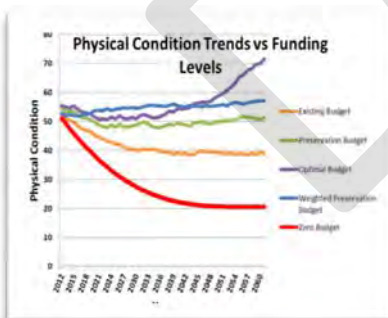


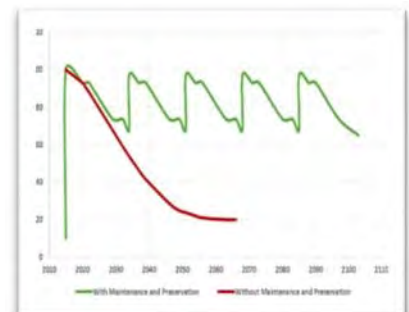


Municipality of Meaford

State of the Infrastructure - Roads



The screenshot shows a software interface for road management. It includes fields for Road Name, From, To, Design Class, Materials, and various dimensions. There are also checkboxes for different road types and a 'Calculate' button at the bottom.



4 Roads Management Services Inc.

7 Candle Crescent, Kitchener Ontario, N2P 2K7

www.4roads.ca



7 Candle Crescent,
Kitchener Ontario, N2P 2K7

September 9, 2014

The Corporation of the Municipality of Meaford
Transportation Department,
211 Trowbridge Street West,
Meaford, Ontario, N4L 1A1

Attention: Mr. Phil Taylor, Superintendent Transportation Services

Subject: Municipality of Meaford, State of the Infrastructure -Roads

Dear Mr. Taylor,

4 Roads Management Services Inc. (4 Roads) is pleased to provide this draft report for review and comment.

The 2014 project produced condition data on the road sections, and developed costing and analysis on the entire road system database and reports on same.

All road sections have been reviewed and have estimated improvement and replacement costs. Calculations for Time of Need, Improvement and Replacement Costs and Performance modeling were developed utilizing WorkTech Asset Manager Foundation Software.

We trust that the information provided in this report will be beneficial to the Municipality of Meaford in the evolution of their Asset Management Plans.

Please do not hesitate to call or email if you require any further information or discussion on any aspect of the report. Thank you for the opportunity to prepare this report. If 4 Roads Management Services Inc. may be of any further service, please do not hesitate to contact the undersigned.

Yours truly,

David Anderson, CET
President,
4 Roads Management Services Inc.
Dave.anderson@4roads.ca
519 505 5065

September 9, 2014

Municipality of Meaford
State of the Infrastructure for Roads



7 Candle Crescent, Kitchener Ontario, N2P 2K7

www.4roads.ca

Executive Summary

In the fall of 2012, the Province of Ontario, introduced a requirement for an Asset Management Plan (AMP) as a prerequisite for municipalities seeking funding assistance for capital projects, from the province; effectively creating a conditional grant. To qualify for future infrastructure grants, an AMP has to be developed and approved by a municipal council by December 2013. On April 26, 2013 the province announced that it had created a \$100 million Infrastructure Fund for small, rural and northern municipalities.

The Municipality of Meaford has developed an AMP for the various asset groups, roads being one of them. A key component of the AMP is a 'State of the Infrastructure' (SotI) review of the asset or asset group. The Asset Management Plan prepared by DFA Infrastructure International provided the following recommendations with respect to the road assets;

"That a Road Needs Study be undertaken to confirm the current condition of road assets and prioritize the rehabilitation/ replacement work required,

That the investment in roads be refined based on the priorities identified in the Road Needs Study"

To put the language in a more current context, a Road Needs Study is essentially the State of the Infrastructure (SotI).

This report provides the SotI review of the Municipality of Meaford road system and also provides recommendations for budgets and road asset management.

The scope of this report includes:

- Review and condition rating on the road assets within the Municipality of Meaford road system
- Develop current replacement costs for each road asset
- Develop/review recommendations for improvement and associated costing on deficient assets
- Develop recommendations for annual budgets based on current costs for amortization/capital depreciation and major program areas based on updated unit costs provided by the Town.
- Develop analysis on the effect of current and recommended budgets on overall system performance.
- Provide Level of Service recommendations
- Provide Asset Management Strategy recommendations

The 2014 State of the Infrastructure for Roads Report summarizes the road system survey conducted during the spring of 2014. The survey identifies the condition of each road asset by its time of need and recommended maintenance, rehabilitation or reconstruction treatment.

Further, the report provides an overview of the physical and financial needs of the road system in its entirety as well as by road section. Both information sources are used to develop programming and budgets. However, once a road section reaches the project design stage, further detailed review, investigation, and design will be required to address the specific requirements of the specific project.

This report should not be confused with a road safety audit. A road safety audit is the formal safety performance examination of an existing or future road or intersection, which qualitatively estimates and reports on potential road safety issues, and identifies opportunities for improvements for all road users. Typically, and more predominantly in a lower tier, rural lower volume road sections, the road system has

some deficiencies with the existing horizontal and vertical alignment. Road sections with potentially substandard horizontal and vertical alignments are listed in Appendix D.

The Municipality provided limited traffic information which was entered into the database and utilized in the preparation of this report. Accurate and current traffic counts are critical in managing a road system and their importance cannot be emphasized enough. Accurate traffic and truck counts are critical to decision making. Traffic counts establish road maintenance classifications for Minimum Maintenance Standards purposes, as per Ontario Regulation 239/02 (*Minimum Maintenance Standards for Municipal Roads*), as well as determining appropriate geometry, structure, and cross-section when the road is rehabilitated or reconstructed. The Municipality of Meaford should continue their traffic counting program and include truck counts. Traffic counts should be updated on a regular cycle, as a risk management exercise.

The Municipality of Meaford staff provided updated information with respect to their database/network. As 4 Roads reviewed the road sections, changes were made to the network data, to ensure the road sections were consistent. (Some road sections that were unopened road allowances were deleted from the database as road assets.) Road sections should be reasonably consistent throughout their length, according to roadside environment, surface type, condition, cross section, speed limit, traffic count or a combination of these factors. For example, new sections should be created as surface type, surface condition, cross-section, or speed limit changes.

Data collection and road ratings were completed generally in accordance with the Ministry of Transportation Ontario (MTO) *Inventory Manual for Municipal Roads* from 1991 (*Inventory Manual or IM*).

Recommendations are made based on the defects observed and other information available in the database at the time of preparation of the report. Once a road asset reaches the project level, the municipality may have selected another alternative based on additional information, asset management strategy, development considerations or available funding.

Road conditions are evaluated during a field inspection. The ratings are either as a standalone value or incorporated into calculations performed by the software, that then classify the road section as a 'Now', '1 to 5', or '6 to 10' year need for maintenance, rehabilitation or reconstruction in six critical areas. The Time of Need is a prediction of the time until the road requires reconstruction, *not the time frame until action is required*. Generally, the closer the timeline to reconstruction, the greater the deterioration of the road is. For example, a road may be categorized as a '6 to 10' year need with a resurfacing recommendation. This road should be resurfaced as soon as possible to further defer the need to reconstruct.

'**NOW**' needs represent road sections that require reconstruction or major rehabilitation. 'NOW' needs are the backlog of work required on the road system; however, 'NOW' needs may not necessarily be the priority, depending on funding levels. Construction improvements identified within this time period are representative of roads that have little or no service life left and are in poor condition. Resurfacing treatments are never 'NOW' need, with the following exceptions;

- RW (Resurface and Widen)
- PR1 or PR2 (Pulverize and resurface 1 or 2 lifts of asphalt)
- When the surface type is inadequate for the traffic volume (i.e. gravel road over 400AADT)
- When the surface is gravel and the roadside environment is Urban or Semi-Urban

'1 to 5' identifies road sections where reconstruction is anticipated within the next five years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road (depending on any other deficiencies), deferring the need to reconstruct.

'6 to 10' identifies road sections where reconstruction is anticipated within six to ten years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road (depending on any other deficiencies), thus deferring the need to reconstruct.

'ADEQ' identifies road sections that do not have reconstruction or resurfacing needs, although minor maintenance such as crack sealing or spot drainage may be required.

This report summarizes the needs identified through a number of tabular appendices.

When the *Inventory Manual* was originally developed, the Province provided funding for municipal road systems; the road systems were measured by their system adequacy. The system adequacy is the percentage of the road system that is not a "NOW" need.

The *Inventory Manual* provides direction that roads with a traffic volume of less than 50 vehicles per day are deemed to be adequate, even if they have structural, geometric, or drainage deficiencies that would otherwise be identified as being in a Time of Need and were to be corrected within the maintenance budget. This approach is directly parallel to Regulation 239/02, *Minimum Maintenance Standards for Municipal Roads*, which states that roads with less than 50 vehicles per day, and a speed limit of less than 80 km/hr., are classified as Class 6 with no standard for repair. This factor does have an effect on the system adequacy calculation.

However, for the purposes of this report, road sections with a traffic count of less than 50 vehicles per day have been provided with recommended treatment and associated improvement cost in order to provide a more accurate assessment of the total needs and conditions. (The calculations will rate them as adequate due to the traffic count) The road system currently includes 37.32 km of road sections that had an actual or estimated traffic count of less than 50 vehicles per day. This represents approximately 9.77% of the road system.

During the field review, and in reviewing the data and the needs for the road network, there were several unique aspects of the network that came to light:

- Traffic information is very limited. Traffic counts were available for only 6% of the road system. The remainder were estimated which should be satisfactory for the purposes of this study however should not be relied upon to determine Regulation 239/02.
- The database included a number of assets that were identified as road assets which were either private roads, unopened road allowances or other assets. The result being that the overall road system is significantly shorter than previously identified, by approximately 10%.
- GIS mapping was a reflection of the original database. A separate layer should be created in the GIS system to identify only the road assets. The GIS mapping should have a live link to the WorkTech database
- Substandard drainage was an issue on approximately 70% of the road system. Some of the sections will require correction through major rehabilitation or reconstruction. Other sections identified with an improvement of Spot Drainage (SD) may be improved through the maintenance programming.

- The overall condition of the road system is less than the target system adequacy when conditional grants were provided.
- Approximately 22.64% (86.48 km) of the road system is recommended for hot mix resurfacing or surface treatment. If not addressed, the resurfacing needs will become major rehabilitation or reconstruction needs at significantly greater cost.
- Approximately 9.5% (37.78km) of the road system has a structural adequacy score of 15 or 16, indicating that those roads would be an additional resurfacing need in the next 1 to 4 year period. (all surface types are included)

System Adequacy is the measure of the condition of the road system developed as a ratio between the 'NOW' needs and the total system. Based on the current review of the road system, the current system adequacy measure is 50.1 % meaning that, 49.9% of the road system is deficient in the 'NOW' time period (in poor condition). The current system adequacy is less than the target system adequacy when conditional grant funding was provided up until the mid-1990's. The previous target was a System Adequacy of 60.

Based on the current unit costs being experienced, the estimated total cost of recommended improvements is **\$91,200,282**. The improvement costs include **\$50,355,206** for those roads identified as NOW needs and **\$40,845,076** is for road work required in the '1 to 10' year time period or for maintenance. Included in those amounts is **\$24,234,069** is for work on road sections requiring maintenance only or with a traffic count of less than 50 vehicles per day.

Based on the composition of the road system, budget recommendations have been developed for annual capital and maintenance programs as follows:

- **\$190,500,800** to replace the road system. Annualized, this would be **\$3,810,000** for the roads capital/depreciation, based upon a 50-year life cycle. (This would be similar to the PSAB 3150 amortization value only using current replacement costs.)
- **\$748,700** for average annual hot mix resurfacing, based upon a 19 (19.4)-year cycle.(This would approximate an average of 5.2km per year)
- **\$316,100** annually, for single surface treatment of existing surface-treated roads, based on a seven-year cycle (this does not include additional padding or geometric correction).
- **\$1,008,800** annually, for resurfacing gravel roads on a three-year cycle (this does not include any additional gravel road conversion costs; nor ditching, re-grading, dust control, etc.).
- **\$43,700** annually for crack sealing

For modeling purposes, 4 Roads has created a funding level described as the 'Preservation Budget'. The Preservation Budget is the total of the recommended funding levels for hot mix resurfacing, single surface treatment, gravel surfacing and crack sealing: **\$2,117,300**. The premise being that if the preservation and resurfacing programs are adequately funded then the system should be sustained. The performance modeling is discussed in Section 9 of this report.

To clarify, the required funding level to sustain or improve the road system; it is not the total of all of the above recommendations. Sustainable funding has to be between the Preservation Budget and the Capital Depreciation.

The preservation budget and performance model thereof are computer derived. Intangible values and decisions and the effects of other external forces cannot be incorporated into the model. As such the preservation model is the minimum required to maintain the system- in theory. From a more pragmatic perspective and to deal with the real life realities of maintaining a road system, it should be greater. Given the constitution and condition of the Municipality of Meaford road system, the Capital Depreciation funding level would be a preferable funding target for the foreseeable future. This would allow the system to be sustained and improved and allow for capital improvements and emergencies.

Municipal pavement and asset management strategies are critical to managing the performance of the road system or asset group, more so, if funding is limited. Funding constraints should push the strategy toward those programs or activities that extend the life cycle of the road by providing the correct treatment at the optimum time. Resurfacing, rehabilitation, and preservation projects should be a higher priority than reconstruction projects. The objective is to “keep the good roads good”.

Recognizing that there is a significant funding gap, part of the asset management strategy has to include a review of the risks such as substandard vertical and horizontal alignment, shoulder and road widths and address risk through additional signage.

The prime goal of any pavement management strategy should be to maintain overall system adequacy. The funding level for road-related programming should be set at a sufficient level so as to ensure that overall system adequacy does not decrease over time.

In addition to the budgetary recommendations, the following recommendations are provided for the management of the road inventory.

1. The information and budget recommendations included in this report should be used to further develop and evolve the corporate Asset Management Plan.
2. The Financial Plan has to be further developed to address the recommended funding requirements and the road system needs identified in this report.
3. The cycle for review of the road system should be continued, reviewing the entire system on a four year cycle.
4. Programming should be reviewed to ensure that resurfacing and preservation programs are a priority and are optimized.
5. Traffic counts should be updated and repeated on a regular basis. The counting should include the percentage of truck traffic.
6. Assets have to be rationalized in the WorkTech databases by creating different asset types.
7. A separate layer should be created in the GIS system to identify only the road assets. The GIS mapping should have a live link to the WorkTech database.
8. A separate layer should be created in the GIS system to identify road features such as safety devices.
9. Further analysis should be undertaken on the Gravel Road system, with respect to the potential for conversion to a hardtop surface.
10. Roadside brushing should be undertaken on a regular basis to ensure drainage is maintained and road life cycle optimized.

Summary Information

Table ES 1: Roadside Environment and Surface Type

Surface Type	Roadside Environment						Total		% of Total	
	Rural		Semi-Urban		Urban		CI-km	Lane-km	CI-km	Lane-km
Concrete			0.34	0.68			0.34	0.68	0.09%	0.09%
Earth	5.41	10.82					5.41	10.82	1.42%	1.42%
Gravel, Stone, Other Loosetop	165.43	330.86	6.18	12.36			171.61	343.22	45.08%	45.04%
High Class Bit.-asphalt	50.34	100.67	30.48	61.17	16.60	33.68	97.42	195.52	25.59%	25.66%
Low Class Bit.-surface treated	90.12	180.24	15.80	31.60			105.92	211.84	27.82%	27.80%
Total	311.30	622.59	52.80	105.81	16.60	33.68	380.70	762.08		
% of Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%				

**Includes 3.48 km of Connecting Link*

See Section 3.3 of the report for definitions

Table ES 2: Roadside Environment and Functional Class

Road Classification	Roadside Environment						Total		% of Total	
	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km
100	30.57	61.14	0.5	1			31.07	62.14	8.16%	8.15%
200	204.62	409.24	3.5	7			208.12	416.24	54.67%	54.62%
300	35.15	70.3					35.15	70.3	9.23%	9.22%
400	33.09	66.18	0.34	0.68			33.43	66.86	8.78%	8.77%
500	7.27	14.53					7.27	14.53	1.91%	1.91%
800			1	2.21	2.48	5.44	3.48	7.65	0.92%	1.00%
ART			2.58	5.16	2.66	5.32	5.24	10.48	1.38%	1.38%
C/R					0.16	0.32	0.16	0.32	0.04%	0.04%
CCI	0.6	1.2	43.46	86.92	9.62	19.24	53.68	107.36	14.10%	14.09%
L/R			1.42	2.84	1.68	3.36	3.1	6.2	0.81%	0.81%
LCI	311.3	622.59	52.8	105.81	16.6	33.68	380.7	762.08		
Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%				
% of Total										

**Includes 3.48 km of Connecting Link*

See Section 3.3 of the report for definitions

Table ES 3: Roadside Environment and Lanes

Lanes	Roadside Environment						Total	% of Total		
	Rural	Semi-Urban		Urban						
	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km
2	311.30	622.59	52.60	105.20	16.12	32.24	380.01	760.03	99.82%	99.73%
3			0.20	0.61	0.48	1.44	0.68	2.05	0.18%	0.27%
Total	311.30	622.59	52.80	105.81	16.60	33.68	380.70	762.08		
% of Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%				

**Includes 3.48 km of Connecting Link*

See Section 3.3 of the report for definitions

Table ES 4: Traffic Count Vs Count Year

Year	Annual Count	Estimated Count	Length
2012	25.08		25.08
2013		112.58	112.58
2014		261.22	261.22
Total	25.08	112.58	398.88

Table ES.5: AADT by Roadside and Minimum Maintenance Standard Class

Roadside	MMS Class					Average
	2	3	4	5	6	
Rural	11,000	1,071	194	102	17	2,477
Semi-Urban		11,000	635	198	24	2,964
Urban		11,034	1,701	153	30	3,229
Average	11,000	7,702	843	151	24	3,417

Table ES 6: Minimum Maintenance Standard Class by Lanes and Roadside Environment

MMS Class		3		4		5		6		TOTAL		% OF TOTAL	
Lanes	Roadside	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km
2	R	8.97	17.93	259.72	519.44	8.35	16.70	34.26	68.52	311.30	622.59	81.77%	81.70%
2	S	0.80	1.60	14.80	29.60	34.01	68.02	2.99	5.98	52.60	105.20	13.82%	13.80%
2	U	2.00	4.00	1.86	3.72	12.19	24.38	0.07	0.14	16.12	32.24	4.23%	4.23%
3	S	0.20	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.61	0.05%	0.08%
3	U	0.48	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.44	0.13%	0.19%
TOTAL		12.45	25.58	276.38	552.76	54.55	109.10	37.32	74.64	380.70	762.08		
% OF TOTAL		3.27%	3.36%	72.60%	72.53%	14.33%	14.32%	9.80%	9.79%				

**Includes 3.48 km of Connecting Link*

See Section 3.3 of the report for definitions

Table ES 7: Time of Need by Length and MMS Class

Time of Need	3		4		5		6		Total	
	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km
NOW	7.73	15.45	162.57	325.14	19.73	39.45			190.02	380.04
1-5			9.55	19.1	5.33	10.66			14.88	29.76
6-10	2.21	4.9	63.39	126.78	15.95	31.9			81.55	163.58
ADEQ	2.51	5.23	40.87	81.74	13.54	27.08	37.32	74.64	94.24	188.69
Total	12.45	25.58	276.38	552.76	54.55	109.1	37.32	74.64	380.7	762.08
% of Total	3.27%	3.36%	72.60%	72.53%	14.33%	14.32%	9.80%	9.79%		
System Adequacy %	37.9	39.6	41.2	41.2	63.8	63.8	100.0	100.0	50.1	50.1

**Includes 3.48 km of Connecting Link*

See Section 3.3 of the report for definitions

Table ES 8: Good to Very Good Roads by Structural Adequacy

Structural Adequacy	TON	3		4		5		6		TOTALS	
		CL KM	LN-KM	CL KM	LN-KM	CL KM	LN-KM	CL KM	LN-KM	CL KM	LN-KM
1	NOW	0.42	0.83	3.73	7.46	0.91	1.81	6.43	12.86	11.48	22.96
2	NOW	1.7	3.4	0.78	1.56	0.76	1.52	1.37	2.74	4.61	9.22
3	NOW			5.89	11.78	0.89	1.78	3.95	7.9	10.73	21.46
4	NOW			23.44	46.88	2.97	5.94	2.82	5.64	29.23	58.46
5	NOW			27.33	54.66	5.01	10.02	0.43	0.86	32.77	65.54
6	NOW	4.95	9.9	32.63	65.26	3.78	7.56			41.36	82.72
7	NOW			34.99	69.98	3.03	6.06	12.08	24.16	50.1	100.2
8	1 to 5			50.56	101.11	9.57	19.14	7.84	15.68	67.97	135.93
9	1 to 5			0.85	1.71	0.13	0.26			0.98	1.97
10	1 to 5			2.75	5.5	0.28	0.56			3.03	6.06
11	1 to 5	0.24	0.48	4.35	8.7	1.67	3.34			6.26	12.52
12	6 to 10			30.39	60.78	4.25	8.5	2.03	4.06	36.67	73.34
13	6 to 10			3.8	7.6	1.93	3.86			5.73	11.46
14	6 to 10	1.05	2.1	11.15	22.3	5.82	11.64	0.17	0.34	18.19	36.38
15	Adeq			5.75	11.5	2.51	5.02			8.26	16.52
16	Adeq	0.1	0.2	21.03	42.06	3.87	7.74			25	50
17	Adeq	0.45	0.9	8.46	16.92	3.89	7.78			12.8	25.6
18	Adeq	0.2	0.4	4.5	9	0.47	0.94			5.17	10.34
19	Adeq	2.68	6.05	4	8	1.58	3.16	0.2	0.4	8.46	17.61
20	Adeq	0.66	1.32			1.23	2.46			1.89	3.78
TOTAL		12.45	25.58	276.38	552.76	54.55	109.1	37.32	74.64	380.7	762.08
Good to Very Good %		41.3	42.9	32.2	32.2	46.8	46.8	6.4	6.4	32.1	32.2

**Includes 3.48 km of Connecting Link
See Section 3.3 of the report for definitions*

Table ES 9: Number of Lanes, Roadside Environment, and Minimum Maintenance Standard (MMS) Class

Lanes	Roadside	3		4		5		6		TOTAL		% OF TOTAL	
		CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km	CI-km	Lane-km
2	R	8.97	17.93	259.72	519.44	8.35	16.70	34.26	68.52	311.30	622.59	81.77%	81.70%
2	S	0.80	1.60	14.80	29.60	34.01	68.02	2.99	5.98	52.60	105.20	13.82%	13.80%
2	U	2.00	4.00	1.86	3.72	12.19	24.38	0.07	0.14	16.12	32.24	4.23%	4.23%
3	S	0.20	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.61	0.05%	0.08%
3	U	0.48	1.44	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.44	0.13%	0.19%
TOTAL		12.45	25.58	276.38	552.76	54.55	109.1	37.32	74.64	380.7	762.08		
% OF TOTAL		3.27%	3.36%	72.60%	72.53%	14.33%	14.32%	9.80%	9.79%				

**Includes 3.48 km of Connecting Link
See Section 3.3 of the report for definitions*

Table ES 10: Road System Needs Summary

Improvement Class	Imp. ID	1 to 5		6 to 10		ADEQ		NOW		TOTAL	
		CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost
Construction	RW			0	457,532	0.42	79,695	0	319,952	1	857,179
Construction	BS	8.58	2,403,419	12.24	2,174,755	19.99	15,584,779	114.06	24,386,440	154.87	44,549,393
Construction	DSTrehab	1.8	135,285			0.15	11,570	3.4	265,593	5.35	412,447
Construction	NONE			0.76	0	22.2	0	0.27	0	23.23	0
Construction	REC	0.21	87,916	0.26	119,439	16.6	6,316,826	31.12	13,894,839	48.19	20,419,020
Construction	RNS			0.21	191,405	0.38	418,785	0.58	460,292	1.17	1,070,482
Construction	RSS	0.54	735,253	4.62	6,002,232	0.81	1,069,149	4.46	5,990,563	10.43	13,797,197
Maintenance	CRK			0.4	880	20.4	44,880	0.27	594	21.07	46,354
Maintenance	SD			26.48	0	0.98	0	1.35	0	28.81	0
Maintenance	SR					1.35	0			1.35	0
Maintenance	SST			2.1	42,840	5.3	122,610			7.4	165,450
Rehabilitation	DST			4.5	176,963	0.17	6,171	0.7	25,410	5.37	208,544
Rehabilitation	GRR2			8.05	363,380	2.2	108,464	8.1	295,099	18.35	766,943
Rehabilitation	PR2	1.2	215,382			0.97	192,741	23.02	4,212,707	25.19	4,620,831
Rehabilitation	R1			17.01	2,671,935	0.71	96,399	0.9	106,572	18.62	2,874,906
Rehabilitation	R2	1.45	442,683	0.12	47,252	0.23	70,956	1.79	397,475	3.59	958,367
Rehabilitation	SSTplus	1.1	67,860	4.8	274,596	1.8	111,043			7.7	453,499
TOTAL		14.88	4,087,798	81.55	12,523,209	94.24	24,234,069	190.02	50,355,206	380.7	91,200,282
% of Total		3.91%	4.48%	21.42%	13.73%	24.76%	26.57%	49.91%	55.21%		

*Includes 3.48 km of Connecting Link
See Section 3.3 of the report for definitions

Graph ES1: Remaining Service Life: Structural Adequacy Rating vs. Length



Graph ES.2: System Performance at Varying Funding Levels at Existing and Proposed Funding Levels

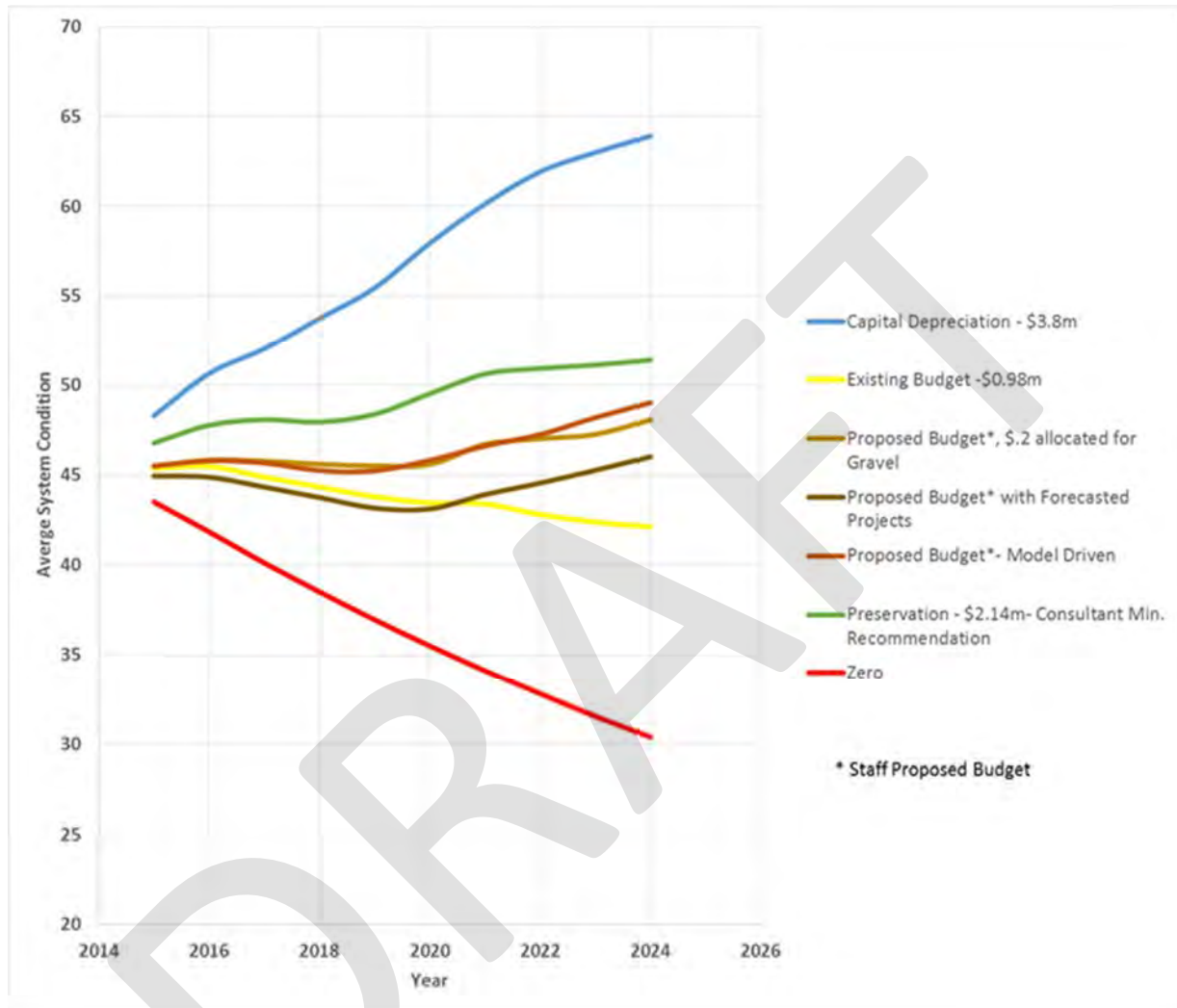


Table ES 8: 10 Year Program -Performance Model Output- Proposed Budget

Imp. Type	Year										Grand Total
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
BS								109,027	758,357	826,295	1,693,679
CRK	31,174	20,746		11,286	7,251	9,570	20,482	16,214	16,236	22,000	154,959
DST	208,544										208,544
DSTrehab	412,448										412,448
GRR						87,480	3,402	46,656	38,610		176,148
GRR2	199,940	198,871	198,871	188,654	198,871	92,426	195,129	130,383	120,285	168,251	1,691,681
MICRO				9,000	4,250	12,751	4,100	11,379	16,965	10,575	69,020
PR2		646,146	1,064,731	825,126	337,774		968,981	562,689	215,382		4,620,829
R1		13,878	82,789	426,209	539,993	895,630	425,453	780,267	906,553	799,856	4,870,628
R2	44,692				294,248	145,360	47,252	287,117	21,308	19,766	859,743
SST	128,730	192,375	9,045	58,290	68,250	346,215	261,765	9,045	58,290	156,900	1,288,905
SSTplus	67,860	78,868			195,728	111,043					453,499
Grand Total	1,093,388	1,150,884	1,355,436	1,518,565	1,646,365	1,700,475	1,926,564	1,952,777	2,151,986	2,003,643	16,500,083

**Proposed Budget*

\$200,000(approx.) allocated for Gravel Road Resurfacing

Contents

1	INTRODUCTION AND BACKGROUND.....	1
2	ASSET CONDITION RATING METHODOLOGY	2
2.1	Asset Condition Rating Methodology	2
2.1.1	Inventory Manual History.....	2
2.1.2	Inventory Manual Overview	2
2.2	Types of Improvements	3

3	STATE OF THE INFRASTRUCTURE	5
3.1	Scope / Asset Type(s)	5
3.2	Road System Inventory and Classification	5
3.3	Surface Types and Roadside Environment.....	5
3.4	MMS Classification	6
3.4.1	Functional / Existing / Design Classifications	8
3.5	Horizontal and Vertical Alignment	9
3.6	Drainage	11
3.6.1	DRAINAGE OUTLET AND MASTER PLANNING	13
3.7	Boundary Roads	13

4	ROAD SYSTEM CONDITION	15
4.1	Road System Condition by Time of Need.....	15
4.2	Road System Adequacy	15
4.2.1	Physical Condition	18
4.2.2	Remaining Service Life.....	18
4.3	Record of Assumptions –TON, Improvement and Replacement Costs	18

5	REPLACEMENT COST VALUATION	19
----------	---	-----------

6	ASSET CONDITION ASSESSMENT AND PLAN UPDATES	20
6.1	Condition Assessment Cycle Recommendation.....	20

7	LEVEL OF SERVICE (LOS)	21
7.1	Current Level of Service Measurement	21
7.1.1	System Adequacy	21
7.1.2	Physical Condition	21
7.1.3	MPMP Good to Very Good	21

8	ASSET MANAGEMENT STRATEGY.....	22
8.1	Asset Management Overview	22
8.2	Priority Rating vs. Condition Rating	23
8.3	Cross Asset Integration and Project Prioritization	25

9	PROGRAM FUNDING RECOMMENDATIONS	26
9.1	Overview	26
9.2	Capital Depreciation.....	26
9.3	Hot Mix Resurfacing	26
9.4	Surface Treatment Resurfacing.....	27
9.5	Gravel Road Resurfacing	28
9.6	Crack Sealing	28
9.7	Performance Modeling- Budget Effect on System Performance.....	28
9.7.1	Asset Management Plan and Strategy Analysis	28
9.7.2	Performance Model Overview	29
9.8	System Performance at Various Budget Levels- 10 Year Program	29
9.9	10 Year Program.....	31
9.10	Record of Assumptions -Performance Modeling.....	34
9.10.1	Pavement Classification for Modeling.....	34
10	STATE OF THE INFRASTRUCTURE – ROADS, RECOMMENDATIONS	37

List of Tables

Table 2.1:	Road Improvement Types	4
Table 3.1:	Surface Type and Roadside Environment Distribution	6
Table 3.2:	Regulation 239/02 Minimum Maintenance Standard Road Classification	7
Table 3.3:	Minimum Maintenance Standards Class Distribution (km)	8
Table 3.4:	Functional Road Class Distribution.....	8
Table 3.5:	Posted Speed vs. Minimum Tolerable Operating Speed.....	10
Table 3.6:	Drainage by Time of Need (length in km)	12
Table 3.7:	Boundary Roads	14
Table 4.1:	Roads System by Time of Need and MMS Class	16
Table 4.2:	Unit Costs	16
Table 4.3:	Needs Summary	17
Table 9.1:	Hot Mix Asphalt Roads by Asset Class and Life Cycle.....	27
Table 9.2:	Proposed Budget	30
Table 9.3:	Performance Model Summary - Ten Year Program	32
Table 9.4:	Sample Section Life Cycle	33
Table 9.5:	Road Asset Classes	35

List of Figures

Figure 3.1: Safe Stopping Distance	9
Figure 3.2: Potentially Substandard Vertical and Horizontal Alignment.....	10
Figure 3.3: OPSS 200.10.....	11
Figure 3.4: Poor Shoulder Drainage (example)	13
Figure 4.1: Remaining Service Life.....	18
Figure 8.1: Treatment Cost vs. Deterioration.....	24
Figure 8.2: Pavement Management- The Right Treatment at the Right Time	24
Figure 9.1: Performance Modeling at Various Budget Levels	30
Figure 9.2: Graphical Representation of a Typical Life Cycle	33
Figure 9.3: Annual Expenditures Budget to Maintain:	34
Figure 9.4: Treatment Selection vs. Condition	36

List of Appendices

Appendix A: Inventory Manual Methodology Overview
Appendix B: Pavement Structure and Defects
Appendix C: Gravel Road Conversion
Appendix D: Potential Substandard Alignment
Appendix E: Deterioration Curve Detail
Appendix F: 10 Year Program Based on Staff Proposed Funding Level
Appendix G: Critical Deficiencies by Asset ID
Appendix H: Needs Sorted By Time of Need and Improvement Category

1 Introduction and Background

In the fall of 2012, the Province of Ontario, introduced a requirement for an Asset Management Plan (AMP) as a prerequisite for municipalities seeking funding assistance for capital projects, from the province; effectively creating a conditional grant. To qualify for future infrastructure grants, municipalities are required to develop an AMP that is approved by council by December 2013. On April 26, 2013 the province announced that it had created a \$100 million Infrastructure Fund for small, rural and northern municipalities.

Conditional Grants are not new to Ontario. Until the mid-1990's, Road Needs Studies (RNS) were completed by municipalities and submitted to the Ministry of Transportation (MTO) on an annual basis in order to receive provincial funding for their road programs.

The Municipality of Meaford has developed an AMP for the various asset groups, roads being one of them. A key component of the AMP is a 'State of the Infrastructure' (SotI) review of the asset or asset group. The Asset Management Plan prepared by DFA Infrastructure International provided the following recommendations with respect to the road assets;

"That a Road Needs Study be undertaken to confirm the current condition of road assets and prioritize the rehabilitation/ replacement work required,

That the investment in roads be refined based on the priorities identified in the Road Needs Study"

To put the language in a more current context, a Road Needs Study is essentially the State of the Infrastructure (SotI).

The scope of this report is includes:

- Review and condition rating on the road assets within the Municipality of Meaford road system
- Develop current replacement costs for each road asset
- Develop/review recommendations for improvement and associated costing on deficient assets
- Develop recommendations for annual budgets based on current costs for amortization/capital depreciation and major program areas based on updated unit costs provided by the Town.
- Develop analysis on the effect of current and recommended budgets on overall system performance.
- Provide Level of Service recommendations
- Provide Asset Management Strategy recommendations

The 2014 SotI Report summarizes the condition data survey conducted during the spring of 2014. The database identifies the condition of each road asset by its time of need and recommended maintenance, rehabilitation or reconstruction treatment.

Recommendations are made based on the defects observed and other information available in the database at the time of preparation of the report. Once a road asset reaches the project level, the municipality may have selected another alternative based on additional information, asset management strategy, development considerations or available funding.

4 Roads believes that the content of this report will satisfy the State of the infrastructure requirements and provides a solid foundation to further develop and evolve the Expected Levels of Services, Asset Management and Financing requirements. 4 Roads Management Services Inc. has prepared this report in a format that it believes will readily lend itself to integration with the corporate AMP.

2 Asset Condition Rating Methodology

2.1 Asset Condition Rating Methodology

The provincial requirements for AMP's include asset condition assessment in accordance with standard engineering practices. The road section reviews follow the methodology of the Ministry of Transportation Inventory Manual for Municipal Roads, 1991.

2.1.1 Inventory Manual History

From the 1960's until the mid-1990's, the Ministry of Transportation (MTO) required its' municipalities to regularly update the condition ratings of their road systems in a number of key areas. The process was originally created by the MTO, as a means to distribute conditional funding, on an equitable basis, between municipalities. The reports were referred to as a 'Road Needs Study' (RNS) and were required in order to receive a conditional grant to subsidize the municipal road programs. After introduction in the 1960's by the MTO, the methodology evolved into the current format by the late 1970's. The most current version of the Inventory Manual is dated 1991, and is the methodology used for this report. The practice was discontinued by a number of municipalities, when conditional funding for roads was eliminated in the mid 1990's.

2.1.2 Inventory Manual Overview

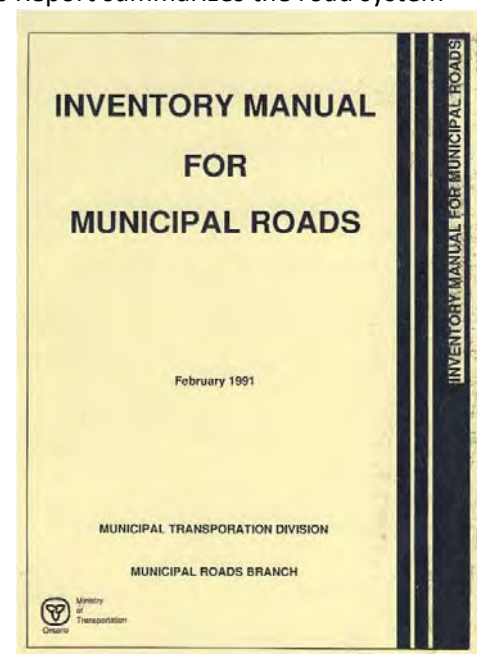
The Inventory Manual Methodology is a sound, consistent, asset management practice that still works well today, and in view of the increasing demands on efficiency and asset management, represents a sound asset management practice that should be repeated on a cyclical basis. The road section review identifies the condition of each road asset by its time of need and recommended rehabilitation strategy.

The Municipality of Meaford State of the Infrastructure (SotI)-Roads Report summarizes the road system survey conducted during the spring 2014. The SotI Report provides an overview of the overall condition of the road system by road section, including such factors as structural adequacy, drainage, and surface condition. The study also provides an indication of apparent deficiencies in horizontal and vertical alignment elements, as per the Ministry of Transportation's manual, "Geometric Design Standards for Ontario Highways".

The report provides an overview of the physical and financial needs of the road system, which may be used for programming and budgeting. However, once a road section reaches the project design stage, further detailed review, investigation, and design will be required to address the specific requirements of the project.

Asset Management by its' very nature is holistic. Managing a road network based solely on pavement condition would be critically deficient in scope in terms of the information required to make an informed decision as to the improvements required on a road section.

The *Inventory Manual* offers a holistic review of each road section, developing a Time of Need (TON) or an Adequate rating in six areas that are critical to municipal decision making:



- Geometrics
- Surface Type
- Surface Width
- Capacity
- Structural Adequacy
- Drainage

The Condition Ratings, developed through the scoring in the *Inventory Manual*, classify roads as 'NOW', '1 to 5', or '6 to 10' year needs for reconstruction. The Time of Need is a prediction of the time until the road requires reconstruction, not the time frame until action is required. For example, a road may be categorized as a '6 to 10' year need with a resurfacing recommendation. This road should be resurfaced as soon as possible, to further defer the need to reconstruct.

To best utilize the database information and modern asset management concepts, it has to be understood that the Time of Need (TON) ratings are the estimated time before the road would require reconstruction. NOW needs are still roads that require reconstruction; however, it is not intended that '1 to 5' and '6 to 10' year needs are to be acted on in that timeframe. The '1 to 5' and '6 to 10' year needs are current candidates for resurfacing treatments that will elevate their structural status to 'ADEQ', and offer the greatest return on investment for a road authority (notwithstanding a drainage or capacity need, etc.).

Field data is obtained through a visual examination of the road system and includes: structural adequacy, level of service, maintenance demand, horizontal and vertical alignment, surface and shoulder width, surface condition, and drainage. The Condition Rating is calculated based upon a combination of other calculations and data.

Evaluations of each road section were completed generally in accordance with the MTO's *Inventory Manual for Municipal Roads* (1991). Data collected was entered directly into WorkTech's Asset Foundation software. Condition ratings, Time of Need, Priority Ratings, and associated costs were then calculated by the software, in accordance with the *Inventory Manual*. Unit costs for construction were provided by Municipality of Meaford staff.

Road sections should be reasonably consistent throughout their length, according to roadside environment, surface type, condition, cross section, speed limit, or a combination of these factors. As an example, section changes should occur as surface type, surface condition, cross-section, or speed limit changes.

The Time of Need ratings from the Structural Adequacy perspective are described more fully in Appendix A.

2.2 Types of Improvements

This report identifies ratings that are resultant from identification of deficiencies on each road section that equate to a TON in one or more of the six critical areas: Geometry, Surface Type, Surface Width, Capacity, Structural Adequacy, or Drainage. Based on the ratings and the deficiencies noted an improvement type recommendation is also provided.

The key factor in providing an improvement type recommendation is the visual survey. During the visual survey, a determination is made as to whether the appearance and performance of a road relates to an underlying structural problem, or simply to aged surface materials. A road's structural or drainage problem would tend to result in a reconstruction/ replacement treatment recommendation, whereas aged surface

materials would result in a resurfacing/rehabilitation treatment recommendation. A determination of the root cause of the problem or the condition is critical; reconstructing a road that should have had some type of resurfacing treatment would be an ineffective use of available resources. For the purposes of this report, the standard improvement types and associated costing formulae identified in the Inventory Manual have been used.

The table below provides a list of road improvements.

Table 2.1: Road Improvement Types

Code	Description
R1	Basic Resurfacing
R2	Basic Resurfacing – Double Lift
RM	Major Resurfacing- removal of existing asphalt and replacement with a greater depth for sections exhibiting structural failure
PR1	Pulverizing and Resurfacing
PR2	Pulverizing and Resurfacing – Double Lift
BS	Tolerable standard for lower volume roads – Rural and Semi-Urban Cross sections only (definitions in Section 3.3)
RW	Resurface and Widen
REC	Reconstruction
RNS	Reconstruction Nominal Storm Sewers (Urban: no new sewer, adjust manholes, catch basins, add sub-drain, remove and replace curb and gutter, granular, and hot mix)
RSS	Reconstruction including Installation of Storm Sewers (New storm sewers and manholes in addition to the above)
NC	Proposed Road Construction (New Road due to Development, expansion, etc.)
SRR	Storm Sewer Installation and Road Reinstatement

Appendix B of this report includes a discussion of Pavement Structure and defects.

3 State of the Infrastructure

3.1 Scope / Asset Type(s)

This report addresses road assets only. The content will provide review and analysis of the road system from a number of perspectives including condition rating, functional classification, roadside environment, replacement cost and regulation 239/02 classification (MMS).

3.2 Road System Inventory and Classification

Road sections within road systems may be classified in a number of ways, to illustrate their roadside environment, surface type, functional classification, and so forth. The classifications provide assistance in developing further information, with respect to the road system, such as replacement costs and performance expectations.

3.3 Surface Types and Roadside Environment

Roadside environment and surface type criteria of a road section are useful in characterization of the road section, and in determining costs for replacement, reconstruction and rehabilitation treatments.

The *Inventory Manual* classifies the roadside environment as Rural, Semi-Urban or Urban. The classification is determined by length, servicing, and adjacent land use.

- **Rural Roads** – within areas of sparse development, or where development is less than 50% of the frontage, including developed areas extending less than 300 m on one side or 200 m on both sides, with no curbs and gutters.
- **Semi-Urban Roads** – within areas where development exceeds 50% of the frontage for a minimum of 300 m on one side, or 200 m on both sides, with no curbs and gutters, with or without storm/combination sewers, or for subdivisions where the lot frontages are 30 m or greater.
- **Urban Roads** – within areas where there are curbs and gutters on both sides, served with storm or combination sewers; or curb and gutter on one side, served with storm or combination sewers; or reversed paved shoulders with, or served by, storm or combination sewers; or for subdivisions with frontages less than 30 m.

Table 3.1: Surface Type and Roadside Environment Distribution

Surface Type	Roadside Environment								% of Total	
	Rural		Semi-Urban		Urban		Total			
	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km
Concrete			0.34	0.68			0.34	0.68	0.09%	0.09%
Earth	5.41	10.82					5.41	10.82	1.42%	1.42%
Gravel, Stone, Other Loosetop	165.43	330.86	6.18	12.36			171.61	343.22	45.08%	45.04%
High Class Bit.-asphalt	50.34	100.67	30.48	61.17	16.60	33.68	97.42	195.52	25.59%	25.66%
Low Class Bit.-surface treated	90.12	180.24	15.80	31.60			105.92	211.84	27.82%	27.80%
Total	311.30	622.59	52.80	105.81	16.60	33.68	380.70	762.08		
% of Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%				

**Includes 3.48 km of Connecting Link*

3.4 MMS Classification

In November 2002, Regulation 239/02, *Minimum Maintenance Standards for Municipal Highways (MMS)* came into effect. Essentially, if a municipality met the standard and documented it, they would not be negligent per Section 44(3)c of the Municipal Act noted above. Regulation 239/02 provided for a review, five years after its original implementation. A process to revise Regulation 239/02, chaired by the Ontario Good Roads Association (OGRA), culminated in a revised regulation, Regulation 23/10, coming into effect in February 2010.

In the late fall of 2011, a court decision (Giuliani) was rendered that effectively created case law that negated the protection that the MMS afforded, and in particular, Tables 4 and 5 of the regulation (Tables 4 and 5 address Snow Accumulation and Icy Roads). Essentially, the decision created a new standard that went beyond the MMS. The effect on a municipality is that a higher standard of weather monitoring and documentation and response to monitoring is required.

OGRA re-called the MMS committee to further amend the regulation, to address the outcome of the Giuliani decision. As a result of the committee meetings and discussions with the province, Regulation 47/13 came into effect, amending Regulations 239/02 and 23/10, on January 25 2013.

The Minimum Maintenance Standards do not have to be adopted by a municipal council per se. The regulation is provincial, applies to all municipalities, and is available for municipalities to use as a defense if they have met the standard and documented it. The more important issue would be to ensure that a Town has the appropriate Standard Operating Procedures (SOP's) in place, and that they are followed and documented, rather than trying to reword or parallel the language of the regulation into a document that is Town-specific.

Traffic counts are important for a number of decision making purposes, with respect to the road system. Accurate, defensible traffic counts, in conjunction with the posted speed limits, are used in determining the MMS class of the respective road sections.

Traffic counts are a particular issue with the Municipality of Meaford Road System. Traffic information for this report was provided by the Municipality. However, the number of traffic counts is very limited. The

majority of the road system has estimated traffic counts. The estimated counts are suitable for the purposes of this report but should not be relied upon to establish accurate MMS classification.

Roads are divided into six service classes by posted speed and traffic count, with Class 1 being the highest service level and Class 6 being the lowest. There are no service standards for Class 6 roads which have less than 50 vehicles per day. **Table 3.2** shows the Regulation 239/02's traffic/speed/ classification matrix.

Table 3.2: Regulation 239/02 Minimum Maintenance Standard Road Classification

Annual Average Daily Traffic (number of motor vehicles per day)	Posted or Statutory Speed Limit (kilometres per hour)						
	100	90	80	70	60	50	40
15, 000 or more	1	1	1	2	2	2	2
12, 000 - 14, 999	1	1	1	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	3	3
5, 000 - 5, 999	1	2	2	3	3	3	3
4, 000 - 4, 999	1	2	3	3	3	3	4
3, 000 - 3, 999	1	2	3	3	3	4	4
2, 000 - 2,999	1	2	3	3	4	4	4
1, 000 - 1,999	1	3	3	3	4	4	5
500 - 999	1	3	4	4	4	4	5
200 - 499	1	3	4	4	5	5	5
50 - 199	1	3	4	5	5	5	5
0 - 49	1	3	6	6	6	6	6

As per the Regulation, different road classifications require different response times. For example, the response time that is required to remove snow accumulation is 12 hours for a Class 3 road, and 16 hours for a Class 4.

