1.50</b>	<b>9,450</b>

## 2024 RURAL ROADS GENERIC (INI-9011)

	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
SST	Burr Road (Hwy 62 to CR2)	6.00	6.00	36,000
SST	Chuckery Hill Road (CR 33 to Rosseau Crossroad)	6.40	2.10	13,440
SST	County Road 17 (CA 1331 to CA 2179)	7.25	4.40	31,900
SST	County Road 20 (CR33 to CA 613)	6.60	3.00	19,800
SST	County Road 38 (CR8 to End)	5.80	0.45	2,610
SST	County Road 7 (CA 1788 to CA 3587)	6.80	9.20	62,560
SST	Elizabeth Road (entire length)	6.50	0.80	5,200
SST	Fennell Crescent (entire length)	6.20	0.45	2,790
SST	Fish Lake Road (CA 1402 to CR49)	5.80	5.40	31,320
SST	Gilead Road (Matthie Rd to CR2)	6.80	7.30	49,640
SST	Kelly Road (Kings Rd to Welbanks Rd)	5.60	4.20	23,520
SST	May Road (CR4 to CR1)	7.00	2.40	16,800
SST	Partridge Hollow Road (CR33 to Stinson Block Rd)	5.80	2.60	15,080
SST	Pleasant Bay Road (CR33 to Bakker Rd)	5.80	0.75	4,350
SST	Salmon Point Road (CR 18 to End)	6.20	3.80	23,560
SST	Swamp College Road (Baitleys Rd to Danforth Rd)	6.00	3.10	18,600
SST	Valley Road (Hwy 62 to CR 19)	6.20	3.20	19,840
SST	Wesley Acres Road (Millennium Trail to CA 866)	7.00	3.90	27,300
		<b>Total SST</b>	<b>63.05</b>	<b>404,310</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
Micro	County Road 18 (CA 2102 to CR 12)	6.80	2.15	14,620
Micro	County Road 33 (CA 15087 to CA 15490)	9.00	2.10	18,900
Micro	County Road 4 (CA 725 to CA 1119)	7.90	2.00	15,800
Micro	Ridge Road (County Road 10 to CA 608)	7.20	3.00	21,600
		<b>Total Micro</b>	<b>9.25</b>	<b>70,920</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
DST	Royal Road (Lighthall Road to County Road 10)	6.50	5.10	33,150
DST	Bond Road (County Road 10 - west end to CA 416)	6.30	2.10	13,230
DST	Kaiser Road (County Road 8 to County Road 7)	5.30	2.10	11,130
<b>*All 2024 DST roads to be funded from White Pines Wind Farm road damage compensation*</b>				
		<b>Total DST</b>	<b>9.30</b>	<b>57,510</b>

## 2025 RURAL ROADS GENERIC (INI-9011)

	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>SST</b>	County Road 24 (Lighthall Rd to Army Reserve Rd)	6.80	6.40	43,520
<b>SST</b>	Lucks Crossroad (CR8 to CR17)	6.40	1.80	11,520
<b>SST</b>	Massassauga Road (CR28 to End)	6.30	6.50	40,950
<b>SST</b>	Mitchells Crossroad (CR17 to CR13)	5.90	2.90	17,110
<b>SST</b>	Old Cheese Factory Road (entire length)	4.80	0.25	1,200
<b>SST</b>	Quick Short Road (CR35 to End)	4.00	0.25	1,000
<b>SST</b>	Sunrise Drive (Massaassauga Rd to End)	6.00	2.40	14,400
<b>SST</b>	Walmsley Road (CR 24 to Bond Rd)	6.00	3.00	18,000
		<b>Total SST</b>	<b>23.50</b>	<b>147,700</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>Micro</b>	County Road 12 (Ridge Rd to CR18)	7.30	4.40	32,120
<b>Micro</b>	County Road 33 (Henderson Lane to Victoria Road)	9.00	5.70	51,300
<b>Micro</b>	County Road 4 (CA 1119 to 2km North)	7.50	2.00	15,000
		<b>Total Micro</b>	<b>12.10</b>	<b>98,420</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>DST</b>	County Road 13 (CA 3641 to CA Babylon)	6.20	4.20	26,040
<b>DST</b>	County Road 19 (CA 538 to CA 1122/Cunningham Road)	6.20	4.00	24,800
		<b>Total DST</b>	<b>8.20</b>	<b>50,840</b>