Response time is the time from when the Town becomes aware that a condition exists, until the time that the condition is corrected or brought within the limits specified in the regulation. This may have a significant impact with respect to the equipment and staffing that may be required to meet the standard, particularly in the case of winter control. The implications are that this increased service level may require the Town to increase the inspection frequency, staff, and machinery to deliver the service beyond the service delivery hours that may currently exist.

The distribution of the MMS Classes across the road system is detailed in Table 3.3.

Table 3.3: Minimum Maintenance Standards Class Distribution (km)

Roadside	MMS Class				TOTAL	% OF TOTAL
	3	4	5	6		
Rural	8.97	259.72	8.35	34.26	311.30	81.77%
Semi-Urban	1.00	14.80	34.01	2.99	52.80	13.87%
Urban	2.48	1.86	12.19	0.07	16.60	4.36%
TOTAL	12.45	276.38	54.55	37.32	380.70	
% OF TOTAL	3.27%	72.60%	14.33%	9.80%		

**Includes 3.48 km of Connecting Link*

3.4.1 Functional / Existing / Design Classifications

Roads are further classified within the database by classes such as Local, Collector, or Arterial and Residential or Industrial. Items 33 and 105 in the *Inventory Manual* provide further direction on determination of the Existing or Design Classes of road. Generally, the classifications are predicated on the existing use, roadside environment, and anticipated growth over either the ten- or twenty-year planning horizon.

The road sections are classified by the rater, at the time of the field review. Table 3.4 identifies the Functional Road Class Distribution.

Table 3.4: Functional Road Class Distribution

Road Classification	Roadside Environment									
	Rural		Semi-Urban		Urban		Total		% of Total	
	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km
100	30.57	61.14	0.5	1			31.07	62.14	8.16%	8.15%
200	204.62	409.24	3.5	7			208.12	416.24	54.67%	54.62%
300	35.15	70.3					35.15	70.3	9.23%	9.22%
400	33.09	66.18	0.34	0.68			33.43	66.86	8.78%	8.77%
500	7.27	14.53					7.27	14.53	1.91%	1.91%
800			1	2.21	2.48	5.44	3.48	7.65	0.92%	1.00%
ART			2.58	5.16	2.66	5.32	5.24	10.48	1.38%	1.38%
C/R					0.16	0.32	0.16	0.32	0.04%	0.04%
CCI	0.6	1.2	43.46	86.92	9.62	19.24	53.68	107.36	14.10%	14.09%
L/R			1.42	2.84	1.68	3.36	3.1	6.2	0.81%	0.81%
LCI	311.3	622.59	52.8	105.81	16.6	33.68	380.7	762.08		
Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%				
% of Total										

**Includes 3.48 km of Connecting Link*

3.5 Horizontal and Vertical Alignment

The changes in direction and elevation of the road are referred to as the horizontal and vertical alignment. The changes in direction should be designed and constructed such that the posted speed limit of the road section may be safely maintained throughout the section. If maintaining the posted speed in safety cannot be achieved, then the horizontal or vertical curve would be identified as substandard.

Lower volume roads that have not been reconstructed, tend to closely follow (or avoid) the existing contours of the land. In southern Ontario, which is relatively flat, there was a greater tendency to follow the alignments of the original Township surveys. However, where these roads were adjacent to larger streams and rivers, there was still a tendency to follow the topography. The result was/is a road alignment that tends to change vertical and horizontal direction frequently; at times without much notice.

When a new road is designed, one of the considerations is the Safe Stopping Distance (SSD). The calculation of the distance to stop safely from any given speed is based upon several factors, such as posted speed limit, reaction times, and friction. When road sections are evaluated for a road needs study, the number of vertical and horizontal curves that appear to be deficient are identified. The identification is based on whether there is sufficient SSD for the posted speed limit. The following table is an excerpt from the Geometric Design Standards for Ontario Highways, and indicates the SSD's required for various design speeds.

Figure 3.1: Safe Stopping Distance

Speed <i>v</i>		Perception and Brake Reaction		Coefficient of friction wet pav't	Braking distance on level	S-Min. Stopping sight distance	
Design	Assumed condition	Time	Distance			calculated	rounded
km/h	km/h	s	m	<i>f</i>	m	m	m
40	40	2.5	28	0.380	17	45	45
50	50	2.5	35	0.358	27	62	65
60	60	2.5	42	0.337	42	84	85
70	70	2.5	49	0.323	60	109	110
80	79	2.5	55	0.312	79	134	135
90	87	2.5	60	0.304	98	158	160
100	95	2.5	66	0.296	120	186	185
110	102	2.5	71	0.290	141	212	215
120	109	2.5	76	0.283	165	241	245
130*	116	2.5	81	0.279	190	271	275
140*	122	2.5	85	0.277	211	296	300
150*	127	2.5	88	0.273	232	320	320
160*	131	2.5	91	0.269	251	342	345

**Design Speeds above 120 km/h are beyond the normal range of application*

On rural roads, one of the effects of substandard alignments is a decrease in the Average Operating Speed through the road section. An Average Operating Speed that is significantly lower than the posted speed will

result in a Geometric Need for the road section. The following table from the *Inventory Manual* identifies the limits that will trigger a geometric need for typical posted speed limits.

Table 3.5: Posted Speed vs. Minimum Tolerable Operating Speed

Item	Speed					
Legal Speed Limit	40	50	60	70	80	90
Minimum Tolerable Operating Speed (trigger for need)	35	45	50	60	65	75

The following pictures were not taken in the Municipality, but provide examples of potentially substandard alignments.

Figure 3.2: Potentially Substandard Vertical and Horizontal Alignment



Appendix D includes a listing of all of the rural road sections with potentially sub-standard vertical or horizontal alignments that should be reviewed for signage, speed reduction, or correction.

3.6 Drainage

Adequate drainage is critical to the performance of a road to maximize its' life expectancy. Roads are designed, constructed, and maintained in order to minimize the amount of water that may enter, or flow over, the road structure.

In the case of water flowing over the road, assessment must be made of the circumstances on a site-specific basis. Factors that should be considered include the traffic volumes of the road section, economic impacts to the loss of the use of the road, upgrade costs, and risks.

Water in a road base can cause different reactions at different times of the year. In non-freezing conditions, the granular road base can become saturated. Too much water displaces the granular material; it removes the material's ability to support the loads for which it was designed. Too much water in the granular material actually acts like a lubricant, and facilitates the displacement of the material under load. In freezing conditions, water in the road structure can cause frost heave, potholes, and pavement break-up as the water freezes and expands. Generally, a saturated granular road base results in structural failure of the road.

Figure 3.3: OPSS 200.10

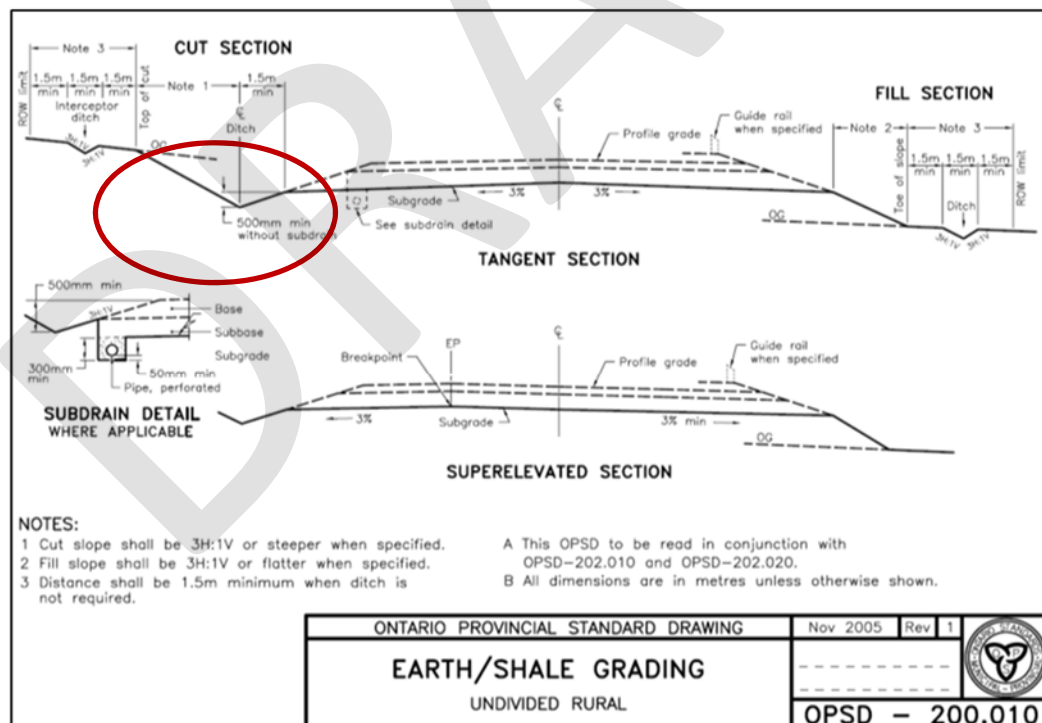


Figure 3.3 provides an example of a rural road, illustrating what the relationship between the gravel road base and the drainage should be. The relationship is the same in an urban system, although not as obvious.

Rural road drainage is typically achieved through roadside ditches. Rural road ditches should be a minimum of 500 mm below the granular road base, to ensure that the road base remains free from moisture and maintains its ability to carry loads.

Urban roads typically have a storm sewer pipe network that carries the minor storm event. The roadway itself is often part of the overland flow route for the major event. The drainage of the granular road base is accomplished through sub-drains installed below the curb and gutter, lower than the lowest elevation of the granular base. This satisfies the same purpose as the ditch in a rural cross-section, by providing an outlet to ensure that the granular base remains dry.

Evaluations of the drainage scores were in part predicated upon the structural score. For example where a road section had virtually no ditch, or very minimal ditching but the road structure did not show any signs of failure typically observed when there is inadequate drainage, then generally a rating was between 12 and 14 and an 'SD- (Spot drainage) improvement noted. Where it was obvious that the inadequate ditch was exacerbating the distress on the road or there was occasional flooding, the score was further reduced and the improvement type would be some type of major rehabilitation or reconstruction dependent upon the traffic volumes.

Table 3.6 provides an overview of the drainage needs of the road system by Time of Need.

Table 3.6: Drainage by Time of Need (length in km)

Roadside	1 to 5	6 to 10	ADEQ	NOW	TOTAL
Rural	52.82	161.44	94.25	2.79	311.3
Semi-Urban	5.21	32.9	14.69		52.8
Urban		0.05	16.2	0.35	16.6
TOTAL	58.03	194.39	125.14	3.14	380.7

**Includes 3.48 km of Connecting Link*

Maintenance of the drainage system(s) is critical to the long-term performance of a road system. Low volume rural roads tend to have a winter maintenance program that includes the application of sand to improve traction. Over time, that sand builds up on the edge of the pavement, to a point where it effectively blocks runoff from getting to the ditch. The runoff is trapped at the edge of pavement, where it saturates that area of the road bed, contributing to the early failure of the edge of the pavement. This element of the road cross-section is not scored as part of the overall evaluation.

Presence or absence of roadside berms is not evaluated during a road review. This is a maintenance issue, however, if roadside berms are not removed, the effect on the overall pavement is similar to not having a ditch. Water cannot drain from the road and it enters into the granular base potentially saturating it. The saturated base cannot support load.

Figure 3.4: Poor Shoulder Drainage (example)



3.6.1 DRAINAGE OUTLET AND MASTER PLANNING

Correcting drainage issues is not quite as simple as digging a ditch or installing a storm sewer. In Ontario, Common law for drainage is such that water cannot simply be collected and directed. It has to be directed to a legal, adequate outlet. There are two primary methodologies to achieve the legal outlet; a Class Environmental Assessment Process or a petition for a Municipal Drain under the Drainage Act. The 'adequate' component is an engineering function.

As Municipality reconstructs/rehabilitates sections of the road network in the urban and semi urban areas, a Master Drainage Plan should be developed as part of a Class Environmental Assessment process prior to the reconstruction process occurring, in order that both minor and major storm events are dealt with appropriately.

3.7 Boundary Roads

Boundary roads, are roads that a municipality would have in common with the abutting municipality. In order to manage the joint responsibilities, a Boundary Road Agreement that identifies the responsibilities of both agencies is created. The agreements are usually in writing; however, some are informal.

The Boundary Road Agreement should identify costs sharing and responsibility arrangements for maintenance or capital works on the road section. From a risk management perspective, the agreement reduces the risk for one of the parties in the event of a claim, depending upon the content of the agreement.

Boundary road reporting can be dealt with in one of two ways: the length can be split to provide a more accurate depiction of the road system that is actually maintained by the agency, or they may not be adjusted. When MTO was providing subsidy, the roads were adjusted for reporting and accounting purposes. For the purposes of this report adjustment has been made to the road system sizes to account for the 50% sharing of the length of the boundary roads.

When a boundary road is reconstructed on a day labour basis by the adjacent municipalities, the project should be treated no differently than if the work were being tendered. The exposure to risk for the municipality is no different. The assignment of the various aspects of the work should be clear and the timing

for completion of the tasks clearly identified and adhered to. Table 3.7 identifies the Municipality boundary roads.

Table 3.7: Boundary Roads

Adjacent Agency	Asset ID	Street Name	Rural	Semi-Urban	Urban	TOTAL
City of Owen Sound	RD-3100	28th Avenue E	0.83			0.83
City of Owen Sound	RD-3151	Superior St.	2.3			2.3
Town of the Blue Mountains	RD-2000	Tbm/Meaf TI	1.8			1.8
Town of the Blue Mountains	RD-2001	Tbm/Meaf TI	1.8			1.8
Town of the Blue Mountains	RD-2003	Christie Beach Rd.	1.5			1.5
Township of Chatsworth	RD-3110	Syd/Holl TI	1.4			1.4
Township of Chatsworth	RD-3111	Syd/Holl TI	1.5			1.5
Township of Chatsworth	RD-3112	Syd/Holl TI	2.7			2.7
Township of Chatsworth	RD-3113	Syd/Holl TI	2.7			2.7
Township of Chatsworth	RD-3114	Syd/Holl TI	2.74			2.74
Township of Chatsworth	RD-3115	Syd/Holl TI	2.7			2.7
Township of Chatsworth	RD-3116	Syd/Holl TI	2.74			2.74
Municipality of Grey Highlands	RD-2073	Meaf/Gh TI	0.6			0.6
Municipality of Grey Highlands	RD-2075	Meaf/Gh TI	2.7			2.7
Municipality of Grey Highlands	RD-2076	Meaf/Gh TI	2.7			2.7
Municipality of Grey Highlands	RD-2077	Meaf/Gh TI	2.8			2.8
		TOTAL	33.51	0	0	33.51

4 Road System Condition

The provincial requirements for AMP's include asset condition assessment in accordance with standard engineering practices. The road section reviews follow the methodology of the Ministry of Transportation Inventory Manual for Municipal Roads, 1991.

4.1 Road System Condition by Time of Need

The Inventory Manual methodology results in overall rating of road sections by Time of Need (TON); NOW, 1 to 5, 6 to 10, or Adeq (Adequate). **Table 4.1** provides a breakdown of the road system by time of Need and MMS Class.

4.2 Road System Adequacy

The system adequacy is a measure of the ratio of the 'NOW' needs to the total system, and includes needs from the six critical areas described earlier in the report. The overall TON is the most severe or earliest identified need. For example a road section may appear to be in good condition, but is identified as a NOW need for capacity, indicating that it requires additional lanes.

Equation 4.2: System Adequacy Calculation

$$\text{System Adequacy} = \frac{\text{Total System (km)} - \text{NOW Deficiencies (km)}}{\text{Total System (km)}} \times 100$$

The Municipality of Meaford currently has a road system adequacy measure of **50.1%**. The road system currently measures 380.7 centreline-kilometres (adjusted for boundary roads), with 190.02 kilometres rated as deficient in the 'NOW' time period. Class 6 Roads (less than 50 vehicles per day) are adequate

The traditional target adequacy for upper-tier road systems (Regions and Counties) was 75%, while a lower-tier's target adequacy was 60%. Based on these former MTO targets, which were in effect when the municipal grant system was in place, the target adequacy for the Municipality of Meaford should be 60%, as a minimum. The minimum target adequacies were established by MTO, to reflect the nature and purpose of the road system.

Table 4.1: Roads System by Time of Need and MMS Class

Time of Need	3	4	5	6	TOTAL	% OF TOTAL
NOW	7.73	162.57	19.73		190.02	49.9%
1-5		9.55	5.33		14.88	3.9%
6-10	2.21	63.39	15.95		81.55	21.4%
ADEQ	2.51	40.87	13.54	37.32	94.24	24.8%
TOTAL	12.45	276.38	54.55	37.32	380.7	
% OF TOTAL	3.27%	72.60%	0.1433	0.098		
Adequacy	37.9	41.2	63.8	100.0	50.1	

•Includes 3.48 km of Connecting Link

The estimates provided in this report are in accordance with the formulae in the *Inventory Manual*, and utilize the unit costs as identified in Table 4.2. These costs include adjustment factors as per the *Inventory Manual*, such as Basic Construction, Terrain, Contingency Roadside Environment, and Engineering.

Table 4.2: Unit Costs

Item	Unit	2013 Costs \$
Excavation	m ³	12.00
Hot Mix Asphalt	t	90.00
Single Surface Treatment	m ²	3.00
Granular A	t	15.00
Granular B	t	13.00
Conc- Curb and Gutter-place	linear m	50.00
Conc- Curb and Gutter-removal	linear m	15.00
Subdrains	linear m	25.00
Storm Sewer-525mm	linear m	300.00
Manholes	ea	5000.00
- manhole removed	ea	500.00
- manholes-Adjust	ea	500.00
Catch Basins	ea	3000.00
Catch-Basins- removed	ea	500.00
Catch Basin Leads	Linear m	25.00
Catchbasins - adjust	ea	500.00
Asphalt Planing	m ²	1.25
Asphalt Pulverizing	m ²	1.25
Crack Sealing	m	2.00

Table 4.3 summarizes the system needs by improvement type, time of needs, cost and length.

Table 4.3: Needs Summary

Improvement Class	Imp. ID	1 to 5		6 to 10		ADEQ		NOW		TOTAL	
		CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost
Construction	RW			0	457,532	0.42	79,695	0	319,952	1	857,179
Construction	BS	8.58	2,403,419	12.24	2,174,755	19.99	15,584,779	114.06	24,386,440	154.87	44,549,393
Construction	DSTrehab	1.8	135,285			0.15	11,570	3.4	265,593	5.35	412,447
Construction	NONE			0.76	0	22.2	0	0.27	0	23.23	0
Construction	REC	0.21	87,916	0.26	119,439	16.6	6,316,826	31.12	13,894,839	48.19	20,419,020
Construction	RNS			0.21	191,405	0.38	418,785	0.58	460,292	1.17	1,070,482
Construction	RSS	0.54	735,253	4.62	6,002,232	0.81	1,069,149	4.46	5,990,563	10.43	13,797,197
Maintenance	CRK			0.4	880	20.4	44,880	0.27	594	21.07	46,354
Maintenance	SD			26.48	0	0.98	0	1.35	0	28.81	0
Maintenance	SR					1.35	0			1.35	0
Maintenance	SST			2.1	42,840	5.3	122,610			7.4	165,450
Rehabilitation	DST			4.5	176,963	0.17	6,171	0.7	25,410	5.37	208,544
Rehabilitation	GRR2			8.05	363,380	2.2	108,464	8.1	295,099	18.35	766,943
Rehabilitation	PR2	1.2	215,382			0.97	192,741	23.02	4,212,707	25.19	4,620,831
Rehabilitation	R1			17.01	2,671,935	0.71	96,399	0.9	106,572	18.62	2,874,906
Rehabilitation	R2	1.45	442,683	0.12	47,252	0.23	70,956	1.79	397,475	3.59	958,367
Rehabilitation	SSTplus	1.1	67,860	4.8	274,596	1.8	111,043			7.7	453,499
TOTAL		14.88	4,087,798	81.55	12,523,209	94.24	24,234,069	190.02	50,355,206	380.7	91,200,282
% of Total		3.91%	4.48%	21.42%	13.73%	24.76%	26.57%	49.91%	55.21%		

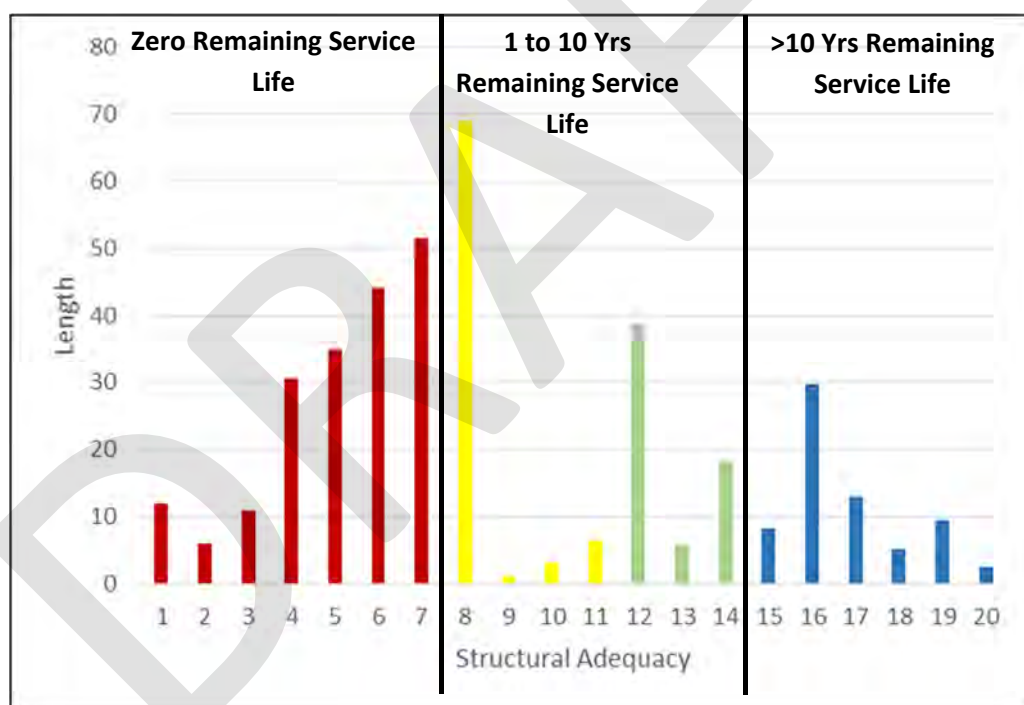
4.2.1 Physical Condition

The Physical Condition is an alternate method of describing the condition of a road section or the average condition of the road system. The value is the structural adequacy converted to be expressed as a value out of 100, instead of 20. This methodology lends itself to modeling and comparators that may be more easily understood. There isn't a 1:1 relationship between the weighted average physical condition and the system adequacy. The Weighted Average Physical Condition of the road system is currently 44.48.

4.2.2 Remaining Service Life

As indicated previously, the Time of Need is really a prediction model in terms of an estimate based on current condition to the time for reconstruction. The TON then also provides an estimate of the remaining life in the road system/section. The following figure summarizes the structural adequacy ratings of the road system and illustrates the estimated remaining service life of the road system.

Figure 4.1: Remaining Service Life



4.3 Record of Assumptions –TON, Improvement and Replacement Costs

The methodology of this report is such that the Inventory Manual itself forms the basis of a large number of assumptions in terms of:

- Dimensional requirements for the development of improvement and replacement costs
- Structural requirements based on road classification
- Time of needs based on the ratings and subsequent calculations
- Assumptions for deterioration are included in Appendix E

5 Replacement Cost Valuation

Program funding recommendations are a function of the dimensional information, surface type, roadside environment, and functional class of the individual assets. Recommended funding for the road system should include sufficient capital expenditures that would allow the replacement of infrastructure as the end of design life is approached, in addition to sufficient funding for maintenance, to ensure that that full life expectancy may be realized.

Budgetary recommendations in this report do not include items related to development and growth. The Town should consider those items as additional to the recommendations in this report. Generally, that type of improvement or expansion to the system would be funded from a different source, such as Development Charges.

The budget recommendations bear a direct relationship to the value of the road system. 4 Roads estimates the cost to replace the road system, to its current standard, at **\$190,500,800**. This estimate is based on the Municipality's unit costs.

6 Asset Condition Assessment and Plan Updates

6.1 Condition Assessment Cycle Recommendation

4 Roads would recommend that the entire road system be reviewed on a maximum four year cycle.

DRAFT

7 Level of Service (LOS)

Level of Service has a different meaning for different interests. For instance, the cost per unit may not have an impact to a ratepayer whose chief concern may be service delivery. Similarly, cost or expenditure per unit may not illustrate the condition of the asset to the end user. Further, municipalities are required to report on various Municipal Performance Measures (MPMP)

4 Roads believes that multiple service measures may be required to adequately relate the condition of an asset to the various user groups; condition, operating costs, and end user. The following sections identify various measurements of service of the road system

7.1 Current Level of Service Measurement

7.1.1 System Adequacy

As described earlier in the report, the system adequacy is the ratio of the “NOW” need roads to the total system. This is a holistic measure as, using the Inventory Manual Methodology, needs are identified in six critical areas, not just the distress on the road surface.

The current system adequacy is **50.1%**.

7.1.2 Physical Condition

Physical condition is the Structural Adequacy rating multiplied by five to produce a rating of between 5 and 100. This is a measure of the amount of distress on the road however the scale is not linear. The current weighted average Physical Condition of the road system is **44.48**.

7.1.3 MPMP Good to Very Good

The province requires annual reporting on the percentage of roads that are rated as good to very good. It has been assumed that the 6-10 and adequate roads are good to very good and this has been expressed as a percentage of the system. Good to very good roads represent **32.1%** of the road system.

8 Asset Management Strategy

8.1 Asset Management Overview

Asset management has as almost as many definitions as there are agencies that manage assets. The American Association of State Highway and Transportation Officials (AASHTO) defines asset management as

“... a strategic approach to managing transportation infrastructure. It focuses on business processes for resource allocation and utilization with the objective of better decision-making based upon quality information and well-defined objectives.”

The document entitled *Managing Public Infrastructure Assets, 2001*, prepared by AMSA, AMWA, WEF, and AWWA, defines asset management as;

‘managing infrastructure assets to minimize the total cost of owning and operating them, while continuously delivering the service levels customers desire, at an acceptable level of risk.’

The Province of Ontario’s document ‘*Building Together- Guide for Municipal Asset Management Plans*’ indicates

‘The asset management strategy is the set of actions that, taken together, has the lowest total cost- not the set of actions that each has the lowest cost individually’

Regardless of the source of the definition, the key themes that keep being repeated are;

- Managing
- Strategic
- Effective
- Efficient
- \$\$\$\$!!
- Service
- Optimizing asset life cycle
- Risk Management

As an absolute minimum, the objective of any asset management plan, or strategy, should be to ensure that the overall condition of an asset group does not diminish over time. The asset management strategy of an agency is heavily predicated, and inextricably linked to the available funding.

Most agencies are not fully funded, and a large number are not even funded sufficiently as to maintain the current condition of their system. From the information provided, and the project analysis, it appears that the Municipality of Meaford does not have sufficient program funding to maintain the existing system. Given either of those circumstances, the strategy should be twofold

- Develop the financial plan in order that there is sufficient funding to maintain the condition of the road system
- Focus should be on a pavement management strategy that utilizes available funding on preservation and resurfacing programs as a priority. Reconstruction and replacement candidates will remain reconstruction and replacement candidates, and cost increases will be incremental with inflation. Preservation and resurfacing opportunities that are missed will escalate in cost by several hundred percent depending on site specifics.

8.2 Priority Rating vs. Condition Rating

Information in a database may be sorted and analyzed in numerous ways. Understanding what information a data field represents, is key to the analysis. The Inventory Manual has many rated and calculated data fields and thus provides for many ways to sort data. Some commonly used representations, or sorting of information, from the database include:

- Priority Rating
- Priority Guide Number
- Structural Adequacy (Condition)

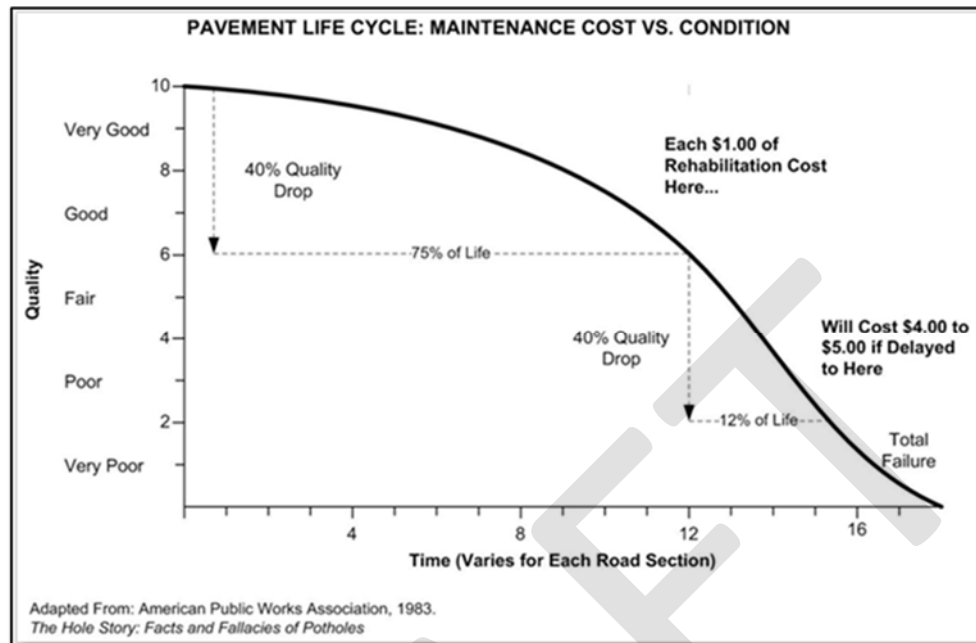
Priority Rating is a calculated field in the Inventory Manual, and is a function of the traffic count and the overall condition rating of the road section. This approach adds weight to the traffic count of the section. Although the word 'priority' is included in the field name, a road section that has a higher calculated 'Priority Rating' is not necessarily a higher priority in the broader sense of asset management.

Similarly, a road agency may choose to sort the road sections based on condition and cost per vehicle. The Priority Guide Number data field would assist in providing that analysis, as sorting on that parameter would prioritize road sections that have higher traffic and thus a lower cost per vehicle.

Developing a road capital program around the Priority Rating or Priority Guide Number fields will result in programming that would lead to a less efficient expenditure of funds and reduced system performance per budget dollar, as road sections with high traffic and in poor condition would be selected first, as opposed to selecting the best rehabilitation candidates at the appropriate time in their life cycles. The exception to this statement would be cases where rehabilitation funding is at a high enough level to ensure that the preservation program requirements can be met.

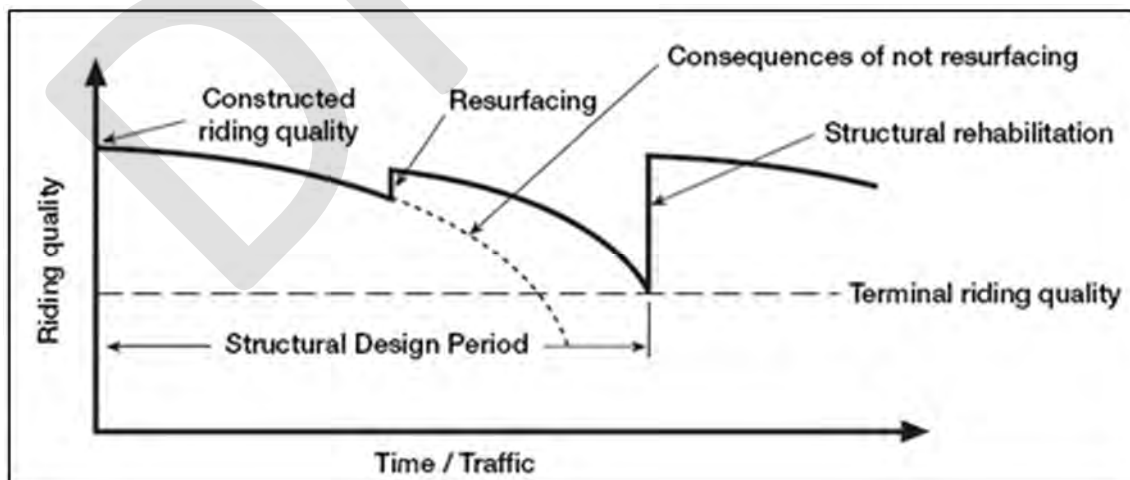
From a more current asset management perspective, project selection should be predicated by condition. (Structural Adequacy or PCI). Figure 8.1 clearly illustrates the financial advantages of managing the road system by performing the right treatment at the right time of the asset life cycle. If appropriate strategies are not undertaken at the correct time, there is a less effective usage of the available funding.

Figure 8.1: Treatment Cost vs. Deterioration



Ideally, if a road is constructed and maintained with timely appropriate maintenance and resurfacing, the road system will reach a point where the majority of the activities will be preservation and resurfacing. Figure 8.2 clearly illustrates the effect the life span of a pavement by applying the correct treatment at the correction time in the life cycle.

Figure 8.2: Pavement Management- The Right Treatment at the Right Time



Source: Wirtgen Cold Recycling Manual

If an agency's budget is fully funded, the programming will include reconstruction, resurfacing, and preservation programs. Prioritization within the different programs will vary as demands are different. However, within the resurfacing and preservation programs, the pavement condition should drive the decision making.

Where funding is limited, resurfacing and preservation programs should be prioritized over the construction program. The effect of this approach will be that 'NOW' need roads will remain 'NOW' needs. However, by virtue of their 'NOW' need condition, 'NOW' need roads will require increased maintenance and likely generate increased complaints from the driving public. To deal with this eventuality, a Town should create a '*maintenance paving budget*', over and above the resurfacing budget. The purpose of this budget is to defer the reconstruction needs, and reduce maintenance efforts and complaints until the road can be reconstructed.

8.3 Cross Asset Integration and Project Prioritization

Prioritizing projects from a purely asset management perspective is a relatively straightforward exercise, regardless of funding level. Complications arise when the specific needs, commitments of the agency, and priorities of other utilities factor into the decision making process.

The road system is, in reality, a utility corridor. Multiple utilities in both urban and rural roadside environments will present conflicting demands and priorities in advancing projects. The Road Needs Study provides ratings that deal strictly with the condition of various factors as they relate to the road section. Those factors have to be considered in conjunction with needs and priorities that may exist for other utilities or pending development. In fact, the condition of other infrastructure within the road allowance may be the key element in the prioritization. For example, a road rated as a reconstruction project may have a relatively low priority rating, but a trunk storm sewer servicing a greater area may require immediate installation. The priority of the road is then dictated by the other utility, and should be integrated into the capital plan, to best serve all interests.

Less tangible priorities may also be project prioritization tools for some agencies. For example, an agency may want to advance projects that also include bus routes or bike lanes.

As a municipal road program is developed, opportunities to complete work on smaller sections adjacent to the main project, at a lesser cost than if completed as a stand-alone project, should be considered to realize economies of scale, and complete improvements that may otherwise be passed over.

9 Program Funding Recommendations

9.1 Overview

Program funding recommendations are a function of the dimensional information, surface type, roadside environment, functional class of the individual assets and current unit costing. Recommended funding for the road system should include sufficient capital expenditures that would allow the replacement of infrastructure as the end of design life is approached, in addition to sufficient funding for maintenance, to ensure that that full life expectancy may be realized.

Budgetary recommendations in this report do not include items related to development and growth; those should be considered as additional. Generally, that type of improvement or expansion to the system would be funded from a different source, such as Development Charges.

The budget recommendations bear a direct relationship to the value of the road system. 4 Roads estimates the cost to replace the road system, to its current standard, at **\$190,500,800**. The budget recommendations provided in this report are based on the constitution of the road system. This represents an opportunity to develop a financial plan in concert with the asset management plan, for a phased implementation.

9.2 Capital Depreciation

The estimated replacement/depreciation value of the Town road system to the current standard is **\$190,500,800**. This equates to an annual capital depreciation of **\$3,810,000**. The annual capital depreciation is strictly a function of the replacement cost and the design life, and would best be described as an 'Accountaneering' number. This estimate does not include bridges, culverts, cross culverts less than 3 m, sidewalks, or street lighting. The typical design life for a road structure is 50 years before reconstruction/replacement. If the life span is 50 years, then 2% of the replacement cost should be the annual contribution to the capital reserve, to ensure that it can be reconstructed in that time frame.

The estimated replacement/depreciation is based upon the replacement value of the road system over a 50-year life cycle. However, the 50-year life cycle can only be a reality if maintenance and preservation treatments such as crack sealing and hot mix asphalt overlays are delivered at the appropriate time. Inadequate maintenance and preservation will result in premature failure and increased life cycle costs.

Analogies to houses and cars sometimes make road maintenance easier to understand. If a house does not have the roof renewed within the correct time frame, there will be damage to the structure, below the roof, and if this is not dealt with, it will result in a rapid deterioration of the house. Similarly, roads require crack sealing and resurfacing at the appropriate time, during the life cycle, in order to maximize the life expectancy of the asset. Preservation and maintenance extend the useful life of the pavement, reducing life cycle costs.

9.3 Hot Mix Resurfacing

Roads require major maintenance throughout the life cycle, in order to optimize and maximize the asset life span. Roads require resurfacing at the appropriate interval, for the respective class of road. Different agencies categorize the expense differently, usually dependent upon the dollar value; however, resurfacing is essentially a maintenance activity.

Resurfacing schedules are dependent upon traffic loading and the percentage of commercial traffic. Higher traffic volumes and percentages of commercial traffic shorten the interval between resurfacings. Optimal resurfacing intervals will vary from ten to twenty years (or more), depending upon the road function, classification, and quality of design and construction.

The Hot Mix Asphalt Resurfacing recommendation in this report is based upon the distribution of the Town's hot mix asphalt inventory. As such, the optimal budget calculation will focus on the 19-year interval (19.37), for hot mix roads.

Given the aforementioned, and the information with respect to surface type contained in **Table 3.1**, the funding for the annual resurfacing program should be **\$748,700** per year on average, in order to maintain the system at its current adequacy level. This estimate is for the major resurfacing work only, and does not include any estimated costs for other pavement preservation activities or programs. Table 9.1 identifies the distribution of hot asphalt roads by asset class and the basis for the recommendation for the annual program budget recommendation.

Table 9.1: Hot Mix Asphalt Roads by Asset Class and Life Cycle

Asset Class	L.C. Yrs	Average Annual Cost	Asset Qty(Km).	Unit Cost	Weighted Average
A/C-R	20	-	0	-	0.00
A/C-S	20	-	0	-	0.00
A/C-U	20	-	0	-	0.00
HCB1-R	10	-	0	-	0.00
HCB1-S	10	-	0	-	0.00
HCB1-U	10	-	0	-	0.00
HCB2-R	12	-	0	-	0.00
HCB2-S	12	12,626.36	1	12,626.36	0.121237
HCB2-U	12	68,780.14	2.48	27,733.93	0.300667
HCB3-R	15	26,183.07	3.48	7,523.87	0.527379
HCB3-S	15	3,794.48	0.42	9,034.48	0.063649
HCB3-U	15	17,627.36	0.95	18,555.12	0.143968
HCB4-R	20	268,232.83	48.42	5,539.71	9.783795
HCB4-S	20	164,869.76	29.06	5,673.43	5.871893
HCB4-U	20	186,561.67	13.17	14,165.65	2.661144
TOTALS			98.98	100852.6	19.47

9.4 Surface Treatment Resurfacing

Most agencies report that the average life of surface treated road is seven years. Similar to the concept applied to the development of the hot mix resurfacing recommendations, the surface-treated road network should be completely resurfaced every seven years, or approximately 14% of the surface treated inventory in each calendar year.

At a unit cost of \$3.00 per square metre, the annual program size should be **\$316,100**, on average, exclusive of hot mix asphalt padding and other preparatory work.

9.5 Gravel Road Resurfacing

When MTO was providing maintenance subsidy, the standard practice for gravel road maintenance was to place approximately 75 mm (3 Inches) of gravel on each gravel road section, every three years.

Since the conditional grant system was discontinued, a large number of municipalities have reduced the amount of gravel that has been placed on gravel roads, to the point where the gravel roads in the system are a major maintenance problem, particularly in the latter part of the winter and early spring. If the granular base is not replenished, the road structure will disappear through normal usage, and the remaining gravel typically becomes contaminated by other materials, such as the native soil and winter sand.

The Municipality has 171.73 km of gravel surfaced roads, as per Table 3.1 of this report. Using the Municipality's benchmark costing, the annual gravel resurfacing program size should be **\$1,009,000** per year, based on adding 75 mm of gravel every three years. (This is 75mm across the entire platform) This estimate does not include costs for re-grading, dust control, or gravel road conversion.

9.6 Crack Sealing

Crack sealing is a preservation activity that extends the life of a hot mix asphalt surface. A program estimate is provided based on crack sealing one metre per two lane metre of pavement every 5 years at the unit cost provided by the Town. Based on that premise, the recommended budget for crack sealing is **\$44,500**.

9.7 Performance Modeling- Budget Effect on System Performance

9.7.1 Asset Management Plan and Strategy Analysis

The asset management plan is a function of the strategy and available financing. The development process for all elements is iterative, concurrent and holistic on a number of levels. It is complex.

The provincial guidelines for the preparation of an AMP indicate that the following must be considered;

- Options must be compared on Lifecycle cost- the total cost of constructing, maintaining, renewing and operating an infrastructure asset throughout its service life. Future costs must be discounted and inflation must be incorporated.
- Assessment of all other relevant direct and indirect costs and benefits associated with each option.
 - Direct benefits and Costs
 - Efficiencies and network effects
 - Investment scheduling to appropriately time expansion in asset lifecycles
 - Safety
 - Environmental
 - Vulnerability to climate change
 - Indirect Benefits and Costs
 - Municipal wellbeing and costs
 - Amenity values
 - Value of culturally or historically significant sites
 - Municipal image
- Assessment of Risks associated with all potential options. Each option must be evaluated based on its potential risk, using an approach that allows for comparative analysis. Risks associated with each option can be scored based on quantitative measures when reasonable estimates can be made of the

probability of the risk event happening and the cost associated with the risk event. Qualitative measures can be used when reasonable estimates of probability and cost associated with the risk event cannot be made.

Significant effort (and expense) will be required to meet all of these requirements.

9.7.2 Performance Model Overview

A properly developed performance model will satisfy the majority of the requirements identified in the foregoing. Key elements of a Performance Model will include;

- Deterioration Curves identifying anticipated deterioration of an appropriately constructed asset over the life cycle of the asset
- 'Trigger' points throughout the deterioration curve identifying appropriate treatments at condition ranges
- Current costing for all treatments identified

To capture the essence of the provincial requirements, development and use of a Performance Model is recommended. Through modeling and the resultant outputs the following may be addressed;

- Review of options and lifecycle effects based on a Return on Investment Analysis
- Efficiencies and network effects
- Budget requirements to achieve LOS goals

It is respectfully suggested that a 10 year AMP can be developed through a Performance model, however, 4 Roads is of the opinion a number of other requirements that the province has identified should not be addressed until they reach the project stage. Further, a number of those requirements would be addressed through a Class Environmental Assessment process.

Through performance modeling, appropriate budget levels, programming and associated costs can be determined, delivering key elements of any plan that can be refined or revisited as circumstances change. Once a model is developed, then the effect of any alternatives may also be measured.

9.8 System Performance at Various Budget Levels- 10 Year Program

This report includes budget recommendations for various aspects of the programming that are typical to road departments. System performance can be predicted based on the level of funding.

4 Roads has prepared four different 10-year performance models for the road system. The models have been prepared with the following parameters:

- Zero budget – demonstrates the effect of no work being performed on the road system and how quickly it will deteriorate
- Existing budget – \$0.98m
- Staff Proposed Budget that allocates approximately \$200,000 per year for Gravel Road Resurfacing
- Staff Proposed Budget that includes forecasted projects that are driven by other asset types such as watermains
- Staff Proposed Budget where project selection is completely by the computer model

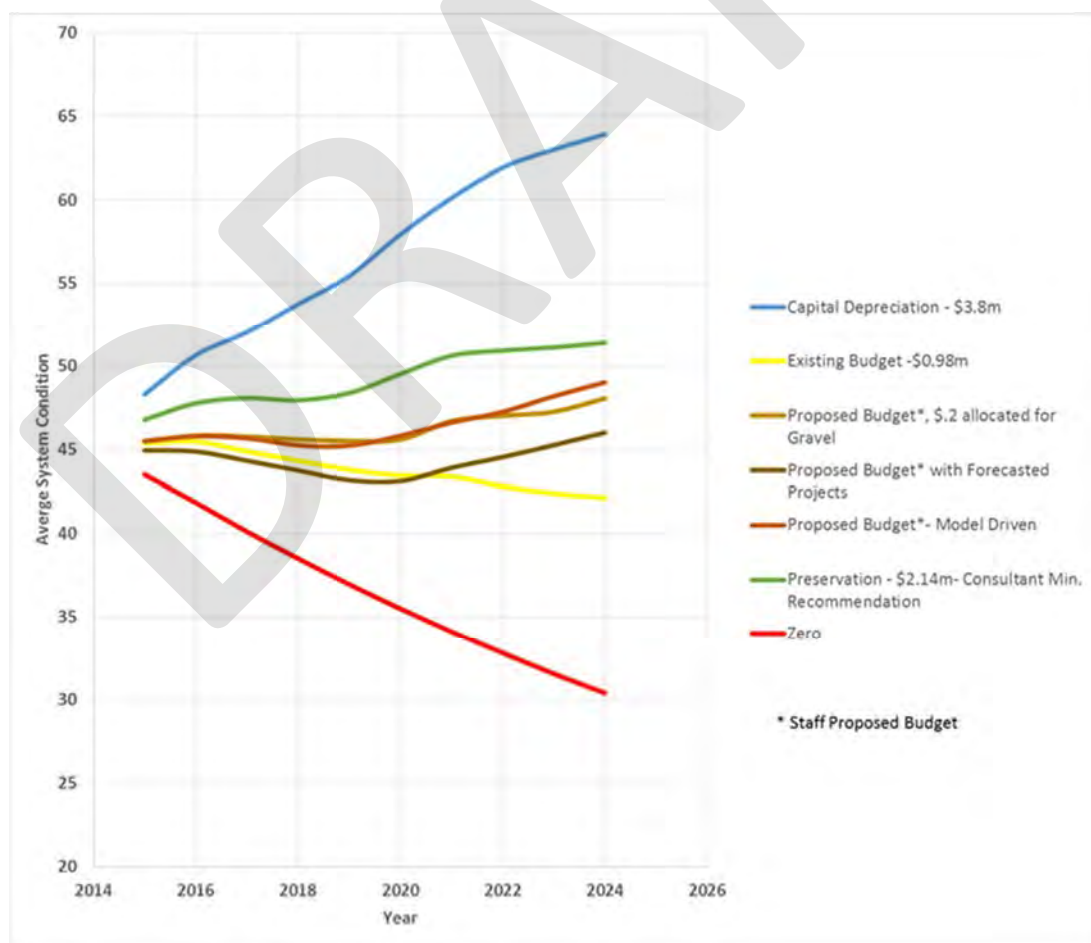
Table 9.2: Staff Proposed Budget

Funding Source	Year									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gas Tax	321,400	337,500	337,500	353,500	370,000	370,000	370,000	370,000	370,000	370,000
Tax Supported Funding (10% Annual Increase)	773,800	901,829	1,033,711	1,169,571	1,310,030	1,454,715	1,603,627	1,757,759	1,916,366	2,080,442
Total Budget	1,095,200	1,239,329	1,371,211	1,523,071	1,680,030	1,824,715	1,973,627	2,127,759	2,286,366	2,450,442

The model that is produced will not exactly match the funding provided as the projects are estimated based on the specifics of the improvement type and the dimensional information that is unique to the asset.

The proposed budget appears to hold the overall system condition at approximately the same condition over the 10 year period, to varying degrees

Figure 9.1: Performance Modeling at Various Budget Levels



The Weighted Average Physical Condition of the road system is currently 44.48. The performance model calculations all begin with the current Physical Condition and for purposes of the graphing, the year-end Physical Condition is displayed based on the effects that the improvements have had on the overall condition of the road system.

In reviewing the results of the performance models, it should be understood that, with the methodology being used, the trigger for a resurfacing activity is a Physical condition of 70. At the proposed funding levels the system shows marginal improvement over the model period. However, the improvement in terms of the Physical Condition will less than a desirable level.

The deterioration curves that have been used consider an average/typical performance for the various road classes. When used in the model at a reasonable funding level the overall average system condition will remain at a similar level as the model will treat the pavements as perpetual. This concept is illustrated in Table 9.4 using Municipality of Meaford Section RD-3066.

9.9 10 Year Program

Appendix F includes the results of a 10 Year program based on the ROI Performance model. Funding levels are as per Table 9.2 for the proposed funding. The selected program provides for approximately \$200,000 of Gravel Road Resurfacing annually.

The resultant project selection from the model may vary from the current program and forecast as the model will select projects based on best ROI initially and then expend remaining funds on other projects. The model can be a starting point for program development but has to be metered with decisions than cannot be easily introduced into a model.

Table 9.3: Performance Model Summary - Ten Year Program

Imp. Type	Year										Grand Total
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
BS								109,027	758,357	826,295	1,693,679
CRK	31,174	20,746		11,286	7,251	9,570	20,482	16,214	16,236	22,000	154,959
DST	208,544										208,544
DSTrehab	412,448										412,448
GRR						87,480	3,402	46,656	38,610		176,148
GRR2	199,940	198,871	198,871	188,654	198,871	92,426	195,129	130,383	120,285	168,251	1,691,681
MICRO				9,000	4,250	12,751	4,100	11,379	16,965	10,575	69,020
PR2		646,146	1,064,731	825,126	337,774		968,981	562,689	215,382		4,620,829
R1		13,878	82,789	426,209	539,993	895,630	425,453	780,267	906,553	799,856	4,870,628
R2	44,692				294,248	145,360	47,252	287,117	21,308	19,766	859,743
SST	128,730	192,375	9,045	58,290	68,250	346,215	261,765	9,045	58,290	156,900	1,288,905
SSTplus	67,860	78,868			195,728	111,043					453,499
Grand Total	1,093,388	1,150,884	1,355,436	1,518,565	1,646,365	1,700,475	1,926,564	1,952,777	2,151,986	2,003,643	16,500,083

**Proposed Budget*

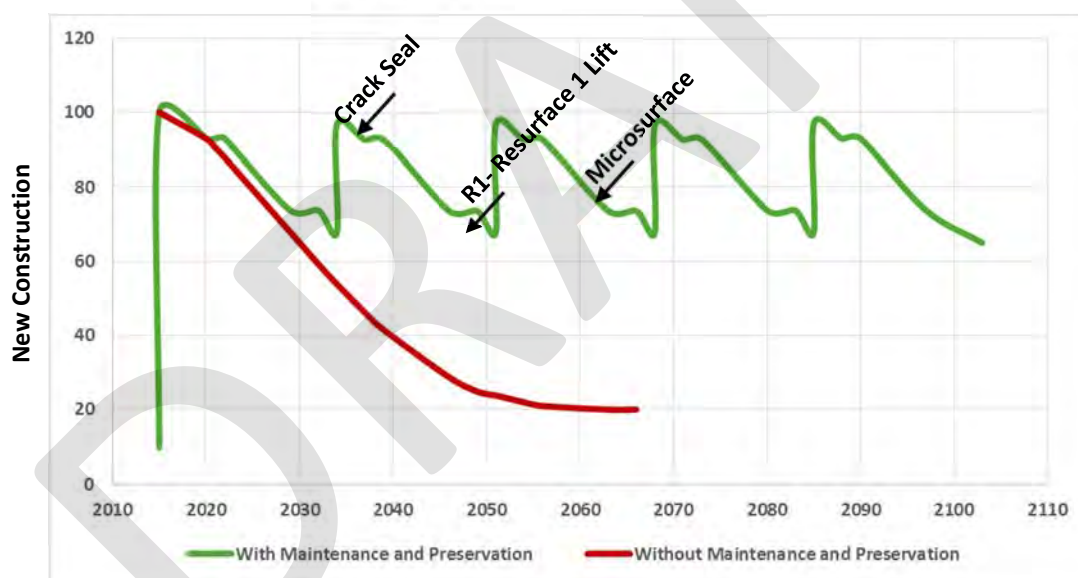
\$200,000(approx.) allocated for Gravel Road Resurfacing

Performance Model Funding will not match proposed budget exactly

Table 9.4: Sample Section Life Cycle

Road Asset RD-3066, Syd/Lakeshore Dr, Grey Road 15-to-Landfill Entrance					
Year	Improvement	Cost	Start Cond	End Cond	Yrs Hold
2015	PR2	\$ 458,433	5	100	
2020	CRK	\$ 5,500	97	97	2
2037	R1	\$ 281,669	66.91	97	
2038	CRK	\$ 5,500	97	97	2
2054	R1	\$ 281,669	69.47	97	
2055	CRK	\$ 5,500	97	97	2

Figure 9.2: Graphical Representation of a Typical Life Cycle



For the purposes of a short to mid-term plan, considering the pavement as performing as a perpetual pavement does not pose a problem. The aggregate road base will deteriorate over time however, the time frame where that may be contributory to the road decline would be beyond 50 years. Condition data is collected regularly and monitoring and analysis would alert the municipality to changes that are occurring.

Figure 9.3: Annual Expenditures Budget to Maintain:

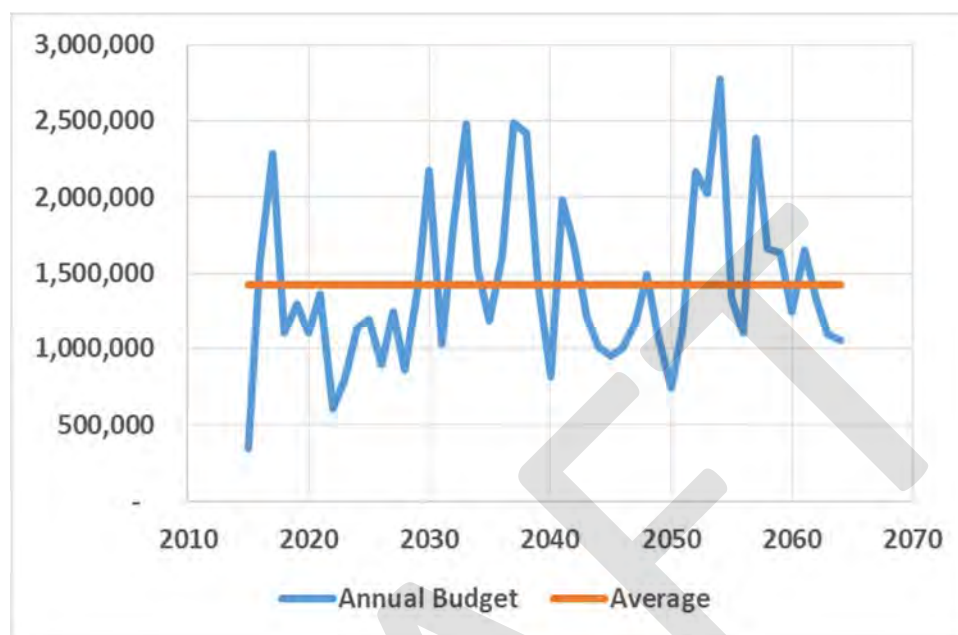


Figure 9.3 illustrates the typical effect on budget requirements by holding the condition of the system at a specified level. If the orange line represented the average annual expense, the budget years above that line would require debt financing or funding from reserves. Conversely, in those years where the funding requirement is less than the annual average then the unspent funds would accumulate in a reserve.

Deterioration curves developed by 4 Roads have been utilized for development of funding and prediction models, and based on our experience with a large cross-section of municipalities and resultant feedback, we believe that those deterioration profiles are representative. The models indicate that the overall condition of the road system will continue to increase over time to a point where the average physical condition will be in the mid 70's range. A physical condition beyond that level may be indicating an over-expenditure/inefficiency in the programming. An average physical condition above 70 would indicate that the average road only requires maintenance.

In a number of the models created for this project, all of the funding will not be spent each year once the average rises above 70. The deterioration curves that have been used consider an average/typical performance for the various road classes.

9.10 Record of Assumptions -Performance Modeling

9.10.1 Pavement Classification for Modeling

In order to develop budget recommendations, 4 Roads adds an additional classification of roads differentiated by surface type, roadside environment and traffic volume. It is anticipated that each road classification will deteriorate at a different rate. Differentiation by roadside environment within a

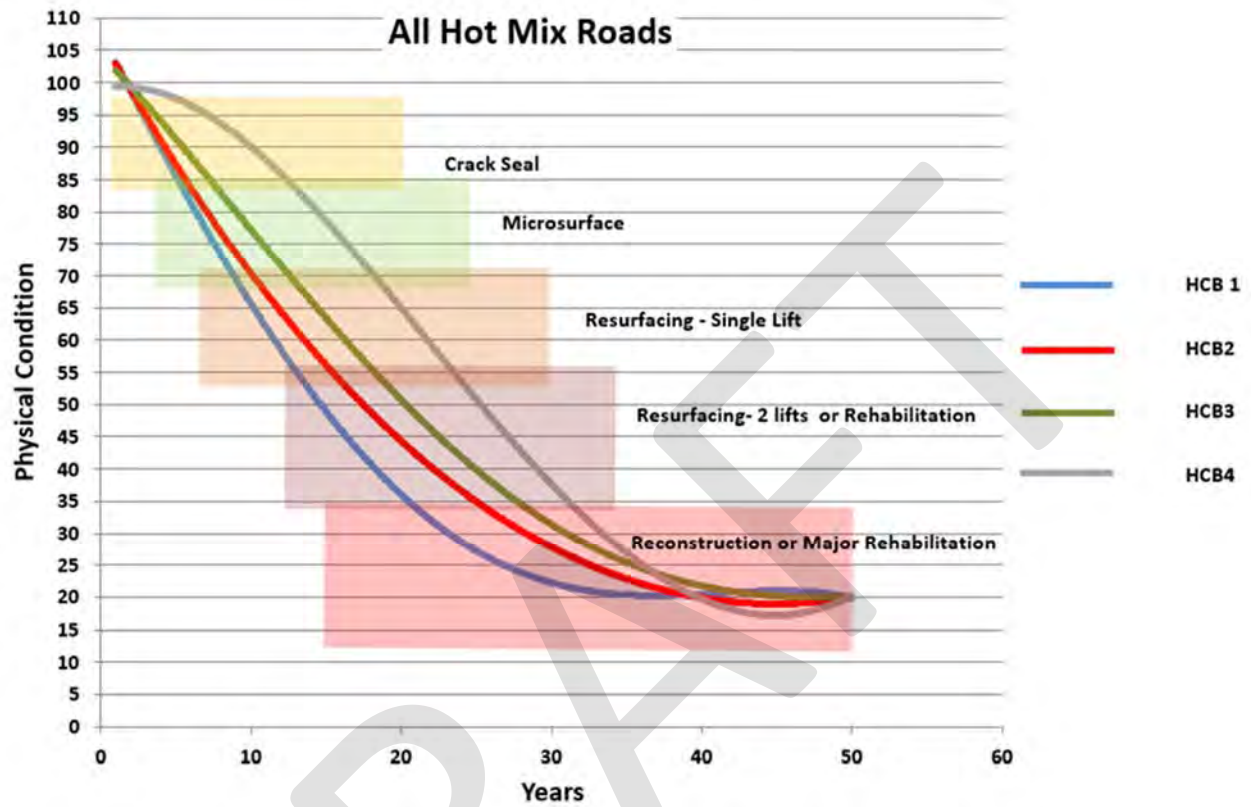
classification permits calculation of the different replacement costs to reflect the servicing and feature differences.

Table 9.5: Road Asset Classes

Asset Class	Subtype	Material	RDSE Env't	AADT Low	AADT High
A/C-	All	A/C	R	1	100,000
CM	All	C/M	R	1	3,000
CON	All	CON	R	1	100,000
GST1	All	G/S	R	1	10,000
HCB1	ART	HCB	R	20,000	100,000
HCB2	ART	HCB	R	10,000	20,000
HCB3	All	HCB	R	1,000	10,000
HCB4	All	HCB	R	1	1,000
ICB	All	ICB	S	1	3,000
LCB1	All	LCB	R	1	2,000

Figure 9.4 illustrates treatment selection by time and asset classes for hot mix roads. Typical treatments and/or improvements have been superimposed over the deterioration curves, to illustrate the general timelines for implementing the treatments. Other road asset classes have been treated similarly. An important concept to remember is that as a road deteriorates the cost of rehabilitation increases. The deterioration curves, improvement types, current unit costs and current condition ratings are essentially the assumptions used to develop budget and programming recommendations in this report. Appendix E provides detail on the deterioration curves for all road asset classes.

Figure 9.4: Treatment Selection vs. Condition



10 State of the Infrastructure – Roads, Recommendations

In addition to the budgetary recommendations, the following recommendations are provided for the management of the road inventory.

1. The information and budget recommendations included in this report should be used to further develop and evolve the corporate Asset Management Plan.
2. The Financial Plan has to be further developed to address the recommended funding requirements and the road system needs identified in this report.
3. The cycle for review of the road system should be continued, reviewing the entire system on a four year cycle.
4. Programming should be reviewed to ensure that resurfacing and preservation programs are a priority and are optimized.
5. Traffic counts should be updated and repeated on a regular basis. The counting should include the percentage of truck traffic.
6. Assets have to be rationalized in the WorkTech databases by creating different asset types.
7. A separate layer should be created in the GIS system to identify only the road assets. The GIS mapping should have a live link to the WorkTech database.
8. A separate layer should be created in the GIS system to identify road features such as safety devices.
9. Further analysis should be undertaken on the Gravel Road system, with respect to the potential for conversion to a hardtop surface.
10. Roadside brushing should be undertaken on a regular basis to ensure drainage in maintained and road life cycle optimized.

Appendix A:

Inventory Manual Methodology Overview

Asset Condition Rating Methodology

The provincial requirements for AMP's include asset condition assessment in accordance with standard engineering practices. The road section reviews follow the methodology of the Ministry of Transportation Inventory Manual for Municipal Roads, 1991.

Inventory Manual History

From the 1960's until the mid-1990's, the Ministry of Transportation (MTO) required municipalities to regularly update the condition ratings of their road systems in a number of key areas. The process was originally created by the MTO, as a means to distribute conditional funding, on an equitable basis, between municipalities. The reports were referred to as a 'Road Need Study' (RNS) and were required in order to receive a conditional grant to subsidize the municipal road programs. After the introduction in the 1960's by the MTO the methodology evolved into the current format by the late 1970's. The most current version of the Inventory Manual is dated 1991, and is the methodology used for this report. The practice was discontinued by a number of municipalities, when conditional funding for roads was eliminated in the mid 1990's.

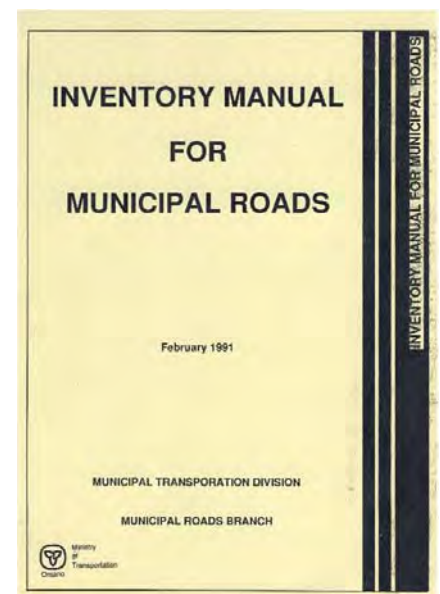
Inventory Manual Overview

The Inventory Manual Methodology is a sound, consistent, asset management practice that still works well today, and in view of the increasing demands on efficiency and asset management, represents a sound asset management that should be repeated on a cyclical basis. The road section review identifies the condition of each road asset by its time of need and recommended rehabilitation strategy.

The State of the Infrastructure Report summarizes the road system survey conducted or provided and provides an overview of the overall condition of the road system by road section, including such factors as structural adequacy, drainage, and surface condition. The study also provides an indication of apparent deficiencies in horizontal and vertical alignment elements, as per the Ministry of Transportation's manual, "Geometric Design Standards for Ontario Highways".

The report provides an overview of the physical and financial needs of the road system, which may be used for programming and budgeting. However, once a road section reaches the project design stage, further detailed review, investigation, and design will be required to address the specific requirements of the project.

Asset Management by its' very nature is holistic. Managing a road network based solely on pavement condition would be critically deficient in scope in terms of the information required to make an informed decision as to the improvements required on a road section.



The *Inventory Manual* offers a holistic review of each road section, developing a Time of Need (TON) or an Adequate rating in six areas that are critical to municipal decision making:

- Geometrics
- Surface Type
- Surface Width
- Capacity
- Structural Adequacy
- Drainage

Evaluations of each road section were completed generally in accordance with the MTO's *Inventory Manual for Municipal Roads* (1991). Data collected was entered directly into WorkTech's Asset Foundation software. Condition ratings, Time of Need, Priority Ratings, and associated costs were then calculated by the software, in accordance with the *Inventory Manual*. Unit costs for construction are typically provided by municipal staff.

Road sections should be reasonably consistent throughout their length, according to roadside environment, surface type, condition, cross section, speed limit, or a combination of these factors. As an example, section changes should occur as surface type, surface condition, cross-section, or speed limit changes.

The Condition Ratings, developed through the scoring in the *Inventory Manual*, classify roads as 'NOW', '1 to 5', or '6 to 10' year needs for reconstruction. The Time of Need is a prediction of the time until the road requires reconstruction, not the time frame until action is required. For example, a road may be categorized as a '6 to 10' year need with a resurfacing recommendation. This road should be resurfaced as soon as possible, to further defer the need to reconstruct.

Field data is obtained through a visual examination of the road system and includes: structural adequacy, level of service, maintenance demand, horizontal and vertical alignment, surface and shoulder width, surface condition, and drainage. The Condition Rating is calculated based upon a combination of other calculations and data.

To best utilize the database information and modern asset management concepts, it has to be understood that the Time of Need (TON) ratings are the estimated time before the road would require reconstruction. NOW needs are still roads that require reconstruction; however, it is not intended that '1 to 5' and '6 to 10' year needs are to be acted on in that timeframe. The '1 to 5' and '6 to 10' year needs are current candidates for resurfacing treatments that will elevate their structural status to 'ADEQ', and offer the greatest return on investment for a road authority(notwithstanding a drainage or capacity need, etc.).

‘NOW’ Needs

‘NOW’ needs represent the backlog of work required on the road system. A ‘NOW’ need is not necessarily the highest priority from asset management or return on investment perspectives. Construction improvements identified within this time period are representative of roads that have little or no service life left and are in poor condition. F Theoretically a resurfacing strategy is never a ‘NOW’ need, with the exceptions of a PR1 or PR2 treatment recommendation (Pulverize and resurface one or two lifts of asphalt) and where the surface type is inadequate for the traffic volume.

If a road with an improvement recommendation of “resurface” deteriorates too far, it becomes a ‘NOW’ construction need. A ‘NOW’ need rating may be triggered by substandard ratings in any of the Structural Adequacy, Surface Type, Surface Width, Capacity, Drainage, or Geometrics data fields.



‘1 to 5’ Year Needs

‘1 to 5’ Identifies road sections where reconstruction is anticipated within the next five years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road (depending on any other deficiencies), thus deferring the need to reconstruct.



'6 to 10' Year Needs

'6 to 10' Identifies road sections where reconstruction improvements are anticipated within six to ten years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road (depending on any other deficiencies), thus deferring the need to reconstruct.



'ADEQ'

An 'ADEQ' rating encompasses a wide range of conditions that include the following:

- Roads with a traffic volume of less than 50 vehicles per day will be deemed adequate, and deficiencies on those roads are to be corrected with the maintenance budgets
- Gravel Roads with a structural adequacy rating that is not a 'NOW' need (more than 25% distress) is adequate; there is no further differentiation by time period
- Roads that do not require improvement other than maintenance



INVENTORY MANUAL TREATMENTS

Table A.1: Road Improvement Types

Code	Description
R1	Basic Resurfacing
R2	Basic Resurfacing – Double Lift
RM	Major Resurfacing
PR1	Pulverizing and Resurfacing
PR2	Pulverizing and Resurfacing – Double Lift
BS	Tolerable standard for lower volume roads – Rural and Semi-Urban Cross sections only
RW	Resurface and Widen
REC	Reconstruction
RNS	Reconstruction Nominal Storm Sewers (Urban: no new sewer, adjust manholes, catch basins, add sub-drain, remove and replace curb and gutter, granular, and hot mix)
RSS	Reconstruction including Installation of Storm Sewers (New storm sewers and manholes in addition to the above)
NC	Proposed Road Construction
SRR	Storm Sewer Installation and Road Reinstatement
Micro*	Microsurfacing (Preservation Activity)
SST*	Application of a Single Surface Treatment
SSTplus*	Single Surface Treatment, Geometric Padding/Correction, Ditch improvements
DST*	Double Surface Treatment

*Additional Improvement Types not included in the Inventory Manual

Types of Improvements

For each Type of Improvement (**Item 104**), there are a number of specific road improvements that are included in the total cost relative to the Roadside Environment (**Item 32**) and the Design Class (**Item 105**). The computer will check a number of Items on the appraisal sheet in order to select the appropriate factors and cross section standards and then calculate the Bench Mark Cost. For example, a Resurfacing and Widening improvement coded under Item 104 is a significantly different road cross section and cost when applied to a rural road vs. an urban arterial. The computer will make all of the necessary checks to arrive at the recommended improvement cost.

Described in the following pages are the road improvements and associated construction activities costed for each Type of Improvement listed under Item 104. Please note, that the Codes (**CO**) – Carry

Over, **(SR)** – Spot Road, **(SI)** – Spot Intersection and **(SD)** – Spot Drainage are direct cost inputs and **are not** included in the Bench Mark Cost system.

(R1) - BASIC RESURFACING

(Single Lift of Hot Mix – 50 mm)

Rural and Semi-Urban Roads (Cross Section A)

- (a) Hot mix padding for 20% of area to be resurfaced
- (b) Single lift of hot mix (50 mm)
- (c) Granular material to raise shoulders to new surface grade

Urban Roads – Granular Base (Cross Section B-1)

– Concrete Base (Cross Section C-1)

- (a) Minor base repairs for 10% of area to be resurfaced
- (b) Hot mix padding for 20% of area to be resurfaced
- (c) Curb removal and replacement on both sides for 50% of section length
- (d) Planning 1.0m of existing pavement along both curbs
- (e) Adjust manholes and catch basins to new surface grade
- (f) Single lift of hot mix (50 mm)

(R2) - BASIC RESURFACING

(Double Lift of Hot Mix – 100 mm)

Rural and Semi-Urban Roads (Cross Section A)

- (a) Hot mix padding for 20% of area to be resurfaced
- (b) Double lift of hot mix (100 mm)
- (c) Granular materials to raise shoulder to new surface grade

Urban Roads – Granular Base (Cross Section B-1)

– Concrete Base (Cross Section C-1)

- (a) Minor base repairs for 10% of area to be resurfaced
- (b) Hot mix padding for 20% of area to be resurfaced
- (c) Curb removal and replacement on both sides for 50% of section length
- (d) Planning 1.0 m of existing pavement along both curbs
- (e) Adjust manholes and catch basins to new surface grade
- (f) Double lift of hot mix (100 mm)

(RM) - MAJOR RESURFACING

(Double Lift of Hot Mix – 100 mm)

Urban Roads (Arterials and Collectors) – Granular Base (Cross Section B-1)

– Concrete Base (Cross Section C-1)

- (a) Base repairs for 50% of area to be resurfaced
- (b) Planning for 50% of area to be resurfaced
- (c) Curb removal and replacement on both sides for 50% of section length
- (d) Adjust manholes and catch basins to new surface grade
- (e) Double lift of hot mix (100 mm)

(PR1) - PULVERIZING AND RESURFACING

(Single lift of Hot Mix – 50 mm)

Rural Roads (Cross Section A)

- (a) Pulverize existing hard top surface
- (b) Single lift of hot mix (50 mm)
- (c) Granular material to raise shoulders to new surface grade

(PR2) - PULVERIZING AND RESURFACING (Double Lift of Hot Mix – 100 mm)

Rural Roads (Cross Section A)

- (a) Pulverize existing hard top surface
- (b) Double lift of hot mix (100 mm)
- (c) Granular material to raise shoulders to new surface grade

(BS) - BASE AND SURFACE

Rural Roads – Tolerable Standard (50 to 100 AADT) (Cross Section D)

- (a) Granular material for base
- (b) Granular material for loose top surface
- (c) Minimal shoulder widening
- (d) Minor Ditching

Rural Roads – Design Standard (200 to 399 AADT) (Cross Section D)

- (a) Placing granular material
- (b) Minimal shoulder widening
- (c) Double surface treatment
- (d) Minor ditching

Rural Roads – Design Standard (400 plus AADT) (Cross Section D)
and

Semi-Urban Roads – Design Standard (Cross Section D)

- (a) Placing granular material
- (b) Minimal shoulder widening
- (c) Hot mix (50/100 mm, see table F-1)
- (d) Minor ditching

(RW) - RESURFACE AND WIDEN

Rural Roads – Tolerable Standard (50 to 199 AADT) (Cross Section E)

- (a) Excavating for widening
- (b) Ditching and side culvert replacement
- (c) Granular material for widening base
- (d) Granular material for loose top surface

Rural Roads – Design Standard (200 to 399 AADT) (Cross Section E)

- (a) Excavating for widening
- (b) Ditching and side culvert replacement
- (c) Granular material for widening base
- (d) Double surface treatment

Rural Road – Design Standard (400 plus AADT) (Cross Section E)
and

Semi-Urban Roads – Design Standard (Cross Section E)

- (a) Excavating for widening
- (b) Ditching and side culvert replacement
- (c) Granular material for widening base
- (d) Base Course of hot mix for widening
- (e) Hot mix Padding for 20% of existing surface area
- (f) Single lift of hot mix (50 mm)

Urban Roads – Design Standard – Granular Base (Cross Section F)

- (a) Excavating for widening
- (b) Curb and Gutter removal
- (c) Catch Basin removal
- (d) Base repair 10% of existing surface area
- (e) Granular material for widening
- (f) Place catch basins and leads
- (g) New curb and gutter
- (h) New sub-drains
- (i) Base course of hot mix for widening
- (j) Hot mix padding for 20% of existing surface area
- (k) Adjust manholes to new surface grade
- (l) Single lift of hot mix (50 mm) curb to curb

Urban Roads – Design Standard – Concrete Base (Cross section G)

- (a) Excavating for widening
- (b) Curb and gutter removal
- (c) Catch basin removal
- (d) Base repair for 10% of existing surface area
- (e) Place new catch basins and leads
- (f) Granular material for widening
- (g) Concrete base for widening
- (h) New curb and gutter
- (i) New subdrains
- (j) Base course of hot mix for widening
- (k) Hot mix padding for 20% of existing surface area
- (l) Adjust manholes to new surface grade
- (m) Single lift of hot mix (50 mm) curb to curb

(REC) - RECONSTRUCTION (RURAL and SEMI-URBAN)

Rural Roads – Design Standard (200 to 399 AADT) (Cross Section H)

- (a) Excavate base material
- (b) Ditching and side culvert replacement
- (c) Grading
- (d) Granular material
- (e) Double surface treatment

Rural Roads – Design Standard (400 plus AADT) Cross Section H)

and

Semi-Urban Roads – Design Standard (Cross Section H)

- (a) Excavate base material
- (b) Ditching and side culvert replacement
- (c) Grading
- (d) Granular material
- (e) Hot mix (50/100 mm, see Table F-1)

Rural and Semi-Urban Roads – Design Standard (Concrete Surface)

(Cross Section P)

- (a) Excavate base material
- (b) Ditching and side culvert replacement
- (c) Grading
- (d) Granular Material
- (e) Concrete base and surface

(RNS) - RECONSTRUCTION NOMINAL STORM SEWERS (URBAN)

Urban Roads – Design Standard – Granular Base (Cross Section I)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Granular base
- (d) New curb and gutter
- (e) New sub-drains
- (f) Adjust manholes and catch basins
- (g) Hot mix (50/100 mm, see Table F-1)

Urban Roads – Design Standard – Concrete Base (Cross Section J)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Granular base
- (d) Concrete base
- (e) New curb and gutter
- (f) New sub-drains
- (g) Adjust manholes and catch basins
- (h) Hot mix (50/100 mm, see Table H-5)

Urban Roads – Design Standard – Concrete Surface (Cross Section O)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Granular base
- (d) Concrete base and surface
- (e) New curb and gutter
- (f) New sub-drains
- (g) Adjust manholes and catch basins

(RSS) - RECONSTRUCTION INCLUDING INSTALLATION OF STORM SEWERS

Urban Roads – Design Standard – Granular Base (Cross Section K)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Storm sewer removal
- (d) Manhole and Catch Basin removal including leads
- (e) New storm sewers
- (f) New manhole and catch basins including leads
- (g) New curb and gutter
- (h) New sub-drains
- (i) Granular base
- (j) Hot mix (100/150 mm, see Table F-1)

Urban Roads – Design Standard – Concrete Base (Cross Section L)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Storm sewer removal
- (d) Manhole and Catch Basin removal including leads
- (e) New storm sewers
- (f) New manhole and catch basins including leads
- (g) New curb and gutter
- (h) New sub-drains
- (i) Granular base
- (j) Concrete base
- (k) Hot mix (50/100 mm, see Table F-1)

Urban Roads – Design Standard – Concrete Surface (Cross Section Q)

- (a) Excavate base material
- (b) Curb and gutter removal
- (c) Storm sewer removal
- (d) Manhole and Catch Basin removal including leads
- (e) New storm sewers
- (f) New manhole and catch basins including leads
- (g) New curb and gutter
- (h) New sub-drains
- (i) Granular base
- (j) Concrete base and surface

(NC) - PROPOSED ROAD CONSTRUCTION

Rural Roads – Design Standard (200 – 399 AADT) (Cross Section H)

- (a) Grading
- (b) Ditching and cross culverts
- (c) Granular base
- (d) Double surface treatment

Rural Roads – Design Standard (400 plus AADT) (Cross Section H)

- (a) Grading
- (b) Ditching and cross culverts
- (c) Granular base
- (d) Hot mix (50.100 mm, see Table F-1)

Semi-Urban Roads

New Construction does not apply to semi-urban roads as there is no existing frontage development.

Urban Roads – Design Standard – Granular Base (Cross Section K)

- (a) Grading
- (b) Storm Sewers
- (c) Manholes and catch basins including leads
- (d) Curb and gutter
- (e) Sub-drains
- (f) Granular base
- (g) Hot mix (100 mm/150 mm, see Table F-1)

Urban Roads – Design Standard – Concrete Base (Cross Section L)

- (a) Grading
- (b) Storm Sewers
- (c) Manholes and catch basins including leads
- (d) Curb and gutter
- (e) Sub-drains
- (f) Granular base
- (g) Concrete base
- (h) Hot mix (50 mm/100 mm , see Table F-1)

(SRR) - STORM SEWER INSTALLATION AND ROAD REINSTATEMENT (URBAN AND SEMI-URBAN)

Urban and Semi-Urban Roads – Granular Base (Cross Section M)

- (a) Trenching and removal of existing storm sewers
- (b) New manholes and adjust catch basin leads
- (c) New storm sewer including bedding
- (d) Granular materials in trench
- (e) Hot mix to restore surface grade (100/150 mm, see Table F-1)

Urban and Semi-Urban Roads – Concrete Base (Cross Section N)

- (a) Trenching and removal of existing storm sewers
- (b) New manholes and adjust catch basin leads
- (c) New storm sewers including bedding
- (d) Granular material in trench
- (e) Concrete base for trenched area
- (f) Hot mix to restore surface grade (50/100 mm, See Table F-1)

Urban and Semi-Urban Roads – Concrete Surface (Cross Section R)

- (a) Trenching and removal of existing storm sewers
- (b) New manholes and adjust catch basin leads
- (c) New storm sewers including bedding
- (d) Granular material in trench
- (e) Concrete base and surface for trenched area

(MICRO) SINGLE LIFT OF MICROSURFACING

Urban, Semi-Urban and Rural Roads with a HCB (High Class Bituminous) surface type

- (a) Unit cost per square metre of Microsurfacing

(SST) SINGLE LIFT OF SURFACE TREATMENT

Urban, Semi-Urban and Rural Roads with a LCB (Low Class Bituminous) surface type

- (a) Unit cost per square metre of Single Surface Treatment

(SSTplus) SINGLE LIFT OF SURFACE TREATMENT, GEOMETRIC CORRECTION DITCHING IMPROVEMENTS

Semi-Urban and Rural Roads with a LCB (Low Class Bituminous) surface type

- (a) Unit cost per square metre of Single Surface Treatment
- (b) 20% Surface area padding to 50mm to correct geometric deficiencies
- (c) Earth Excavation allowance to provide for minor ditch improvements and berm removal

(DST) DOUBLE LIFT OF SURFACE TREATMENT

Urban, Semi-Urban and Rural Roads with a LCB (Low Class Bituminous) surface type

(a) Unit cost per square metre of Double Surface Treatment

DRAFT

Appendix B

Pavement Structure and Defects

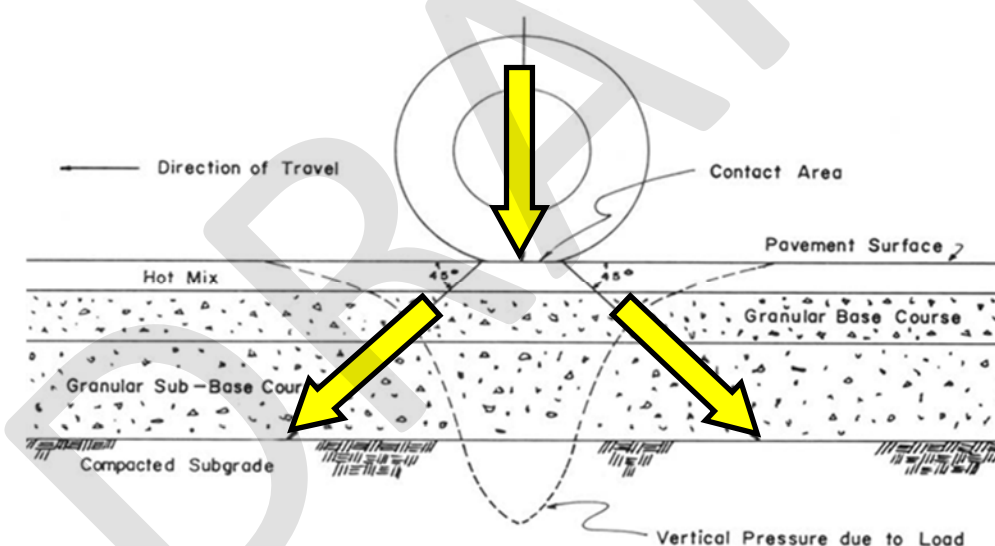
Pavement Structure

To assist in understanding the content and methodology of the report, the following sections provide an overview of how flexible and rigid pavement structures are designed and function. The majority of municipal roads would be described as having a flexible pavement structure. Hot mix asphalt, surface treatment, and gravel road surfaces are typical flexible pavement road structures. Other pavement structure types include rigid and composite, and are more typically found on 400 series highways, or on arterial roads of larger urban centres.

Flexible Pavement Road Structure

Load is applied to the pavement structure, and ultimately to the native sub-grade, via wheel loads of vehicles. The pavement structure between the native sub-grade and the load application point has to be designed such that the load that is transmitted to the sub-grade is not greater than the sub-grade's ability to support the load. The figure below shows a typical flexible pavement structure and how applied load dissipates.

Load Distribution through Pavement Structure



Depth Below Surface	Stress (psi)	Stress (Kpa)
At Surface	90	620.50
8" (200 mm) Below	11	75.84
11" (275 mm) Below	7	48.26
16" (400 mm) Below	4	27.58

Surface materials experience the highest loading at the point of contact with the vehicle's tire. Radial truck tires, running inflated from 110 psi to 120 psi, can have an impact 20 times higher at the surface, than at the compacted sub-grade. The loading actually occurs in three dimensions, in a conical fashion, dissipating both vertically and horizontally as it passes through the pavement structure. Loading

decreases exponentially as it passes through the road structure. Therefore, materials of lesser strength or lesser quality can be used deeper in the road structure.

The closer the road building materials are placed to the surface of the road, the higher the quality required. Similarly, the poorer the sub-grade or native material, the deeper/stronger the road structure has to be to carry the same loads.

Traffic counts, and the percentage of trucks, are critical to structural design of the pavement. Depending upon the source, the effect of a single truck on the pavement structure can be equivalent to 2,000 to 8,000 passenger cars. The effect of farm machinery would be very similar to that of heavy trucks. However, the Highway Traffic does permit certain types of farm machinery and equipment to use the roads even during half load season, so this is an additional consideration when designing rural roads.

Pavement evaluation involves a review of each road section and an assessment of the type and extent of the distress(es) observed. Treatment recommendations are predicated by whether the cause of the major distress(es) is structural or non-structural.

Flexible pavements will have age-related distresses and wearing such as thermal cracking and oxidation. These distresses are non-structural; however, once a crack develops and water enters the pavement structure, deterioration will accelerate. Poor construction practices, quality control, or materials may produce other non-structural surface defects, such as segregation and raveling, which will also result in a reduced life expectancy of the surface asphalt.

Fatigue cracking indicates structural failure and can manifest itself in many forms, such as wheel path, alligator, and edge cracking. It can be localized or throughout a road section. When roads that have exhibited fatigue cracking are rehabilitated, there should be particular attention paid to the rehabilitation treatment, to ensure that the upgraded facility has sufficient structure.

Wheelpath Fatigue Cracking



Flexible Pavement Road Structure Design

There are a number of flexible pavement structural design methodologies and associated software. The simplest way to describe structural design may be the Granular Base Equivalency (GBE) Methodology. This GBE methodology is still used in Ontario, by a number of agencies, and is frequently used as a cross-check where more sophisticated analysis has been undertaken.

The measurement is unit-less and relates to the structural value of one millimetre of Granular 'A' material. The relationship of the typical road building materials is expressed in either of the two following ways:

- **1 mm of HMA = 2 mm of Granular A = 3 mm of Granular B**

Or

- **HMA = 2, Granular A = 1, Granular B = 0.67**

To gain some perspective on what this means in terms of typical construction activities, the following table indicates a typical subdivision road construction as expressed in GBE.

Granular Base Equivalency

Material	Example 1 Depth	Granular Base Equivalency	Example 2 Depth	Granular Base Equivalency
Hot Mix Asphalt (HMA)	100	200	150	300
Granular A	150	150	300	300
Granular B	300	200	0	0
TOTAL	550	550	450	600

When reconstruction and rehabilitation projects are undertaken, and use of alternate materials and/or road structure is contemplated, the GBE concept is important to bear in mind, as different treatments such as Expanded Asphalt and Cold in Place recycling also have a structural value. For design purposes, it may be prudent to use a conservative equivalency of 1.5 for these products (although, some sources indicate GBE's of up to 1.8).

As an example, if a 200 mm pavement is replaced with 150 mm of Expanded Asphalt or Cold in Place Recycling, with a 50 mm overlay of Hot Mix asphalt, a pavement structure with a GBE of 400 is replaced by a pavement structure with a GBE of 325; a significant difference. Premature failure will be the result of an under-designed pavement structure, wasting resources and available funding.

The purpose of this example is to illustrate the different structural values that products have. Expanded Asphalt and Cold in Place recycling are both excellent products to rehabilitate pavement structures.

The MTO's *Pavement Design and Rehabilitation Manual* is an excellent resource for use in pavement structure design and rehabilitation, and is available from the online MTO Catalog.

Thin Lift Pavements

Hot mix asphalt mixes are designed in Ontario either by the Marshall Method or the Superpave Method. Through time, this has resulted in a number of commonly used mixes that are typically sorted by size. One of the parameters used to describe that sizing is the Nominal Maximum Aggregate Size (NMAS).

In the Marshall Mix Method, typical mix designations are HL1, HL2, HL3, HL4, and HL8. In the Superpave mix design methodology, mixes are designated by the NMAS.

The following table identifies the NMAS for the more commonly used mixes, and indicates recommended minimum lift thicknesses for them.

Recommended Minimum Lift Thicknesses

Mix Type	NMAS (mm)	Lift Thickness Range (mm)
SP 9.5	9.5	30 to 40
SP 12.5	12.5	40 to 50
SP 19	19.0	60 to 80
HL3	13.2	40 to 55
HL4	16.0	50 to 65
HL8	19.0	60 to 80

Thin Lift Pavement



Rigid Pavement Structure

Rigid Pavements are constructed of concrete, or concrete with an asphalt wearing surface. The fundamental difference between a flexible pavement and a rigid pavement is the method in which the load is transferred. Whereas the flexible pavement disperses load through the pavement structure in a conical fashion, with a higher point load directly beneath the loading point, the rigid pavement structure distributes that load in a beam-like fashion, more evenly across the pavement structure. Rigid pavements may have an exposed concrete wearing surface, or they may be covered with an asphaltic concrete wearing surface.

The resulting rigid pavement structure is usually thinner overall, when compared to a flexible pavement, designed to accommodate the same traffic loading. This does not necessarily translate into a reduced cost of construction. Any comparison of costs between flexible and rigid pavements should be on a life cycle basis, for the most accurate assessment.

Older concrete pavements were prone to failure at joints, as load transfer caused a slight movement in the concrete slab, and with the intrusion of water, a structural failure. Newer concrete pavements are designed with improved load transfer technology.

Pavement Distresses and Treatment Selection

Treatment recommendation is dependent upon the condition of the road section at the time of the review.

Treatment Selection – Critical Area Analysis

When using the Inventory Manual methodology all of the ‘holistic’ needs are considered in the recommendation. For example, a road may appear to require only a resurfacing, however, when the other critical areas are reviewed, there may be a capacity problem which would then result in a recommendation to resurface and widen (RW) that would address both the pavement condition and the need for additional lanes. Another example would be where the pavement is exhibiting some type of distress but there is also poor drainage. The recommendation would then be to reconstruct (REC if rural, RSS if urban).

Treatment Selection for Non-Structural Rehabilitation

Resurfacing recommendations are predicated upon the type and extent of distress noted. For example, all pavements will develop thermal/transverse cracking as they age. As the age of the pavement increases, the frequency of the cracking increases. If the spacing of the cracks is still greater than 10m, then the R1 – resurface with one lift of asphalt – treatment will typically be sufficient to restore the road as the treatment provides for overlay and base asphalt repair. However, if the frequency of transverse cracking, which may have become transverse alligator cracking if left unattended too long, then the recommendation will be more extensive, such as a PR2- Pulverize and resurface with 2 lifts of asphalt. The following illustrates transverse cracking.

Transverse /Thermal cracking



Treatment Selection for Structural Rehabilitation

Road sections exhibiting structural failure such as fatigue cracking require a more extensive rehabilitation to restore the performance of the road section. In simple terms, placing a single lift of asphalt over structurally failed asphalt will guarantee the same failure in a very short time period. Unless the single lift overlay is placed knowingly as a holding strategy, it should be avoided on structurally deficient pavements. For pavements that have failed structurally or have too much transverse cracking, the recommendation is typically PR2 as a minimum provided the drainage is adequate or requires only minor improvement.

Reflective Cracking

Paving over an active crack(s) will result in a crack(s) in the same location with 2 to 3 years. As a rule of thumb, the crack will migrate through at approximately 25mm per year. Therefore it would be anticipated that if a 50mm overlay is placed, then the cracking would reappear in approximately 2 years. This is not an efficient usage of available funding.

Structurally Failed Pavement



The above figure illustrates a pavement that has failed both structurally and has very frequent severe transverse cracks. Placement of a 50mm overlay over this type of pavement condition will result in rapid failure is not recommended. The figure below illustrates a newer pavement that already have very frequent transverse cracks appearing likely the result of paving over a failed pavement. The first transverse crack generally occurs in approximately 4 to 5 years and the cracks are 40m to 50m or more apart.

Reflective Transverse Cracking on Newer Pavement



Appendix C

Gravel Road Conversion

Gravel Road Conversion

Gravel Road Maintenance Overview

Gravel roads form a component of the road asset group for the municipality and should be managed as any other asset. Gravel roads tend to be the 'forgotten' asset.

One of the difficulties in determining the deterioration of a gravel road is that the wearing surface and the granular layers are one and the same, so the extent of deterioration may not be as obvious until the deterioration is significant. Appropriate gravel road maintenance can be deceptively expensive and frequently, budget analysis proves that the per-kilometre cost of gravel road maintenance is greater than the per-kilometre cost for hard top maintenance. This is further exacerbated as traffic volume on a gravel road increases.

Like other road assets, gravel roads have lifecycle maintenance and rehabilitation costs that should be addressed as part of any asset management plan. Life cycle costs include regular addition of gravel, dust control, grading and labour. Grading will typically include equipment costs for a motor grader. A Net Present Value (NPV) assessment comparing life cycle of a gravel surface vs. hard top surface would be a key element in determining the merit of converting a gravel road to hard top.

NPV Analysis Components

Process

Given the above noted, a Net Present Value (NPV) assessment of the gravel road, in comparison with a surface treated road section or other hard top surface, should be undertaken as it may be more cost-effective to convert/upgrade the gravel road to a surface treated road.

Road agencies in both Canada and the United States, have conducted studies that have generally indicated that, dependent upon local unit costs, gravel road conversion to hardtop, can be a cost-effective strategy. One source indicates that this may be effective management for roads with traffic volumes as low as 100 AADT.

It is preferable to address the cost comparisons over a period of time where the life cycles may conclude concurrently. For instance, if the gravel maintenance is on a three year basis and the surface treatment is seven, then the cycles coincide at 21 years. Total life cycle cost over that time period should be considered.

Gravel

This report provides an annual cost for maintenance costs for 75mm of additional gravel to be added every three years and does not include regular grading or dust control. This was a typical standard that was used in the past by many municipalities. Due to the natural life cycle wear and tear, maintenance and winter control activities, gravel roads require additional gravel on a regular basis to ensure continuing performance.

Equipment

As part of a holistic review of service delivery, consideration should be given to the equipment hourly rates and replacement. Accurate hourly rates are required to provide a true assessment. Equipment rates should include capital depreciation and operating costs.

One of the factors driving the overall cost is the equipment that is required to properly maintain a gravel road system- particularly graders. Part of the gravel road conversion analysis should include:

- Has the hourly rate for the equipment been calculated properly to include capital depreciation and maintenance costs?
A new grader will cost \$250,000 to \$300,000. At a 20-year life span, there is \$12,500 to \$15,000 in capital depreciation, alone, on the grader. What is the current rate for the grader? If there is not full cost recovery on the grader hourly rate, then the cost for gravel road maintenance is not accurate either.
- Is the grader used for any other purpose/activities?
- What is the length of the gravel road system? A commonly used length of gravel roads used to justify a grader is 75 kilometres.
- How many hours per year is the grader operated?
- Are there other pieces of equipment that could be used or rented to maintain the gravel roads?

Surface Treatment or other hard top

Whatever other surface type is being compared with the gravel road surface should include the same factors as for gravel so there is a 1:1 comparison.

Additional Factors and Considerations

If the argument for conversion may be made from a financial perspective, then there are additional factors that should be considered from physical and risk perspectives. Other factors for consideration include:

- Platform width
- Drainage
- Structural Adequacy
- Traffic Volume and Type

The figure below provides a graphical illustration of the different factors and decision flow that may be considered in developing a case to convert a gravel road to hard top.