## 2026 RURAL ROADS GENERIC (INI-9011)

	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>SST</b>	Badgley Road (CR19 to Victoria Rd)	6.00	1.70	10,200
<b>SST</b>	County Road 39 (CR29 to Edward Dr)	6.00	3.30	19,800
<b>SST</b>	Fry Road (CA 1018 to Bethesda Rd)	6.00	5.70	34,200
<b>SST</b>	Jericho Road (Hwy 62 to Doxsee Rd)	5.50	3.10	17,050
<b>SST</b>	Marisett Road (Shannon Rd to CR11)	6.00	2.40	14,400
<b>SST</b>	Morrison Point Road (CR13 to End)	6.30	3.40	21,420
<b>SST</b>	North Big Island Road (CA 1221 to CA 1854)	5.60	3.20	17,920
<b>SST</b>	Rankin Road (CR18 to Kelly Rd)	6.40	1.90	12,160
<b>SST</b>	Taft Road (CR3 to CR33)	6.10	1.60	9,760
		<b>Total SST</b>	<b>26.30</b>	<b>156,910</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>Micro</b>	County Road 14 (Hwy 62 to CA 1435)	7.80	2.40	18,720
<b>Micro</b>	County Road 33 (Partridge Hollow Rd to CA 19931)	9.00	2.00	18,000
		<b>Total Micro</b>	<b>4.40</b>	<b>36,720</b>
	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
<b>DST</b>	County Road 13 (Babylon to CA 2083)	6.60	3.65	24,057
<b>DST</b>	County Road 8 (CA 4065 to CA 4654)	6.50	3.00	19,500
<b>DST</b>	Whitney Road (Salem Road to CR 19)	6.10	1.40	8,540
<b>DST</b>	Palmer Burris Road (CR1 to CA 236)	6.10	1.10	6,710
<b>DST</b>	County Road 28 (Massassauga Road to Fenwood Crescent -farthest)	6.50	3.00	19,500
<b>DST</b>	County Road 35 (CA 823 to CA 1226)	6.00	2.00	12,000
<b>DST</b>	Blakely Road (CR33 to End)	6.00	0.90	5,400
		<b>Total DST</b>	<b>15.05</b>	<b>95,707</b>

## 2027 RURAL ROADS GENERIC (INI-9011)

	Road Name	Width (m)	Length (km)	Area (m <sup>2</sup> )
SST	Bakker Road (Pleasant Bay Rd to CA 450)	6.00	2.30	13,800
SST	Bethel Road (CR4 to CR5)	6.00	7.00	42,000
SST	Captains Drive (CR8 to End)	6.00	0.25	1,500
SST	Closson Road (CR2 to Danforth Rd)	6.00	8.00	48,000
SST	County Road 13 (E of CA 3598 to Gravelly Bay Rd)	6.30	5.10	32,130
SST	County Road 30 (Corey St to CR1)	6.70	1.50	10,050
SST	County Road 7 (CA 3587 to CR8)	6.70	1.20	8,040
SST	County Road 8 (CA 3332 to Blue Heron Lane)	6.50	1.00	6,500
SST	Elmbrook Road (CR5 to Bethesda Rd)	6.20	4.60	28,520
SST	Fish Lake Road (Gorsline Rd to CA 1402)	6.00	4.50	27,000
SST	Huffs Island Road (Hwy 62 to End)	5.60	5.70	31,920
SST	Island Road (entire length)	5.80	2.80	16,240
SST	Kings Road (CR18 to CA 379)	6.50	2.00	13,000
SST	Kleinstuber Parks Road (CR 12 to End)	5.80	3.30	19,140
SST	Lakeside Drive (CA 622 to CR33)	7.00	5.20	36,400
SST	Link Road (entire length)	6.20	0.30	1,860
SST	North Marysburgh Court (entire length)	6.50	0.60	3,900
SST	Old Milford Road (McKinley Crossroad to CR 17)	7.00	4.00	28,000
SST	Shebas Drive (Island Rd to end)	6.00	0.15	900
SST	Welbanks Road (CR18 to Kelly Rd)	6.00	1.90	11,400
		<b>Total SST</b>	<b>61.40</b>	<b>380,300</b>
	<b>Road Name</b>	<b>Width (m)</b>	<b>Length (km)</b>	<b>Area (m<sup>2</sup>)</b>
Micro	County Road 33 (CA 19931 to Henderson Lane)	9.00	1.20	10,800
		<b>Total Micro</b>	<b>1.20</b>	<b>10,800</b>
	<b>Road Name</b>	<b>Width (m)</b>	<b>Length (km)</b>	<b>Area (m<sup>2</sup>)</b>
DST	County Road 20 (CA 830 to Huycks Point Road)	6.80	2.50	17,000
DST	County Road 7 (CA 1211 to CA 1788)	6.70	2.00	13,400
DST	County Road 19 (CA 1587 to CR 33)	6.60	3.00	19,800
		<b>Total DST</b>	<b>7.50</b>	<b>50,200</b>