Appendix D

Potential Substandard Alignment

Geometric Needs

Current Inspection - Rural Sections w/Curve Needs Only

ID	Street Name	From Description	To Description	Length	Rsde. Env.	AADT	Limit	Op. Speed	TON	H.Curve	H. SSD	V. Curve	V.SSD
RD-2001	Tbm/Meaf TI	4 Sideroad	7 Sideroad	1.800	R	300	80	80	ADEQ	0	0	0	2
RD-2003	Christie Beach Rd.	Highway 26	North End	1.500	R	300	80	70	ADEQ	1	0	1	1
RD-2011	3rd Line	Meaf/GH TL	4 Sideroad	1.850	R	95	80	70	ADEQ	1	0	0	5
RD-2013	3rd Line	7 Sideroad	10 Sideroad	1.850	R	322	80	70	ADEQ	0	0	4	0
RD-2015	3rd Line	Holmcrest Ln.	Highway 26	1.100	R	750	80	60	NOW	3	0	1	0
RD-2032	7Th Line	4 Sideroad	7 Sideroad	1.800	R	581	80	80	ADEQ	0	0	1	0
RD-2034	7Th Line	10 Sideroad	13 Sideroad	1.800	R	681	80	80	ADEQ	1	0	0	2
RD-2056	Scotch Mountain Rd.	Grey Rd 12	Grey Rd 12	1.000	R	54	80	0	ADEQ	2	0	0	1
RD-2057	11Th Line	Meaf/GH TL	4 Sideroad	1.800	R	122	80	80	ADEQ	0	0	0	1
RD-2058	11Th Line	4 Sideroad	8 Sideroad	2.400	R	124	80	80	ADEQ	0	0	1	0
RD-2059	11th Line	8 Sideroad	10 Sideroad	1.100	R	211	80	0	ADEQ	0	0	0	1
RD-2067	12Th Line	7 Sideroad	8 Sideroad	0.600	R	20	80	80	ADEQ	0	0	0	2
RD-2068	12Th Line	8 Sideroad	10 Sideroad	1.200	R	30	80	0	ADEQ	0	0	0	2
RD-2069	12Th Line	10 Sideroad	13 Sideroad	1.000	R	100	80	60	NOW	6	0	0	2
RD-2071	12th Line	13 Sideroad	16 Sideroad	1.800	R	73	80	75	ADEQ	2	0	2	2
RD-2073	Meaf/Gh TI	TBM/MEAF TL	West end to Bridge	0.600	R	50	80	60	NOW	0	0	0	1
RD-2075	Meaf/Gh TI	7th Line	Grey Road 7	2.700	R	200	80	80	ADEQ	0	0	0	6
RD-2076	Meaf/Gh TI	Grey Road 12	7th Line	2.700	R	300	80	80	ADEQ	0	0	1	5
RD-2077	Meaf/Gh TI	11th Line	Grey Road 12	2.800	R	50	80	80	ADEQ	1	0	0	2
RD-2085	4 Sideroad	3rd Line	Foster St.	1.310	R	587	60	60	ADEQ	0	0	0	2
RD-2087	4 Sideroad	7th Line	Grey Road 7	2.700	R	208	80	80	ADEQ	0	0	0	5
RD-2088	4 Sideroad	West of 7th Line	7th Line	0.200	R	20	80	80	ADEQ	0	0	0	1
RD-2089	4 Sideroad	11th Line	Grey Road 12	2.800	R	50	80	70	ADEQ	0	0	2	8
RD-2090	4 Sideroad	St.Vin/Syd TL	11th Line	2.800	R	101	80	70	ADEQ	1	0	2	3
RD-2092	7 Sideroad	Collingview Cres.	Meaf/BM TL	0.900	R	142	80	70	ADEQ	0	0	0	2
RD-2094	7 Sideroad	W. of Collingview Cr.	Collingview Cr.	0.200	R	10	80	80	ADEQ	0	0	0	1
RD-2095	7 Sideroad	3rd Line	East Limit	0.200	R	30	80	40	NOW	1	0	0	2
RD-2098	7 Sideroad	7th Line	Grey Road 7	2.700	R	164	80	80	ADEQ	0	0	0	5
RD-2099	7 Sideroad	Grey Road 12	East to End	0.800	R	20	80	65	ADEQ	0	0	2	2
RD-2100-1	Sideroad 6	1St Concession	St. Vincent - Sydenham Townline	1.400	R	25	80	65	ADEQ	1	0	0	3
RD-2103	8 Sideroad	12th Line	11th Line	1.300	R	20	80	80	ADEQ	0	0	1	0
RD-2111	John St.	Grey Road 7	Penny Lane	0.500	R	202	80	65	ADEQ	1	0	0	0
RD-2115	10 Sideroad	7th Line	East To End	1.150	R	80	80	70	ADEQ	2	0	0	2
RD-2116	10 Sideroad	Grey Road 12	7th Line	2.700	R	136	80	65	ADEQ	0	0	1	5
RD-2117	10 Sideroad	11th Line	Grey Road 12	2.700	R	541	80	80	ADEQ	0	0	0	3
RD-2118	10 Sideroad	12th Line	11th Line	2.700	R	400	80	0	ADEQ	0	0	0	2
RD-2119	Gerald Shortt Parkway	St.Vin/Syd TL	12th Line	1.100	R	537	80	80	ADEQ	1	0	0	1
RD-2121	Muir St.	Grey Road 7	Highway 26	0.750	R	1,000	80	80	ADEQ	1	0	0	0
RD-2135	13 Sideroad	7th Line	East to End	0.200	R	20	80	80	ADEQ	0	0	0	1
RD-2136-1	13 Sideroad	Grey Road 12	Bridge	1.000	R	51	80	80	ADEQ	0	0	0	1
RD-2136-2	13 Sideroad	Bridge	1.1km East of Bridge	1.100	R	51	80	80	ADEQ	0	0	0	3

Geometric Needs

Current Inspection - Rural Sections w/Curve Needs Only

ID	Street Name	From Description	To Description	Length	Rsde. Env.	AADT	Limit	Op. Speed	TON	H.Curve	H. SSD	V. Curve	V.SSD
RD-2137	13 Sideroad	11th Line	Grey Road 12	1.600	R	10	80	80	ADEQ	1	0	0	1
RD-2141	16 Sideroad	12th Line	11th Line	1.400	R	127	80	80	ADEQ	0	0	1	1
RD-2142	16 Sideroad	1km West of 12th Line	12th Line	1.000	R	30	80	65	ADEQ	0	0	1	2
RD-2150	22 Sideroad	Grey Road 112	1.3km East of Grey Road 112	1.300	R	158	80	80	ADEQ	0	0	0	1
RD-2150-1	22 Sideroad	1.3km East of Grey Road 112	7Th Line	0.500	R	158	80	80	ADEQ	0	0	0	1
RD-2151	22 Sideroad	11th Line	to East Limit	1.100	R	50	80	80	ADEQ	0	0	0	3
RD-2154	25 Sideroad	Grey Road 112	7th Line	2.700	R	102	80	60	NOW	4	0	1	2
RD-2155-2	25 Sideroad	1.0km West of Grey Road 112	Grey Road 112	1.000	R	100	80	65	ADEQ	3	0	0	0
RD-3001	Syd/St.Vin Tl	Syd/Holl TL	Sideroad 3	2.800	R	100	80	60	NOW	2	0	1	4
RD-3002	Syd/St.Vin Tl	Sideroad 3	Sideroad 6	1.900	R	100	80	70	ADEQ	1	0	1	3
RD-3003	Syd/St.Vin Tl	Sideroad 6	Gerald Shortt Parkway	1.900	R	100	80	75	ADEQ	0	0	0	2
RD-3006	St. Vincent - Sydenham Townline	Hwy. 26	1.8km North of Hwy. 26	1.800	R	100	80	80	ADEQ	0	0	1	1
RD-3007	Syd/St.Vin Townline	1.8km North of Hwy. 26	Sideroad 24	1.700	R	100	80	80	ADEQ	0	0	0	2
RD-3008	St. Vincent - Sydenham Townline	Sideroad 24	Sideroad 27	2.200	R	20	80	60	NOW	3	0	0	1
RD-3011	Harbour Dr.	North End	Syd/Lakeshore Dr.	2.150	R	50	80	80	ADEQ	1	0	0	1
RD-3016	1St Concession	Sideroad 3	Sideroad 6	2.000	R	100	80	70	ADEQ	0	0	1	2
RD-3017	1st Concession	Sideroad 6	10 Sideroad	1.700	R	100	80	80	ADEQ	0	0	2	0
RD-3018	2nd Concession S.	Syd/Holl TL	Grey Road 29	1.800	R	100	80	75	ADEQ	0	0	2	1
RD-3019	2Nd Concession S.	Grey Road 18	North End	1.550	R	40	80	70	ADEQ	0	0	1	2
RD-3023	2Nd Concession N.	Sideroad 24	Sideroad 27	1.860	R	100	80	80	ADEQ	0	0	0	1
RD-3025	2Nd Concession N.	Sideroad 30	Sideroad 8	2.100	R	100	80	75	ADEQ	2	0	0	2
RD-3026	Side Road 8	2nd Concession N.	100m South of Sydenham-Lakeshore Drive	0.800	R	100	80	75	ADEQ	1	0	0	2
RD-3027	Sideroad 8	Sydenham-Lakeshore Drive	Concession 'B'	1.000	R	100	80	80	ADEQ	1	0	0	3
RD-3028	Queen's Bush Rd.	Concession 'B'	Tee Junction	1.300	R	50	80	70	ADEQ	2	0	1	0
RD-3030	Kilmanjaro Ln.	Syd/Lakeshore Dr.	Concession A	1.900	R	10	80	65	ADEQ	0	0	0	1
RD-3031	4Th Concession S.	Syd/Holl TL	Sideroad 3	1.850	R	100	80	80	ADEQ	0	0	0	1
RD-3033	4Th Concession S.	Sideroad 6	Grey Road 18	1.850	R	100	80	80	ADEQ	0	0	0	1
RD-3035	4Th Concession N.	Highway 26	Sideroad 15	1.840	R	100	80	80	ADEQ	0	0	0	2
RD-3038	Irish Block Rd.	Sideroad 24	Sideroad 27	1.800	R	150	80	80	ADEQ	0	0	0	1
RD-3040	5th Concession	Sideroad 15	South To End	1.300	R	50	80	50	NOW	1	0	0	3
RD-3041	5th Concession	Highway 26	Sideroad 15	1.300	R	100	80	80	ADEQ	2	0	0	0
RD-3042	6Th Concession S.	Syd/Holl TL	Sideroad 3	1.800	R	100	80	75	ADEQ	0	0	0	2
RD-3048	6th Concession N.	Sideroad 22	Sideroad 24	1.850	R	50	80	80	ADEQ	0	0	1	3
RD-3049	6th Concession N.	Sideroad 24	Sideroad 27	2.300	R	50	80	80	ADEQ	1	0	0	0
RD-3051	Sideroad 30	Sideroad 23	Bend in Sideroad 30	1.500	R	50	80	80	ADEQ	1	0	0	1
RD-3052	8th Concession	Syd/Holl TL	Sunny Valley Rd.	1.840	R	150	80	75	ADEQ	0	0	0	2
RD-3056	8Th Concession N.	Sideroad 22	Sideroad 33	1.100	R	50	80	80	ADEQ	0	0	0	1
RD-3069	Syd/Lakeshore Dr.	Sideroad 18	Kilmanjaro Ln.	1.600	R	150	80	80	ADEQ	1	0	0	0
RD-3070	Syd/Lakeshore Dr.	Kilmanjaro Ln.	Sideroad 8	1.700	R	150	80	80	ADEQ	0	0	0	2
RD-3072	Syd/Lakeshore Dr.	150m East of Sideroad 8	Harbour Dr.	1.900	R	50	80	80	ADEQ	1	0	0	0

Geometric Needs

Current Inspection - Rural Sections w/Curve Needs Only

ID	Street Name	From Description	To Description	Length	Rsde. Env.	AADT	Limit	Op. Speed	TON	H.Curve	H. SSD	V. Curve	V.SSD
RD-3074	Concession 'A'	Grey Road 15	Sideroad 21	1.200	R	200	80	80	ADEQ	1	0	0	0
RD-3075	Concession 'A'	Sideroad 21	Sideroad 24	1.800	R	200	80	75	ADEQ	1	0	0	2
RD-3076-1	Tom Thomson Ln.	Sideroad 24	450m South of Grey Road 15	1.250	R	200	80	70	ADEQ	3	0	0	0
RD-3082	Bayshore Rd.	Ashgrove Ln	Thornridge Rd	0.900	R	300	80	60	NOW	2	0	0	0
RD-3083	Bayshore Rd.	Thornridge Rd	Sideroad 18	0.700	R	300	80	80	ADEQ	1	0	0	0
RD-3087	Concession A	Kilmanjaro Ln.	East End.	1.280	R	10	80	30	NOW	1	0	0	1
RD-3095	10th Concession	Sunny Valley Rd.	Sideroad 6	1.800	R	100	80	80	ADEQ	0	0	0	2
RD-3110	Syd/Holl TI	Grey Road 29	Syd/St.Vin TL	1.400	R	50	80	80	ADEQ	1	0	0	1
RD-3111	Syd/Holl TI	2nd Concession	Grey Road 29	1.500	R	50	80	70	ADEQ	2	0	0	2
RD-3112	Syd/Holl TI	4th Concession S.	2nd Concession S	2.700	R	50	80	70	ADEQ	0	0	1	4
RD-3113	Syd/Holl TI	6th Concession S	4th Concession S.	2.700	R	50	60	55	ADEQ	0	0	1	3
RD-3114	Syd/Holl TI	8th Concession	6th Concession	2.740	R	10	80	60	NOW	3	0	1	5
RD-3115	Syd/Holl TI	10th Concession	8th Concession	2.700	R	50	80	65	ADEQ	0	0	3	2
RD-3116	Syd/Holl TI	Highway 6 & 10	10th Concession	2.740	R	50	80	65	ADEQ	0	0	1	4
RD-3118	Sideroad 3	Grey Road 29	Syd/St.Vin TL	1.400	R	50	80	65	ADEQ	0	0	1	4
RD-3119	Sideroad 3	4th Concession S.	2nd Concession S.	2.700	R	50	80	770	ADEQ	0	0	0	2
RD-3120	Sideroad 3	6th Concession S.	4th Concession S.	2.700	R	50	80	70	ADEQ	0	0	1	4
RD-3121-1	Sunny Valley Rd.	8th Concession	End of GRAN	0.750	R	20	80	75	ADEQ	0	0	0	3
RD-3121-2	Sunny Valley Rd.	End of GRAN	6th Concession	0.700	R	20	80	75	ADEQ	0	0	0	3
RD-3122	Sunny Valley Rd.	10th Concession	8th Concession	2.700	R	50	80	70	ADEQ	0	0	3	4
RD-3123	Sunny Valley Rd.	Highway 6 & 10	10th Concession	2.700	R	100	50	50	ADEQ	0	0	0	2
RD-3124	Sideroad 6	1st Concession	Syd/St.Vin TL	1.400	R	50	80	70	ADEQ	1	0	0	3
RD-3125-1	Sideroad 6	Grey Road 29	1st Concession	1.000	R	20	80	70	ADEQ	2	0	0	1
RD-3126	Sideroad 6	4th Concession S.	Grey Road 29	2.700	R	50	80	75	ADEQ	0	0	2	1
RD-3127	Sideroad 6	6th Concession S.	4th Concession S.	2.700	R	50	80	70	ADEQ	0	0	1	5
RD-3128	Sideroad 6	8th Concession S.	6th Concession S.	2.700	R	50	80	70	ADEQ	0	0	0	3
RD-3142	Story Book Park Rd.	10th Concession	Grey Road 11	2.700	R	250	80	70	ADEQ	0	0	0	1
RD-3144	Sideroad 15	Grey Road 18	Syd/St.Vin TL	0.840	R	10	80	70	ADEQ	0	0	0	2
RD-3149	Sideroad 15	Grey Road 11	East To End	1.500	R	100	80	80	ADEQ	0	0	0	1
RD-3150	Sideroad 15	10th Concession S.	East End	1.000	R	20	80	70	ADEQ	0	0	0	1
RD-3151	Superior St.	Highway 6 & 10	10th Concession	2.300	R	750	80	80	ADEQ	1	0	2	0
RD-3163	Sideroad 22	Irish Block Rd.	2nd Concession N.	2.700	R	100	80	65	ADEQ	0	0	0	5
RD-3164	Sideroad 22	6th Concession N.	Irish Block Rd.	2.200	R	100	80	75	ADEQ	0	0	0	3
RD-3165	Sideroad 22	8th Concession N.	East To End	0.600	R	40	80	65	ADEQ	0	0	0	3
RD-3167	Sideroad 38	Grey Road 15	West End	0.200	R	20	80	20	NOW	1	0	0	1
RD-3171	Sideroad 24	Concession A	West End	0.100	R	10	80	20	NOW	1	0	0	0
RD-3172	Sideroad 24	2nd Concession N.	Syd/St.Vin TL	2.700	R	50	80	80	ADEQ	0	0	0	5
RD-3173	Sideroad 24	Irish Block Rd.	2nd Concession N.	2.700	R	100	80	70	ADEQ	0	0	0	3
RD-3174	Sideroad 24	6th Concession N.	Irish Block Rd.	2.700	R	1,100	80	70	ADEQ	0	0	0	5
RD-3176	Sideroad 27	2nd Concession N.	St. Vincent - Sydenham Townline	2.700	R	50	80	80	ADEQ	1	0	0	0
RD-3178	Sideroad 27	6th Concession N.	Irish Block Rd.	1.410	R	100	80	80	ADEQ	0	0	0	1

Geometric Needs

Current Inspection - Rural Sections w/Curve Needs Only

ID	Street Name	From Description	To Description	Length	Rsde. Env.	AADT	Limit	Op. Speed	TON	H.Curve	H. SSD	V. Curve	V.SSD
RD-3180	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	1.550	R	50	80	80	ADEQ	0	0	0	2
RD-3180-1	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	1.000	R	20	80	80	ADEQ	0	0	0	1
RD-3181	Sideroad 30	Irish Block Rd.	2nd Concession N.	2.580	R	50	80	80	ADEQ	1	0	0	2
RD-3182	Sideroad 23	6th Concession	Syd/Lakeshore Dr.	1.000	R	50	80	75	ADEQ	0	0	0	2
RD-3183	Sideroad 23	Syd/Lakeshore Dr.	Bayshore Rd.	1.100	R	50	80	70	ADEQ	0	0	1	3
RD-3186	Sideroad 18	Syd/Lakeshore Dr.	Concession A	2.000	R	50	80	80	ADEQ	0	0	1	1
RD-3188	Concession B	Queen's Bush Rd.	East To End	0.600	R	20	80	80	ADEQ	0	0	0	1
RD-3189	Concession 'B'	Sideroad 8	Queen's Bush Rd.	0.450	R	100	80	70	ADEQ	1	0	0	0
				<u>215.390</u>									

Appendix E

Deterioration Curve Detail

WorkTech Asset Classes and Deterioration Curves

Asset Classes

In order to utilize the Best Practice and Performance Modeling modules of WorkTech Asset Manager Foundation (WT), assets must be defined by an asset class. Table 1 identifies the road asset classes that have been developed for use in WT by 4 Roads Management Services Inc.

Table 1: Road Asset Classes

Asset Class	Subtype	Material	RDSE Envt	AADT Low	AADT High
A/C-R	All	A/C	R	1	100,000
A/C-S	All	A/C	S	1	100,000
A/C-U	All	A/C	U	1	100,000
CM1-R	All	C/M	R	1	3,000
CM1-S	All	C/M	S	1	3,000
CM1-U	All	C/M	U	1	3,000
CON-R	All	CON	R	1	100,000
CON-S	All	CON	S	1	100,000
CON-U	All	CON	U	1	100,000
GST1-R	All	G/S	R	1	10,000
GST1-S	All	G/S	S	1	10,000
HCB1-R	ART	HCB	R	20,000	100,000
HCB1-S	ART	HCB	S	20,000	100,000
HCB1-U	ART	HCB	U	20,000	100,000
HCB2-R	ART	HCB	R	10,000	20,000
HCB2-S	ART	HCB	S	10,000	20,000
HCB2-U	ART	HCB	U	10,000	20,000
HCB3-R	All	HCB	R	1,000	10,000
HCB3-S	All	HCB	S	1,000	10,000
HCB3-U	All	HCB	U	1,000	10,000
HCB4-R	All	HCB	R	1	1,000
HCB4-S	All	HCB	S	1	1,000
HCB4-U	All	HCB	U	1	1,000
ICB-S	All	ICB	S	1	3,000
ICB-U	All	ICB	U	1	3,000
ICB1-R	All	ICB	R	1	3,000
LCB1-R	All	LCB	R	1	2,000
LCB1-S	All	LCB	S	1	2,000
LCB1-U	All	LCB	U	1	2,000

Conventional wisdom has been to define road assets by their functional classes such as Arterial, Collector or Local and then further differentiate by usage, such as residential or commercial. From a performance modeling perspective, using the functional classification will only work to a point, as the traffic on a functional class will vary between agencies.

4 Roads believes that the performance/deterioration of a road section is more predictable based on surface type and traffic volume rather than by functional class. Based on that philosophy, Table 1 was created identifying Road Asset Classification by Surface Type, Traffic Volume and Roadside Environment. Roadside Environment has been added to permit the calculation of different replacement costs between rural and urban cross-sections.

Deterioration Curves

When using the Inventory Manual (IM) methodology, Structural Adequacy is a measurement of the percentage of the surface of the road that is exhibiting distress. The rater will consider the type of distress as well as the other critical areas (surface width, capacity, geometry, drainage and surface width) in order to provide a recommendation for an improvement. In the IM, any, or multiple of the critical areas, may produce a Time of Need (TON). The overall TON of the road section is the worst of all of the TON's. For example, if five of the TON's are ADEQ, and one is NOW, the section is a NOW need.

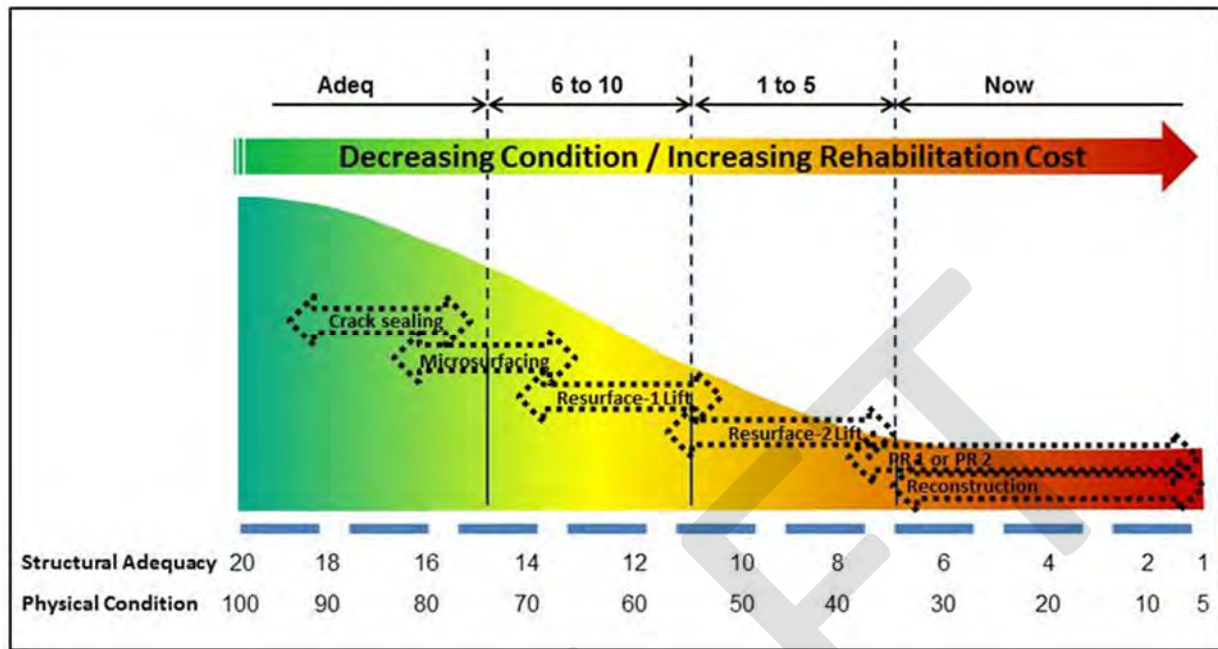
It would be possible, but very difficult, to develop performance models around all of the critical areas. So for the purposes of the performance modeling, Structural Adequacy (distress) has been selected to be the driver in the decisions with respect to the model.

In the early years of the model, if a project is selected that has an identified improvement type, that improvement will be used for the project in the year that it is selected. In the later years, presumably after all current deficiencies have been corrected the model will revert to the assigned asset class for deterioration and project selection based on estimated condition.

All deterioration curves relate to the 'Physical Condition' data field in WorkTech. Physical Condition is the Structural Adequacy multiplied by 5 to produce a score from 5 to 100. The Physical Condition deterioration curve is specific to the Inventory Manual and therefore the trigger points and definition of the curve will be different than other methodologies. It should be noted that different evaluation methodologies will produce varying deterioration curves and trigger points. Familiarity with the rating system being utilized is essential.

The deterioration curves are the same for each asset class regardless of roadside environment. For urban sections, the improvement is RSS- Reconstruction with Storm Sewers, rather than REC- Reconstruction Rural.

Figure 1: Physical Condition versus Improvement Selection



Where the MTO PCI / Inventory Manual Condition Rating format is being used, the PCI data is entered to produce a PCI score from different formulas that represent the defects and weightings by surface type. The PCI score is then used to approximate a Structural Adequacy score (and a Physical Condition). Table 2 identifies the approximations to convert PCI to Structural Adequacy and a Time of Need.

Table 2: PCI to Structural Adequacy Conversion

Time of Need	PCI	Structural Adequacy	Formula PCI to SA
NOW	1 to 55	1 to 7	IF PCI <=55 then, PCI / 8 = SA
1 to 5	56 to 75	8 to 11	IF PCI >55<=75 then, PCI / 7 =SA
6 to 10	76 to 85	12 to 14	IF PCI >75<=85 then, PCI / 6 =SA
ADEQ	86 to 100	15 to 20	If PCI >85 then, PCI /5.4 =SA

Once a Structural Adequacy Score has been determined, the TON is also calculated. What this achieves is the detail of PCI data collection and the strength of the holistic evaluation of the Inventory Manual.

Improvement Types- Effect on the Asset

Appendix A of this report includes a summary of the improvement types that are included in the inventory Manual. In WorkTech there is no restriction on what may be developed as an improvement type for a road agency. However, regardless of the improvement types that are used the effect that the improvement has on the asset has to be understood in order to use performance modeling.

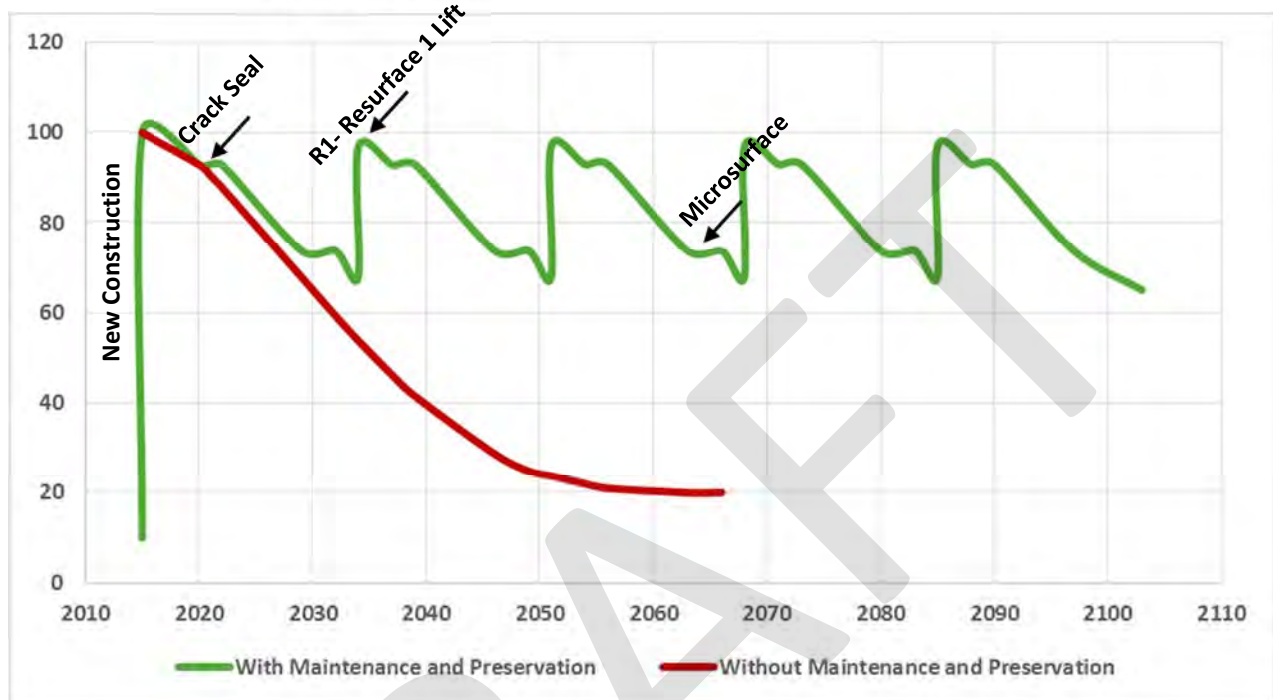
The following table identifies a number of improvement types and further identifies the effect that they have on a road asset. A similar approach may be taken with other assets.

Code	Description	Effect on the Asset
R1	Basic Resurfacing – Single Lift	Increase Physical Condition to 97
R2	Basic Resurfacing – Double Lift	Increase Physical Condition to 100
RM	Major Resurfacing	Increase Physical Condition to 100
PR1	Pulverizing and Resurfacing – Single Lift	Increase Physical Condition to 95
PR2	Pulverizing and Resurfacing – Double Lift	Increase Physical Condition to 100
BS	Base and Surface Tolerable – Tolerable standard for lower volume roads – Rural and Semi-Urban Cross sections only	Increase Physical Condition to 95
RW	Resurface and Widen	Increase Physical Condition to 97
REC	Reconstruction	Increase Physical Condition to 100
RNS	Reconstruction Nominal Storm Sewers (Urban: no new sewer, adjust manholes, catch basins, add sub-drain, remove and replace curb and gutter, granular, and hot mix)	Increase Physical Condition to 100
RSS	Reconstruction including Installation of Storm Sewers (New storm sewers and manholes in addition to the above)	Increase Physical Condition to 100
NC	Proposed Road Construction	Increase Physical Condition to 100
SRR	Storm Sewer Installation and Road Reinstatement	No effect
CRK	Crack Sealing	Hold Physical Condition for 2 Years
MICRO	Microsurfacing	Hold Physical Condition for 3 years
GRR	Gravel Road Resurfacing – add 75mm	Hold Physical Condition for 3 years
GRR2	Gravel Road Resurfacing - Add 150mm	Increase Physical Condition by 20

The effect that a treatment has on an asset is critical to the analysis. Inaccurate determination of the effect of a treatment on an asset will produce an inaccurate – and indefensible- result. The following chart is a comparison of the deterioration of a road section without any treatment applied versus a road section that has appropriate treatment at the optimal condition, producing a more cost effective life cycle.

Figure 2, shown below, illustrates several different aspects of performance model output including the effect of a treatment on an asset and the effect of multiple treatments undertaken at the optimal asset condition to produce a cost effective management strategy.

Figure 2: Performance Model – Effect of Treatment on Asset

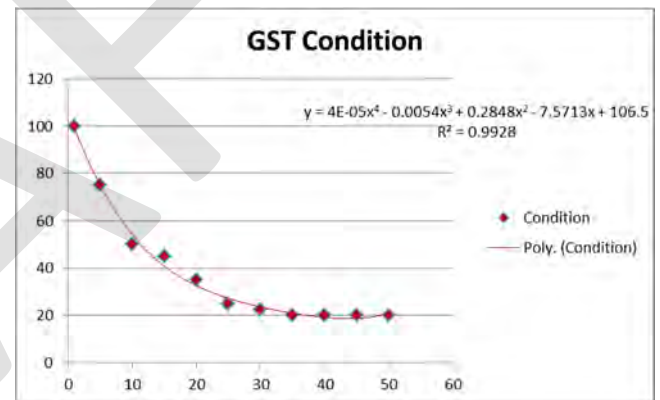


Deterioration Curves by Surface Type and Traffic Volume

The following pages includes tables and graphs indicating the anticipated performance of an appropriately constructed road asset and the condition triggers for treatments. The deterioration curves by asset class used in concert with the table indicating the treatment effect on the asset, and the agency's unit costs, will produce a performance model that demonstrates the effect on the system at various budget levels and produce a program based on input parameters.

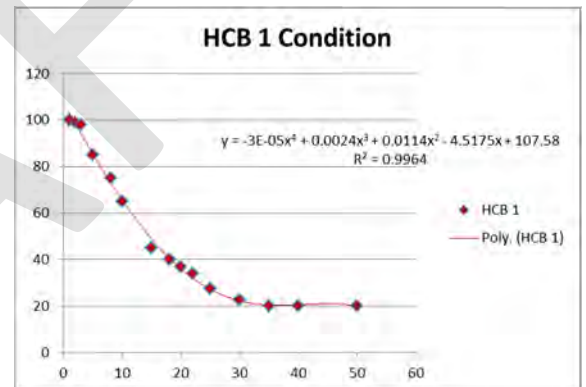
Gravel Roads- All Roadsides, all AADT

Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	92.45	NONE	No Improvement Required
3	86.21	GRR	75mm of Granular A
4	80.43	GRR	75mm of Granular A
5	75.11	GRR	75mm of Granular A
6	70.21	GRR	75mm of Granular A
7	65.7	GRR2	150mm of additional Gravel
8	61.55	GRR2	150mm of additional Gravel
9	57.75	GRR2	150mm of additional Gravel
10	54.27	GRR2	150mm of additional Gravel
11	51.07	GRR2	150mm of additional Gravel
12	48.15	GRR2	150mm of additional Gravel
13	45.48	GRR2	150mm of additional Gravel
14	43.04	GRR2	150mm of additional Gravel
15	40.81	GRR2	150mm of additional Gravel
16	38.77	GRR2	150mm of additional Gravel
17	36.9	GRR2	150mm of additional Gravel
18	35.2	GRR2	150mm of additional Gravel
19	33.63	REC	Reconstruction - Rural
20	32.19	REC	Reconstruction - Rural
21	30.86	REC	Reconstruction - Rural
22	29.64	REC	Reconstruction - Rural
23	28.51	REC	Reconstruction - Rural
24	27.45	REC	Reconstruction - Rural
25	26.47	REC	Reconstruction - Rural
30	22.28	REC	Reconstruction - Rural
35	18.88	REC	Reconstruction - Rural
40	20	REC	Reconstruction - Rural
45	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



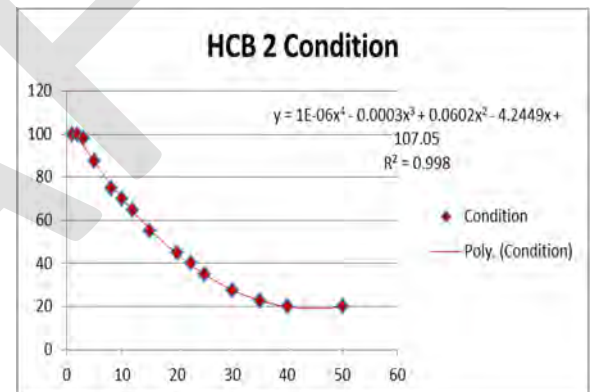
HCB1 All Roadsides- AADT > 20,000, assumes 10% Commercial

>Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	98.61	NONE	No Improvement Required
3	94.19	NONE	No Improvement Required
4	89.83	CRK	Crack Sealing
5	85.55	CRK	Crack Sealing
6	81.36	CRK	Crack Sealing
7	77.26	MICRO	Microsurfacing -Pavement Preservation
8	73.28	MICRO	Microsurfacing -Pavement Preservation
9	69.4	R1	Basic Resurfacing 1 - 50mm
10	65.65	R1	Basic Resurfacing 1 - 50mm
11	62.02	R1	Basic Resurfacing 1 - 50mm
12	58.54	R1	Basic Resurfacing 1 - 50mm
13	55.19	R2	Basic Resurfacing 2 - 100mm
14	52	R2	Basic Resurfacing 2 - 100mm
15	48.96	R2	Basic Resurfacing 2 - 100mm
16	46.08	R2	Basic Resurfacing 2 - 100mm
17	43.36	R2	Basic Resurfacing 2 - 100mm
18	40.81	R2	Basic Resurfacing 2 - 100mm
19	38.41	R2	Basic Resurfacing 2 - 100mm
20	36.19	REC	Reconstruction - Rural
22	32.24	REC	Reconstruction - Rural
23	30.51	REC	Reconstruction - Rural
24	28.95	REC	Reconstruction - Rural
25	27.55	REC	Reconstruction - Rural
26	26.3	REC	Reconstruction - Rural
27	25.21	REC	Reconstruction - Rural
28	24.27	REC	Reconstruction - Rural
29	23.47	REC	Reconstruction - Rural
30	22.82	REC	Reconstruction - Rural
35	21.31	REC	Reconstruction - Rural
40	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



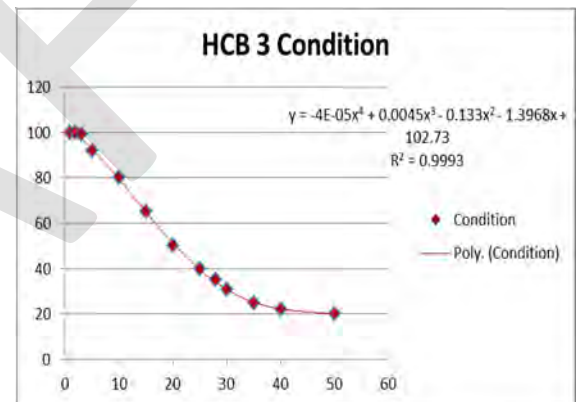
HCB 2 All Roadsides- AADT >10,000 <20,000, Assumes 10% Commercial

>Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	98.79	NONE	No Improvement Required
3	94.85	NONE	No Improvement Required
4	91.01	CRK	Crack Sealing
5	87.29	CRK	Crack Sealing
6	83.68	CRK	Crack Sealing
7	80.18	CRK2	Crack Sealing
8	76.79	MICRO	Microsurfacing -Pavement Preservation
9	73.51	MICRO2	Microsurfacing -Pavement Preservation
10	70.33	R1	Basic Resurfacing 1 - 50mm
11	67.26	R1	Basic Resurfacing 1 - 50mm
12	64.28	R1	Basic Resurfacing 1 - 50mm
13	61.41	R1	Basic Resurfacing 1 - 50mm
14	58.63	R1	Basic Resurfacing 1 - 50mm
15	55.95	R2	Basic Resurfacing 2 - 100mm
16	53.38	R2	Basic Resurfacing 2 - 100mm
17	50.89	R2	Basic Resurfacing 2 - 100mm
18	48.5	R2	Basic Resurfacing 2 - 100mm
19	46.2	R2	Basic Resurfacing 2 - 100mm
20	43.99	R2	Basic Resurfacing 2 - 100mm
21	41.87	R2	Basic Resurfacing 2 - 100mm
22	39.84	R2	Basic Resurfacing 2 - 100mm
23	37.89	R2	Basic Resurfacing 2 - 100mm
24	36.03	R2	Basic Resurfacing 2 - 100mm
25	34.26	REC	Reconstruction - Rural
26	32.56	REC	Reconstruction - Rural
27	30.95	REC	Reconstruction - Rural
28	29.42	REC	Reconstruction - Rural
29	27.97	REC	Reconstruction - Rural
30	26.59	REC	Reconstruction - Rural
35	20.86	REC	Reconstruction - Rural
40	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



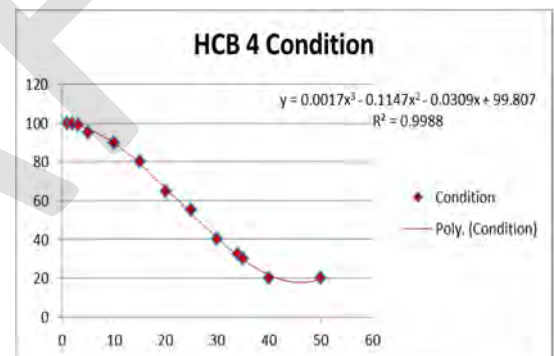
HC3 3 All Roadsides – AADT 1,000 < 10,000, Assumes 10% Commercial

>Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	99.44	NONE	No Improvement Required
3	97.46	NONE	No Improvement Required
4	95.29	NONE	No Improvement Required
5	92.95	CRK	Crack Sealing
6	90.48	CRK	Crack Sealing
7	87.88	CRK2	Crack Sealing
8	85.18	CRK2	Crack Sealing
9	82.4	CRK2	Crack Sealing
10	79.56	MICRO	Microsurfacing -Pavement Preservation
11	76.67	MICRO	Microsurfacing -Pavement Preservation
12	73.76	MICRO2	Microsurfacing -Pavement Preservation
13	70.83	R1	Basic Resurfacing 1 - 50mm
14	67.91	R1	Basic Resurfacing 1 - 50mm
15	65.01	R1	Basic Resurfacing 1 - 50mm
16	62.14	R1	Basic Resurfacing 1 - 50mm
17	59.31	R1	Basic Resurfacing 1 - 50mm
18	56.54	R1	Basic Resurfacing 1 - 50mm
19	53.83	R2	Basic Resurfacing 2 - 100mm
20	51.19	R2	Basic Resurfacing 2 - 100mm
21	48.63	R2	Basic Resurfacing 2 - 100mm
22	46.17	R2	Basic Resurfacing 2 - 100mm
23	43.8	R2	Basic Resurfacing 2 - 100mm
24	41.53	R2	Basic Resurfacing 2 - 100mm
25	39.37	R2	Basic Resurfacing 2 - 100mm
26	37.31	R2	Basic Resurfacing 2 - 100mm
27	35.37	R2	Basic Resurfacing 2 - 100mm
28	33.54	REC	Reconstruction - Rural
29	31.82	REC	Reconstruction - Rural
30	30.22	REC	Reconstruction - Rural
35	23.83	REC	Reconstruction - Rural
40	20	REC	Reconstruction - Rural
45	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



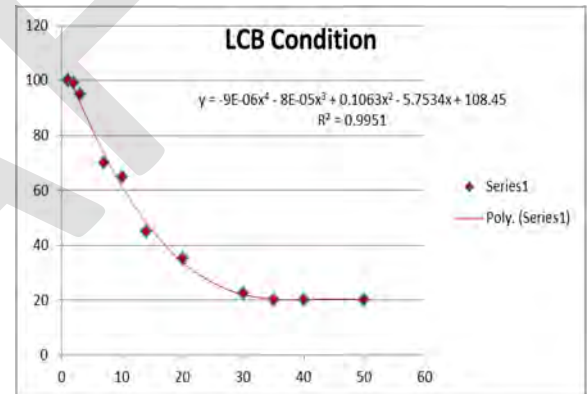
HCB 4 All Roadsides- AADT <1,000, Assumes 5% Commercial

>Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	99.44	NONE	No Improvement Required
3	97.46	NONE	No Improvement Required
4	95.29	NONE	No Improvement Required
5	92.95	CRK	Crack Sealing
6	90.48	CRK	Crack Sealing
7	87.88	CRK2	Crack Sealing
8	85.18	CRK2	Crack Sealing
9	82.4	CRK2	Crack Sealing
10	79.56	MICRO	Microsurfacing -Pavement Preservation
11	76.67	MICRO	Microsurfacing -Pavement Preservation
12	73.76	MICRO2	Microsurfacing -Pavement Preservation
13	70.83	R1	Basic Resurfacing 1 - 50mm
14	67.91	R1	Basic Resurfacing 1 - 50mm
15	65.01	R1	Basic Resurfacing 1 - 50mm
16	62.14	R1	Basic Resurfacing 1 - 50mm
17	59.31	R1	Basic Resurfacing 1 - 50mm
18	56.54	R1	Basic Resurfacing 1 - 50mm
19	53.83	R2	Basic Resurfacing 2 - 100mm
20	51.19	R2	Basic Resurfacing 2 - 100mm
21	48.63	R2	Basic Resurfacing 2 - 100mm
22	46.17	R2	Basic Resurfacing 2 - 100mm
23	43.8	R2	Basic Resurfacing 2 - 100mm
24	41.53	R2	Basic Resurfacing 2 - 100mm
25	39.37	R2	Basic Resurfacing 2 - 100mm
26	37.31	R2	Basic Resurfacing 2 - 100mm
27	35.37	R2	Basic Resurfacing 2 - 100mm
28	33.54	REC	Reconstruction - Rural
29	31.82	REC	Reconstruction - Rural
30	30.22	REC	Reconstruction - Rural
40	20	REC	Reconstruction - Rural
45	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



LCB All roadsides – All AADT's

Year	Condition	Improvement	Description
1	100	NONE	No Improvement Required
2	98.61	NONE	No Improvement Required
3	94.19	NONE	No Improvement Required
4	89.84	NONE	No Improvement Required
5	85.56	NONE	No Improvement Required
6	81.36	NONE	No Improvement Required
7	77.26	SST	Single Surface Treatment
8	73.28	SST	Single Surface Treatment
9	69.4	SST	Single Surface Treatment
10	65.65	SST	Single Surface Treatment
11	62.02	SST	Single Surface Treatment
12	58.54	SST	Single Surface Treatment
13	55.19	SST	Single Surface Treatment
14	52	SSTplus	SST plus Padding / geometric correction
15	48.96	SSTplus	SST plus Padding / geometric correction
16	46.08	SSTplus	SST plus Padding / geometric correction
17	43.36	SSTplus	SST plus Padding / geometric correction
18	40.81	SSTplus	SST plus Padding / geometric correction
19	38.41	SSTplus	SST plus Padding / geometric correction
20	36.19	REC	Reconstruction - Rural
21	34.13	REC	Reconstruction - Rural
22	32.24	REC	Reconstruction - Rural
23	30.51	REC	Reconstruction - Rural
24	28.95	REC	Reconstruction - Rural
25	27.55	REC	Reconstruction - Rural
30	22.82	REC	Reconstruction - Rural
35	21.31	REC	Reconstruction - Rural
40	21.92	REC	Reconstruction - Rural
45	20	REC	Reconstruction - Rural
50	20	REC	Reconstruction - Rural



Appendix F

10 Year Program Based on Staff Proposed Funding Level

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2015	RD-1038	Sykes St. S	Paul St.-to-Edwin/Margaret	CRK	\$ 220	80	80	2	166,979	166,979
2015	RD-1037	Sykes St. S	James Cres.-to-Paul St.	CRK	\$ 220	90	90	2	187,852	187,852
2015	RD-1142	Sykes St. N	William St.-to-Cook St.	CRK	\$ 220	90	90	2	170,978	170,978
2015	RD-1017	St.Vincent St.	Montgomery St.-to-Georgian Trail	CRK	\$ 440	85	85	2	281,084	281,084
2015	RD-1041	Sykes St. S	Boucher St.-to-Berry St.	CRK	\$ 330	85	85	2	250,471	250,471
2015	RD-1039	Sykes St. S	Edwin/Margaret-to-Marshall St.	CRK	\$ 330	85	85	2	242,219	242,219
2015	RD-1040	Sykes St. S	Marshall St.-to-Boucher St.	CRK	\$ 330	85	85	2	242,219	242,219
2015	RD-1133	Bayfield St.	Collingwood St. E-to-Parker St. E	CRK	\$ 330	85	85	2	218,855	218,855
2015	RD-1161	Thompson St.	Nelson St. W-to-Collingwood St. W	CRK	\$ 264	85	85	2	153,502	153,502
2015	RD-1162	Thompson St.	Collingwood St. W-to-Parker St. W	CRK	\$ 286	85	85	2	166,294	166,294
2015	RD-1163	Thompson St.	Parker St. W-to-Lombard St.	CRK	\$ 242	85	85	2	140,710	140,710
2015	RD-1027	Denmark St.	Margaret St.-to-Marshall St. E	CRK	\$ 330	85	85	2	187,662	187,662
2015	RD-1096	Edwin St. E	Sykes St.-to-Henry St.	CRK	\$ 396	85	85	2	225,195	225,195
2015	RD-1110	Margaret St.	St.Vincent St.-to-Richmond St. N	CRK	\$ 528	85	85	2	300,260	300,260
2015	RD-1171	Victoria St.	Albert St.-to-William St.	CRK	\$ 264	85	85	2	150,130	150,130
2015	RD-1224	Lombard St.	Thompson St.-to-Cook St.	CRK	\$ 374	85	85	2	212,684	212,684
2015	RD-1232	William St.	Thompson St.-to-Cook St.	CRK	\$ 352	85	85	2	200,173	200,173
2015	RD-1018	St.Vincent St.	Georgian Trail-to-Edwin St.	CRK	\$ 198	85	85	2	52,842	52,842
2015	RD-2024	John St.	Robertson Ave.-to-Robertson Ave.	SST	\$ 12,240	65	90		194,250	268,961
2015	RD-2113	Roberston Ave.	John St.-to-West End	SST	\$ 16,320	65	90		259,000	358,616
2015	RD-2007	Collingview Cres.	7 Sideroad-to-South to End	DST	\$ 25,410	40	90		129,183	290,662
2015	RD-1130	Bayfield St.	Berry St. ROW-to-Trowbridge St.	CRK	\$ 110	80	80	2	64,685	64,685
2015	RD-1229	Albert St.	Victoria St.-to-Birchwood Crt.	CRK	\$ 440	80	80	2	68,982	68,982
2015	RD-2022	Ross St.	Robertson Ave.-to-Southeast to End	SST	\$ 8,160	70	90		139,462	179,308
2015	RD-3083	Bayshore Rd.	Thornridge Rd-to-Sideroad 18	CRK	\$ 1,540	80	80	2	226,183	226,183
2015	RD-1157	Cook St.	William St.-to-Sykes St. N	CRK	\$ 220	80	80	2	120,394	120,394
2015	RD-1028	Denmark St.	Marshall St. E-to-Boucher St. E	CRK	\$ 330	80	80	2	176,623	176,623
2015	RD-1117	Marshall St. E	Henry St.-to-Denmark St.	CRK	\$ 286	80	80	2	153,074	153,074
2015	RD-1132	Bayfield St.	Nelson St. E-to-Collingwood St. E	CRK	\$ 264	80	80	2	141,298	141,298
2015	RD-1134	Bayfield St.	Parker St. E-to-Sykes St. N	CRK	\$ 440	80	80	2	235,498	235,498
2015	RD-1214	Collingwood St. W	Cook St.-to-Sykes St. N	CRK	\$ 352	80	80	2	188,398	188,398
2015	RD-1240	Fairway Ave.	Meadowlane Dr.-to-Ridge Rd.	CRK	\$ 374	80	80	2	200,173	200,173
2015	RD-1247	Country Cres.	Northwest End-to-Ridge Creek	CRK	\$ 396	80	80	2	211,948	211,948
2015	RD-2023	Penny Lane	John St.-to-North End	SST	\$ 2,040	70	90		31,637	40,676
2015	RD-2112	John St.	East Limit-to-Robertson Ave.	SST	\$ 6,120	70	90		94,912	122,029
2015	RD-2009	Foster St.	4 Sideroad-to-South To End	DST	\$ 6,171	60	90		47,060	70,590
2015	RD-3028	Queen's Bush Rd.	Concession 'B'-to-Tee Junction	DSTrehab	\$ 106,519	15	90		87,321	523,927
2015	RD-3037	Irish Block Rd.	Sideroad 22-to-Sideroad 24	DSTrehab	\$ 136,030	20	90		154,485	695,183
2015	RD-1246	Albery Crt.	Northwest End-to-Sykes St. N	CRK	\$ 770	75	75	2	424,492	424,492
2015	RD-3187	Sideroad 19-A	Sideroad 18-to-South To End	DSTrehab	\$ 11,570	25	90		16,480	59,328
2015	RD-3033	4Th Concession S.	Sideroad 6-to-Grey Road 18	SST	\$ 36,075	75	90		595,411	714,493
2015	RD-2059	11th Line	8 Sideroad-to-10 Sideroad	SSTplus	\$ 67,860	40	90		188,815	424,833

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2015	RD-1155	Cook St.	Lombard St.-to-Albert St.	CRK	\$ 264	75	75	2	135,443	135,443
2015	RD-1248	Ford Ave.	Grandview Dr.-to-Sykes St. N	CRK	\$ 374	85	85	2	90,614	90,614
2015	RD-1003	Middle Ave.	Parklane Cres. N-to-Grant Ave.	CRK	\$ 242	75	75	2	121,429	121,429
2015	RD-1112	Margaret St.	Henry St.-to-Denmark St.	CRK	\$ 264	75	75	2	132,467	132,467
2015	RD-1113	Margaret St.	Sykes St.-to-Henry St.	CRK	\$ 264	75	75	2	132,467	132,467
2015	RD-1116	Marshall St. E	Denmark St.-to-St.Vincent St.	CRK	\$ 242	75	75	2	121,429	121,429
2015	RD-1169	Owen St.	Berry St.-to-Trowbridge St.	CRK	\$ 176	75	75	2	88,312	88,312
2015	RD-1191	Meadow Lane	Ridge Creek Dr.-to-Fairway Ave.	CRK	\$ 638	75	75	2	320,130	320,130
2015	RD-1227	Albert St.	Cook St.-to-Sykes St. N	CRK	\$ 264	75	75	2	132,467	132,467
2015	RD-1244	Ridge Creek	Meadow Lane-to-Ridge Rd.	CRK	\$ 330	75	75	2	165,584	165,584
2015	RD-2119	Gerald Shortt Parkway	St.Vin/Syd TL-to-12th Line	CRK	\$ 2,420	85	85	2	575,478	575,478
2015	RD-2140	16 Sideroad	11th Line-to-Grey Road 12	CRK	\$ 5,940	85	85	2	1,412,537	1,412,537
2015	RD-3132	Gerald Shortt Parkway	Grey Road 18-to-Syd/St.Vin Townline	CRK	\$ 3,080	85	85	2	732,426	732,426
2015	RD-2072	12th Line	16 Sideroad-to-Highway 26	DST	\$ 70,785	60	90		463,455	695,183
2015	RD-2136-3	13 Sideroad	1.1km East of Bridge-to-7th Line	SST	\$ 11,700	75	90		174,174	209,009
2015	RD-2086	4 Sideroad	Grey Road 7-to-3rd Line	DST	\$ 106,178	70	90		1,163,266	1,495,627
2015	RD-1019	St.Vincent St.	Edwin St.-to-Eliza St.	CRK	\$ 352	80	80	2	192,630	192,630
2015	RD-1020	St.Vincent St.	Eliza St.-to-Margaret St.	CRK	\$ 330	80	80	2	180,590	180,590
2015	RD-1080	Grace Ave.	Union St.-to-East End	CRK	\$ 220	95	95	2	139,827	139,827
2015	RD-1094	Edwin St. E	Denmark St.-to-St.Vincent St.	CRK	\$ 176	95	95	2	111,862	111,862
2015	RD-1095	Edwin St. E	Henry St.-to-Denmark St.	CRK	\$ 352	95	95	2	223,723	223,723
2015	RD-1234	St Andrews Dr.	Victoria St.-to-Ridge Rd.	CRK	\$ 880	95	95	2	559,308	559,308
2015	RD-1149	Cook St.	South End-to-Berry St.	R2	\$ 44,692	40	100		88,312	220,779
2015	RD-3038	Irish Block Rd.	Sideroad 24-to-Sideroad 27	DSTrehab	\$ 135,285	40	90		308,970	695,183
2015	RD-2149	22 Sideroad	7th Line-to-Georgian Beach Rd. N	CRK	\$ 1,100	85	85	2	216,533	216,533
2015	RD-3078	Bayshore Rd.	Rossmoyne-to-Roxsborough	DSTrehab	\$ 23,044	35	90		40,641	104,504
2015	RD-2004	Clarence St.	4 Sideroad-to-South to End	CRK	\$ 396	85	85	2	76,206	76,206
2015	RD-2006	Dinsmore St.	4 Sideroad-to-South to End	CRK	\$ 660	85	85	2	127,010	127,010
2015	RD-3053	8th Concession S.	Sunny Valley Rd.-to-Sideroad 6	SST	\$ 36,075	80	90		635,105	714,493
2015	RD-1219	Parker St. W	Cook St.-to-Sykes St. N	CRK	\$ 352	90	90	2	211,948	211,948
2015	RD-1223	Lombard St.	Cook St.-to-Sykes St. N	CRK	\$ 352	90	90	2	211,948	211,948
2015	RD-1231	William St.	Cook St.-to-Sykes St. N	CRK	\$ 132	90	90	2	79,481	79,481
2015	RD-1245	Ridge Creek	West End-to-Meadow Lane	CRK	\$ 198	90	90	2	119,221	119,221
2015	RD-3119	Sideroad 3	4th Concession S.-to-2nd Concession S.	GRR2	\$ 96,228	40	55		425,547	585,127
2015	RD-3120	Sideroad 3	6th Concession S.-to-4th Concession S.	GRR2	\$ 96,228	40	55		425,547	585,127
2015	RD-2095	7 Sideroad	3rd Line-to-East Limit	GRR2	\$ 7,484	40	55		27,878	38,332
					\$ 1,093,388					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2016	RD-2120-2	Swarthmore Drive	1.03km East of Hwy. 26-to-East End Culdesac	CRK	\$ 132	94.55	94.55	2	122,958	122,958
2016	RD-1024	St.Vincent St.	Bridge St.-to-Harbour	CRK	\$ 198	79.56	79.56	2	51,213	51,213
2016	RD-3116	Syd/Holl Tl	Highway 6 & 10-to-10th Concession	SST	\$ 26,715	77.27	90		1,027,306	1,196,552
2016	RD-1016	St.Vincent St.	Sykes St. S-to-Montgomery St.	CRK	\$ 528	82.4	82.4	2	123,953	123,953
2016	RD-2076	Meaf/Gh Tl	Grey Road 12-to-7th Line	SST	\$ 27,540	77.27	90		918,656	1,070,002
2016	RD-2117	10 Sideroad	11th Line-to-Grey Road 12	CRK	\$ 5,940	79.27	79.27	2	1,317,315	1,317,315
2016	RD-3067	Syd/Lakeshore Dr.	Landfill Entrance-to-Sideroad 23	CRK	\$ 3,740	79.27	79.27	2	692,816	692,816
2016	RD-2012	3rd Line	4 Sideroad-to-7 Sideroad	CRK	\$ 3,960	79.27	79.27	2	726,971	726,971
2016	RD-1085	Aiken Street	Richmond St.-to-Graham St.	CRK	\$ 638	79.27	79.27	2	113,469	113,469
2016	RD-1170	Victoria St.	Lombard St.-to-Albert St.	CRK	\$ 242	79.27	79.27	2	39,409	39,409
2016	RD-1007	Vera St.	Eliza St.-to-Aimee	CRK	\$ 462	79.27	79.27	2	72,464	72,464
2016	RD-2028-1	Cedar Ave.	Harbour Beach Dr.-to-North End	SST	\$ 11,700	73.28	90		193,225	237,313
2016	RD-1062	Centre St.	Russett Dr.-to-Louisa St.	CRK	\$ 1,166	83.76	83.76	2	185,850	185,850
2016	RD-2039	7Th Line	22 Sideroad-to-Georgian Beach Rd. N	CRK	\$ 3,520	94.55	94.55	2	956,051	956,051
2016	RD-2070	12Th Line	10 Sideroad-to-13 Sideroad	SST	\$ 29,250	77.27	90		497,377	579,318
2016	RD-2071	12th Line	13 Sideroad-to-16 Sideroad	SST	\$ 35,100	77.27	90		596,853	695,183
2016	RD-2150	22 Sideroad	Grey Road 112-to-1.3km East of Grey Road 112	SST	\$ 25,350	77.27	90		431,060	502,076
2016	RD-2001	Tbm/Meaf Tl	4 Sideroad-to-7 Sideroad	SST	\$ 36,720	77.27	90		612,437	713,335
2016	RD-1049	Union St.	Augusta St.-to-Grace Ave.	CRK	\$ 220	94.55	94.55	2	41,552	41,552
2016	RD-2032	7Th Line	4 Sideroad-to-7 Sideroad	PR2	\$ 323,073	20	100		225,532	1,127,660
2016	RD-2033	7Th Line	7 Sideroad-to-10 Sideroad	PR2	\$ 323,073	20	100		225,532	1,127,660
2016	RD-2063	11Th Line N	Highway 26-to-22 Sideroad	SSTplus	\$ 78,868	62.02	90		432,091	627,027
2016	RD-1145	Sykes St. N	Helen St.-to-Albery Crt.	R1	\$ 13,878	67.25	97		62,699	90,435
2016	RD-3127	Sideroad 6	6th Concession S.-to-4th Concession S.	GRR2	\$ 102,643	38.77	53.77		412,461	572,041
2016	RD-3119	Sideroad 3	4th Concession S.-to-2nd Concession S.	GRR2	\$ 96,228	55	70		585,127	744,707
					\$ 1,150,884					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2017	RD-3076-2	Tom Thomson Ln.	450m South of Grey Road 15-to-Grey Road 15	SST	\$ 9,045	77.27	90		136,927	159,485
2017	RD-2035	7Th Line	13 Sideroad-to-Grey Road 12	PR2	\$ 276,226	27.55	100		275,774	1,000,993
2017	RD-2034	7Th Line	10 Sideroad-to-13 Sideroad	PR2	\$ 330,072	23.85	100		268,947	1,127,660
2017	RD-3066	Syd/Lakeshore Dr.	Grey Road 15-to-Landfill Entrance	PR2	\$ 458,433	5	100		63,108	1,262,164
2017	RD-1143	Sykes St. N	Cook St.-to-Susan St.	R1	\$ 68,833	64.28	97		305,291	460,692
2017	RD-1101	Louisa St.	Dillon Ave.-to-Blake St.	R1	\$ 13,956	56.5	97		41,580	71,385
2017	RD-3120	Sideroad 3	6th Concession S.-to-4th Concession S.	GRR2	\$ 96,228	54.27	69.27		577,361	736,941
2017	RD-3127	Sideroad 6	6th Concession S.-to-4th Concession S.	GRR2	\$ 102,643	53.77	68.77		572,041	731,621
					\$ 1,355,436					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2018	RD-1031	Henry St.	Margaret St.-to-Marshall St. E	CRK	\$ 308	94.55	94.55	2	194,831	194,831
2018	RD-1197	Berry St.	Cook St.-to-Sykes St. N	CRK	\$ 286	94.55	94.55	2	180,914	180,914
2018	RD-1218	Parker St. E	Sykes St. N-to-Bayfield St.	CRK	\$ 308	94.55	94.55	2	194,831	194,831
2018	RD-1220	Parker St. W	Fairgrounds-to-Thompson St.	CRK	\$ 418	94.55	94.55	2	264,413	264,413
2018	RD-1101	Louisa St.	Dillon Ave.-to-Blake St.	CRK	\$ 110	97	97	2	71,385	71,385
2018	RD-2000	Tbm/Meaf Tl	Meaf/GH TL-to-4 Sideroad	SST	\$ 18,360	77.27	90		612,437	713,335
2018	RD-2037	7Th Line	Highway 26-to-Centreville Rd.	CRK	\$ 1,430	92.95	92.95	2	372,641	372,641
2018	RD-2038	7Th Line	Centreville Rd.-to-22 Sideroad	CRK	\$ 2,750	92.95	92.95	2	705,097	705,097
2018	RD-2044	7Th Line	Harbour Beach Dr.-to-Northeast End	SST	\$ 21,450	73.27	90		345,862	424,833
2018	RD-3017-1	1st Concession	10 Sideroad-to-Grey Road 18	CRK	\$ 440	94.55	94.55	2	123,664	123,664
2018	RD-2042	7Th Line	25 Sideroad-to-McKay Cr.	CRK	\$ 1,760	94.55	94.55	2	478,025	478,025
2018	RD-1229	Albert St.	Victoria St.-to-Birchwood Cr.	SST	\$ 3,780	77.26	90		66,620	77,605
2018	RD-2040	7Th Line	Georgian Beach Rd. N-to-25 Sideroad	CRK	\$ 1,100	94.55	94.55	2	269,475	269,475
2018	RD-2041	7Th Line	25 Sideroad-to-25 Sideroad	CRK	\$ 220	94.55	94.55	2	53,895	53,895
2018	RD-3005	Syd/St.Vin Tl	South Turnaround-to-Highway 26	CRK	\$ 308	94.55	94.55	2	70,502	70,502
2018	RD-1038	Sykes St. S	Paul St.-to-Edwin/Margaret	MICRO	\$ 2,025	76.79	76.79	3	160,279	160,279
2018	RD-2043	7Th Line	McKay Cr.-to-Harbour Beach Drive	CRK	\$ 1,320	94.55	94.55	2	289,034	289,034
2018	RD-3083	Bayshore Rd.	Thornridge Rd-to-Sideroad 18	SST	\$ 14,700	77.27	90		218,465	254,456
2018	RD-1046	Victoria Cres.	Marshall St. W-to-Boucher St. W	CRK	\$ 330	94.55	94.55	2	67,052	67,052
2018	RD-1045	Victoria Cres.	Edwin St. W-to-Marshall St. W	CRK	\$ 198	94.55	94.55	2	38,106	38,106
2018	RD-3097	10th Concession	Grey Road 18-to-Story Book Park Rd.	PR2	\$ 351,323	26.29	100		318,423	1,211,194
2018	RD-3098	10th Concession	Story Book Park Rd.-to-Sideroad 15	PR2	\$ 342,078	26.29	100		310,043	1,179,321
2018	RD-1144	Sykes St. N	Susan St.-to-Helen St.	R1	\$ 55,510	61.41	97		229,014	361,739
2018	RD-1146	Sykes St. N	Albery Cr.-to-Ford Ave.	R1	\$ 41,633	61.41	97		171,761	271,304
2018	RD-2121	Muir St.	Grey Road 7-to-Highway 26	PR2	\$ 131,725	26.08	100		117,732	451,428
2018	RD-2036	7Th Line	Grey Road 12-to-Highway 26	R1	\$ 203,566	53.91	97		607,922	1,093,830
2018	RD-1202	Trowbridge St. E	Sykes St. N-to-Bayfield St.	R1	\$ 59,913	53.91	97		176,126	316,902
2018	RD-1021	St.Vincent St.	Margaret St.-to-Marshall St. E	R1	\$ 41,867	53.83	97		121,515	218,966
2018	RD-1129	Bridge St.	Bayfield St.-to-Denmark St.	R1	\$ 23,720	64.32	97		104,137	157,048
2018	RD-1019	St.Vincent St.	Edwin St.-to-Eliza St.	MICRO	\$ 3,600	79.56	79.56	3	191,570	191,570
2018	RD-1020	St.Vincent St.	Eliza St.-to-Margaret St.	MICRO	\$ 3,375	79.56	79.56	3	179,597	179,597
2018	RD-3119	Sideroad 3	4th Concession S.-to-2nd Concession S.	GRR2	\$ 96,228	65.7	80.7		698,961	858,541
2018	RD-2095	7 Sideroad	3rd Line-to-East Limit	GRR2	\$ 7,484	51.07	66.07		35,593	46,047
2018	RD-3042	6Th Concession S.	Syd/Holl TL-to-Sideroad 3	GRR2	\$ 74,844	35.2	50.2		249,654	356,041
2018	RD-2094	7 Sideroad	W. of Collingview Cr.-to-Collingview Cr.	GRR2	\$ 10,098	35.2	50.2		24,533	34,987
					\$ 1,518,565					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2019	RD-1036	Sykes St. S	Ivan St.-to-James Cres.	CRK	\$ 220	91.01	91.01	2	172,897	172,897
2019	RD-1034	Sykes St. S	McKibbin St.-to-Coleman St.	CRK	\$ 1,188	91.01	91.01	2	736,022	736,022
2019	RD-1035	Sykes St. S	Coleman St.-to-Ivan St.	CRK	\$ 396	91.01	91.01	2	245,341	245,341
2019	RD-1145	Sykes St. N	Helen St.-to-Albery Crt.	CRK	\$ 220	91.01	91.01	2	84,850	84,850
2019	RD-1033	Sykes St. S	204m East of St. Vincent Street-to-St. Vincent St.	CRK	\$ 673	91.01	91.01	2	226,302	226,302
2019	RD-1202	Trowbridge St. E	Sykes St. N-to-Bayfield St.	CRK	\$ 352	97	97	2	316,902	316,902
2019	RD-1129	Bridge St.	Bayfield St.-to-Denmark St.	CRK	\$ 242	97	97	2	157,048	157,048
2019	RD-3036	Irish Block Rd.	Highway 26-to-Sideroad 22	SST	\$ 35,100	77.27	90		596,853	695,183
2019	RD-3068	Syd/Lakeshore Dr.	Sideroad 23-to-Sideroad 18	SST	\$ 33,150	77.27	90		563,694	656,561
2019	RD-2036	7Th Line	Grey Road 12-to-Highway 26	CRK	\$ 3,960	97	97	2	1,093,830	1,093,830
2019	RD-3043	6th Concession S.	Sideroad 3-to-Sideroad 6	SSTplus	\$ 127,868	58.37	90		538,123	829,725
2019	RD-1152	Cook St.	Nelson St. W-to-Collingwood St. W	R2	\$ 49,808	32.98	100		59,559	180,591
2019	RD-1153	Cook St.	Collingwood St. W-to-Parker St. W	R2	\$ 49,808	32.98	100		59,559	180,591
2019	RD-1154	Cook St.	Parker St. W-to-Lombard St.	R2	\$ 49,808	32.98	100		59,559	180,591
2019	RD-1151	Cook St.	Trowbridge St.-to-Nelson St. W	R1	\$ 29,180	51.35	97		77,278	145,977
2019	RD-1156	Cook St.	Albert St.-to-William St.	R1	\$ 35,017	51.35	97		92,733	175,173
2019	RD-1032	Henry St.	Marshall St. E-to-Boucher St. E	R1	\$ 34,266	56.5	97		109,640	188,231
2019	RD-3099	10th Concession	Sideroad 15-to-Superior St.	PR2	\$ 35,954	24.98	100		28,726	114,995
2019	RD-1215	Collingwood St. W	Thompson St.-to-Cook St.	R2	\$ 51,190	37.07	100		70,930	191,342
2019	RD-2151	22 Sideroad	11th Line-to-to East Limit	SSTplus	\$ 67,860	58.37	90		275,528	424,833
2019	RD-1118	Marshall St. E	Sykes St.-to-Henry St.	R1	\$ 36,284	56.5	97		108,108	185,602
2019	RD-1002	Middle Ave.	Parklane Cres. N-to-Parklane Cres. S	R2	\$ 60,429	46.33	100		112,381	242,567
2019	RD-1017	St.Vincent St.	Montgomery St.-to-Georgian Trail	MICRO	\$ 4,250	79.56	79.56	3	263,095	263,095
2019	RD-3070	Syd/Lakeshore Dr.	Kilmanjaro Ln.-to-Sideroad 8	PR2	\$ 301,820	22.73	100		195,085	858,271
2019	RD-1150	Cook St.	Berry St.-to-Trowbridge St.	R2	\$ 33,205	41.55	100		50,024	120,394
2019	RD-1022	St.Vincent St.	Marshall St. E-to-Boucher St. E	R1	\$ 41,867	59.32	97		133,908	218,966
2019	RD-1023	St.Vincent St.	Boucher St. E-to-Bridge St.	R1	\$ 39,075	59.32	97		124,981	204,368
2019	RD-2118	10 Sideroad	12th Line-to-11th Line	R1	\$ 290,038	61.71	97		1,025,502	1,611,954
2019	RD-1131	Bayfield St.	Trowbridge St.-to-Nelson St. E	R1	\$ 34,266	61.71	97		119,750	188,231
2019	RD-3120	Sideroad 3	6th Concession S.-to-4th Concession S.	GRR2	\$ 96,228	65.7	80.7		698,961	858,541
2019	RD-3127	Sideroad 6	6th Concession S.-to-4th Concession S.	GRR2	\$ 102,643	65.7	80.7		698,961	858,541
					\$ 1,646,365					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2020	RD-1135	Sykes St. N	Berry St.-to-Trowbridge St.	CRK	\$ 242	91.01	91.01	2	242,513	242,513
2020	RD-1136	Sykes St. N	Trowbridge St.-to-Nelson St.	CRK	\$ 330	91.01	91.01	2	300,996	300,996
2020	RD-1137	Sykes St. N	Nelson St.-to-Collingwood St.	CRK	\$ 264	91.01	91.01	2	240,797	240,797
2020	RD-1140	Sykes St. N	Lombard St.-to-Albert St.	CRK	\$ 286	91.01	91.01	2	224,766	224,766
2020	RD-1141	Sykes St. N	Albert St.-to-William St.	CRK	\$ 330	91.01	91.01	2	259,346	259,346
2020	RD-1143	Sykes St. N	Cook St.-to-Susan St.	CRK	\$ 550	91.01	91.01	2	432,243	432,243
2020	RD-1032	Henry St.	Marshall St. E-to-Boucher St. E	CRK	\$ 264	97	97	2	188,231	188,231
2020	RD-1131	Bayfield St.	Trowbridge St.-to-Nelson St. E	CRK	\$ 264	97	97	2	188,231	188,231
2020	RD-1151	Cook St.	Trowbridge St.-to-Nelson St. W	CRK	\$ 220	97	97	2	145,977	145,977
2020	RD-1156	Cook St.	Albert St.-to-William St.	CRK	\$ 264	97	97	2	175,173	175,173
2020	RD-1118	Marshall St. E	Sykes St.-to-Henry St.	CRK	\$ 286	97	97	2	185,602	185,602
2020	RD-1149	Cook St.	South End-to-Berry St.	CRK	\$ 330	97	97	2	214,156	214,156
2020	RD-2086	4 Sideroad	Grey Road 7-to-3rd Line	SST	\$ 52,650	77.27	90		1,284,079	1,495,627
2020	RD-2022	Ross St.	Robertson Ave.-to-Southeast to End	SST	\$ 8,160	77.26	90		153,926	179,308
2020	RD-2024	John St.	Robertson Ave.-to-Robertson Ave.	SST	\$ 12,240	77.26	90		230,888	268,961
2020	RD-2113	Roberston Ave.	John St.-to-West End	SST	\$ 16,320	77.26	90		307,852	358,616
2020	RD-3187	Sideroad 19-A	Sideroad 18-to-South To End	SST	\$ 2,925	77.26	90		50,930	59,328
2020	RD-1048	Union St.	Russett Dr.-to-Augusta St.	SST	\$ 2,010	77.26	90		34,597	40,302
2020	RD-2023	Penny Lane	John St.-to-North End	SST	\$ 2,040	77.26	90		34,918	40,676
2020	RD-2112	John St.	East Limit-to-Robertson Ave.	SST	\$ 6,120	77.26	90		104,755	122,029
2020	RD-2059	11th Line	8 Sideroad-to-10 Sideroad	SST	\$ 21,450	77.27	90		364,743	424,833
2020	RD-2072	12th Line	16 Sideroad-to-Highway 26	SST	\$ 35,100	77.27	90		596,853	695,183
2020	RD-3033	4Th Concession S.	Sideroad 6-to-Grey Road 18	SST	\$ 36,075	77.27	90		613,432	714,493
2020	RD-3037	Irish Block Rd.	Sideroad 22-to-Sideroad 24	SST	\$ 35,100	77.27	90		596,853	695,183
2020	RD-3038	Irish Block Rd.	Sideroad 24-to-Sideroad 27	SST	\$ 35,100	77.27	90		596,853	695,183
2020	RD-3053	8th Concession S.	Sunny Valley Rd.-to-Sideroad 6	SST	\$ 36,075	77.27	90		613,432	714,493
2020	RD-3028	Queen's Bush Rd.	Concession 'B'-to-Tee Junction	SST	\$ 27,300	77.27	90		449,820	523,927
2020	RD-2136-3	13 Sideroad	1.1km East of Bridge-to-7th Line	SST	\$ 11,700	77.27	90		179,446	209,009
2020	RD-3078	Bayshore Rd.	Rossmoyne-to-Roxsborough	SST	\$ 5,850	77.27	90		89,723	104,504
2020	RD-2118	10 Sideroad	12th Line-to-11th Line	CRK	\$ 5,940	97	97	2	1,611,954	1,611,954
2020	RD-1039	Sykes St. S	Edwin/Margaret-to-Marshall St.	MICRO	\$ 3,038	76.79	76.79	3	218,824	218,824
2020	RD-1040	Sykes St. S	Marshall St.-to-Boucher St.	MICRO	\$ 3,038	76.79	76.79	3	218,824	218,824
2020	RD-1001	Parklane Cres.	Parklane Cres. N-to-Parklane Cres. S	R1	\$ 45,688	59.1	97		152,914	250,976
2020	RD-1005	Pollard Dr.	Grant Av.-to-Parklane Cres.	R1	\$ 85,665	59.1	97		286,714	470,579
2020	RD-1188	Ridge Rd.	St. Andrew's Dr.-to-Fairway Ave.	R1	\$ 37,108	59.1	97		122,468	201,005
2020	RD-1029	Denmark St.	Boucher St. E-to-Bridge St.	R1	\$ 53,706	59.1	97		173,974	285,541
2020	RD-1203	Trowbridge St. W	Thompson St.-to-Cook St.	R1	\$ 49,478	59.1	97		160,094	262,759
2020	RD-3044	6th Concession S.	Sideroad 6-to-Grey Road 18	SSTplus	\$ 111,043	58.37	90		406,662	627,027
2020	RD-1204	Trowbridge St. W	Owen St.-to-Thompson St.	R1	\$ 38,483	59.1	97		121,782	199,879
2020	RD-1056	Blake St.	Louisa St.-to-South To End	R1	\$ 50,240	59.1	97		156,577	256,987
2020	RD-1063	Parklane Cres.	Middle Ave.-to-Parklane Cres.	R1	\$ 33,493	59.1	97		104,384	171,324
2020	RD-1067	Parklane Cres.	Middle Ave.-to-Parklane Cres.	R1	\$ 36,284	59.1	97		113,083	185,602

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2020	RD-1091	Eliza St.	St. Vincent St.-to-Richmond St.	R1	\$ 78,151	59.1	97		243,564	399,757
2020	RD-1111	Margaret St.	Denmark St.-to-St.Vincent St.	R1	\$ 253,990	59.1	97		791,582	1,299,212
2020	RD-1124	Boucher St. E	Sykes St.-to-Henry St.	R1	\$ 33,493	59.1	97		104,384	171,324
2020	RD-1241	Fairway Ave.	Westend-to-Meadowlane Dr.	R1	\$ 19,538	59.1	97		60,891	99,939
2020	RD-1228	Albert St.	Birchwood Crt.-to-Thompson St.	R1	\$ 16,307	46.08	97		29,800	62,731
2020	RD-2158	Fligg Cres.	North End-to-Moore St.	R1	\$ 35,559	48.82	97		72,948	144,940
2020	RD-1041	Sykes St. S	Boucher St.-to-Berry St.	MICRO	\$ 4,575	76.79	76.79	3	226,279	226,279
2020	RD-1139	Sykes St. N	Parker St.-to-Lombard St.	R2	\$ 70,904	43.99	100		112,486	255,707
2020	RD-1190	Ridge Rd.	Ridge Creek Dr.-to-Sykes St. N (# 26)	R1	\$ 28,447	59.1	97		86,168	141,426
2020	RD-1138	Sykes St. N	Collingwood St.-to-Parker St.	R2	\$ 74,456	43.99	100		116,390	264,583
2020	RD-1171	Victoria St.	Albert St.-to-William St.	MICRO	\$ 2,100	79.27	79.27	3	140,009	140,009
2020	RD-2095	7 Sideroad	3rd Line-to-East Limit	GRR2	\$ 7,484	65.7	80.7		45,790	56,244
2020	RD-3042	6Th Concession S.	Syd/Holl TL-to-Sideroad 3	GRR2	\$ 74,844	48.15	63.15		341,501	447,888
2020	RD-3119	Sideroad 3	4th Concession S.-to-2nd Concession S.	GRR	\$ 43,740	80.43	80.43	3	855,668	855,668
2020	RD-2094	7 Sideroad	W. of Collingview Cr.-to-Collingview Cr.	GRR2	\$ 10,098	48.15	63.15		33,558	44,012
2020	RD-3120	Sideroad 3	6th Concession S.-to-4th Concession S.	GRR	\$ 43,740	80.7	80.7	3	858,541	858,541
					\$ 1,700,475					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2021	RD-1021	St. Vincent St.	Margaret St.-to-Marshall St. E	CRK	\$ 330	92.95	92.95	2	209,823	209,823
2021	RD-1144	Sykes St. N	Susan St.-to-Helen St.	CRK	\$ 880	91.01	91.01	2	339,401	339,401
2021	RD-1146	Sykes St. N	Albery Crt.-to-Ford Ave.	CRK	\$ 660	91.01	91.01	2	254,550	254,550
2021	RD-1001	Parklane Cres.	Parklane Cres. N-to-Parklane Cres. S	CRK	\$ 352	97	97	2	250,976	250,976
2021	RD-1005	Pollard Dr.	Grant Av.-to-Parklane Cres.	CRK	\$ 660	97	97	2	470,579	470,579
2021	RD-3116	Syd/Holl Tl	Highway 6 & 10-to-10th Concession	SST	\$ 26,715	77.27	90		1,027,306	1,196,552
2021	RD-1203	Trowbridge St. W	Thompson St.-to-Cook St.	CRK	\$ 396	97	97	2	262,759	262,759
2021	RD-1029	Denmark St.	Boucher St. E-to-Bridge St.	CRK	\$ 440	97	97	2	285,541	285,541
2021	RD-1030	Henry St.	Edwin St.-to-Margaret St.	CRK	\$ 264	97	97	2	171,324	171,324
2021	RD-1056	Blake St.	Louisa St.-to-South To End	CRK	\$ 396	97	97	2	256,987	256,987
2021	RD-1063	Parklane Cres.	Middle Ave.-to-Parklane Cres.	CRK	\$ 264	97	97	2	171,324	171,324
2021	RD-1067	Parklane Cres.	Middle Ave.-to-Parklane Cres.	CRK	\$ 286	97	97	2	185,602	185,602
2021	RD-1073	Coleman St.	Sykes St. S-to-Gray Ave.	CRK	\$ 44	97	97	2	28,554	28,554
2021	RD-1091	Eliza St.	St. Vincent St.-to-Richmond St.	CRK	\$ 616	97	97	2	399,757	399,757
2021	RD-1111	Margaret St.	Denmark St.-to-St. Vincent St.	CRK	\$ 2,002	97	97	2	1,299,212	1,299,212
2021	RD-1115	Marshall St. E	St. Vincent St.-to-Richmond St. N.	CRK	\$ 638	97	97	2	414,035	414,035
2021	RD-1122	Boucher St. E	Denmark St.-to-St. Vincent St.	CRK	\$ 286	97	97	2	185,602	185,602
2021	RD-1124	Boucher St. E	Sykes St.-to-Henry St.	CRK	\$ 264	97	97	2	171,324	171,324
2021	RD-1125	Boucher St. W	Victoria Cres.-to-Sykes St.	CRK	\$ 242	97	97	2	157,048	157,048
2021	RD-1204	Trowbridge St. W	Owen St.-to-Thompson St.	CRK	\$ 308	97	97	2	199,879	199,879
2021	RD-1241	Fairway Ave.	Westend-to-Meadowlane Dr.	CRK	\$ 154	97	97	2	99,939	99,939
2021	RD-1249	Glen Abbey Crt.	Ridge Rd-to-South End	CRK	\$ 352	97	97	2	228,433	228,433
2021	RD-2001	Tbm/Meaf Tl	4 Sideroad-to-7 Sideroad	SST	\$ 18,360	77.27	90		612,437	713,335
2021	RD-2076	Meaf/Gh Tl	Grey Road 12-to-7th Line	SST	\$ 27,540	77.27	90		918,656	1,070,002
2021	RD-2028-1	Cedar Ave.	Harbour Beach Dr.-to-North End	SST	\$ 11,700	77.26	90		203,720	237,313
2021	RD-2070	12Th Line	10 Sideroad-to-13 Sideroad	SST	\$ 29,250	77.27	90		497,377	579,318
2021	RD-2071	12th Line	13 Sideroad-to-16 Sideroad	SST	\$ 35,100	77.27	90		596,853	695,183
2021	RD-2087	4 Sideroad	7th Line-to-Grey Road 7	SST	\$ 52,650	77.27	90		895,279	1,042,773
2021	RD-2150	22 Sideroad	Grey Road 112-to-1.3km East of Grey Road 112	SST	\$ 25,350	77.27	90		431,060	502,076
2021	RD-1188	Ridge Rd.	St. Andrew's Dr.-to-Fairway Ave.	CRK	\$ 660	97	97	2	201,005	201,005
2021	RD-1037	Sykes St. S	James Cres.-to-Paul St.	MICRO	\$ 2,025	76.79	76.79	3	160,279	160,279
2021	RD-2063	11Th Line N	Highway 26-to-22 Sideroad	SST	\$ 35,100	77.27	90		538,338	627,027
2021	RD-2032	7Th Line	4 Sideroad-to-7 Sideroad	CRK	\$ 3,960	97	97	2	1,093,830	1,093,830
2021	RD-2033	7Th Line	7 Sideroad-to-10 Sideroad	CRK	\$ 3,960	97	97	2	1,093,830	1,093,830
2021	RD-1190	Ridge Rd.	Ridge Creek Dr.-to-Sykes St. N (# 26)	CRK	\$ 528	97	97	2	141,426	141,426
2021	RD-1142	Sykes St. N	William St.-to-Cook St.	MICRO	\$ 2,075	76.79	76.79	3	145,883	145,883
2021	RD-2158	Fligg Cres.	North End-to-Moore St.	CRK	\$ 660	97	97	2	144,940	144,940
2021	RD-1119	Marshall St. W	Victoria Cres.-to-Sykes St.	CRK	\$ 330	97	97	2	67,578	67,578
2021	RD-2120	Swarthmore Drive	Hwy. 26-to-250m East of Hwy. 26	CRK	\$ 550	97	97	2	110,610	110,610
2021	RD-3080	Bayshore Rd.	Sideroad 23-to-Ashgrove Ln.	R1	\$ 173,104	46.33	97		325,155	680,768
2021	RD-3082	Bayshore Rd.	Ashgrove Ln-to-Thornridge Rd	R1	\$ 106,572	43.36	97		174,749	390,929
2021	RD-1123	Boucher St. E	Henry St.-to-Denmark St.	R2	\$ 47,252	46.33	100		81,829	176,623

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2021	RD-2031	7Th Line	Meaf/GH TL-to-4 Sideroad	PR2	\$ 145,143	26.29	100		106,183	403,892
2021	RD-3069	Syd/Lakeshore Dr.	Sideroad 18-to-Kilmanjaro Ln.	PR2	\$ 276,780	21.61	100		157,448	728,590
2021	RD-1183	Pearson St.	Nelson St. W-to-Ridge Rd.	R1	\$ 49,745	56.5	97		133,926	229,927
2021	RD-1189	Ridge Rd.	Fairway Ave.-to-Ridge Creek Dr.	R1	\$ 34,706	56.5	97		93,437	160,414
2021	RD-2148-1	Centreville Rd.	Lakeshore Rd.-to-Scotia Dr.	PR2	\$ 88,345	20	100		43,588	217,940
2021	RD-3075	Concession 'A'	Sideroad 21-to-Sideroad 24	PR2	\$ 315,414	20	100		154,485	772,425
2021	RD-2010	Foster St.	4 Sideroad-to-South To End	PR2	\$ 73,176	20	100		35,531	177,656
2021	RD-2148-2	Centreville Rd.	7th Line-to-Scotia Dr.	R1	\$ 61,326	51.35	97		124,117	234,456
2021	RD-2159	Scotia Dr.	Centreville Rd.-to-North End	PR2	\$ 70,123	15	100		23,509	156,728
2021	RD-3042	6Th Concession S.	Syd/Holl TL-to-Sideroad 3	GRR2	\$ 74,844	63.15	78.15		447,888	554,275
2021	RD-3128	Sideroad 6	8th Concession S.-to-6th Concession S.	GRR2	\$ 120,285	30.86	45.86		328,309	487,889
2021	RD-2095	7 Sideroad	3rd Line-to-East Limit	GRR	\$ 3,402	80.7	80.7	3	56,244	56,244
					\$ 1,926,564					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2022	RD-1022	St.Vincent St.	Marshall St. E-to-Boucher St. E	CRK	\$ 330	92.95	92.95	2	209,823	209,823
2022	RD-1023	St.Vincent St.	Boucher St. E-to-Bridge St.	CRK	\$ 308	92.95	92.95	2	195,835	195,835
2022	RD-3076-2	Tom Thomson Ln.	450m South of Grey Road 15-to-Grey Road 15	SST	\$ 9,045	77.27	90		136,927	159,485
2022	RD-2034	7Th Line	10 Sideroad-to-13 Sideroad	CRK	\$ 3,960	97	97	2	1,093,830	1,093,830
2022	RD-1183	Pearson St.	Nelson St. W-to-Ridge Rd.	CRK	\$ 946	97	97	2	229,927	229,927
2022	RD-1189	Ridge Rd.	Fairway Ave.-to-Ridge Creek Dr.	CRK	\$ 660	97	97	2	160,414	160,414
2022	RD-3066	Syd/Lakeshore Dr.	Grey Road 15-to-Landfill Entrance	CRK	\$ 5,500	97	97	2	1,224,299	1,224,299
2022	RD-3080	Bayshore Rd.	Sideroad 23-to-Ashgrove Ln.	CRK	\$ 3,300	97	97	2	680,768	680,768
2022	RD-2148-2	Centreville Rd.	7th Line-to-Scotia Dr.	CRK	\$ 1,210	97	97	2	234,456	234,456
2022	RD-1243	Helen St.	Stewart St.-to-Sykes St. N	R1	\$ 30,502	53.91	97		71,698	129,006
2022	RD-1246	Albery Crt.	Northwest End-to-Sykes St. N	R1	\$ 100,700	64.32	97		364,044	549,009
2022	RD-1187	Ridge Rd.	Glen Abbey Ct.-to-St. Andrew's Dr.	R2	\$ 22,396	39.27	100		27,125	69,074
2022	RD-2065	Moore St.	Fligg Cres.-to-11th Line	R1	\$ 11,853	53.91	97		26,851	48,314
2022	RD-3062	Clearview Cres.	Highway 26-to-North	PR2	\$ 130,142	22.73	100		72,911	320,768
2022	RD-1238	Susan St.	Stewart St.-to-Existing HCB	R1	\$ 18,199	53.91	97		40,303	72,516
2022	RD-1003	Middle Ave.	Parklane Cres. N-to-Grant Ave.	R1	\$ 30,702	64.32	97		104,137	157,048
2022	RD-1112	Margaret St.	Henry St.-to-Denmark St.	R1	\$ 33,493	64.32	97		113,604	171,324
2022	RD-1113	Margaret St.	Sykes St.-to-Henry St.	R1	\$ 33,493	64.32	97		113,604	171,324
2022	RD-1116	Marshall St. E	Denmark St.-to-St.Vincent St.	R1	\$ 30,702	64.32	97		104,137	157,048
2022	RD-1169	Owen St.	Berry St.-to-Trowbridge St.	R1	\$ 22,329	64.32	97		75,736	114,217
2022	RD-1179	Stewart St.	Susan St.-to-Helen St.	R1	\$ 36,794	53.91	97		80,606	145,033
2022	RD-1191	Meadow Lane	Ridge Creek Dr.-to-Fairway Ave.	R1	\$ 80,942	64.32	97		274,543	414,035
2022	RD-1227	Albert St.	Cook St.-to-Sykes St. N	R1	\$ 33,493	64.32	97		113,604	171,324
2022	RD-1244	Ridge Creek	Meadow Lane-to-Ridge Rd.	R1	\$ 41,867	64.32	97		142,005	214,156
2022	RD-2026	Greenfield Dr.	Northend-to-Grey Road 12	PR2	\$ 18,933	20	100		8,789	43,947
2022	RD-3076-1	Tom Thomson Ln.	Sideroad 24-to-450m South of Grey Road 15	R1	\$ 134,666	48.96	97		241,001	477,473
2022	RD-1168	Owen St.	Miller St.-to-Berry St.	PR2	\$ 30,521	25.66	100		19,171	74,712
2022	RD-2091	Hurlburt Crt.	West End-to-Meaf/BM TL	PR2	\$ 14,396	24.98	100		8,709	34,865
2022	RD-1175	Noble St.	Trowbridge St. W-to-Nelson St. W	PR2	\$ 25,247	20	100		11,534	57,672
2022	RD-1155	Cook St.	Lombard St.-to-Albert St.	R1	\$ 35,017	64.32	97		116,156	175,173
2022	RD-1200	Berry St.	Pearson St.-to-Noble St.	PR2	\$ 32,189	20	100		14,596	72,980
2022	RD-1225	Lombard St.	Victoria St.-to-Thompson St.	R1	\$ 26,254	53.91	97		56,040	100,832
2022	RD-1206	Trowbridge St. W	Noble-to-Pearson	PR2	\$ 32,392	20	100		14,596	72,980
2022	RD-2082	4 Sideroad	Dinsmore St.-to-Clarence St.	BS	\$ 53,618	10	95		11,376	108,067
2022	RD-1174	Noble St.	Berry St. W-to-Trowbridge St. W	PR2	\$ 11,652	22.73	100		6,050	26,618
2022	RD-3029	Queen's Bush Rd.	Concession 'B'-to-Northwest End	PR2	\$ 139,057	21.06	100		66,014	313,457
2022	RD-2027	Algonquin Dr.	Lakeshore Rd.-to-South/ West End	PR2	\$ 128,160	31.1	100		99,759	320,768
2022	RD-2101-2	St.Vincent Cres.	Tucker St.-to-Tucker St.	R2	\$ 223,178	40.81	100		263,598	645,915
2022	RD-1024	St.Vincent St.	Bridge St.-to-Harbour	R1	\$ 11,775	67.92	97		43,720	62,439
2022	RD-1027	Denmark St.	Margaret St.-to-Marshall St. E	MICRO	\$ 3,188	74.48	74.48	3	164,436	164,436
2022	RD-1130	Bayfield St.	Berry St. ROW-to-Trowbridge St.	R1	\$ 14,278	69.47	97		56,171	78,430
2022	RD-1114	Marshall St. E	Richmond St. N.-to-East End	R2	\$ 41,543	27.75	100		26,428	95,236

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2022	RD-1051	Union St.	Farrar St.-to-Louisa St.	R1	\$ 12,928	53.91	97		25,565	45,999
2022	RD-1028	Denmark St.	Marshall St. E-to-Boucher St. E	R1	\$ 40,280	69.47	97		153,375	214,156
2022	RD-2083	4 Sideroad	Ridgecrest Ln-to-Dinsmore St.	BS	\$ 55,409	15	95		17,100	108,303
2022	RD-1161	Thompson St.	Nelson St. W-to-Collingwood St. W	MICRO	\$ 2,730	74.48	74.48	3	134,504	134,504
2022	RD-1162	Thompson St.	Collingwood St. W-to-Parker St. W	MICRO	\$ 2,958	74.48	74.48	3	145,713	145,713
2022	RD-1163	Thompson St.	Parker St. W-to-Lombard St.	MICRO	\$ 2,503	74.48	74.48	3	123,295	123,295
2022	RD-3128	Sideroad 6	8th Concession S.-to-6th Concession S.	GRR2	\$ 120,285	45.86	60.86		487,889	647,469
2022	RD-2094	7 Sideroad	W. of Collingview Cr.-to-Collingview Cr.	GRR2	\$ 10,098	61.55	76.55		42,897	53,352
2022	RD-3127	Sideroad 6	6th Concession S.-to-4th Concession S.	GRR	\$ 46,656	75.11	75.11	3	799,071	799,071
					\$ 1,952,777					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2023	RD-1130	Bayfield St.	Berry St. ROW-to-Trowbridge St.	CRK	\$ 110	97	97	2	78,430	78,430
2023	RD-1246	Albery Crt.	Northwest End-to-Sykes St. N	CRK	\$ 770	97	97	2	549,009	549,009
2023	RD-1155	Cook St.	Lombard St.-to-Albert St.	CRK	\$ 264	97	97	2	175,173	175,173
2023	RD-1003	Middle Ave.	Parklane Cres. N-to-Grant Ave.	CRK	\$ 242	97	97	2	157,048	157,048
2023	RD-1028	Denmark St.	Marshall St. E-to-Boucher St. E	CRK	\$ 330	97	97	2	214,156	214,156
2023	RD-1112	Margaret St.	Henry St.-to-Denmark St.	CRK	\$ 264	97	97	2	171,324	171,324
2023	RD-1113	Margaret St.	Sykes St.-to-Henry St.	CRK	\$ 264	97	97	2	171,324	171,324
2023	RD-1116	Marshall St. E	Denmark St.-to-St.Vincent St.	CRK	\$ 242	97	97	2	157,048	157,048
2023	RD-1169	Owen St.	Berry St.-to-Trowbridge St.	CRK	\$ 176	97	97	2	114,217	114,217
2023	RD-1191	Meadow Lane	Ridge Creek Dr.-to-Fairway Ave.	CRK	\$ 638	97	97	2	414,035	414,035
2023	RD-1227	Albert St.	Cook St.-to-Sykes St. N	CRK	\$ 264	97	97	2	171,324	171,324
2023	RD-1244	Ridge Creek	Meadow Lane-to-Ridge Rd.	CRK	\$ 330	97	97	2	214,156	214,156
2023	RD-2000	Tbm/Meaf TI	Meaf/GH TL-to-4 Sideroad	SST	\$ 18,360	77.27	90		612,437	713,335
2023	RD-2121	Muir St.	Grey Road 7-to-Highway 26	CRK	\$ 1,650	92.95	92.95	2	419,602	419,602
2023	RD-1229	Albert St.	Victoria St.-to-Birchwood Crt.	SST	\$ 3,780	77.26	90		66,620	77,605
2023	RD-2044	7Th Line	Harbour Beach Dr.-to-Northeast End	SST	\$ 21,450	77.27	90		364,743	424,833
2023	RD-3097	10th Concession	Grey Road 18-to-Story Book Park Rd.	CRK	\$ 4,180	97	97	2	1,174,858	1,174,858
2023	RD-3098	10th Concession	Story Book Park Rd.-to-Sideroad 15	CRK	\$ 4,070	97	97	2	1,143,941	1,143,941
2023	RD-3083	Bayshore Rd.	Thornridge Rd-to-Sideroad 18	SST	\$ 14,700	77.27	90		218,465	254,456
2023	RD-1243	Helen St.	Stewart St.-to-Sykes St. N	CRK	\$ 528	97	97	2	129,006	129,006
2023	RD-1051	Union St.	Farrar St.-to-Louisa St.	CRK	\$ 198	97	97	2	45,999	45,999
2023	RD-1179	Stewart St.	Susan St.-to-Helen St.	CRK	\$ 660	97	97	2	145,033	145,033
2023	RD-1238	Susan St.	Stewart St.-to-Existing HCB	CRK	\$ 330	97	97	2	72,516	72,516
2023	RD-2065	Moore St.	Fligg Cres.-to-11th Line	CRK	\$ 220	97	97	2	48,314	48,314
2023	RD-1225	Lombard St.	Victoria St.-to-Thompson St.	CRK	\$ 506	97	97	2	100,832	100,832
2023	RD-1038	Sykes St. S	Paul St.-to-Edwin/Margaret	R1	\$ 27,705	70.33	97		146,796	202,462
2023	RD-2117	10 Sideroad	11th Line-to-Grey Road 12	R1	\$ 288,317	66.91	97		1,111,916	1,611,954
2023	RD-1018	St.Vincent St.	Georgian Trail-to-Edwin St.	R1	\$ 11,132	67.92	97		42,224	60,302
2023	RD-1117	Marshall St. E	Henry St.-to-Denmark St.	R1	\$ 36,284	66.91	97		128,027	185,602
2023	RD-1132	Bayfield St.	Nelson St. E-to-Collingwood St. E	R1	\$ 33,493	66.91	97		118,178	171,324
2023	RD-1134	Bayfield St.	Parker St. E-to-Sykes St. N	R1	\$ 55,822	66.91	97		196,964	285,541
2023	RD-1214	Collingwood St. W	Cook St.-to-Sykes St. N	R1	\$ 44,658	66.91	97		157,572	228,433
2023	RD-1240	Fairway Ave.	Meadowlane Dr.-to-Ridge Rd.	R1	\$ 47,449	66.91	97		167,420	242,710
2023	RD-1247	Country Cres.	Northwest End-to-Ridge Creek	R1	\$ 50,240	66.91	97		177,268	256,987
2023	RD-1157	Cook St.	William St.-to-Sykes St. N	R1	\$ 29,180	66.91	97		100,694	145,977
2023	RD-3074	Concession 'A'	Grey Road 15-to-Sideroad 21	PR2	\$ 215,382	32.24	100		168,910	523,914
2023	RD-1186	Ridge Rd.	Pearson St.-to-Glen Abbey Ct.	R2	\$ 21,308	37.07	100		20,435	55,125
2023	RD-1110	Margaret St.	St.Vincent St.-to-Richmond St. N	MICRO	\$ 5,400	72	72	3	254,338	254,338
2023	RD-1224	Lombard St.	Thompson St.-to-Cook St.	MICRO	\$ 3,825	72	72	3	180,156	180,156
2023	RD-1232	William St.	Thompson St.-to-Cook St.	MICRO	\$ 3,600	72	72	3	169,559	169,559
2023	RD-2107	Old Highway 26	West End-to-Highway 26	R1	\$ 77,580	61.71	97		206,679	324,871
2023	RD-1096	Edwin St. E	Sykes St.-to-Henry St.	MICRO	\$ 4,140	72	72	3	190,753	190,753

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2023	RD-3021	2Nd Concession N.	Highway 26-to-Sideroad 22	R1	\$ 204,693	61.71	97		533,916	839,245
2023	RD-2085	4 Sideroad	3rd Line-to-Foster St.	BS	\$ 390,218	20	95		165,577	786,492
2023	RD-3041	5th Concession	Highway 26-to-Sideroad 15	BS	\$ 220,654	20.44	95		95,622	444,428
2023	RD-2081	4 Sideroad	Clarence St.-to-Meaf/BM TL	BS	\$ 147,485	20.85	95		65,310	297,577
2023	RD-3128	Sideroad 6	8th Concession S.-to-6th Concession S.	GRR2	\$ 120,285	60.86	75.86		647,469	807,050
2023	RD-3042	6Th Concession S.	Syd/Holl TL-to-Sideroad 3	GRR	\$ 34,020	75.11	75.11	3	532,714	532,714
2023	RD-2094	7 Sideroad	W. of Collingview Cr.-to-Collingview Cr.	GRR	\$ 4,590	76.55	76.55	3	53,352	53,352
					\$ 2,151,986					

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2024	RD-1138	Sykes St. N	Collingwood St.-to-Parker St.	CRK	\$ 264	91.01	91.01	2	240,797	240,797
2024	RD-1139	Sykes St. N	Parker St.-to-Lombard St.	CRK	\$ 264	91.01	91.01	2	232,719	232,719
2024	RD-1002	Middle Ave.	Parklane Cres. N-to-Parklane Cres. S	CRK	\$ 330	97	97	2	235,290	235,290
2024	RD-1150	Cook St.	Berry St.-to-Trowbridge St.	CRK	\$ 176	97	97	2	116,782	116,782
2024	RD-1152	Cook St.	Nelson St. W-to-Collingwood St. W	CRK	\$ 264	97	97	2	175,173	175,173
2024	RD-1153	Cook St.	Collingwood St. W-to-Parker St. W	CRK	\$ 264	97	97	2	175,173	175,173
2024	RD-1154	Cook St.	Parker St. W-to-Lombard St.	CRK	\$ 264	97	97	2	175,173	175,173
2024	RD-1157	Cook St.	William St.-to-Sykes St. N	CRK	\$ 220	97	97	2	145,977	145,977
2024	RD-1117	Marshall St. E	Henry St.-to-Denmark St.	CRK	\$ 286	97	97	2	185,602	185,602
2024	RD-1132	Bayfield St.	Nelson St. E-to-Collingwood St. E	CRK	\$ 264	97	97	2	171,324	171,324
2024	RD-1134	Bayfield St.	Parker St. E-to-Sykes St. N	CRK	\$ 440	97	97	2	285,541	285,541
2024	RD-1214	Collingwood St. W	Cook St.-to-Sykes St. N	CRK	\$ 352	97	97	2	228,433	228,433
2024	RD-1215	Collingwood St. W	Thompson St.-to-Cook St.	CRK	\$ 286	97	97	2	185,602	185,602
2024	RD-1240	Fairway Ave.	Meadowlane Dr.-to-Ridge Rd.	CRK	\$ 374	97	97	2	242,710	242,710
2024	RD-1247	Country Cres.	Northwest End-to-Ridge Creek	CRK	\$ 396	97	97	2	256,987	256,987
2024	RD-2035	7Th Line	13 Sideroad-to-Grey Road 12	SST	\$ 30,150	77.27	90		773,467	900,894
2024	RD-2082	4 Sideroad	Dinsmore St.-to-Clarence St.	CRK	\$ 396	94.55	94.55	2	107,555	107,555
2024	RD-3043	6th Concession S.	Sideroad 3-to-Sideroad 6	SST	\$ 37,050	77.27	90		712,365	829,725
2024	RD-2151	22 Sideroad	11th Line-to-to East Limit	SST	\$ 21,450	77.27	90		364,743	424,833
2024	RD-3036	Irish Block Rd.	Highway 26-to-Sideroad 22	SST	\$ 35,100	77.27	90		596,853	695,183
2024	RD-3068	Syd/Lakeshore Dr.	Sideroad 23-to-Sideroad 18	SST	\$ 33,150	77.27	90		563,694	656,561
2024	RD-2117	10 Sideroad	11th Line-to-Grey Road 12	CRK	\$ 5,940	97	97	2	1,611,954	1,611,954
2024	RD-3099	10th Concession	Sideroad 15-to-Superior St.	CRK	\$ 440	97	97	2	111,545	111,545
2024	RD-3070	Syd/Lakeshore Dr.	Kilmanjaro Ln.-to-Sideroad 8	CRK	\$ 3,740	97	97	2	832,523	832,523
2024	RD-3021	2Nd Concession N.	Highway 26-to-Sideroad 22	CRK	\$ 4,180	97	97	2	839,245	839,245
2024	RD-2107	Old Highway 26	West End-to-Highway 26	CRK	\$ 1,760	97	97	2	324,871	324,871
2024	RD-2140	16 Sideroad	11th Line-to-Grey Road 12	R1	\$ 289,464	69.47	97		1,154,458	1,611,954
2024	RD-2119	Gerald Shortt Parkway	St.Vin/Syd TL-to-12th Line	R1	\$ 118,631	69.47	97		470,335	656,722
2024	RD-3132	Gerald Shortt Parkway	Grey Road 18-to-Syd/St.Vin Townline	R1	\$ 150,985	69.47	97		598,608	835,828
2024	RD-1061-1	Centre St.	600m North of Muir Street-to-Russett Dr.	R1	\$ 37,754	59.1	97		91,546	150,253
2024	RD-1176	Noble St.	Nelson St. W-to-Collingwood St. W	R1	\$ 12,443	59.1	97		28,840	47,335
2024	RD-1219	Parker St. W	Cook St.-to-Sykes St. N	MICRO	\$ 3,600	76.91	76.91	3	181,122	181,122
2024	RD-1223	Lombard St.	Cook St.-to-Sykes St. N	MICRO	\$ 3,600	76.91	76.91	3	181,122	181,122
2024	RD-1231	William St.	Cook St.-to-Sykes St. N	MICRO	\$ 1,350	76.91	76.91	3	67,921	67,921
2024	RD-1245	Ridge Creek	West End-to-Meadow Lane	MICRO	\$ 2,025	76.91	76.91	3	101,881	101,881
2024	RD-3048	6th Concession N.	Sideroad 22-to-Sideroad 24	BS	\$ 335,966	22.28	95		162,409	692,499
2024	RD-3112	Syd/Holl Tl	4th Concession S.-to-2nd Concession S	BS	\$ 490,329	22.28	95		237,030	1,010,674
2024	RD-1019	St.Vincent St.	Edwin St.-to-Eliza St.	R1	\$ 44,658	70.84	97		170,574	233,563
2024	RD-1020	St.Vincent St.	Eliza St.-to-Margaret St.	R1	\$ 41,867	70.84	97		159,913	218,966
2024	RD-1084	Aiken Street	Graham St.-to-Grant Ave.	R1	\$ 43,046	59.1	97		97,930	160,732
2024	RD-1222	Parker St. W	Pearson St.-to-Noble St.	R1	\$ 14,181	59.1	97		32,348	53,093
2024	RD-1016	St.Vincent St.	Sykes St. S-to-Montgomery St.	R1	\$ 33,981	65.02	97		97,808	145,915

Municipality of Meaford

10 Year Roads Program - Proposed Budget

Year	Asset ID	Street Name	Description	Imp. Type	Cost	Start Cond	End Cond	Yrs Hold	Start Value	End Value
2024	RD-2156	Mckay Crt.	7th Line-to-East End	R2	\$ 19,766	36.9	100		17,025	46,137
2024	RD-1170	Victoria St.	Lombard St.-to-Albert St.	R1	\$ 12,846	64.32	97		31,977	48,224
2024	RD-2081	4 Sideroad	Clarence St.-to-Meaf/BM TL	CRK	\$ 1,100	95	95	2	297,577	297,577
2024	RD-2011	3rd Line	Meaf/GH TL-to-4 Sideroad	GRR2	\$ 82,418	27.45	42.45		176,963	273,665
2024	RD-3017	1st Concession	Sideroad 6-to-10 Sideroad	GRR2	\$ 85,833	27.45	42.45		162,615	251,476
					\$ 2,003,643					

Appendix G

Critical Deficiencies by Asset ID

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1001	Parklane Cres.	Parklane Cres. N	Parklane Cres. S	0.160	160	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1002	Middle Ave.	Parklane Cres. N	Parklane Cres. S	0.150	150	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1003	Middle Ave.	Parklane Cres. N	Grant Ave.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1004	Middle Ave.	Grant Av.	North End	0.080	20	ADEQ	1-5	ADEQ	NOW	NOW	NOW	BS	ADEQ
RD-1005	Pollard Dr.	Grant Av.	Parklane Cres.	0.300	300	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1006	Lakeside Ave.	Aiken St.	Lakeside Ave.	0.100	100	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	REC	1-5
RD-1007	Vera St.	Eliza St.	Aimee	0.210	210	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1008	Graham St.	Aiken St.	Cemetery Gates	0.300	300	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1009	Aimee St.	South End	Margaret St.	0.100	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1010	Richmond St. S	Eliza St.	Aiken St.	0.150	150	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1011	Richmond St. N	Margaret St.	Marshall St. E	0.150	150	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1013	Fuller St.	Boucher St. E	Bridge St.	0.140	140	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1014	Fuller St.	Bridge St.	North End	0.090	90	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1016	St.Vincent St.	Sykes St. S	Montgomery St.	0.240	2,000	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1017	St.Vincent St.	Montgomery St.	Georgian Trail	0.200	2,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1018	St.Vincent St.	Georgian Trail	Edwin St.	0.090	2,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1019	St.Vincent St.	Edwin St.	Eliza St.	0.160	2,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1020	St.Vincent St.	Eliza St.	Margaret St.	0.150	2,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1021	St.Vincent St.	Margaret St.	Marshall St. E	0.150	2,000	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1022	St.Vincent St.	Marshall St. E	Boucher St. E	0.150	1,500	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1023	St.Vincent St.	Boucher St. E	Bridge St.	0.140	1,500	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1024	St.Vincent St.	Bridge St.	Harbour	0.090	1,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1025	Mckibbon Dr.	South End	Sykes St. S	0.270	270	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	RSS	1-5
RD-1026	Denmark St.	Edwin St.	Margaret St.	0.240	240	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1027	Denmark St.	Margaret St.	Marshall St. E	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1028	Denmark St.	Marshall St. E	Boucher St. E	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1029	Denmark St.	Boucher St. E	Bridge St.	0.200	200	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1030	Henry St.	Edwin St.	Margaret St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1031	Henry St.	Margaret St.	Marshall St. E	0.140	140	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1032	Henry St.	Marshall St. E	Boucher St. E	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1033	Sykes St. S	Muir St.	600m West of Muir Street	0.600	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1033-1	Sykes St. S	600m West of Muir Street	St. Vincent St.	1.040	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1034	Sykes St. S	McKibbon St.	Coleman St.	0.360	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	6-10
RD-1035	Sykes St. S	Coleman St.	Ivan St.	0.120	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	6-10
RD-1036	Sykes St. S	Ivan St.	James Cres.	0.100	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1037	Sykes St. S	James Cres.	Paul St.	0.100	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1038	Sykes St. S	Paul St.	Edwin/Margaret	0.100	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1039	Sykes St. S	Edwin/Margaret	Marshall St.	0.150	11,570	NOW	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	NOW
RD-1040	Sykes St. S	Marshall St.	Boucher St.	0.150	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	6-10
RD-1041	Sykes St. S	Boucher St.	Berry St.	0.150	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	6-10
RD-1043	Coleman St.	South of Augusta	Augusta St.	0.270	270	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1045	Victoria Cres.	Edwin St. W	Marshall St. W	0.090	90	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1046	Victoria Cres.	Marshall St. W	Boucher St. W	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1047	Union St.	Muir St.	570m North of Muir	0.570	570	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-1047-1	Union Street	570m North of Muir	Russett Dr.	0.400	570	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1048	Union St.	Russett Dr.	Augusta St.	0.100	570	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1049	Union St.	Augusta St.	Grace Ave.	0.100	570	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1050	Union St.	Grace Ave.	Farrar St.	0.160	570	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1051	Union St.	Farrar St.	Louisa St.	0.090	570	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1052	Union St.	Louisa St.	Centennial Heights	0.100	570	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1053	Union St.	Centennial Heights	Parkview Ave.	0.060	570	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1054	Union St.	Parkview Ave.	Paul St.	0.040	570	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1056	Blake St.	Louisa St.	South To End	0.180	180	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1058	Dillon Ave.	Louisa St.	South To End	0.090	20	ADEQ	1-5	ADEQ	NOW	NOW	NOW	REC	ADEQ
RD-1059	Lorne St.	Louisa St.	Edwin St. W	0.210	210	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1061	Centre St.	Muir St.	Russet Dr.	0.600	600	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-1061-1	Centre St.	600m North of Muir Street	Russett Dr.	0.370	370	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1062	Centre St.	Russett Dr.	Louisa St.	0.530	530	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1063	Parklane Cres.	Middle Ave.	Parklane Cres.	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1067	Parklane Cres.	Middle Ave.	Parklane Cres.	0.130	130	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1068	Montgomery	St. Vincent St.	East End	0.472	472	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1071	Gray Ave.	West End	St.Vincent St.	0.340	153	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1073	Coleman St.	Sykes St. S	Gray Ave.	0.020	245	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1074	Coleman St.	Augusta St.	Sykes St. S	0.120	120	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1075	Augusta St.	Ivan St.	Coleman St.	0.200	200	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1076	Augusta St.	Gully	Ivan St.	0.050	20	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	ADEQ
RD-1078	Augusta St.	Union St.	East End	0.100	10	ADEQ	1-5	ADEQ	NOW	NOW	NOW	REC	ADEQ
RD-1079	Ivan Street	Augusta St.	Sykes	0.240	240	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1080	Grace Ave.	Union St.	East End	0.100	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1081	Grant Ave.	Middle Ave.	Memorial Park	0.240	240	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1082	Grant Ave.	Pollard Dr.	Middle Ave.	0.100	100	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1083	Grant Ave.	Aiken St.	Pollard Dr.	0.190	190	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1084	Aiken Street	Graham St.	Grant Ave.	0.360	360	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1085	Aiken Street	RichCBond St.	Graham St.	0.290	290	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1086	Aiken Street	St. Vincent St.	Richmond St.	0.280	280	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1088	Lakeside Ave.	Lakeside Ave.	Lakeside Ave.	0.160	160	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-1089	Eliza St.	Vera St.	Lakeside Ave.	0.130	130	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1090	Eliza St.	RichCBond St.	Vera St.	0.480	480	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1091	Eliza St.	St. Vincent St.	RichCBond St.	0.280	280	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1092	Burton St.	Farrar St.	James Cres.	0.160	160	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1093	Farrar St.	Union St.	Burton St.	0.180	180	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1094	Edwin St. E	Denmark St.	St.Vincent St.	0.080	80	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1095	Edwin St. E	Henry St.	Denmark St.	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1096	Edwin St. E	Sykes St.	Henry St.	0.180	180	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1097	Edwin St. W	Victoria Cres.	Sykes St.	0.330	330	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1098	Edwin St. W	Lorne St.	Victoria Cres.	0.210	210	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1099	Edwin St. W	Legion Rd.	Lorne St.	0.140	140	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1100	Louisa St.	Blake St.	Union St.	0.080	80	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1101	Louisa St.	Dillon Ave.	Blake St.	0.050	50	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1102	Louisa St.	Centre St.	Dillon Ave.	0.180	180	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-1103	Centennial Heights	Union St.	Southeast to End	0.160	160	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1104	James Cres.	Burton St.	Paul St.	0.120	120	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1105	Paul St.	Union St.	Sykes St. S	0.270	270	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1106	Parkview Ave.	Curb	Union St.	0.080	80	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	RSS	6-10
RD-1107	Parkview Ave.	Westend	Curb	0.080	80	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1108	Margaret St.	Vera St.	East End	0.100	10	ADEQ	1-5	ADEQ	NOW	NOW	NOW	REC	ADEQ
RD-1109	Margaret St.	Richmond St. N	Vera St.	0.210	210	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1110	Margaret St.	St. Vincent St.	Richmond St. N	0.240	240	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1111	Margaret St.	Denmark St.	St. Vincent St.	0.910	910	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1112	Margaret St.	Henry St.	Denmark St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1113	Margaret St.	Sykes St.	Henry St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1114	Marshall St. E	Richmond St. N.	East End	0.200	200	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1115	Marshall St. E	St. Vincent St.	Richmond St. N.	0.290	290	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1116	Marshall St. E	Denmark St.	St. Vincent St.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1117	Marshall St. E	Henry St.	Denmark St.	0.130	130	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1118	Marshall St. E	Sykes St.	Henry St.	0.130	130	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1119	Marshall St. W	Victoria Cres.	Sykes St.	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1120	Boucher St. E	Fuller St.	East End	0.240	240	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1121	Boucher St. E	St. Vincent St.	Fuller St.	0.180	180	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1122	Boucher St. E	Denmark St.	St. Vincent St.	0.130	130	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1123	Boucher St. E	Henry St.	Denmark St.	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R2	6-10
RD-1124	Boucher St. E	Sykes St.	Henry St.	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1125	Boucher St. W	Victoria Cres.	Sykes St.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1127	Bridge St.	St. Vincent St.	Fuller St.	0.180	180	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1128	Bridge St.	Denmark St.	St. Vincent St.	0.120	120	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1129	Bridge St.	Bayfield St.	Denmark St.	0.110	110	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1130	Bayfield St.	Berry St. ROW	Trowbridge St.	0.050	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1131	Bayfield St.	Trowbridge St.	Nelson St. E	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1132	Bayfield St.	Nelson St. E	Collingwood St. E	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1133	Bayfield St.	Collingwood St. E	Parker St. E	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1134	Bayfield St.	Parker St. E	Sykes St. N	0.200	200	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1135	Sykes St. N	Berry St.	Trowbridge St.	0.110	11,000	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1136	Sykes St. N	Trowbridge St.	Nelson St.	0.150	11,000	NOW	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	NOW
RD-1137	Sykes St. N	Nelson St.	Collingwood St.	0.120	11,000	NOW	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	NOW
RD-1138	Sykes St. N	Collingwood St.	Parker St.	0.120	11,000	NOW	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	NOW
RD-1139	Sykes St. N	Parker St.	Lombard St.	0.120	11,000	NOW	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	NOW

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1140	Sykes St. N	Lombard St.	Albert St.	0.130	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	6-10
RD-1141	Sykes St. N	Albert St.	William St.	0.150	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	6-10
RD-1142	Sykes St. N	William St.	Cook St.	0.100	11,000	6-10	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	6-10
RD-1143	Sykes St. N	Cook St.	Susan St.	0.250	11,000	6-10	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1144	Sykes St. N	Susan St.	Helen St.	0.400	11,000	6-10	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1145	Sykes St. N	Helen St.	Albery Crt.	0.100	11,000	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1146	Sykes St. N	Albery Crt.	Ford Ave.	0.300	11,000	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1149	Cook St.	South End	Berry St.	0.150	150	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1150	Cook St.	Berry St.	Trowbridge St.	0.080	80	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1151	Cook St.	Trowbridge St.	Nelson St. W	0.100	100	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1152	Cook St.	Nelson St. W	Collingwood St. W	0.120	120	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1153	Cook St.	Collingwood St. W	Parker St. W	0.120	120	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1154	Cook St.	Parker St. W	Lombard St.	0.120	120	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1155	Cook St.	Lombard St.	Albert St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1156	Cook St.	Albert St.	William St.	0.120	120	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1157	Cook St.	William St.	Sykes St. N	0.100	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1158	Grandview Dr.	Sykes St. N	Helen St.	0.400	400	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1159	Grandview Dr.	Helen St.	Ford Ave.	0.390	390	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1160	Thompson St.	Trowbridge St.	Nelson St. W	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1161	Thompson St.	Nelson St. W	Collingwood St. W	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1162	Thompson St.	Collingwood St. W	Parker St. W	0.130	130	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1163	Thompson St.	Parker St. W	Lombard St.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1164	Thompson St.	Lombard St.	Albert St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1165	Thompson St.	Albert St.	William St.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1166	Thompson St.	William St.	Susan St.	0.250	250	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1168	Owen St.	Miller St.	Berry St.	0.150	150	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-1169	Owen St.	Berry St.	Trowbridge St.	0.080	80	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1170	Victoria St.	Lombard St.	Albert St.	0.110	110	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1171	Victoria St.	Albert St.	William St.	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	NOW
RD-1172	Victoria St.	William St.	Northend	0.150	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-1174	Noble St.	Berry St. W	Trowbridge St. W	0.060	60	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-1175	Noble St.	Trowbridge St. W	Nelson St. W	0.130	130	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-1176	Noble St.	Nelson St. W	Collingwood St. W	0.110	110	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-1177	Noble St.	Collingwood St. W	Parker St. W	0.130	130	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	REC	6-10
RD-1179	Stewart St.	Susan St.	Helen St.	0.300	300	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1183	Pearson St.	Nelson St. W	Ridge Rd.	0.430	430	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1186	Ridge Rd.	Pearson St.	Glen Abbey Ct.	0.100	100	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1187	Ridge Rd.	Glen Abbey Ct.	St. Andrew's Dr.	0.100	100	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1188	Ridge Rd.	St. Andrew's Dr.	Fairway Ave.	0.300	300	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1189	Ridge Rd.	Fairway Ave.	Ridge Creek Dr.	0.300	300	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1190	Ridge Rd.	Ridge Creek Dr.	Sykes St. N (# 26)	0.240	240	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1191	Meadow Lane	Ridge Creek Dr.	Fairway Ave.	0.290	290	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1192	Gardiner St.	Miller St.	Nelson St. W	0.310	310	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	1-5
RD-1193	Legion Rd.	Owen St.	Berry St.	0.210	575	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RNS	6-10
RD-1194	Miller St.	Pearson St.	Owen St.	0.410	410	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1197	Berry St.	Cook St.	Sykes St. N	0.130	130	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1198	Berry St.	Legion Rd.	Cook St.	0.140	140	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	RSS	6-10
RD-1199	Berry St.	West End	Owen St.	0.150	150	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	RSS	1-5
RD-1200	Berry St.	Pearson St.	Noble St.	0.160	160	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	ADEQ
RD-1201	Trowbridge St. W	Cook St.	Sykes St.	0.170	170	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	NOW
RD-1202	Trowbridge St. E	Sykes St. N	Bayfield St.	0.160	160	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1203	Trowbridge St. W	Thompson St.	Cook St.	0.180	180	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1204	Trowbridge St. W	Owen St.	Thompson St.	0.140	140	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1206	Trowbridge St. W	Noble	Pearson	0.160	160	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	ADEQ
RD-1207	Nelson St. E	Sykes St. N	Bayfield St.	0.180	180	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	ADEQ
RD-1212	Nelson St. W	Gardiner St.	Pearson St.	0.630	630	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	ADEQ
RD-1213	Collingwood St. E	Bayfield	Sykes	0.200	200	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	RNS	ADEQ
RD-1214	Collingwood St. W	Cook St.	Sykes St. N	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1215	Collingwood St. W	Thompson St.	Cook St.	0.130	130	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	R2	ADEQ
RD-1216	Collingwood St. W	Noble St.	Thompson St.	0.290	290	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	REC	ADEQ
RD-1217	Collingwood St. W	Pearson St.	Noble St.	0.140	140	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	REC	ADEQ
RD-1218	Parker St. E	Sykes St. N	Bayfield St.	0.140	140	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1219	Parker St. W	Cook St.	Sykes St. N	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1220	Parker St. W	Fairgrounds	Thompson St.	0.190	190	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-1222	Parker St. W	Pearson St.	Noble St.	0.120	120	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	ADEQ
RD-1223	Lombard St.	Cook St.	Sykes St. N	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1224	Lombard St.	Thompson St.	Cook St.	0.170	170	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1225	Lombard St.	Victoria St.	Thompson St.	0.230	230	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-1227	Albert St.	Cook St.	Sykes St. N	0.120	120	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1228	Albert St.	Birchwood Crt.	Thompson St.	0.150	150	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	ADEQ
RD-1229	Albert St.	Victoria St.	Birchwood Crt.	0.200	200	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1231	William St.	Cook St.	Sykes St. N	0.060	60	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1232	William St.	Thompson St.	Cook St.	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1233	William St.	Victoria St.	Thompson St.	0.200	200	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	RSS	ADEQ
RD-1234	St Andrews Dr.	Victoria St.	Ridge Rd.	0.400	400	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1235	Susan St.	Thompson St.	Sykes St. N	0.080	80	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	NOW
RD-1236	Susan St.	Mary St.	Thompson St.	0.120	120	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	ADEQ
RD-1237	Susan St.	Existing HCB	Mary St.	0.090	90	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	RSS	ADEQ
RD-1238	Susan St.	Stewart St.	Existing HCB	0.150	150	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	ADEQ
RD-1240	Fairway Ave.	Meadowlane Dr.	Ridge Rd.	0.170	170	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1241	Fairway Ave.	Westend	Meadowlane Dr.	0.070	30	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	ADEQ
RD-1242	Helen St.	Sykes St. N	Grandview Dr.	0.130	130	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	REC	6-10
RD-1243	Helen St.	Stewart St.	Sykes St. N	0.240	240	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	ADEQ
RD-1244	Ridge Creek	Meadow Lane	Ridge Rd.	0.150	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-1245	Ridge Creek	West End	Meadow Lane	0.090	90	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1246	Albery Crt.	Northwest End	Sykes St. N	0.350	350	ADEQ	NOW	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1247	Country Cres.	Northwest End	Ridge Creek	0.180	180	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1248	Ford Ave.	Grandview Dr.	Sykes St. N	0.170	236	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-1249	Glen Abbey Crt.	Ridge Rd	South End	0.160	160	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2000	Tbm/Meaf TI	Meaf/GH TL	4 Sideroad	1.800	300	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2001	Tbm/Meaf TI	4 Sideroad	7 Sideroad	1.800	300	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SST	ADEQ
RD-2003	Christie Beach Rd.	Highway 26	North End	1.500	300	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2004	Clarence St.	4 Sideroad	South to End	0.180	180	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2005	Mountain Rd.	Collingview Cres.	7 Sideroad	0.600	600	ADEQ	6-10	ADEQ	ADEQ	ADEQ	NOW	BS	NOW
RD-2006	Dinsmore St.	4 Sideroad	South to End	0.300	50	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2007	Collingview Cres.	7 Sideroad	South to End	0.700	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	NOW	DST	NOW
RD-2008	Ridgecrest Ln.	4 Sideroad	South To End	0.300	300	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2009	Foster St.	4 Sideroad	South To End	0.170	30	ADEQ	6-10	ADEQ	ADEQ	ADEQ	NOW	DST	ADEQ
RD-2010	Foster St.	4 Sideroad	South To End	0.360	70	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2011	3rd Line	Meaf/GH TL	4 Sideroad	1.850	95	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	6-10
RD-2012	3rd Line	4 Sideroad	7 Sideroad	1.800	260	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2013	3rd Line	7 Sideroad	10 Sideroad	1.850	322	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2014	3rd Line	Holmcrest Ln.	Holms Hill Drive	0.135	750	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-2014-1	3rd Line	Holms Hill Drive	10 Sideroad	0.204	750	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-2015	3rd Line	Holmcrest Ln.	Highway 26	1.100	750	ADEQ	ADEQ	NOW	1-5	ADEQ	ADEQ	BS	NOW
RD-2016	Holmes Hill Dr.	Peter's Road	10 Sideroad	0.250	250	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2016-1	Holms Hill Drive	Sideroad 3	Peter S Rd.	0.180	180	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2022	Ross St.	Robertson Ave.	Southeast to End	0.400	400	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	SST	6-10
RD-2023	Penny Lane	John St.	North End	0.100	20	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	SST	ADEQ
RD-2024	John St.	Robertson Ave.	Robertson Ave.	0.600	600	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	SST	6-10
RD-2025	Thom St.	Grey Road 12	South To End	0.270	270	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2026	Greenfield Dr.	Northend	Grey Road 12	0.100	225	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2027	Algonquin Dr.	Lakeshore Rd.	South/ West End	0.650	650	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	PR2	ADEQ
RD-2027-1	Algonquin Dr.	Bend	South End	0.167	70	ADEQ	6-10	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-2028-1	Cedar Ave.	Harbour Beach Dr.	North End	0.600	600	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2028-2	Habour Beach Dr.	7th Line	Cedar Ave.	2.330	200	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-2029	Lakeshore Rd. S	Algonquin Dr.	Centreville Rd.	0.450	578	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-2030-1	Lakeshore Rd. S	Ford Ave.	Algonquin Dr.	0.250	250	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	ADEQ
RD-2030-2	Lakeshore Rd. N	22 Sideroad	Lakeshore Rd. S	0.600	600	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2031	7Th Line	Meaf/GH TL	4 Sideroad	0.800	157	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2032	7Th Line	4 Sideroad	7 Sideroad	1.800	581	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2033	7Th Line	7 Sideroad	10 Sideroad	1.800	733	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2034	7Th Line	10 Sideroad	13 Sideroad	1.800	681	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2035	7Th Line	13 Sideroad	Grey Road 12	1.500	1,039	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2036	7Th Line	Grey Road 12	Highway 26	1.800	712	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-2037	7Th Line	Highway 26	Centreville Rd.	0.650	1,270	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-2038	7Th Line	Centreville Rd.	22 Sideroad	1.250	1,089	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2039	7Th Line	22 Sideroad	Georgian Beach Rd. N	1.600	696	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2040	7Th Line	Georgian Beach Rd. N	25 Sideroad	0.500	499	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2041	7Th Line	25 Sideroad	25 Sideroad	0.100	410	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2042	7Th Line	25 Sideroad	McKay Crt.	0.800	389	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2043	7Th Line	McKay Crt.	Harbour Beach Drive	0.600	261	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2044	7Th Line	Harbour Beach Dr.	Northeast End	1.100	80	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2056	Scotch Mountain Rd.	Grey Rd 12	Grey Rd 12	1.000	54	ADEQ	ADEQ	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-2057	11Th Line	Meaf/GH TL	4 Sideroad	1.800	122	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2058	11Th Line	4 Sideroad	8 Sideroad	2.400	124	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2059	11th Line	8 Sideroad	10 Sideroad	1.100	211	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	SSTplus	1-5
RD-2060	11Th Line	10 Sideroad	13 Sideroad	1.800	216	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2061	11Th Line S	13 Sideroad	16 Sideroad	1.800	249	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2062	11Th Line	16 Sideroad	Highway 26	1.800	249	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2063	11Th Line N	Highway 26	22 Sideroad	1.800	144	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	SSTplus	6-10
RD-2064	11Th Line	22 Sideroad	25 Sideroad	1.800	35	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2065	Moore St.	Fligg Cres.	11th Line	0.100	100	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	ADEQ
RD-2067	12Th Line	7 Sideroad	8 Sideroad	0.600	20	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	ADEQ
RD-2068	12Th Line	8 Sideroad	10 Sideroad	1.200	30	ADEQ	ADEQ	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-2069	12Th Line	10 Sideroad	13 Sideroad	1.000	100	ADEQ	ADEQ	NOW	ADEQ	NOW	ADEQ	REC	NOW
RD-2070	12Th Line	10 Sideroad	13 Sideroad	1.500	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2071	12th Line	13 Sideroad	16 Sideroad	1.800	73	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2072	12th Line	16 Sideroad	Highway 26	1.800	150	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	DST	6-10
RD-2073	Meaf/Gh TI	TBM/MEAF TL	West end to Bridge	0.600	50	ADEQ	1-5	NOW	ADEQ	NOW	ADEQ	REC	NOW
RD-2075	Meaf/Gh TI	7th Line	Grey Road 7	2.700	200	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2076	Meaf/Gh TI	Grey Road 12	7th Line	2.700	300	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SR	ADEQ
RD-2077	Meaf/Gh TI	11th Line	Grey Road 12	2.800	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2079	Old Mail Road	Grey Road 7	Meaf/GH TL	1.400	109	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2080	Old Mail Road	Grey Road 7	Meaf/GH TL	0.900	109	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-2081	4 Sideroad	Clarence St.	Meaf/BM TL	0.500	500	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2082	4 Sideroad	Dinsmore St.	Clarence St.	0.180	500	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2083	4 Sideroad	Ridgecrest Ln	Dinsmore St.	0.200	500	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2084	4 Sideroad	Foster St.	Ridgecrest Ln	4.500	500	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2085	4 Sideroad	3rd Line	Foster St.	1.310	587	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2086	4 Sideroad	Grey Road 7	3rd Line	2.700	366	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	DST	6-10
RD-2087	4 Sideroad	7th Line	Grey Road 7	2.700	208	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2088	4 Sideroad	West of 7th Line	7th Line	0.200	20	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	REC	ADEQ
RD-2089	4 Sideroad	11th Line	Grey Road 12	2.800	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-2090	4 Sideroad	St.Vin/Syd TL	11th Line	2.800	101	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2091	Hurlburt Crt.	West End	Meaf/BM TL	0.070	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2092	7 Sideroad	Collingview Cres.	Meaf/BM TL	0.900	142	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2093	7 Sideroad	Collingview Cr.	Moutain Rd.	0.300	142	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-2094	7 Sideroad	W. of Collingview Cr.	Collingview Cr.	0.200	10	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	ADEQ
RD-2095	7 Sideroad	3rd Line	East Limit	0.200	30	ADEQ	6-10	NOW	ADEQ	ADEQ	ADEQ	GRR2	ADEQ
RD-2096	7 Sideroad	Tucker St.	3rd Line	0.200	200	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2097	7 Sideroad	Grey Road 7	1.25km West of Tucker Street	1.490	10	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	REC	ADEQ
RD-2097-1	7 Sideroad	1.25km West of Tucker Street	Tucker St.	1.250	50	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2098	7 Sideroad	7th Line	Grey Road 7	2.700	164	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-2099	7 Sideroad	Grey Road 12	East to End	0.800	20	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	ADEQ
RD-2100	7 Sideroad	200m West of 12th Line	12th Line	0.200	5	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	ADEQ
RD-2100-1	Sideroad 6	1St Concession	St. Vincent - Sydenham Townline	1.400	25	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-2101-1	Tucker St.	St.Vincent Cr.	7 Sideroad	0.150	50	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NOW	R2	NOW
RD-2101-2	St.Vincent Cres.	Tucker St.	Tucker St.	1.400	120	ADEQ	6-10	ADEQ	ADEQ	ADEQ	NOW	R2	NOW
RD-2102	3rd Line	10 Sideroad	Holmcrest Ln.	0.310	300	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-2103	8 Sideroad	12th Line	11th Line	1.300	20	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	BS	ADEQ
RD-2104	Fraser St.	West End	Christie Beach Rd.	1.230	500	ADEQ	1-5	ADEQ	NOW	NOW	NOW	REC	NOW
RD-2105	Barker St.	West End	Christie Beach Rd.	0.960	40	ADEQ	1-5	ADEQ	NOW	NOW	NOW	REC	ADEQ
RD-2106	Starlight Ln.	Highway 26	Highway 26	0.350	50	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2107	Old Highway 26	West End	Highway 26	0.800	800	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	ADEQ
RD-2108	10 Sideroad	Holmes Hill Dr.	3rd Line	0.440	440	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2109	Holmcrest Ln.	3rd Line	Peter's Rd.	0.160	160	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2110	Peter'S Rd.	Holmcrest Ln.	Holmes Hill Dr.	0.110	110	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2111	John St.	Grey Road 7	Penny Lane	0.500	202	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2112	John St.	East Limit	Robertson Ave.	0.300	300	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	SST	6-10
RD-2113	Roberston Ave.	John St.	West End	0.800	100	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	SST	6-10
RD-2115	10 Sideroad	7th Line	East To End	1.150	80	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-2116	10 Sideroad	Grey Road 12	7th Line	2.700	136	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2117	10 Sideroad	11th Line	Grey Road 12	2.700	541	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2118	10 Sideroad	12th Line	11th Line	2.700	400	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-2119	Gerald Shortt Parkway	St.Vin/Syd TL	12th Line	1.100	537	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2120	Swarthmore Drive	Hwy. 26	250m East of Hwy. 26	0.250	250	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-2120-1	Swarthmore Drive	250m East of Hwy. 26	1.03km East of Hwy. 26	0.530	40	ADEQ	6-10	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-2120-2	Swarthmore Drive	1.03km East of Hwy. 26	East End Culdesac	0.060	20	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	ADEQ
RD-2121	Muir St.	Grey Road 7	Highway 26	0.750	1,000	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2122	Muir St.	Union St.	Grey Road 7	0.600	600	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2123	Muir St.	Union St.	Centre St.	0.400	150	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2124	Muir St.	West End	Centre St.	0.500	10	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2135	13 Sideroad	7th Line	East to End	0.200	20	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	ADEQ
RD-2136-1	13 Sideroad	Grey Road 12	Bridge	1.000	51	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-2136-2	13 Sideroad	Bridge	1.1km East of Bridge	1.100	51	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-2136-3	13 Sideroad	1.1km East of Bridge	7th Line	0.600	51	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SST	ADEQ
RD-2137	13 Sideroad	11th Line	Grey Road 12	1.600	10	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-2138	13 Sideroad	12th Line	11th Line	2.790	1	ADEQ	NOW	ADEQ	NOW	ADEQ	ADEQ	NONE	ADEQ

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-2140	16 Sideroad	11th Line	Grey Road 12	2.700	515	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2141	16 Sideroad	12th Line	11th Line	1.400	127	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2142	16 Sideroad	1km West of 12th Line	12th Line	1.000	30	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	ADEQ
RD-2148-1	Centreville Rd.	Lakeshore Rd.	Scotia Dr.	0.450	357	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2148-2	Centreville Rd.	7th Line	Scotia Dr.	0.550	357	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-2149	22 Sideroad	7th Line	Georgian Beach Rd. N	0.500	350	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-2150	22 Sideroad	Grey Road 112	1.3km East of Grey Road 112	1.300	158	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-2150-1	22 Sideroad	1.3km East of Grey Road 112	7Th Line	0.500	158	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-2151	22 Sideroad	11th Line	to East Limit	1.100	50	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	SSTplus	6-10
RD-2153	25 Sideroad	7th Line	Kiowana Beach Rd.	0.180	111	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-2154	25 Sideroad	Grey Road 112	7th Line	2.700	102	ADEQ	6-10	NOW	ADEQ	ADEQ	ADEQ	BS	NOW
RD-2155-1	25 Sideroad	11th Line	100m East of 11th Line	0.100	10	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-2155-2	25 Sideroad	1.0km West of Grey Road 112	Grey Road 112	1.000	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-2156	Mckay Crt.	7th Line	East End	0.100	20	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NOW	R2	ADEQ
RD-2158	Fligg Cres.	North End	Moore St.	0.300	300	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-2159	Scotia Dr.	Centreville Rd.	North End	0.350	350	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-2160	Captains Crt.	Harbour Beach Dr.	North End	0.450	100	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	BS	6-10
RD-3001	Syd/St.Vin TI	Syd/Holl TL	Sideroad 3	2.800	100	ADEQ	1-5	NOW	NOW	NOW	ADEQ	BS	NOW
RD-3002	Syd/St.Vin TI	Sideroad 3	Sideroad 6	1.900	100	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-3003	Syd/St.Vin TI	Sideroad 6	Gerald Shortt Parkway	1.900	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-3004	Syd/St.Vin TI	Sideroad 9	North Limit	0.140	1	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	NONE	ADEQ
RD-3005	Syd/St.Vin TI	South Turnaround	Highway 26	0.140	20	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-3006	St. Vincent - Sydenham Townline	Hwy. 26	1.8km North of Hwy. 26	1.800	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3007	Syd/St.Vin Townline	1.8km North of Hwy. 26	Sideroad 24	1.700	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-3008	St. Vincent - Sydenham Townline	Sideroad 24	Sideroad 27	2.200	20	ADEQ	6-10	NOW	NOW	ADEQ	ADEQ	BS	ADEQ
RD-3009	St. Vincent - Sydenham Townline	Sideroad 27	Sideroad 30	1.850	20	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-3010	St. Vincent - Sydenham Townline	Sideroad 30	Syd/Lakeshore Dr.	0.600	5	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	ADEQ
RD-3011	Harbour Dr.	North End	Syd/Lakeshore Dr.	2.150	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3016	1St Concession	Sideroad 3	Sideroad 6	2.000	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3017	1st Concession	Sideroad 6	10 Sideroad	1.700	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	6-10
RD-3017-1	1st Concession	10 Sideroad	Grey Road 18	0.200	400	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-3018	2nd Concession S.	Syd/Holl TL	Grey Road 29	1.800	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-3019	2Nd Concession S.	Grey Road 18	North End	1.550	40	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	BS	ADEQ
RD-3020	2Nd Concession S.	Sideroad 15	Highway 26	1.800	50	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-3021	2Nd Concession N.	Highway 26	Sideroad 22	1.900	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3022	2Nd Concession N.	Sideroad 22	Sideroad 24	1.860	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3023	2Nd Concession N.	Sideroad 24	Sideroad 27	1.860	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3024	2Nd Concession N.	Sideroad 27	Sideroad 30	1.800	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	ADEQ
RD-3025	2Nd Concession N.	Sideroad 30	Sideroad 8	2.100	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-3026	Side Road 8	2nd Concession N.	100m South of Sydenham-Lakeshore Drive	0.800	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
Rd-3026-1	Side Road 8	100m South of Sydenham-Lakeshore Drive	Sydenham-Lakeshore Drive	0.100	100	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3027	Sideroad 8	Sydenham-Lakeshore Drive	Concession 'B'	1.000	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3028	Queen's Bush Rd.	Concession 'B'	Tee Junction	1.300	50	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	DSTreh:	NOW
RD-3029	Queen'S Bush Rd.	Concession 'B'	Northwest End	0.700	700	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3030	Kilmanjaro Ln.	Syd/Lakeshore Dr.	Concession A	1.900	10	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	ADEQ
RD-3031	4Th Concession S.	Syd/Holl TL	Sideroad 3	1.850	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3032	4Th Concession S.	Sideroad 3	Sideroad 6	1.800	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-3033	4Th Concession S.	Sideroad 6	Grey Road 18	1.850	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SST	ADEQ
RD-3034	4Th Concession S.	South End	Sideroad 15	1.520	50	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-3035	4Th Concession N.	Highway 26	Sideroad 15	1.840	100	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-3036	Irish Block Rd.	Highway 26	Sideroad 22	1.800	150	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3037	Irish Block Rd.	Sideroad 22	Sideroad 24	1.800	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	DSTreh:	NOW
RD-3038	Irish Block Rd.	Sideroad 24	Sideroad 27	1.800	150	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	DSTreh:	1-5
RD-3040	5th Concession	Sideroad 15	South To End	1.300	50	ADEQ	1-5	NOW	NOW	NOW	ADEQ	REC	NOW
RD-3041	5th Concession	Highway 26	Sideroad 15	1.300	100	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3042	6Th Concession S.	Syd/Holl TL	Sideroad 3	1.800	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	6-10
RD-3043	6th Concession S.	Sideroad 3	Sideroad 6	1.900	100	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	SSTplus	6-10
RD-3044	6th Concession S.	Sideroad 6	Grey Road 18	1.800	100	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SSTplus	ADEQ
RD-3045	6Th Concession S.	150m South of Hwy 26 to South End	South To End	0.450	50	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-3046	6th Concession S.	Highway 26	South approx. 0.3 k	0.150	50	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-3047	6th Concession N.	Highway 26	Sideroad 22	1.800	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3048	6th Concession N.	Sideroad 22	Sideroad 24	1.850	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3049	6th Concession N.	Sideroad 24	Sideroad 27	2.300	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-3050	6th Concession N.	Sideroad 27	Sideroad 23	0.970	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3051	Sideroad 30	Sideroad 23	Bend in Sideroad 30	1.500	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3052	8th Concession	Syd/Holl TL	Sunny Valley Rd.	1.840	150	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3053	8th Concession S.	Sunny Valley Rd.	Sideroad 6	1.850	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	SST	ADEQ
RD-3054	8Th Concession S.	Sideroad 6	Grey Road 18	1.800	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3055	8th Concession N.	Highway 26	Sideroad 22	2.300	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-3056	8Th Concession N.	Sideroad 22	Sideroad 33	1.100	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3057	8th Concession N.	Sideroad 33	Sideroad 24	1.300	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3062	Clearview Cres.	Highway 26	North	0.650	650	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3066	Syd/Lakeshore Dr.	Grey Road 15	Landfill Entrance	2.500	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3067	Syd/Lakeshore Dr.	Landfill Entrance	Sideroad 23	1.700	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-3068	Syd/Lakeshore Dr.	Sideroad 23	Sideroad 18	1.700	150	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	NONE	ADEQ
RD-3069	Syd/Lakeshore Dr.	Sideroad 18	Kilmanjaro Ln.	1.600	150	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3070	Syd/Lakeshore Dr.	Kilmanjaro Ln.	Sideroad 8	1.700	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3071	Syd/Lakeshore Dr.	Sideroad 8	150m East of Sideroad 8	0.150	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3072	Syd/Lakeshore Dr.	150m East of Sideroad 8	Harbour Dr.	1.900	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-3074	Concession 'A'	Grey Road 15	Sideroad 21	1.200	200	ADEQ	ADEQ	ADEQ	1-5	ADEQ	ADEQ	PR2	1-5
RD-3075	Concession 'A'	Sideroad 21	Sideroad 24	1.800	200	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3076-1	Tom Thomson Ln.	Sideroad 24	450m South of Grey Road 15	1.250	200	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-3076-2	Tom Thomson Ln.	450m South of Grey Road 15	Grey Road 15	0.450	200	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3077	Bayshore Rd.	Grey Road 15	Rossmoyne	1.000	300	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3078	Bayshore Rd.	Rossmoyne	Roxsborough	0.300	300	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	DSTreh	NOW
RD-3079	Bayshore Rd.	Roxsborough	Sideroad 23	2.800	300	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3080	Bayshore Rd.	Sideroad 23	Ashgrove Ln.	1.500	300	ADEQ	ADEQ	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-3082	Bayshore Rd.	Ashgrove Ln	Thornridge Rd	0.900	300	ADEQ	ADEQ	NOW	6-10	ADEQ	ADEQ	R1	NOW
RD-3083	Bayshore Rd.	Thornridge Rd	Sideroad 18	0.700	300	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-3085	Concession 'A'	Sideroad 18	Eagle Ridge Ent.	2.000	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3086	Concession 'A'	Eagle Ridge Ent.	Kilmanjaro LN.	0.500	10	ADEQ	1-5	NOW	NOW	NOW	ADEQ	BS	ADEQ
RD-3087	Concession A	Kilmanjaro Ln.	East End.	1.280	10	ADEQ	1-5	NOW	NOW	NOW	ADEQ	BS	ADEQ
RD-3091	Thornridge Rd.	South End	Bayshore Rd.	0.450	50	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-3092	Ashgrove Ln.	North End	Bayshore Rd.	1.300	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3095	10th Concession	Sunny Valley Rd.	Sideroad 6	1.800	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3096	10th Concession	Sideroad 6	Grey Road 18	1.800	100	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3097	10th Concession	Grey Road 18	Story Book Park Rd.	1.900	750	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3098	10th Concession	Story Book Park Rd.	Sideroad 15	1.850	750	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3099	10th Concession	Sideroad 15	Superior St.	0.200	750	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	PR2	NOW
RD-3100	28th Avenue E	Superior St.	8th Street	0.830	1,000	ADEQ	ADEQ	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3103	11Th Concession	Superior St.	South To End	0.700	60	ADEQ	6-10	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-3110	Syd/Holl TI	Grey Road 29	Syd/St.Vin TL	1.400	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3111	Syd/Holl TI	2nd Concession	Grey Road 29	1.500	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	BS	NOW
RD-3112	Syd/Holl TI	4th Concession S.	2nd Concession S	2.700	50	ADEQ	6-10	ADEQ	NOW	NOW	ADEQ	BS	NOW
RD-3113	Syd/Holl TI	6th Concession S	4th Concession S.	2.700	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3114	Syd/Holl TI	8th Concession	6th Concession	2.740	10	ADEQ	1-5	NOW	NOW	NOW	ADEQ	REC	ADEQ
RD-3115	Syd/Holl TI	10th Concession	8th Concession	2.700	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	SD	NOW
RD-3116	Syd/Holl TI	Highway 6 & 10	10th Concession	2.740	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3118	Sideroad 3	Grey Road 29	Syd/St.Vin TL	1.400	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3119	Sideroad 3	4th Concession S.	2nd Concession S.	2.700	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	GRR2	NOW
RD-3120	Sideroad 3	6th Concession S.	4th Concession S.	2.700	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	GRR2	NOW
RD-3121-1	Sunny Valley Rd.	8th Concession	End of GRAN	0.750	20	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-3121-2	Sunny Valley Rd.	End of GRAN	6th Concession	0.700	20	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-3122	Sunny Valley Rd.	10th Concession	8th Concession	2.700	50	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	BS	NOW
RD-3123	Sunny Valley Rd.	Highway 6 & 10	10th Concession	2.700	100	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-3124	Sideroad 6	1st Concession	Syd/St.Vin TL	1.400	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	BS	NOW
RD-3125-1	Sideroad 6	Grey Road 29	1st Concession	1.000	20	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	REC	ADEQ
RD-3125-2	Sideroad 6	Grey Road 29	1st Concession	0.450	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3126	Sideroad 6	4th Concession S.	Grey Road 29	2.700	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3127	Sideroad 6	6th Concession S.	4th Concession S.	2.700	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	GRR2	NOW
RD-3128	Sideroad 6	8th Concession S.	6th Concession S.	2.700	50	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	GRR2	6-10

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-3129	Sideroad 6	10th Concession S.	East To End	0.900	50	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-3131	Divison St.	Highway 6&10	East To End	0.500	40	ADEQ	1-5	ADEQ	ADEQ	NOW	NOW	REC	ADEQ
RD-3132	Gerald Shortt Parkway	Grey Road 18	Syd/St.Vin Townline	1.400	537	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	ADEQ	CRK	ADEQ
RD-3141	Story Book Park Rd.	Grey Road 11	East To End	2.200	80	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3142	Story Book Park Rd.	10th Concession	Grey Road 11	2.700	250	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3143-1	Story Book Park Rd.	Highway 6 & 10	1km West of Concession 10	1.700	1,000	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3143-2	Story Book Park Rd.	1km West of Concession 10	10 Concession	1.000	1,000	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3144	Sideroad 15	Grey Road 18	Syd/St.Vin TL	0.840	10	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	ADEQ
RD-3146	Sideroad 15	5th Concession S.	East End	0.360	10	ADEQ	6-10	NOW	ADEQ	NOW	ADEQ	BS	ADEQ
RD-3147	Sideroad 15	5th Concession N.	5th Concession S.	0.400	100	ADEQ	6-10	ADEQ	NOW	NOW	ADEQ	REC	NOW
RD-3148	Sideroad 15	West End	5th Concession N.	0.400	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	REC	NOW
RD-3149	Sideroad 15	Grey Road 11	East To End	1.500	100	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-3150	Sideroad 15	10th Concession S.	East End	1.000	20	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	ADEQ
RD-3151	Superior St.	Highway 6 & 10	10th Concession	2.300	750	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3161	Woodford Cres.	Highway 26	Highway 26	0.350	350	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	BS	1-5
RD-3163	Sideroad 22	Irish Block Rd.	2nd Concession N.	2.700	100	ADEQ	1-5	ADEQ	ADEQ	NOW	ADEQ	BS	NOW
RD-3164	Sideroad 22	6th Concession N.	Irish Block Rd.	2.200	100	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	NOW
RD-3165	Sideroad 22	8th Concession N.	East To End	0.600	40	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	ADEQ
RD-3166	Sideroad 21	28th Avenue E.	Concession 'A'	1.400	100	ADEQ	6-10	ADEQ	6-10	ADEQ	ADEQ	R1	6-10
RD-3167	Sideroad 38	Grey Road 15	West End	0.200	20	ADEQ	1-5	NOW	NOW	NOW	ADEQ	BS	ADEQ
RD-3171	Sideroad 24	Concession A	West End	0.100	10	ADEQ	1-5	NOW	NOW	NOW	ADEQ	BS	ADEQ
RD-3172	Sideroad 24	2nd Concession N.	Syd/St.Vin TL	2.700	50	ADEQ	6-10	ADEQ	ADEQ	NOW	ADEQ	BS	NOW
RD-3173	Sideroad 24	Irish Block Rd.	2nd Concession N.	2.700	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3174	Sideroad 24	6th Concession N.	Irish Block Rd.	2.700	1,100	ADEQ	6-10	ADEQ	NOW	ADEQ	NOW	BS	NOW
RD-3176	Sideroad 27	2nd Concession N.	St. Vincent - Sydenham Townline	2.700	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3177	Sideroad 27	Irish Block Rd.	2nd Concession N.	2.750	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	SD	6-10
RD-3178	Sideroad 27	6th Concession N.	Irish Block Rd.	1.410	100	ADEQ	6-10	ADEQ	ADEQ	ADEQ	ADEQ	BS	6-10
RD-3180	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	1.550	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3180-1	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	1.000	20	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	ADEQ
RD-3181	Sideroad 30	Irish Block Rd.	2nd Concession N.	2.580	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3182	Sideroad 23	6th Concession	Syd/Lakeshore Dr.	1.000	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3183	Sideroad 23	Syd/Lakeshore Dr.	Bayshore Rd.	1.100	50	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3186	Sideroad 18	Syd/Lakeshore Dr.	Concession A	2.000	50	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3187	Sideroad 19-A	Sideroad 18	South To End	0.150	20	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	DSTreh	ADEQ
RD-3188	Concession B	Queen's Bush Rd.	East To End	0.600	20	ADEQ	1-5	ADEQ	NOW	NOW	ADEQ	BS	ADEQ
RD-3189	Concession 'B'	Sideroad 8	Queen's Bush Rd.	0.450	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3191	Bognor- John St.	Grey Road 29	Bognor-2nd Ave.	0.190	190	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3192	Bognor-William St.	Grey Road 29	Bognor-2nd Ave.	0.190	190	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3193	Bognor-Main St.	Grey Road 29	Bognor-2nd Ave.	0.190	190	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
RD-3194	Bognor-Queen St.	Grey Road 29	Bognor-2nd Ave.	0.190	190	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW

Critical Deficiencies

Current Inspection Batch

ID	Street Name	From Description	To Description	Length	AADT	Cap.	Drain	Geo	SA	Width	Type	Imp	Overall TON
RD-3195	Bognor- 2Nd Ave.	Bognor-William St.	Bognor-John St.	0.100	100	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3196	Bognor- 2Nd Ave.	Bognor-Main St.	Bognor-William St.	0.120	120	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3197	Bognor- 2Nd Ave.	Bognor-Queen St.	Bognor-Main St.	0.110	110	ADEQ	6-10	ADEQ	1-5	ADEQ	ADEQ	REC	1-5
RD-3198	Queen St.	Grey Road 15	Market Ln.	0.150	150	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3199	Market Lane	Bayshore Rd.	Queen St.	0.090	90	ADEQ	1-5	ADEQ	NOW	ADEQ	ADEQ	REC	NOW
RD-3202	Sideroad 33	8th Concession N.	Sydenham-Lakeshore Dr.	1.000	150	ADEQ	6-10	ADEQ	NOW	ADEQ	ADEQ	BS	NOW
				<u>398.888</u>									

Appendix H

Needs Sorted By Time of Need and Improvement Category

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
RSS										
20.00	RD-1089	Eliza St.	Vera St.	Lakeside Ave.	130	0.130	NOW	Construction	RSS	166,165.43
21.00	RD-1235	Susan St.	Thompson St.	Sykes St. N	80	0.080	NOW	Construction	RSS	102,255.65
23.00	RD-1083	Grant Ave.	Aiken St.	Pollard Dr.	190	0.190	NOW	Construction	RSS	242,857.16
25.00	RD-1107	Parkview Ave.	Westend	Curb	80	0.080	NOW	Construction	RSS	102,255.65
26.00	RD-1086	Aiken Street	St. Vincent St.	Richmond St.	280	0.280	NOW	Construction	RSS	357,894.77
27.00	RD-1127	Bridge St.	St.Vincent St.	Fuller St.	180	0.180	NOW	Construction	RSS	230,075.21
27.00	RD-1079	Ivan Street	Augusta St.	Sykes	240	0.240	NOW	Construction	RSS	306,766.94
28.00	RD-1097	Edwin St. W	Victoria Cres.	Sykes St.	330	0.330	NOW	Construction	RSS	421,804.55
29.00	RD-1090	Eliza St.	RicHCBond St.	Vera St.	480	0.480	NOW	Construction	RSS	613,533.89
29.00	RD-1075	Augusta St.	Ivan St.	Coleman St.	200	0.200	NOW	Construction	RSS	255,639.12
29.00	RD-1054	Union St.	Parkview Ave.	Paul St.	570	0.040	NOW	Construction	RSS	51,127.82
29.00	RD-1166	Thompson St.	William St.	Susan St.	250	0.250	NOW	Construction	RSS	319,548.90
29.00	RD-1194	Miller St.	Pearson St.	Owen St.	410	0.410	NOW	Construction	RSS	583,612.49
31.00	RD-1120	Boucher St. E	Fuller St.	East End	240	0.240	NOW	Construction	RSS	306,766.94
32.00	RD-1071	Gray Ave.	West End	St.Vincent St.	153	0.340	NOW	Construction	RSS	434,586.50
36.00	RD-1050	Union St.	Grace Ave.	Farrar St.	570	0.160	NOW	Construction	RSS	204,511.30
19.00	RD-1233	William St.	Victoria St.	Thompson St.	200	0.200	ADEQ	Construction	RSS	255,639.12
20.00	RD-1076	Augusta St.	Gully	Ivan St.	20	0.050	ADEQ	Construction	RSS	63,909.78
24.00	RD-1236	Susan St.	Mary St.	Thompson St.	120	0.120	ADEQ	Construction	RSS	153,383.47
24.00	RD-1237	Susan St.	Existing HCB	Mary St.	90	0.090	ADEQ	Construction	RSS	115,037.60
12.00	RD-1106	Parkview Ave.	Curb	Union St.	80	0.080	6-10	Construction	RSS	102,255.65
13.00	RD-1082	Grant Ave.	Pollard Dr.	Middle Ave.	100	0.100	6-10	Construction	RSS	127,819.56
13.00	RD-1009	Aimee St.	South End	Margaret St.	100	0.100	6-10	Construction	RSS	127,819.56
13.00	RD-1198	Berry St.	Legion Rd.	Cook St.	140	0.140	6-10	Construction	RSS	178,947.38
14.00	RD-1011	Richmond St. N	Margaret St.	Marshall St. E	150	0.150	6-10	Construction	RSS	191,729.34
15.00	RD-1008	Graham St.	Aiken St.	Cemetery Gates	300	0.300	6-10	Construction	RSS	427,033.53
15.00	RD-1109	Margaret St.	Richmond St.N	Vera St.	210	0.210	6-10	Construction	RSS	268,421.08
15.00	RD-1068	Montgomery	St. Vincent St.	East End	472	0.472	6-10	Construction	RSS	603,308.32
16.00	RD-1053	Union St.	Centennial Heights	Parkview Ave.	570	0.060	6-10	Construction	RSS	76,691.74
17.00	RD-1013	Fuller St.	Boucher St. E	Bridge St.	140	0.140	6-10	Construction	RSS	178,947.38
17.00	RD-1128	Bridge St.	Denmark St.	St.Vincent St.	120	0.120	6-10	Construction	RSS	153,383.47
18.00	RD-1014	Fuller St.	Bridge St.	North End	90	0.090	6-10	Construction	RSS	115,037.60
18.00	RD-1081	Grant Ave.	Middle Ave.	Memorial Park	240	0.240	6-10	Construction	RSS	306,766.94
18.00	RD-1047-1	Union Street	570m North of Muir	Russett Dr.	570	0.400	6-10	Construction	RSS	511,278.24
19.00	RD-1010	Richmond St. S	Eliza St.	Aiken St.	150	0.150	6-10	Construction	RSS	191,729.34
20.00	RD-1074	Coleman St.	Augusta St.	Sykes St. S	120	0.120	6-10	Construction	RSS	153,383.47
20.00	RD-1059	Lorne St.	Louisa St.	Edwin St. W	210	0.210	6-10	Construction	RSS	298,923.47
20.00	RD-1052	Union St.	Louisa St.	Centennial Heights	570	0.100	6-10	Construction	RSS	127,819.56
20.00	RD-1043	Coleman St.	South of Augusta	Augusta St.	270	0.270	6-10	Construction	RSS	345,112.81
21.00	RD-1026	Denmark St.	Edwin St.	Margaret St.	240	0.240	6-10	Construction	RSS	306,766.94
20.00	RD-1199	Berry St.	West End	Owen St.	150	0.150	1-5	Construction	RSS	213,516.77

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
26.00	RD-1025	Mckibbon Dr.	South End	Sykes St. S	270	0.270	1-5	Construction	RSS	345,112.81
						8.202				10,639,177.25
RNS										
16.00	RD-1100	Louisa St.	Blake St.	Union St.	80	0.080	NOW	Construction	RNS	72,026.72
18.00	RD-1201	Trowbridge St. W	Cook St.	Sykes St.	170	0.170	NOW	Construction	RNS	191,987.32
21.00	RD-1105	Paul St.	Union St.	Sykes St. S	270	0.270	NOW	Construction	RNS	275,075.73
22.00	RD-1103	Centennial Heights	Union St.	Southeast to End	160	0.160	NOW	Construction	RNS	144,053.44
23.00	RD-1121	Boucher St. E	St.Vincent St.	Fuller St.	180	0.180	NOW	Construction	RNS	162,060.12
26.00	RD-1092	Burton St.	Farrar St.	James Cres.	160	0.160	NOW	Construction	RNS	114,923.17
26.00	RD-1093	Farrar St.	Union St.	Burton St.	180	0.180	NOW	Construction	RNS	129,288.57
27.00	RD-1098	Edwin St. W	Lorne St.	Victoria Cres.	210	0.210	NOW	Construction	RNS	177,926.81
19.00	RD-1213	Collingwood St. E	Bayfield	Sykes	200	0.200	ADEQ	Construction	RNS	205,199.44
20.00	RD-1207	Nelson St. E	Sykes St. N	Bayfield St.	180	0.180	ADEQ	Construction	RNS	213,585.84
26.00	RD-1193	Legion Rd.	Owen St.	Berry St.	575	0.210	6-10	Construction	RNS	191,404.92
						2.000				1,877,532.08
REC										
21.00	RD-3077	Bayshore Rd.	Grey Road 15	Rossmoyne	300	1.000	NOW	Construction	REC	439,467.53
24.00	RD-3071	Syd/Lakeshore Dr.	Sideroad 8	150m East of Sideroad 8	50	0.150	NOW	Construction	REC	68,305.35
25.00	RD-3148	Sideroad 15	West End	5th Concession N.	50	0.400	NOW	Construction	REC	143,944.32
25.00	RD-2080	Old Mail Road	Grey Road 7	Meaf/GH TL	109	0.900	NOW	Construction	REC	380,531.18
26.00	RD-3182	Sideroad 23	6th Concession	Syd/Lakeshore Dr.	50	1.000	NOW	Construction	REC	429,124.84
29.00	RD-3195	Bognor- 2Nd Ave.	Bognor-William St.	Bognor-John St.	100	0.100	NOW	Construction	REC	41,864.87
30.00	RD-3196	Bognor- 2Nd Ave.	Bognor-Main St.	Bognor-William St.	120	0.120	NOW	Construction	REC	50,237.84
30.00	RD-3034	4Th Concession S.	South End	Sideroad 15	50	1.520	NOW	Construction	REC	546,988.42
30.00	RD-3103	11Th Concession	Superior St.	South To End	60	0.700	NOW	Construction	REC	243,930.96
31.00	RD-3183	Sideroad 23	Syd/Lakeshore Dr.	Bayshore Rd.	50	1.100	NOW	Construction	REC	472,037.33
31.00	RD-1172	Victoria St.	William St.	Northend	150	0.150	NOW	Construction	REC	65,295.56
32.00	RD-2056	Scotch Mountain Rd.	Grey Rd 12	Grey Rd 12	54	1.000	NOW	Construction	REC	348,472.80
32.00	RD-2027-1	Algonquin Dr.	Bend	South End	70	0.167	NOW	Construction	REC	69,914.33
33.00	RD-3147	Sideroad 15	5th Concession N.	5th Concession S.	100	0.400	NOW	Construction	REC	143,944.32
33.00	RD-3020	2Nd Concession S.	Sideroad 15	Highway 26	50	1.800	NOW	Construction	REC	565,755.84
33.00	RD-2073	Meaf/Gh TI	TBM/MEAF TL	West end to Bridge	50	0.600	NOW	Construction	REC	209,083.68
33.00	RD-1088	Lakeside Ave.	Lakeside Ave.	Lakeside Ave.	160	0.160	NOW	Construction	REC	66,983.78
34.00	RD-3129	Sideroad 6	10th Concession S.	East To End	50	0.900	NOW	Construction	REC	282,877.92
35.00	RD-3192	Bognor-William St.	Grey Road 29	Bognor-2nd Ave.	190	0.190	NOW	Construction	REC	79,543.24
35.00	RD-3199	Market Lane	Bayshore Rd.	Queen St.	90	0.090	NOW	Construction	REC	37,678.38
35.00	RD-3035	4Th Concession N.	Highway 26	Sideroad 15	100	1.840	NOW	Construction	REC	662,143.87
35.00	RD-3040	5th Concession	Sideroad 15	South To End	50	1.300	NOW	Construction	REC	512,232.24
35.00	RD-2089	4 Sideroad	11th Line	Grey Road 12	50	2.800	NOW	Construction	REC	975,723.84
35.00	RD-2029	Lakeshore Rd. S	Algonquin Dr.	Centreville Rd.	578	0.450	NOW	Construction	REC	207,128.88
36.00	RD-2115	10 Sideroad	7th Line	East To End	80	1.150	NOW	Construction	REC	400,743.72

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
36.00	RD-3191	Bognor- John St.	Grey Road 29	Bognor-2nd Ave.	190	0.190	NOW	Construction	REC	79,543.24
37.00	RD-3151	Superior St.	Highway 6 & 10	10th Concession	750	2.300	NOW	Construction	REC	1,440,898.54
38.00	RD-3198	Queen St.	Grey Road 15	Market Ln.	150	0.150	NOW	Construction	REC	62,797.30
39.00	RD-3123	Sunny Valley Rd.	Highway 6 & 10	10th Concession	100	2.700	NOW	Construction	REC	1,063,866.96
39.00	RD-2069	12Th Line	10 Sideroad	13 Sideroad	100	1.000	NOW	Construction	REC	348,472.80
40.00	RD-3002	Syd/St.Vin TI	Sideroad 3	Sideroad 6	100	1.900	NOW	Construction	REC	662,098.32
45.00	RD-3100	28th Avenue E	Superior St.	8th Street	1,000	0.830	NOW	Construction	REC	563,007.00
48.00	RD-3143-2	Story Book Park Rd.	1km West of Concession 10	10 Concession	1,000	1.000	NOW	Construction	REC	656,335.58
57.00	RD-2104	Fraser St.	West End	Christie Beach Rd.	500	1.230	NOW	Construction	REC	567,482.52
59.00	RD-3143-1	Story Book Park Rd.	Highway 6 & 10	1km West of Concession 10	1,000	1.700	NOW	Construction	REC	1,006,381.22
10.00	RD-1217	Collingwood St. W	Pearson St.	Noble St.	140	0.140	ADEQ	Construction	REC	63,857.17
21.00	RD-3131	Divison St.	Highway 6&10	East To End	40	0.500	ADEQ	Construction	REC	13,230.00
23.00	RD-3125-1	Sideroad 6	Grey Road 29	1st Concession	20	1.000	ADEQ	Construction	REC	348,472.80
23.00	RD-2100	7 Sideroad	200m West of 12th Line	12th Line	5	0.200	ADEQ	Construction	REC	69,694.56
23.00	RD-1216	Collingwood St. W	Noble St.	Thompson St.	290	0.290	ADEQ	Construction	REC	157,863.38
24.00	RD-2030-1	Lakeshore Rd. S	Ford Ave.	Algonquin Dr.	250	0.250	ADEQ	Construction	REC	115,071.60
26.00	RD-2097	7 Sideroad	Grey Road 7	1.25km West of Tucker Street	10	1.490	ADEQ	Construction	REC	519,224.47
28.00	RD-2135	13 Sideroad	7th Line	East to End	20	0.200	ADEQ	Construction	REC	69,694.56
28.00	RD-1108	Margaret St.	Vera St.	East End	10	0.100	ADEQ	Construction	REC	41,864.87
28.00	RD-1078	Augusta St.	Union St.	East End	10	0.100	ADEQ	Construction	REC	41,864.87
29.00	RD-2088	4 Sideroad	West of 7th Line	7th Line	20	0.200	ADEQ	Construction	REC	69,694.56
29.00	RD-2068	12Th Line	8 Sideroad	10 Sideroad	30	1.200	ADEQ	Construction	REC	418,167.36
30.00	RD-2067	12Th Line	7 Sideroad	8 Sideroad	20	0.600	ADEQ	Construction	REC	209,083.68
30.00	RD-2137	13 Sideroad	11th Line	Grey Road 12	10	1.600	ADEQ	Construction	REC	502,894.08
31.00	RD-3009	St. Vincent - Sydenham Townline	Sideroad 27	Sideroad 30	20	1.850	ADEQ	Construction	REC	644,674.68
31.00	RD-2120-1	Swarthmore Drive	250m East of Hwy. 26	1.03km East of Hwy. 26	40	0.530	ADEQ	Construction	REC	221,883.78
31.00	RD-1058	Dillon Ave.	Louisa St.	South To End	20	0.090	ADEQ	Construction	REC	37,678.38
32.00	RD-1212	Nelson St. W	Gardiner St.	Pearson St.	630	0.630	ADEQ	Construction	REC	266,371.84
32.00	RD-2100-1	Sideroad 6	1St Concession	St. Vincent - Sydenham Townline	25	1.400	ADEQ	Construction	REC	551,634.72
32.00	RD-3030	Kilmanjaro Ln.	Syd/Lakeshore Dr.	Concession A	10	1.900	ADEQ	Construction	REC	597,186.72
34.00	RD-2105	Barker St.	West End	Christie Beach Rd.	40	0.960	ADEQ	Construction	REC	401,902.70
38.00	RD-3114	Syd/Holl TI	8th Concession	6th Concession	10	2.740	ADEQ	Construction	REC	954,815.47
11.00	RD-1177	Noble St.	Collingwood St. W	Parker St. W	130	0.130	6-10	Construction	REC	57,672.07
17.00	RD-1242	Helen St.	Sykes St. N	Grandview Dr.	130	0.130	6-10	Construction	REC	61,767.41
22.00	RD-1006	Lakeside Ave.	Aiken St.	Lakeside Ave.	100	0.100	1-5	Construction	REC	41,864.87
26.00	RD-3197	Bognor- 2Nd Ave.	Bognor-Queen St.	Bognor-Main St.	110	0.110	1-5	Construction	REC	46,051.35
					51.427					20,419,020.47

NONE

6.00	RD-1136	Sykes St. N	Trowbridge St.	Nelson St.	11,000	0.150	NOW	Construction	NONE	0.00
6.00	RD-1137	Sykes St. N	Nelson St.	Collingwood St.	11,000	0.120	NOW	Construction	NONE	0.00
2.00	RD-1125	Boucher St. W	Victoria Cres.	Sykes St.	110	0.110	ADEQ	Construction	NONE	0.00

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost	
2.00	RD-1122	Boucher St. E	Denmark St.	St.Vincent St.	130	0.130	ADEQ	Construction	NONE	0.00	
2.00	RD-1115	Marshall St. E	St.Vincent St.	Richmond St. N.	290	0.290	ADEQ	Construction	NONE	0.00	
2.00	RD-1031	Henry St.	Margaret St.	Marshall St. E	140	0.140	ADEQ	Construction	NONE	0.00	
2.00	RD-1073	Coleman St.	Sykes St. S	Gray Ave.	245	0.020	ADEQ	Construction	NONE	0.00	
2.00	RD-1218	Parker St. E	Sykes St. N	Bayfield St.	140	0.140	ADEQ	Construction	NONE	0.00	
2.00	RD-1249	Glen Abbey Crt.	Ridge Rd	South End	160	0.160	ADEQ	Construction	NONE	0.00	
2.00	RD-1197	Berry St.	Cook St.	Sykes St. N	130	0.130	ADEQ	Construction	NONE	0.00	
2.00	RD-3005	Syd/St.Vin Tl	South Turnaround	Highway 26	20	0.140	ADEQ	Construction	NONE	0.00	
2.00	RD-2120	Swarthmore Drive	Hwy. 26	250m East of Hwy. 26	250	0.250	ADEQ	Construction	NONE	0.00	
3.00	RD-1220	Parker St. W	Fairgrounds	Thompson St.	190	0.190	ADEQ	Construction	NONE	0.00	
3.00	RD-1030	Henry St.	Edwin St.	Margaret St.	120	0.120	ADEQ	Construction	NONE	0.00	
4.00	RD-2040	7Th Line	Georgian Beach Rd. N	25 Sideroad	499	0.500	ADEQ	Construction	NONE	0.00	
4.00	RD-2041	7Th Line	25 Sideroad	25 Sideroad	410	0.100	ADEQ	Construction	NONE	0.00	
4.00	RD-2042	7Th Line	25 Sideroad	McKay Crt.	389	0.800	ADEQ	Construction	NONE	0.00	
5.00	RD-2043	7Th Line	Mckay Crt.	Harbour Beach Drive	261	0.600	ADEQ	Construction	NONE	0.00	
5.00	RD-1046	Victoria Cres.	Marshall St. W	Boucher St. W	150	0.150	ADEQ	Construction	NONE	0.00	
5.00	RD-1119	Marshall St. W	Victoria Cres.	Sykes St.	150	0.150	ADEQ	Construction	NONE	0.00	
6.00	RD-1135	Sykes St. N	Berry St.	Trowbridge St.	11,000	0.110	ADEQ	Construction	NONE	0.00	
8.00	RD-1045	Victoria Cres.	Edwin St. W	Marshall St. W	90	0.090	ADEQ	Construction	NONE	0.00	
8.00	RD-1036	Sykes St. S	Ivan St.	James Cres.	11,000	0.100	ADEQ	Construction	NONE	0.00	
8.00	RD-3068	Syd/Lakeshore Dr.	Sideroad 23	Sideroad 18	150	1.700	ADEQ	Construction	NONE	0.00	
9.00	RD-2044	7Th Line	Harbour Beach Dr.	Northeast End	80	1.100	ADEQ	Construction	NONE	0.00	
9.00	RD-2037	7Th Line	Highway 26	Centreville Rd.	1,270	0.650	ADEQ	Construction	NONE	0.00	
10.00	RD-3017-1	1st Concession	10 Sideroad	Grey Road 18	400	0.200	ADEQ	Construction	NONE	0.00	
11.00	RD-2097-1	7 Sideroad	1.25km West of Tucker Street	Tucker St.	50	1.250	ADEQ	Construction	NONE	0.00	
12.00	RD-2038	7Th Line	Centreville Rd.	22 Sideroad	1,089	1.250	ADEQ	Construction	NONE	0.00	
12.00	RD-2087	4 Sideroad	7th Line	Grey Road 7	208	2.700	ADEQ	Construction	NONE	0.00	
13.00	RD-2093	7 Sideroad	Collingview Cr.	Moutain Rd.	142	0.300	ADEQ	Construction	NONE	0.00	
14.00	RD-1033-1	Sykes St. S	600m West of Muir Street	St. Vincent St.	11,000	1.040	ADEQ	Construction	NONE	0.00	
14.00	RD-2000	Tbm/Meaf Tl	Meaf/GH TL	4 Sideroad	300	1.800	ADEQ	Construction	NONE	0.00	
18.00	RD-2092	7 Sideroad	Collingview Cres.	Meaf/BM TL	142	0.900	ADEQ	Construction	NONE	0.00	
18.00	RD-3003	Syd/St.Vin Tl	Sideroad 6	Gerald Shortt Parkway	100	1.900	ADEQ	Construction	NONE	0.00	
20.00	RD-3018	2nd Concession S.	Syd/Holl TL	Grey Road 29	100	1.800	ADEQ	Construction	NONE	0.00	
25.00	RD-3004	Syd/St.Vin Tl	Sideroad 9	North Limit	1	0.140	ADEQ	Construction	NONE	0.00	
29.00	RD-2138	13 Sideroad	12th Line	11th Line	1	2.790	ADEQ	Construction	NONE	0.00	
47.00	RD-1033	Sykes St. S	Muir St.	600m West of Muir Street	11,000	0.600	ADEQ	Construction	NONE	0.00	
6.00	RD-1140	Sykes St. N	Lombard St.	Albert St.	11,000	0.130	6-10	Construction	NONE	0.00	
6.00	RD-1141	Sykes St. N	Albert St.	William St.	11,000	0.150	6-10	Construction	NONE	0.00	
8.00	RD-1034	Sykes St. S	McKibbon St.	Coleman St.	11,000	0.360	6-10	Construction	NONE	0.00	
8.00	RD-1035	Sykes St. S	Coleman St.	Ivan St.	11,000	0.120	6-10	Construction	NONE	0.00	
						25.570					0.00

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
DSTrehab										
18.00	RD-3078	Bayshore Rd.	Rossmoyne	Roxsborough	300	0.300	NOW	Construction	DSTrehab	23,044.28
20.00	RD-3028	Queen's Bush Rd.	Concession 'B'	Tee Junction	50	1.300	NOW	Construction	DSTrehab	106,518.75
21.00	RD-3037	Irish Block Rd.	Sideroad 22	Sideroad 24	150	1.800	NOW	Construction	DSTrehab	136,030.05
17.00	RD-3187	Sideroad 19-A	Sideroad 18	South To End	20	0.150	ADEQ	Construction	DSTrehab	11,569.50
21.00	RD-3038	Irish Block Rd.	Sideroad 24	Sideroad 27	150	1.800	1-5	Construction	DSTrehab	135,284.85
						5.350				412,447.43
BS										
16.00	RD-3057	8th Concession N.	Sideroad 33	Sideroad 24	50	1.300	NOW	Construction	BS	205,223.66
17.00	RD-3022	2Nd Concession N.	Sideroad 22	Sideroad 24	100	1.860	NOW	Construction	BS	315,704.96
18.00	RD-2016-1	Holms Hill Drive	Sideroad 3	Peter S Rd.	180	0.180	NOW	Construction	BS	51,684.24
19.00	RD-3125-2	Sideroad 6	Grey Road 29	1st Concession	50	0.450	NOW	Construction	BS	114,938.93
19.00	RD-3023	2Nd Concession N.	Sideroad 24	Sideroad 27	100	1.860	NOW	Construction	BS	315,704.96
19.00	RD-3092	Ashgrove Ln.	North End	Bayshore Rd.	100	1.300	NOW	Construction	BS	399,562.02
20.00	RD-3079	Bayshore Rd.	Roxsborough	Sideroad 23	300	2.800	NOW	Construction	BS	606,178.76
20.00	RD-3050	6th Concession N.	Sideroad 27	Sideroad 23	50	0.970	NOW	Construction	BS	164,641.83
20.00	RD-2106	Starlight Ln.	Highway 26	Highway 26	50	0.350	NOW	Construction	BS	100,497.13
20.00	RD-2136-1	13 Sideroad	Grey Road 12	Bridge	51	1.000	NOW	Construction	BS	232,770.04
22.00	RD-3186	Sideroad 18	Syd/Lakeshore Dr.	Concession A	50	2.000	NOW	Construction	BS	339,467.70
22.00	RD-2154	25 Sideroad	Grey Road 112	7th Line	102	2.700	NOW	Construction	BS	458,281.40
22.00	RD-3096	10th Concession	Sideroad 6	Grey Road 18	100	1.800	NOW	Construction	BS	448,285.79
22.00	RD-2062	11Th Line	16 Sideroad	Highway 26	249	1.800	NOW	Construction	BS	520,482.11
23.00	RD-2060	11Th Line	10 Sideroad	13 Sideroad	216	1.800	NOW	Construction	BS	418,986.07
23.00	RD-2079	Old Mail Road	Grey Road 7	Meaf/GH TL	109	1.400	NOW	Construction	BS	221,010.09
23.00	RD-2005	Mountain Rd.	Collingview Cres.	7 Sideroad	600	0.600	NOW	Construction	BS	163,622.34
23.00	RD-1102	Louisa St.	Centre St.	Dillon Ave.	180	0.180	NOW	Construction	BS	51,684.24
23.00	RD-3085	Concession 'A'	Sideroad 18	Eagle Ridge Ent.	100	2.000	NOW	Construction	BS	155,436.75
23.00	RD-3054	8Th Concession S.	Sideroad 6	Grey Road 18	150	1.800	NOW	Construction	BS	418,986.07
23.00	RD-3181	Sideroad 30	Irish Block Rd.	2nd Concession N.	50	2.580	NOW	Construction	BS	437,913.33
23.00	RD-3141	Story Book Park Rd.	Grey Road 11	East To End	80	2.200	NOW	Construction	BS	458,946.76
24.00	RD-3189	Concession 'B'	Sideroad 8	Queen's Bush Rd.	100	0.450	NOW	Construction	BS	104,746.51
24.00	RD-3006	St. Vincent - Sydenham Townline	Hwy. 26	1.8km North of Hwy. 26	100	1.800	NOW	Construction	BS	448,285.79
24.00	RD-3056	8Th Concession N.	Sideroad 22	Sideroad 33	50	1.100	NOW	Construction	BS	173,650.79
24.00	RD-3072	Syd/Lakeshore Dr.	150m East of Sideroad 8	Harbour Dr.	50	1.900	NOW	Construction	BS	322,494.32
24.00	RD-2058	11Th Line	4 Sideroad	8 Sideroad	124	2.400	NOW	Construction	BS	558,648.09
25.00	RD-2057	11Th Line	Meaf/GH TL	4 Sideroad	122	1.800	NOW	Construction	BS	326,886.03
25.00	RD-3011	Harbour Dr.	North End	Syd/Lakeshore Dr.	50	2.150	NOW	Construction	BS	364,927.78
25.00	RD-3016	1St Concession	Sideroad 3	Sideroad 6	100	2.000	NOW	Construction	BS	339,467.70
25.00	RD-3202	Sideroad 33	8th Concession N.	Sydenham-Lakeshore Dr.	150	1.000	NOW	Construction	BS	232,770.04
25.00	RD-3173	Sideroad 24	Irish Block Rd.	2nd Concession N.	100	2.700	NOW	Construction	BS	458,281.40
26.00	RD-3025	2Nd Concession N.	Sideroad 30	Sideroad 8	100	2.100	NOW	Construction	BS	362,026.67

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
26.00	Rd-3026-1	Side Road 8	100m South of Sydenham-Lakeshore Drive	Sydenham-Lakeshore Drive	100	0.100	NOW	Construction	BS	13,457.34
26.00	RD-2123	Muir St.	Union St.	Centre St.	150	0.400	NOW	Construction	BS	86,596.97
26.00	RD-2116	10 Sideroad	Grey Road 12	7th Line	136	2.700	NOW	Construction	BS	458,281.40
26.00	RD-2061	11Th Line S	13 Sideroad	16 Sideroad	249	1.800	NOW	Construction	BS	418,986.07
26.00	RD-2081	4 Sideroad	Clarence St.	Meaf/BM TL	500	0.500	NOW	Construction	BS	147,484.84
27.00	RD-3031	4Th Concession S.	Syd/Holl TL	Sideroad 3	100	1.850	NOW	Construction	BS	314,007.62
27.00	RD-3113	Syd/Holl TI	6th Concession S	4th Concession S.	50	2.700	NOW	Construction	BS	458,281.40
27.00	RD-3176	Sideroad 27	2nd Concession N.	St. Vincent - Sydenham Townline	50	2.700	NOW	Construction	BS	458,281.40
27.00	RD-3051	Sideroad 30	Sideroad 23	Bend in Sideroad 30	50	1.500	NOW	Construction	BS	254,600.78
27.00	RD-3142	Story Book Park Rd.	10th Concession	Grey Road 11	250	2.700	NOW	Construction	BS	628,479.11
28.00	RD-3180	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	50	1.550	NOW	Construction	BS	244,689.74
28.00	RD-3118	Sideroad 3	Grey Road 29	Syd/St.Vin TL	50	1.400	NOW	Construction	BS	237,627.39
28.00	RD-3041	5th Concession	Highway 26	Sideroad 15	100	1.300	NOW	Construction	BS	220,654.01
28.00	RD-3052	8th Concession	Syd/Holl TL	Sunny Valley Rd.	150	1.840	NOW	Construction	BS	428,296.87
28.00	RD-2077	Meaf/Gh TI	11th Line	Grey Road 12	50	2.800	NOW	Construction	BS	508,489.38
28.00	RD-2084	4 Sideroad	Foster St.	Ridgecrest Ln	500	4.500	NOW	Construction	BS	1,246,705.43
28.00	RD-2003	Christie Beach Rd.	Highway 26	North End	300	1.500	NOW	Construction	BS	324,738.63
29.00	RD-2082	4 Sideroad	Dinsmore St.	Clarence St.	500	0.180	NOW	Construction	BS	53,617.71
29.00	RD-2083	4 Sideroad	Ridgecrest Ln	Dinsmore St.	500	0.200	NOW	Construction	BS	55,409.13
29.00	RD-3027	Sideroad 8	Sydenham-Lakeshore Drive	Concession 'B'	100	1.000	NOW	Construction	BS	232,770.04
30.00	RD-3048	6th Concession N.	Sideroad 22	Sideroad 24	50	1.850	NOW	Construction	BS	335,966.20
30.00	RD-3095	10th Concession	Sunny Valley Rd.	Sideroad 6	100	1.800	NOW	Construction	BS	305,520.93
30.00	RD-1047	Union St.	Muir St.	570m North of Muir	570	0.570	NOW	Construction	BS	166,956.97
31.00	RD-3172	Sideroad 24	2nd Concession N.	Syd/St.Vin TL	50	2.700	NOW	Construction	BS	458,281.40
31.00	RD-3193	Bognor-Main St.	Grey Road 29	Bognor-2nd Ave.	190	0.190	NOW	Construction	BS	51,813.74
31.00	RD-3194	Bognor-Queen St.	Grey Road 29	Bognor-2nd Ave.	190	0.190	NOW	Construction	BS	51,813.74
32.00	RD-3122	Sunny Valley Rd.	10th Concession	8th Concession	50	2.700	NOW	Construction	BS	490,329.05
32.00	RD-3124	Sideroad 6	1st Concession	Syd/St.Vin TL	50	1.400	NOW	Construction	BS	237,627.39
32.00	RD-3112	Syd/Holl TI	4th Concession S.	2nd Concession S	50	2.700	NOW	Construction	BS	490,329.05
32.00	RD-2122	Muir St.	Union St.	Grey Road 7	600	0.600	NOW	Construction	BS	172,280.79
32.00	RD-2111	John St.	Grey Road 7	Penny Lane	202	0.500	NOW	Construction	BS	111,089.55
32.00	RD-2013	3rd Line	7 Sideroad	10 Sideroad	322	1.850	NOW	Construction	BS	434,543.22
33.00	RD-2015	3rd Line	Holmcrest Ln.	Highway 26	750	1.100	NOW	Construction	BS	318,072.40
33.00	RD-2075	Meaf/Gh TI	7th Line	Grey Road 7	200	2.700	NOW	Construction	BS	645,636.42
33.00	RD-3111	Syd/Holl TI	2nd Concession	Grey Road 29	50	1.500	NOW	Construction	BS	272,405.03
35.00	RD-2085	4 Sideroad	3rd Line	Foster St.	587	1.310	NOW	Construction	BS	390,217.76
36.00	RD-3026	Side Road 8	2nd Concession N.	100m South of Sydenham-Lakeshore Drive	100	0.800	NOW	Construction	BS	136,851.00
37.00	RD-3164	Sideroad 22	6th Concession N.	Irish Block Rd.	100	2.200	NOW	Construction	BS	373,414.47
38.00	RD-3163	Sideroad 22	Irish Block Rd.	2nd Concession N.	100	2.700	NOW	Construction	BS	458,281.40
39.00	RD-3001	Syd/St.Vin TI	Syd/Holl TL	Sideroad 3	100	2.800	NOW	Construction	BS	475,254.78
46.00	RD-3174	Sideroad 24	6th Concession N.	Irish Block Rd.	1,100	2.700	NOW	Construction	BS	458,281.40

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
52.00	RD-1061	Centre St.	Muir St.	Russet Dr.	600	0.600	NOW	Construction	BS	467,823.51
18.00	RD-2124	Muir St.	West End	Centre St.	10	0.500	ADEQ	Construction	BS	389,852.93
19.00	RD-2155-1	25 Sideroad	11th Line	100m East of 11th Line	10	0.100	ADEQ	Construction	BS	77,970.59
20.00	RD-2110	Peter'S Rd.	Holmcrest Ln.	Holmes Hill Dr.	110	0.110	ADEQ	Construction	BS	33,809.10
23.00	RD-3146	Sideroad 15	5th Concession S.	East End	10	0.360	ADEQ	Construction	BS	322,903.75
24.00	RD-2109	Holmcrest Ln.	3rd Line	Peter's Rd.	160	0.160	ADEQ	Construction	BS	49,176.86
25.00	RD-3008	St. Vincent - Sydenham Townline	Sideroad 24	Sideroad 27	20	2.200	ADEQ	Construction	BS	1,973,300.67
25.00	RD-3150	Sideroad 15	10th Concession S.	East End	20	1.000	ADEQ	Construction	BS	838,330.35
25.00	RD-2064	11Th Line	22 Sideroad	25 Sideroad	35	1.800	ADEQ	Construction	BS	1,403,470.53
25.00	RD-2008	Ridgecrest Ln.	4 Sideroad	South To End	300	0.300	ADEQ	Construction	BS	88,737.93
26.00	RD-2025	Thom St.	Grey Road 12	South To End	270	0.270	ADEQ	Construction	BS	79,864.14
26.00	RD-2103	8 Sideroad	12th Line	11th Line	20	1.300	ADEQ	Construction	BS	1,089,829.46
26.00	RD-2108	10 Sideroad	Holmes Hill Dr.	3rd Line	440	0.440	ADEQ	Construction	BS	126,339.25
27.00	RD-2030-2	Lakeshore Rd. N	22 Sideroad	Lakeshore Rd. S	600	0.600	ADEQ	Construction	BS	177,475.86
28.00	RD-2016	Holmes Hill Dr.	Peter's Road	10 Sideroad	250	0.250	ADEQ	Construction	BS	71,783.67
29.00	RD-1004	Middle Ave.	Grant Av.	North End	20	0.080	ADEQ	Construction	BS	23,352.67
29.00	RD-2099	7 Sideroad	Grey Road 12	East to End	20	0.800	ADEQ	Construction	BS	670,664.28
29.00	RD-3086	Concession 'A'	Eagle Ridge Ent.	Kilmanjaro LN.	10	0.500	ADEQ	Construction	BS	419,165.18
31.00	RD-3010	St. Vincent - Sydenham Townline	Sideroad 30	Syd/Lakeshore Dr.	5	0.600	ADEQ	Construction	BS	467,823.51
31.00	RD-3019	2Nd Concession S.	Grey Road 18	North End	40	1.550	ADEQ	Construction	BS	1,299,412.04
31.00	RD-2142	16 Sideroad	1km West of 12th Line	12th Line	30	1.000	ADEQ	Construction	BS	838,330.35
32.00	RD-3121-1	Sunny Valley Rd.	8th Concession	End of GRAN	20	0.750	ADEQ	Construction	BS	672,716.14
32.00	RD-3121-2	Sunny Valley Rd.	End of GRAN	6th Concession	20	0.700	ADEQ	Construction	BS	627,868.40
33.00	RD-3171	Sideroad 24	Concession A	West End	10	0.100	ADEQ	Construction	BS	83,833.04
33.00	RD-3144	Sideroad 15	Grey Road 18	Syd/St.Vin TL	10	0.840	ADEQ	Construction	BS	704,197.49
34.00	RD-3087	Concession A	Kilmanjaro Ln.	East End.	10	1.280	ADEQ	Construction	BS	1,148,102.21
35.00	RD-3180-1	Sideroad 30	1km West of Townline	St. Vincent - Sydenham Townline	20	1.000	ADEQ	Construction	BS	779,705.85
35.00	RD-3188	Concession B	Queen's Bush Rd.	East To End	20	0.600	ADEQ	Construction	BS	467,823.51
38.00	RD-3165	Sideroad 22	8th Concession N.	East To End	40	0.600	ADEQ	Construction	BS	502,998.21
40.00	RD-3167	Sideroad 38	Grey Road 15	West End	20	0.200	ADEQ	Construction	BS	155,941.17
12.00	RD-2160	Captains Crt.	Harbour Beach Dr.	North End	100	0.450	6-10	Construction	BS	129,210.60
17.00	RD-3055	8th Concession N.	Highway 26	Sideroad 22	100	2.300	6-10	Construction	BS	390,387.86
17.00	RD-2153	25 Sideroad	7th Line	Kiowana Beach Rd.	111	0.180	6-10	Construction	BS	30,552.09
20.00	RD-3178	Sideroad 27	6th Concession N.	Irish Block Rd.	100	1.410	6-10	Construction	BS	239,324.73
21.00	RD-3032	4Th Concession S.	Sideroad 3	Sideroad 6	100	1.800	6-10	Construction	BS	315,096.21
22.00	RD-3049	6th Concession N.	Sideroad 24	Sideroad 27	50	2.300	6-10	Construction	BS	390,387.86
23.00	RD-2136-2	13 Sideroad	Bridge	1.1km East of Bridge	51	1.100	6-10	Construction	BS	201,336.14
25.00	RD-2155-2	25 Sideroad	1.0km West of Grey Road 112	Grey Road 112	100	1.000	6-10	Construction	BS	169,733.85
27.00	RD-3007	Syd/St.Vin Townline	1.8km North of Hwy. 26	Sideroad 24	100	1.700	6-10	Construction	BS	308,725.70
14.00	RD-3046	6th Concession S.	Highway 26	South approx. 0.3 k	50	0.150	1-5	Construction	BS	46,406.63
15.00	RD-3091	Thornridge Rd.	South End	Bayshore Rd.	50	0.450	1-5	Construction	BS	138,309.94

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
17.00	RD-2028-2	Habour Beach Dr.	7th Line	Cedar Ave.	200	2.330	1-5	Construction	BS	716,138.09
20.00	RD-2098	7 Sideroad	7th Line	Grey Road 7	164	2.700	1-5	Construction	BS	804,265.61
21.00	RD-3045	6Th Concession S.	150m South of Hwy 26 to South End	South To End	50	0.450	1-5	Construction	BS	99,980.60
22.00	RD-2102	3rd Line	10 Sideroad	Holmcresc Ln.	300	0.310	1-5	Construction	BS	108,613.96
22.00	RD-3149	Sideroad 15	Grey Road 11	East To End	100	1.500	1-5	Construction	BS	349,155.06
24.00	RD-3161	Woodford Cres.	Highway 26	Highway 26	350	0.350	1-5	Construction	BS	112,346.81
28.00	RD-2014-1	3rd Line	Holms Hill Drive	10 Sideroad	750	0.204	1-5	Construction	BS	16,971.07
29.00	RD-2014	3rd Line	Holmcresc Ln.	Holms Hill Drive	750	0.135	1-5	Construction	BS	11,230.85
						161.819				44,549,392.56

CRK

5.00	RD-1171	Victoria St.	Albert St.	William St.	120	0.120	NOW	Maint	CRK	264.00
18.00	RD-1039	Sykes St. S	Edwin/Margaret	Marshall St.	11,570	0.150	NOW	Maint	CRK	330.00
2.00	RD-1080	Grace Ave.	Union St.	East End	100	0.100	ADEQ	Maint	CRK	220.00
2.00	RD-1094	Edwin St. E	Denmark St.	St. Vincent St.	80	0.080	ADEQ	Maint	CRK	176.00
3.00	RD-1234	St Andrews Dr.	Victoria St.	Ridge Rd.	400	0.400	ADEQ	Maint	CRK	880.00
4.00	RD-1095	Edwin St. E	Henry St.	Denmark St.	160	0.160	ADEQ	Maint	CRK	352.00
5.00	RD-1133	Bayfield St.	Collingwood St. E	Parker St. E	150	0.150	ADEQ	Maint	CRK	330.00
5.00	RD-1161	Thompson St.	Nelson St. W	Collingwood St. W	120	0.120	ADEQ	Maint	CRK	264.00
5.00	RD-1162	Thompson St.	Collingwood St. W	Parker St. W	130	0.130	ADEQ	Maint	CRK	286.00
5.00	RD-1163	Thompson St.	Parker St. W	Lombard St.	110	0.110	ADEQ	Maint	CRK	242.00
5.00	RD-1245	Ridge Creek	West End	Meadow Lane	90	0.090	ADEQ	Maint	CRK	198.00
5.00	RD-1231	William St.	Cook St.	Sykes St. N	60	0.060	ADEQ	Maint	CRK	132.00
6.00	RD-1232	William St.	Thompson St.	Cook St.	160	0.160	ADEQ	Maint	CRK	352.00
6.00	RD-1219	Parker St. W	Cook St.	Sykes St. N	160	0.160	ADEQ	Maint	CRK	352.00
6.00	RD-1223	Lombard St.	Cook St.	Sykes St. N	160	0.160	ADEQ	Maint	CRK	352.00
6.00	RD-1224	Lombard St.	Thompson St.	Cook St.	170	0.170	ADEQ	Maint	CRK	374.00
6.00	RD-1096	Edwin St. E	Sykes St.	Henry St.	180	0.180	ADEQ	Maint	CRK	396.00
7.00	RD-1117	Marshall St. E	Henry St.	Denmark St.	130	0.130	ADEQ	Maint	CRK	286.00
7.00	RD-1112	Margaret St.	Henry St.	Denmark St.	120	0.120	ADEQ	Maint	CRK	264.00
7.00	RD-1113	Margaret St.	Sykes St.	Henry St.	120	0.120	ADEQ	Maint	CRK	264.00
7.00	RD-1110	Margaret St.	St. Vincent St.	Richmond St. N	240	0.240	ADEQ	Maint	CRK	528.00
7.00	RD-1164	Thompson St.	Lombard St.	Albert St.	120	0.120	ADEQ	Maint	CRK	264.00
7.00	RD-1165	Thompson St.	Albert St.	William St.	110	0.110	ADEQ	Maint	CRK	242.00
7.00	RD-1157	Cook St.	William St.	Sykes St. N	100	0.100	ADEQ	Maint	CRK	220.00
7.00	RD-1132	Bayfield St.	Nelson St. E	Collingwood St. E	120	0.120	ADEQ	Maint	CRK	264.00
7.00	RD-1134	Bayfield St.	Parker St. E	Sykes St. N	200	0.200	ADEQ	Maint	CRK	440.00
7.00	RD-1130	Bayfield St.	Berry St. ROW	Trowbridge St.	150	0.050	ADEQ	Maint	CRK	110.00
7.00	RD-1003	Middle Ave.	Parklane Cres. N	Grant Ave.	110	0.110	ADEQ	Maint	CRK	242.00
7.00	RD-1027	Denmark St.	Margaret St.	Marshall St. E	150	0.150	ADEQ	Maint	CRK	330.00
7.00	RD-1028	Denmark St.	Marshall St. E	Boucher St. E	150	0.150	ADEQ	Maint	CRK	330.00
7.00	RD-1169	Owen St.	Berry St.	Trowbridge St.	80	0.080	ADEQ	Maint	CRK	176.00

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
7.00	RD-1160	Thompson St.	Trowbridge St.	Nelson St. W	120	0.120	ADEQ	Maint	CRK	264.00
7.00	RD-1244	Ridge Creek	Meadow Lane	Ridge Rd.	150	0.150	ADEQ	Maint	CRK	330.00
8.00	RD-1214	Collingwood St. W	Cook St.	Sykes St. N	160	0.160	ADEQ	Maint	CRK	352.00
8.00	RD-1227	Albert St.	Cook St.	Sykes St. N	120	0.120	ADEQ	Maint	CRK	264.00
8.00	RD-1240	Fairway Ave.	Meadowlane Dr.	Ridge Rd.	170	0.170	ADEQ	Maint	CRK	374.00
8.00	RD-1247	Country Cres.	Northwest End	Ridge Creek	180	0.180	ADEQ	Maint	CRK	396.00
8.00	RD-1155	Cook St.	Lombard St.	Albert St.	120	0.120	ADEQ	Maint	CRK	264.00
8.00	RD-1116	Marshall St. E	Denmark St.	St.Vincent St.	110	0.110	ADEQ	Maint	CRK	242.00
8.00	RD-3067	Syd/Lakeshore Dr.	Landfill Entrance	Sideroad 23	150	1.700	ADEQ	Maint	CRK	3,740.00
9.00	RD-2006	Dinsmore St.	4 Sideroad	South to End	50	0.300	ADEQ	Maint	CRK	660.00
9.00	RD-2012	3rd Line	4 Sideroad	7 Sideroad	260	1.800	ADEQ	Maint	CRK	3,960.00
10.00	RD-2004	Clarence St.	4 Sideroad	South to End	180	0.180	ADEQ	Maint	CRK	396.00
10.00	RD-1229	Albert St.	Victoria St.	Birchwood Crt.	200	0.200	ADEQ	Maint	CRK	440.00
10.00	RD-1191	Meadow Lane	Ridge Creek Dr.	Fairway Ave.	290	0.290	ADEQ	Maint	CRK	638.00
10.00	RD-1017	St.Vincent St.	Montgomery St.	Georgian Trail	2,000	0.200	ADEQ	Maint	CRK	440.00
11.00	RD-1085	Aiken Street	RicHCBond St.	Graham St.	290	0.290	ADEQ	Maint	CRK	638.00
12.00	RD-3083	Bayshore Rd.	Thornridge Rd	Sideroad 18	300	0.700	ADEQ	Maint	CRK	1,540.00
13.00	RD-3132	Gerald Shortt Parkway	Grey Road 18	Syd/St.Vin Townline	537	1.400	ADEQ	Maint	CRK	3,080.00
13.00	RD-1007	Vera St.	Eliza St.	Aimee	210	0.210	ADEQ	Maint	CRK	462.00
13.00	RD-1019	St.Vincent St.	Edwin St.	Eliza St.	2,000	0.160	ADEQ	Maint	CRK	352.00
13.00	RD-1020	St.Vincent St.	Eliza St.	Margaret St.	2,000	0.150	ADEQ	Maint	CRK	330.00
13.00	RD-1170	Victoria St.	Lombard St.	Albert St.	110	0.110	ADEQ	Maint	CRK	242.00
14.00	RD-1248	Ford Ave.	Grandwiew Dr.	Sykes St. N	236	0.170	ADEQ	Maint	CRK	374.00
14.00	RD-1037	Sykes St. S	James Cres.	Paul St.	11,000	0.100	ADEQ	Maint	CRK	220.00
14.00	RD-2140	16 Sideroad	11th Line	Grey Road 12	515	2.700	ADEQ	Maint	CRK	5,940.00
14.00	RD-2149	22 Sideroad	7th Line	Georgian Beach Rd. N	350	0.500	ADEQ	Maint	CRK	1,100.00
18.00	RD-2119	Gerald Shortt Parkway	St.Vin/Syd TL	12th Line	537	1.100	ADEQ	Maint	CRK	2,420.00
19.00	RD-2117	10 Sideroad	11th Line	Grey Road 12	541	2.700	ADEQ	Maint	CRK	5,940.00
20.00	RD-1038	Sykes St. S	Paul St.	Edwin/Margaret	11,000	0.100	ADEQ	Maint	CRK	220.00
21.00	RD-1024	St.Vincent St.	Bridge St.	Harbour	1,000	0.090	ADEQ	Maint	CRK	198.00
22.00	RD-1018	St.Vincent St.	Georgian Trail	Edwin St.	2,000	0.090	ADEQ	Maint	CRK	198.00
23.00	RD-1246	Albery Crt.	Northwest End	Sykes St. N	350	0.350	ADEQ	Maint	CRK	770.00
14.00	RD-1142	Sykes St. N	William St.	Cook St.	11,000	0.100	6-10	Maint	CRK	220.00
18.00	RD-1040	Sykes St. S	Marshall St.	Boucher St.	11,000	0.150	6-10	Maint	CRK	330.00
18.00	RD-1041	Sykes St. S	Boucher St.	Berry St.	11,000	0.150	6-10	Maint	CRK	330.00
						21.420				47,124.00

SST

10.00	RD-2136-3	13 Sideroad	1.1km East of Bridge	7th Line	51	0.600	ADEQ	Maintenance	SST	11,700.00
11.00	RD-3053	8th Concession S.	Sunny Valley Rd.	Sideroad 6	150	1.850	ADEQ	Maintenance	SST	36,075.00
12.00	RD-3033	4Th Concession S.	Sideroad 6	Grey Road 18	100	1.850	ADEQ	Maintenance	SST	36,075.00
14.00	RD-2001	Tbm/Meaf TI	4 Sideroad	7 Sideroad	300	1.800	ADEQ	Maintenance	SST	36,720.00

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
14.00	RD-2023	Penny Lane	John St.	North End	20	0.100	ADEQ	Maintenance	SST	2,040.00
14.00	RD-2113	Roberston Ave.	John St.	West End	100	0.800	6-10	Maintenance	SST	16,320.00
17.00	RD-2112	John St.	East Limit	Robertson Ave.	300	0.300	6-10	Maintenance	SST	6,120.00
17.00	RD-2022	Ross St.	Robertson Ave.	Southeast to End	400	0.400	6-10	Maintenance	SST	8,160.00
20.00	RD-2024	John St.	Robertson Ave.	Robertson Ave.	600	0.600	6-10	Maintenance	SST	12,240.00
						8.300				165,450.00
SR										
25.00	RD-2076	Meaf/Gh TI	Grey Road 12	7th Line	300	2.700	ADEQ	Maintenance	SR	0.00
						2.700				0.00
SD										
26.00	RD-3115	Syd/Holl TI	10th Concession	8th Concession	50	2.700	NOW	Maintenance	SD	0.00
6.00	RD-2120-2	Swarthmore Drive	1.03km East of Hwy. 26	East End Culdesac	20	0.060	ADEQ	Maintenance	SD	0.00
10.00	RD-1222	Parker St. W	Pearson St.	Noble St.	120	0.120	ADEQ	Maintenance	SD	0.00
24.00	RD-2107	Old Highway 26	West End	Highway 26	800	0.800	ADEQ	Maintenance	SD	0.00
6.00	RD-2039	7Th Line	22 Sideroad	Georgian Beach Rd. N	696	1.600	6-10	Maintenance	SD	0.00
9.00	RD-1176	Noble St.	Nelson St. W	Collingwood St. W	110	0.110	6-10	Maintenance	SD	0.00
11.00	RD-3021	2Nd Concession N.	Highway 26	Sideroad 22	100	1.900	6-10	Maintenance	SD	0.00
11.00	RD-3036	Irish Block Rd.	Highway 26	Sideroad 22	150	1.800	6-10	Maintenance	SD	0.00
12.00	RD-3076-2	Tom Thomson Ln.	450m South of Grey Road 15	Grey Road 15	200	0.450	6-10	Maintenance	SD	0.00
12.00	RD-2070	12Th Line	10 Sideroad	13 Sideroad	100	1.500	6-10	Maintenance	SD	0.00
12.00	RD-1048	Union St.	Russett Dr.	Augusta St.	570	0.100	6-10	Maintenance	SD	0.00
12.00	RD-1049	Union St.	Augusta St.	Grace Ave.	570	0.100	6-10	Maintenance	SD	0.00
14.00	RD-1084	Aiken Street	Graham St.	Grant Ave.	360	0.360	6-10	Maintenance	SD	0.00
14.00	RD-3116	Syd/Holl TI	Highway 6 & 10	10th Concession	50	2.740	6-10	Maintenance	SD	0.00
15.00	RD-2150	22 Sideroad	Grey Road 112	1.3km East of Grey Road 112	158	1.300	6-10	Maintenance	SD	0.00
15.00	RD-2096	7 Sideroad	Tucker St.	3rd Line	200	0.200	6-10	Maintenance	SD	0.00
15.00	RD-1062	Centre St.	Russett Dr.	Louisa St.	530	0.530	6-10	Maintenance	SD	0.00
16.00	RD-2071	12th Line	13 Sideroad	16 Sideroad	73	1.800	6-10	Maintenance	SD	0.00
16.00	RD-3047	6th Concession N.	Highway 26	Sideroad 22	50	1.800	6-10	Maintenance	SD	0.00
16.00	RD-1061-1	Centre St.	600m North of Muir Street	Russett Dr.	370	0.370	6-10	Maintenance	SD	0.00
18.00	RD-3177	Sideroad 27	Irish Block Rd.	2nd Concession N.	100	2.750	6-10	Maintenance	SD	0.00
18.00	RD-2090	4 Sideroad	St.Vin/Syd TL	11th Line	101	2.800	6-10	Maintenance	SD	0.00
18.00	RD-1158	Grandview Dr.	Sykes St. N	Helen St.	400	0.400	6-10	Maintenance	SD	0.00
19.00	RD-3110	Syd/Holl TI	Grey Road 29	Syd/St.Vin TL	50	1.400	6-10	Maintenance	SD	0.00
20.00	RD-1159	Grandview Dr.	Helen St.	Ford Ave.	390	0.390	6-10	Maintenance	SD	0.00
22.00	RD-1016	St.Vincent St.	Sykes St. S	Montgomery St.	2,000	0.240	6-10	Maintenance	SD	0.00
22.00	RD-3126	Sideroad 6	4th Concession S.	Grey Road 29	50	2.700	6-10	Maintenance	SD	0.00
23.00	RD-2141	16 Sideroad	12th Line	11th Line	127	1.400	6-10	Maintenance	SD	0.00
23.00	RD-2028-1	Cedar Ave.	Harbour Beach Dr.	North End	600	0.600	6-10	Maintenance	SD	0.00
						33.020				0.00

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
SSTplus										
11.00	RD-3044	6th Concession S.	Sideroad 6	Grey Road 18	100	1.800	ADEQ	Rehab	SSTplus	111,043.35
12.00	RD-3043	6th Concession S.	Sideroad 3	Sideroad 6	100	1.900	6-10	Rehab	SSTplus	127,868.10
14.00	RD-2063	11Th Line N	Highway 26	22 Sideroad	144	1.800	6-10	Rehab	SSTplus	78,868.35
19.00	RD-2151	22 Sideroad	11th Line	to East Limit	50	1.100	6-10	Rehab	SSTplus	67,859.83
20.00	RD-2059	11th Line	8 Sideroad	10 Sideroad	211	1.100	1-5	Rehab	SSTplus	67,859.83
						7.700				453,499.46
R2										
11.00	RD-2101-1	Tucker St.	St.Vincent Cr.	7 Sideroad	50	0.150	NOW	Rehab	R2	28,937.79
18.00	RD-2101-2	St.Vincent Cres.	Tucker St.	Tucker St.	120	1.400	NOW	Rehab	R2	223,177.50
30.00	RD-1138	Sykes St. N	Collingwood St.	Parker St.	11,000	0.120	NOW	Rehab	R2	74,456.07
30.00	RD-1139	Sykes St. N	Parker St.	Lombard St.	11,000	0.120	NOW	Rehab	R2	70,903.95
10.00	RD-2156	Mckay Crt.	7th Line	East End	20	0.100	ADEQ	Rehab	R2	19,766.25
13.00	RD-1215	Collingwood St. W	Thompson St.	Cook St.	130	0.130	ADEQ	Rehab	R2	51,190.10
10.00	RD-1123	Boucher St. E	Henry St.	Denmark St.	120	0.120	6-10	Rehab	R2	47,252.40
9.00	RD-1104	James Cres.	Burton St.	Paul St.	120	0.120	1-5	Rehab	R2	47,252.40
11.00	RD-1150	Cook St.	Berry St.	Trowbridge St.	80	0.080	1-5	Rehab	R2	33,205.12
11.00	RD-1187	Ridge Rd.	Glen Abbey Ct.	St. Andrew's Dr.	100	0.100	1-5	Rehab	R2	22,395.94
12.00	RD-1002	Middle Ave.	Parklane Cres. N	Parklane Cres. S	150	0.150	1-5	Rehab	R2	60,428.55
14.00	RD-1152	Cook St.	Nelson St. W	Collingwood St. W	120	0.120	1-5	Rehab	R2	49,807.68
14.00	RD-1153	Cook St.	Collingwood St. W	Parker St. W	120	0.120	1-5	Rehab	R2	49,807.68
14.00	RD-1154	Cook St.	Parker St. W	Lombard St.	120	0.120	1-5	Rehab	R2	49,807.68
14.00	RD-1149	Cook St.	South End	Berry St.	150	0.150	1-5	Rehab	R2	44,692.05
17.00	RD-1186	Ridge Rd.	Pearson St.	Glen Abbey Ct.	100	0.100	1-5	Rehab	R2	21,307.79
20.00	RD-1192	Gardiner St.	Miller St.	Nelson St. W	310	0.310	1-5	Rehab	R2	69,687.71
20.00	RD-1114	Marshall St. E	Richmond St. N.	East End	200	0.200	1-5	Rehab	R2	41,542.83
						3.710				1,005,619.49
R1										
18.00	RD-3082	Bayshore Rd.	Ashgrove Ln	Thornridge Rd	300	0.900	NOW	Rehab	R1	106,571.70
6.00	RD-1241	Fairway Ave.	Westend	Meadowlane Dr.	30	0.070	ADEQ	Rehab	R1	19,537.70
12.00	RD-1243	Helen St.	Stewart St.	Sykes St. N	240	0.240	ADEQ	Rehab	R1	30,501.90
12.00	RD-1238	Susan St.	Stewart St.	Existing HCB	150	0.150	ADEQ	Rehab	R1	18,199.35
13.00	RD-2065	Moore St.	Fligg Cres.	11th Line	100	0.100	ADEQ	Rehab	R1	11,853.00
14.00	RD-1228	Albert St.	Birchwood Crt.	Thompson St.	150	0.150	ADEQ	Rehab	R1	16,306.95
8.00	RD-1124	Boucher St. E	Sykes St.	Henry St.	120	0.120	6-10	Rehab	R1	33,493.20
8.00	RD-1129	Bridge St.	Bayfield St.	Denmark St.	110	0.110	6-10	Rehab	R1	23,720.13
9.00	RD-1131	Bayfield St.	Trowbridge St.	Nelson St. E	120	0.120	6-10	Rehab	R1	34,266.12
9.00	RD-1001	Parklane Cres.	Parklane Cres. N	Parklane Cres. S	160	0.160	6-10	Rehab	R1	45,688.16
9.00	RD-1032	Henry St.	Marshall St. E	Boucher St. E	120	0.120	6-10	Rehab	R1	34,266.12
9.00	RD-1063	Parklane Cres.	Middle Ave.	Parklane Cres.	120	0.120	6-10	Rehab	R1	33,493.20
9.00	RD-1067	Parklane Cres.	Middle Ave.	Parklane Cres.	130	0.130	6-10	Rehab	R1	36,284.30

Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
10.00	RD-1056	Blake St.	Louisa St.	South To End	180	0.180	6-10	Rehab	R1	50,239.80
10.00	RD-1029	Denmark St.	Boucher St. E	Bridge St.	200	0.200	6-10	Rehab	R1	53,706.25
10.00	RD-1151	Cook St.	Trowbridge St.	Nelson St. W	100	0.100	6-10	Rehab	R1	29,180.45
10.00	RD-1118	Marshall St. E	Sykes St.	Henry St.	130	0.130	6-10	Rehab	R1	36,284.30
10.00	RD-1101	Louisa St.	Dillon Ave.	Blake St.	50	0.050	6-10	Rehab	R1	13,955.50
10.00	RD-1091	Eliza St.	St. Vincent St.	RicHCBond St.	280	0.280	6-10	Rehab	R1	78,150.80
10.00	RD-1203	Trowbridge St. W	Thompson St.	Cook St.	180	0.180	6-10	Rehab	R1	49,478.13
10.00	RD-1204	Trowbridge St. W	Owen St.	Thompson St.	140	0.140	6-10	Rehab	R1	38,482.99
11.00	RD-1202	Trowbridge St. E	Sykes St. N	Bayfield St.	160	0.160	6-10	Rehab	R1	59,912.51
11.00	RD-1188	Ridge Rd.	St. Andrew's Dr.	Fairway Ave.	300	0.300	6-10	Rehab	R1	37,108.13
11.00	RD-1156	Cook St.	Albert St.	William St.	120	0.120	6-10	Rehab	R1	35,016.54
11.00	RD-1005	Pollard Dr.	Grant Av.	Parklane Cres.	300	0.300	6-10	Rehab	R1	85,665.30
12.00	RD-3080	Bayshore Rd.	Sideroad 23	Ashgrove Ln.	300	1.500	6-10	Rehab	R1	173,103.75
14.00	RD-1111	Margaret St.	Denmark St.	St. Vincent St.	910	0.910	6-10	Rehab	R1	253,990.10
14.00	RD-2036	7Th Line	Grey Road 12	Highway 26	712	1.800	6-10	Rehab	R1	203,566.28
15.00	RD-3166	Sideroad 21	28th Avenue E.	Concession 'A'	100	1.400	6-10	Rehab	R1	167,517.00
16.00	RD-2148-2	Centreville Rd.	7th Line	Scotia Dr.	357	0.550	6-10	Rehab	R1	61,326.05
16.00	RD-1022	St. Vincent St.	Marshall St. E	Boucher St. E	1,500	0.150	6-10	Rehab	R1	41,866.50
16.00	RD-1023	St. Vincent St.	Boucher St. E	Bridge St.	1,500	0.140	6-10	Rehab	R1	39,075.40
17.00	RD-1099	Edwin St. W	Legion Rd.	Lorne St.	140	0.140	6-10	Rehab	R1	18,517.28
17.00	RD-1190	Ridge Rd.	Ridge Creek Dr.	Sykes St. N (# 26)	240	0.240	6-10	Rehab	R1	28,447.20
17.00	RD-1225	Lombard St.	Victoria St.	Thompson St.	230	0.230	6-10	Rehab	R1	26,254.06
17.00	RD-2118	10 Sideroad	12th Line	11th Line	400	2.700	6-10	Rehab	R1	290,037.51
18.00	RD-2158	Fligg Cres.	North End	Moore St.	300	0.300	6-10	Rehab	R1	35,559.00
18.00	RD-1189	Ridge Rd.	Fairway Ave.	Ridge Creek Dr.	300	0.300	6-10	Rehab	R1	34,705.58
18.00	RD-1051	Union St.	Farrar St.	Louisa St.	570	0.090	6-10	Rehab	R1	12,927.63
19.00	RD-3076-1	Tom Thomson Ln.	Sideroad 24	450m South of Grey Road 15	200	1.250	6-10	Rehab	R1	134,666.44
19.00	RD-2150-1	22 Sideroad	1.3km East of Grey Road 112	7Th Line	158	0.500	6-10	Rehab	R1	52,241.63
20.00	RD-1021	St. Vincent St.	Margaret St.	Marshall St. E	2,000	0.150	6-10	Rehab	R1	41,866.50
20.00	RD-1179	Stewart St.	Susan St.	Helen St.	300	0.300	6-10	Rehab	R1	36,793.98
21.00	RD-1183	Pearson St.	Nelson St. W	Ridge Rd.	430	0.430	6-10	Rehab	R1	49,744.67
24.00	RD-1143	Sykes St. N	Cook St.	Susan St.	11,000	0.250	6-10	Rehab	R1	68,832.97
30.00	RD-1145	Sykes St. N	Helen St.	Albery Crt.	11,000	0.100	6-10	Rehab	R1	13,877.62
32.00	RD-1144	Sykes St. N	Susan St.	Helen St.	11,000	0.400	6-10	Rehab	R1	55,510.49
34.00	RD-1146	Sykes St. N	Albery Crt.	Ford Ave.	11,000	0.300	6-10	Rehab	R1	41,632.87
						18.760				2,893,423.04

PR2

17.00	RD-2091	Hurlburt Crt.	West End	Meaf/BM TL	50	0.070	NOW	Rehab	PR2	14,395.61
18.00	RD-2010	Foster St.	4 Sideroad	South To End	70	0.360	NOW	Rehab	PR2	73,176.44
18.00	RD-1174	Noble St.	Berry St. W	Trowbridge St. W	60	0.060	NOW	Rehab	PR2	11,652.26
19.00	RD-2031	7Th Line	Meaf/GH TL	4 Sideroad	157	0.800	NOW	Rehab	PR2	145,143.36

Total Needs Summary by Improvement Type

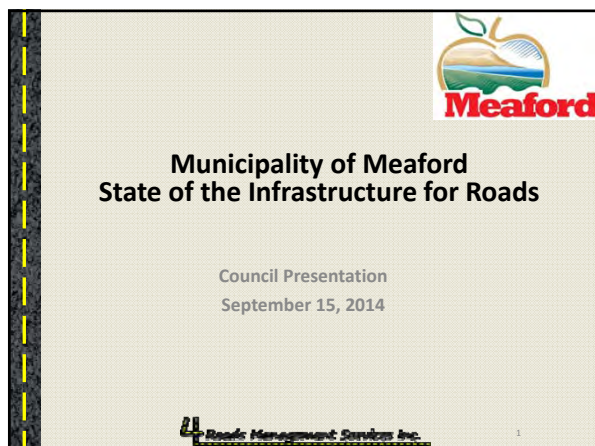
Current Inspection Batch -Needs Only

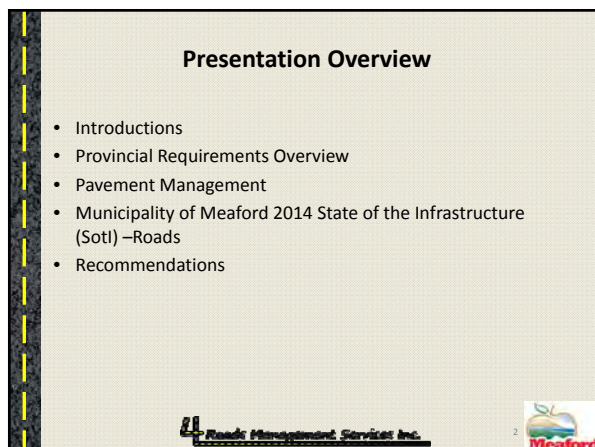
Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
20.00	RD-1175	Noble St.	Trowbridge St. W	Nelson St. W	130	0.130	NOW	Rehab	PR2	25,246.57
21.00	RD-1168	Owen St.	Miller St.	Berry St.	150	0.150	NOW	Rehab	PR2	30,521.04
24.00	RD-3066	Syd/Lakeshore Dr.	Grey Road 15	Landfill Entrance	150	2.500	NOW	Rehab	PR2	458,433.00
24.00	RD-3069	Syd/Lakeshore Dr.	Sideroad 18	Kilmanjaro Ln.	150	1.600	NOW	Rehab	PR2	276,780.00
25.00	RD-2148-1	Centreville Rd.	Lakeshore Rd.	Scotia Dr.	357	0.450	NOW	Rehab	PR2	88,345.13
25.00	RD-2026	Greenfield Dr.	Northend	Grey Road 12	225	0.100	NOW	Rehab	PR2	18,933.10
26.00	RD-2159	Scotia Dr.	Centreville Rd.	North End	350	0.350	NOW	Rehab	PR2	70,123.27
27.00	RD-3070	Syd/Lakeshore Dr.	Kilmanjaro Ln.	Sideroad 8	150	1.700	NOW	Rehab	PR2	301,820.04
27.00	RD-3029	Queen'S Bush Rd.	Concession 'B'	Northwest End	700	0.700	NOW	Rehab	PR2	139,057.10
29.00	RD-3075	Concession 'A'	Sideroad 21	Sideroad 24	200	1.800	NOW	Rehab	PR2	315,414.00
30.00	RD-3099	10th Concession	Sideroad 15	Superior St.	750	0.200	NOW	Rehab	PR2	35,954.10
31.00	RD-3097	10th Concession	Grey Road 18	Story Book Park Rd.	750	1.900	NOW	Rehab	PR2	351,322.92
31.00	RD-3098	10th Concession	Story Book Park Rd.	Sideroad 15	750	1.850	NOW	Rehab	PR2	342,077.58
31.00	RD-3062	Clearview Cres.	Highway 26	North	650	0.650	NOW	Rehab	PR2	130,142.16
32.00	RD-2032	7Th Line	4 Sideroad	7 Sideroad	581	1.800	NOW	Rehab	PR2	323,073.36
32.00	RD-2033	7Th Line	7 Sideroad	10 Sideroad	733	1.800	NOW	Rehab	PR2	323,073.36
32.00	RD-2034	7Th Line	10 Sideroad	13 Sideroad	681	1.800	NOW	Rehab	PR2	330,071.76
34.00	RD-2035	7Th Line	13 Sideroad	Grey Road 12	1,039	1.500	NOW	Rehab	PR2	276,226.20
43.00	RD-2121	Muir St.	Grey Road 7	Highway 26	1,000	0.750	NOW	Rehab	PR2	131,725.13
22.00	RD-1206	Trowbridge St. W	Noble	Pearson	160	0.160	ADEQ	Rehab	PR2	32,392.42
24.00	RD-1200	Berry St.	Pearson St.	Noble St.	160	0.160	ADEQ	Rehab	PR2	32,188.51
28.00	RD-2027	Algonquin Dr.	Lakeshore Rd.	South/ West End	650	0.650	ADEQ	Rehab	PR2	128,160.18
18.00	RD-3074	Concession 'A'	Grey Road 15	Sideroad 21	200	1.200	1-5	Rehab	PR2	215,382.24
						25.190				4,620,830.84
GRR2										
28.00	RD-3119	Sideroad 3	4th Concession S.	2nd Concession S.	50	2.700	NOW	Rehab	GRR2	96,228.00
28.00	RD-3127	Sideroad 6	6th Concession S.	4th Concession S.	50	2.700	NOW	Rehab	GRR2	102,643.20
31.00	RD-3120	Sideroad 3	6th Concession S.	4th Concession S.	50	2.700	NOW	Rehab	GRR2	96,228.00
12.00	RD-3024	2Nd Concession N.	Sideroad 27	Sideroad 30	100	1.800	ADEQ	Rehab	GRR2	90,882.00
18.00	RD-2094	7 Sideroad	W. of Collingview Cr.	Collingview Cr.	10	0.200	ADEQ	Rehab	GRR2	10,098.00
35.00	RD-2095	7 Sideroad	3rd Line	East Limit	30	0.200	ADEQ	Rehab	GRR2	7,484.40
19.00	RD-3017	1st Concession	Sideroad 6	10 Sideroad	100	1.700	6-10	Rehab	GRR2	85,833.00
20.00	RD-3128	Sideroad 6	8th Concession S.	6th Concession S.	50	2.700	6-10	Rehab	GRR2	120,285.00
23.00	RD-3042	6Th Concession S.	Syd/Holl TL	Sideroad 3	100	1.800	6-10	Rehab	GRR2	74,844.00
26.00	RD-2011	3rd Line	Meaf/GH TL	4 Sideroad	95	1.850	6-10	Rehab	GRR2	82,417.50
						18.350				766,943.10
DST										
14.00	RD-2007	Collingview Cres.	7 Sideroad	South to End	50	0.700	NOW	Rehab	DST	25,410.00
10.00	RD-2009	Foster St.	4 Sideroad	South To End	30	0.170	ADEQ	Rehab	DST	6,171.00
14.00	RD-2086	4 Sideroad	Grey Road 7	3rd Line	366	2.700	6-10	Rehab	DST	106,177.50

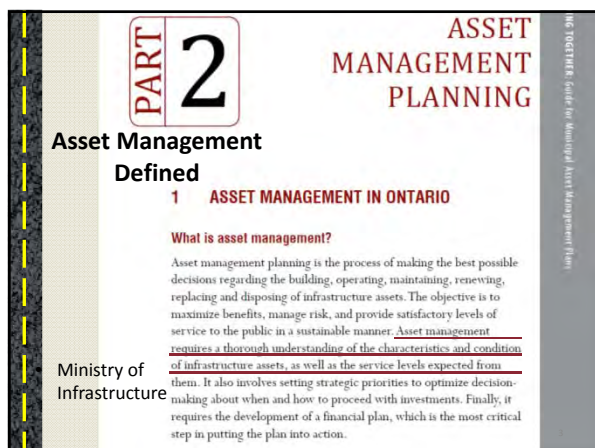
Total Needs Summary by Improvement Type

Current Inspection Batch -Needs Only

Priority #	Asset ID	Street Name	From	To	AADT	Length	TON	Imp. Class	Imp	Imp. Cost
15.00	RD-2072	12th Line	16 Sideroad	Highway 26	150	1.800	6-10	Rehab	DST	70,785.00
						5.370				208,543.50
						398.888				88,059,003.22
						398.888				88,059,003.22







PART 3

THE ELEMENTS OF A DETAILED ASSET MANAGEMENT PLAN

An asset management plan is a strategic document that states how a group of assets is to be managed over a period of time. The plan describes the characteristics and condition of infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financing strategies to implement the planned actions. A detailed asset management plan has the following sections:

- Executive summary
- Introduction
- State of local infrastructure
- Expected levels of service
- Asset management strategy
- Financing strategy

MOI Asset Management Plan Requirements

BRIDGING TOGETHER. BUILDING THE FUTURE. MEAFORD ASSET MANAGEMENT PLAN

4

MIII Requirements for State of the Infrastructure

- State of the Infrastructure (SotI)
 - Asset types
 - Materials, subtypes
 - Financial Accounting Valuation
 - Historic
 - Replacement costs
 - Asset Age Distribution
 - May be some difficulties with some assets
 - Age of the composite asset vs the apparent age
 - May estimate by material or current condition
 - Asset condition using standard engineering practices

MOI Asset Management Plan Requirements

BRIDGING TOGETHER. BUILDING THE FUTURE. MEAFORD ASSET MANAGEMENT PLAN

5

MIII Requirements for State of the Infrastructure (Cont'd)

- SotI
 - Existing Inventory from PSAB?
 - Replacement Cost?
 - Calculated in WorkTech
 - Condition Assessments
 - Completed in WorkTech
 - PCI
 - Inventory Manual
 - Currency? Last completed?
 - Review
 - Levels
 - High- Approach Phase 1 of process at a high level?
 - Some detail- still mostly desktop
 - Detailed- field work required
 - Full (suggest that this may be construction project level)
 - Review cycle should be part of policy

MOI Asset Management Plan Requirements

BRIDGING TOGETHER. BUILDING THE FUTURE. MEAFORD ASSET MANAGEMENT PLAN

6

MIII Requirements for State of the Infrastructure

- SotI
 - Existing Inventory from MTO Rims Inventory
 - Replacement Cost
 - Calculated in WorkTech
 - Condition Assessments
 - Roads Completed in WorkTech - Inventory Manual / RIMS methodology
 - Review cycle should be part of policy



MIII Requirements for State of the Infrastructure

- Record of assumptions
- QA / Verification
 - All road assets have been field audited
- Supported by a database
 - WorkTech Asset Manager Foundation
- Regularly Updated
 - Condition Assessment Policy
 - Will vary by asset group

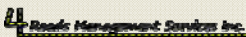


Worktech Asset Manager Foundation





- Worktech Asset Manager Foundation
- Can be used for any and all assets
- Budget Development, Performance Modeling, Analysis



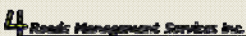

MIII Requirements -Level of Service

- Desired / Target
- Existing
- How measured?
 - Operational?
 - Overall Condition
 - May have to have multiple measures for some assets




MIII Requirements -Level of Service

- Desired / Target
- Existing
- How measured?
 - Operational?
 - Number of breaks in watermain system wide or per segment
 - 24 / 7 100% reliable service
 - Meet MMS
 - Regulatory
 - Overall Condition?
 - System Adequacy
 - Average condition; PCI, Physical Condition
 - May have to have multiple measures for some assets
 - For example for roads- Meet MMS and overall average condition measure

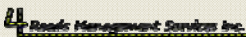



MIII Requirements- Asset Management Strategy

- Overall Asset Management Strategy should cross integrate assets
- Has to be in lock step with the financial plan
- Planned actions to include
 - Non-infrastructure solutions
 - Maintenance Activities
 - Renewal and rehab
 - Replacement
 - Disposal
 - Expansion
- Return on Investment Model in WorkTech produces workplan that integrates these actions based on best Return on Investment

MIII Requirements- Asset Management Strategy

- From MIII handbook
- “ The asset management strategy is the set of actions that, taken together, has the lowest total cost - not the set of actions that each has the lowest cost individually”
- Also consider the best overall affect to asset group or groups
- Plan has to include Operating and Capital costs and activities

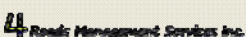


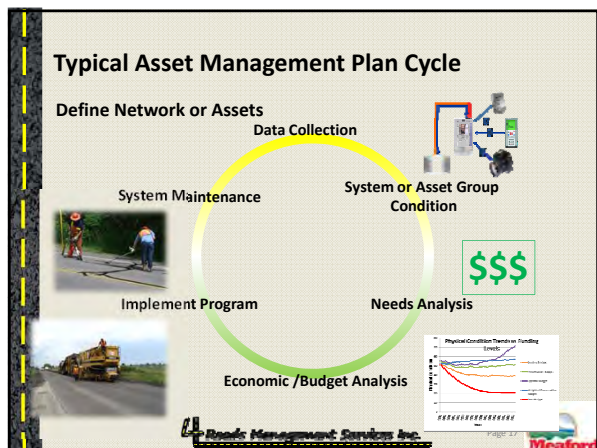

ASSET/PAVEMENT MANAGEMENT




Asset Management

- Asset Management is a state of mind and a perpetual process
- Has to be integrated into our work processes
 - Daily,
 - Weekly
 - Monthly
 - Annually



PSAB vs Asset Management

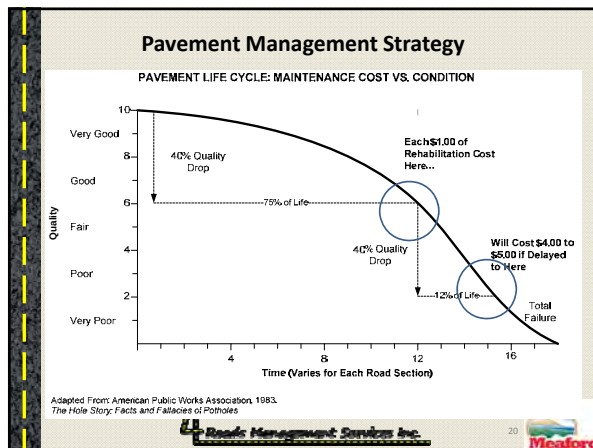
- PSAB is not Asset Management
- PSAB is a standard method for reporting on capital depreciation and improvements to assets or asset groups

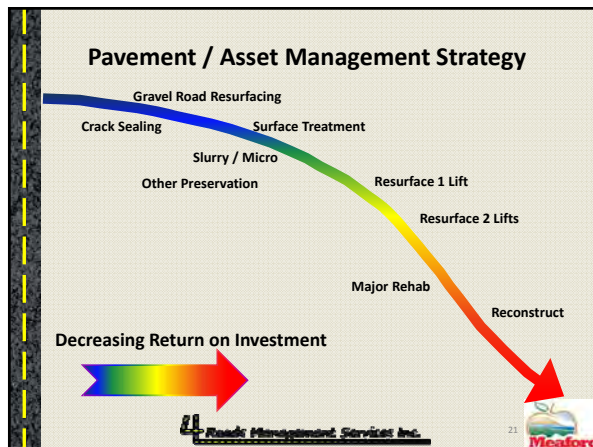
Meaford Management Services Inc.

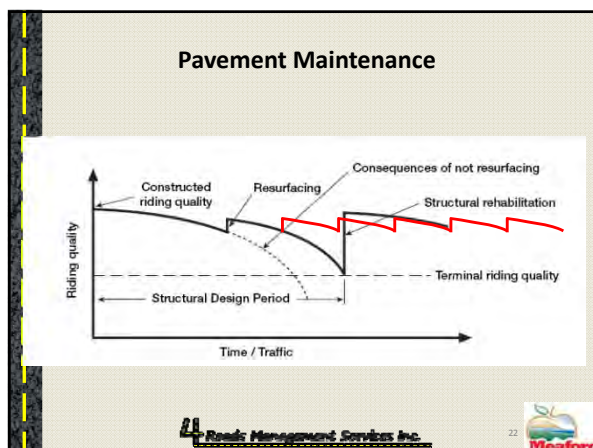
PSAB vs Asset Management

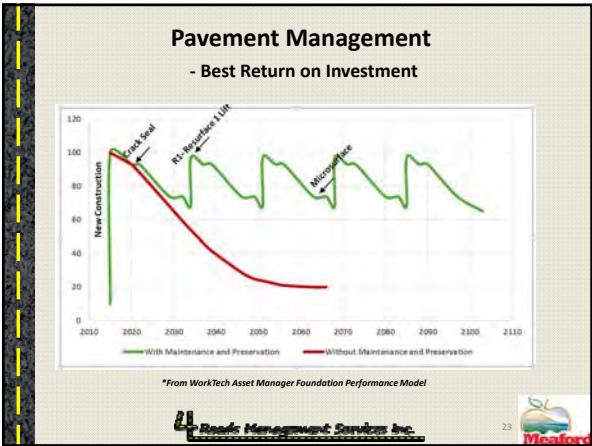
- Tandem Dump Truck Purchase
- Initial Cost = \$250,000
- Assume 1000 hrs / yr of use and 10 year life cycle
- Capital Depreciation / hr = \$25
- At end of Life Cycle \$250,000 in reserve to replace vehicle
- At the end of life cycle at 2% inflation replacement vehicle costs \$304,748
 - Approximately \$55,000 shortfall
 - Apply this to all assets!!!!!!

Meaford Management Services Inc.









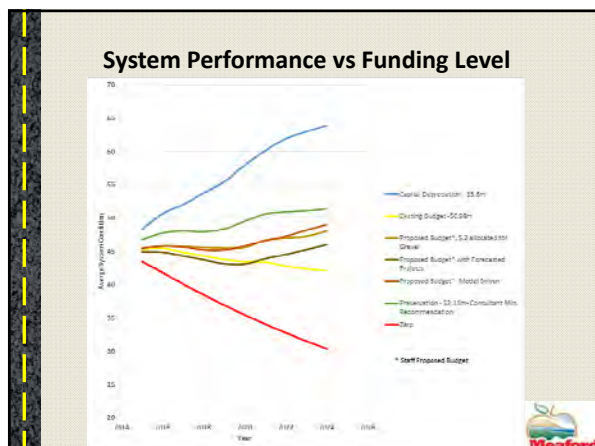
- ### Programming
- The Preservation Budget and Concept!
 - Paradigm shift required!!
 - Gross Funding Level stays fixed/adjusted annually for inflation
 - Programs ‘flex’ within the funding limit
- 24 Road Management Services Inc.**
- 25

10 Year Program Model

Prog. Type	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Grand Total
BS								109,037	758,357	826,295	1,693,679
CW	35,574	20,746		11,286	7,253	6,570	20,462	16,214	16,236	22,000	154,959
DST	206,544										206,544
DST/Hub	412,449										412,449
GRN						87,480	3,402	46,656	38,030		176,548
GRN2	105,940	108,873	109,871	188,054	198,875	121,426	105,120	130,383	120,285	168,215	1,495,881
MICRD					4,200	12,753	4,100	11,379	16,505	10,175	49,009
PR2	446,141	1,024,731	825,136	337,774			868,581	362,689	233,382		4,426,829
PL	18,878	63,789	420,209	930,089	895,039	424,451	780,857	406,351	799,036		4,878,638
PL	44,680			284,248	345,900	47,252	287,117	21,308	18,768		869,763
ST	126,730	352,375	9,045	58,290	68,250	346,215	261,765	9,045	58,290	154,000	1,288,905
ST/Hub	67,880	76,888			195,728	111,043					453,899
Grand Total	1,893,988	2,150,884	1,951,430	1,518,565	1,446,365	1,798,475	1,536,564	1,952,777	2,151,986	2,083,643	16,080,089

24 Road Management Services Inc.

26



Roads Strategy

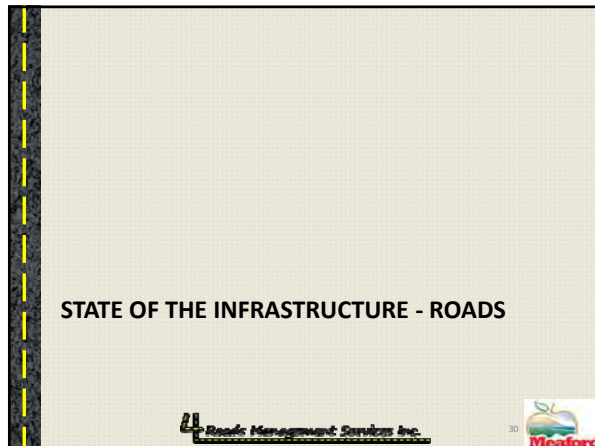
- 'Worst First' only works if funding is adequate across all programs
- Is not the case.
- Hot Mix resurfacing program (or any activity that preserves the asset value) should be the priority program over reconstruction
- Roads that do not get resurfaced at the right time deteriorate rapidly to construction needs

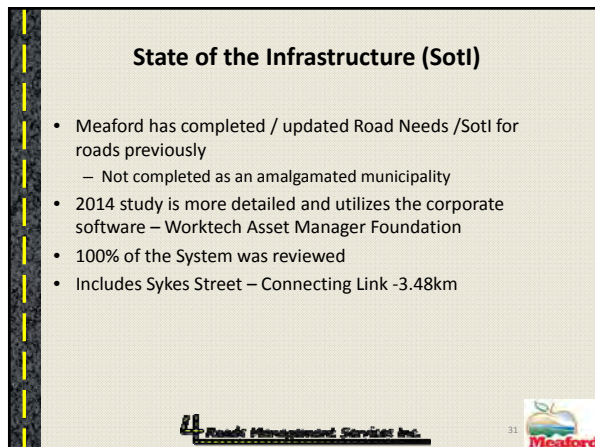
24 Roads Management Services Inc. 28 Meaford

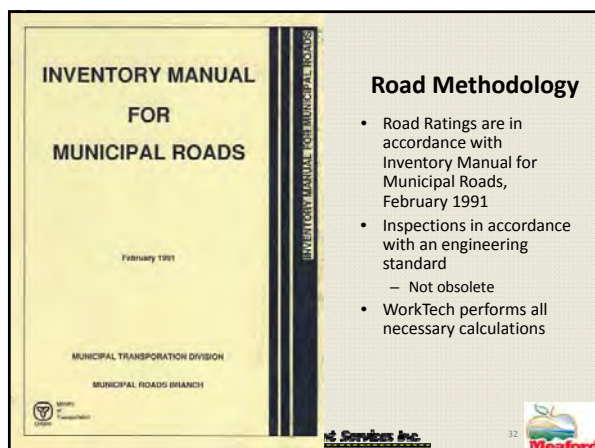
Strategy and Prioritization

- Program priority is resurfacing programs
 - Hot mix, Surface Treatment, Gravel Road Resurfacing
 - Other pavement preservation
 - Crack Sealing
 - microsurfacing
- Generally projects by priority, *by program*
- Assess less tangible criteria
- Assess other infrastructure needs (ie water and sanitary sewer)
- Assess adjacent project opportunities

24 Roads Management Services Inc. 29 Meaford







Inventory Manual Methodology

- Condition Ratings developed through the scoring in the Inventory Manual classify roads as 'NOW', '1 to 5', or '6 to 10' year needs
- 'NOW' Needs are the backlog / roads that need to be reconstructed
- 1 to 5 and 6 to 10 year needs are the time estimated until reconstruction required
 - Not the time until action may be taken
 - Ideal candidates for resurfacing
 - Defers the need to reconstruct

 Road Management Services Inc.



Inventory Manual Methodology

- The IM evaluates all road related aspects of the road allowance- a more holistic approach
- The study will result in a summary of needs in 6 functional areas
 - Geometry
 - Surface Width
 - Surface Type
 - Structural Adequacy
 - Drainage
 - Capacity

 Road Management Services Inc.



Report Methodology

- Traffic counts are an important factor in any decision making relative to the road system
 - Maintenance
 - Design
 - Cross-section
 - Geometry
 - Structure
 - Establishing road maintenance classifications for Minimum Maintenance Standards purposes as per Regulation 239/02 (now Regulation 23/10)
- % of truck traffic is critical to the design
- Urban and Rural counts required

 Road Management Services Inc.



Report Methodology

NOW' – Roads where total rehabilitation required (*a resurfacing treatment is generally never a 'NOW' need- some exceptions.*)
Generally represents the backlog of work required on the road system



11.25.09 11:47

24 Road Management Services Inc.

36 

Report Methodology



'1 to 5' - Identifies road sections where reconstruction is anticipated within the next 5 years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road (depending on the other deficiencies if any), deferring the need to reconstruct.

24 Road Management Services Inc.

37 

Report Methodology



14.04.2011 11:58

'6 to 10' - Identifies road sections where reconstruction improvements are anticipated within 6 to 10 years, based upon a review of their current condition. These roads can be good candidates for resurfacing treatments that would extend the life of the road,(depending on the other deficiencies if any), deferring the need to reconstruct.

24 Road Management Services Inc.

38 

Report Methodology

Adequate Road - May be a wide range of conditions

- Roads with an AADT of less than 50 are not dealt with in this methodology, similar to Class 6 roads in Minimum Maintenance Standards



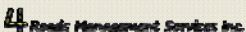
Report Methodology

Types of Improvements- Roads

- R1- Basic Resurfacing
- R2 - Basic Resurfacing -double lift
- RM- Major Resurfacing
- PR1- Pulverizing and Resurfacing
- PR2 - Pulverize and Resurfacing -Double lift
- BS - Tolerable standard for lower volume roads
- RW - Resurface and widen
- REC - Reconstruction
- RNS - Reconstruction Nominal Storm Sewers (Urban)
- RSS - Reconstruction including installation of Storm Sewers
- NC - Proposed road Construction
- SRR - Storm Sewer Installation and Road re-instatement




STATE OF THE INFRASTRUCTURE -ROAD SYSTEM




Meaford Roads By MMS Class

MMS Class						
Roadside	3	4	5	6	TOTAL	% OF TOTAL
Rural	8.97	259.72	8.35	34.26	311.30	81.77%
Semi-Urban	1.00	14.80	34.01	2.99	52.80	13.87%
Urban	2.48	1.86	12.19	0.07	16.60	4.36%
TOTAL	12.45	276.38	54.55	37.32	380.70	
% OF TOTAL	3.27%	72.60%	14.33%	9.80%		

42

System Inventory –Surface Type and Roadside

Roadside Environment									
Surface Type	Rural		Semi-Urban		Urban		Total		% of Total
	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	
Concrete			0.34	0.68			0.34	0.68	0.09%
Earth	5.41	10.82					5.41	10.82	1.42%
Gravel, Stone, Other Loosetop	165.43	330.86	6.18	12.36			171.61	343.22	45.08%
High Class Bit.-asphalt	50.34	100.67	30.48	61.17	16.60	33.68	97.42	195.52	25.59%
Low Class Bit.-surface treated	90.12	180.24	15.80	31.60			105.92	211.84	27.82%
Total	311.30	622.59	52.80	105.81	16.60	33.68	380.70	762.08	
% of Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%			

43

Functional Class

Roadside Environment									
Road Classification	Rural		Semi-Urban		Urban		Total		% of Total
	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	Cl-km	Lane-km	
100	30.57	61.14	0.5	1			31.07	62.14	8.16%
200	204.62	409.24	3.5	7			208.12	416.24	54.67%
300	35.15	70.3					35.15	70.3	9.23%
400	33.09	66.18	0.34	0.68			33.43	66.86	8.78%
500	7.27	14.53					7.27	14.53	1.91%
800			1	2.21	2.48	5.44	3.48	7.65	0.92%
ART			2.58	5.16	2.66	5.32	5.24	10.48	1.38%
C/R					0.16	0.32	0.16	0.32	0.04%
CCI	0.6	1.2	43.46	86.92	9.62	19.24	53.68	107.36	14.10%
L/R			1.42	2.84	1.68	3.36	3.1	6.2	0.81%
ICI									
Total	311.3	622.59	52.8	105.81	16.6	33.68	380.7	762.08	
% of Total	81.77%	81.70%	13.87%	13.88%	4.36%	4.42%			

44

STATE OF THE INFRASTRUCTURE -NEEDS



Road Inventory Improvement Costs

Improvement Class	Imp. ID	1 to 5		6 to 10		ADQ		NOW		TOTAL	
		Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM	Imp. Cost	CL-KM
Construction	FW			0	457,512	0.42	79,695	0	319,912	1	857,179
Construction	BS	8.16	2,403,410	12.34	2,174,755	19.99	15,584,779	114.06	24,386,440	154.87	44,549,393
Construction	DSTrehab	1.8	135,285			0.15	11,570	3.4	265,593	5.35	412,447
Construction	NONE			0.76	0	22.2	0	0.27	0	23.23	0
Construction	REC	0.21	87,916	0.26	119,439	16.6	6,316,826	31.12	13,894,839	48.19	20,419,020
Construction	RWS			0.21	191,405	0.38	418,785	0.58	460,292	1.17	1,070,482
Construction	RSS	0.54	735,253	4.62	6,002,232	0.81	1,069,149	4.46	5,990,563	10.43	13,797,197
Maintenance	CRK			0.4	880	20.4	44,880	0.27	594	21.07	46,354
Maintenance	SD		26,48	0	0	0	0	0	0	26.48	0
Maintenance	SR					1.35	0			1.35	0
Maintenance	STT			2.1	42,840	5.3	1,122,630			7.4	165,450
Rehabilitation	DST			4.5	176,963	0.17	6,173	0.7	25,410	5.37	208,546
Rehabilitation	DM2			8.05	363,380	2.2	108,464	8.1	295,099	18.36	766,943
Rehabilitation	PR2	1.2	215,382			0.97	192,743	23.02	4,212,707	25.19	4,620,831
Rehabilitation	R1			17.01	2,671,935	0.71	96,199	0.0	106,072	18.62	2,874,906
Rehabilitation	R2	1.41	442,683	0.12	42,212	0.23	70,956	1.79	997,475	3.55	958,367
Rehabilitation	SSTrehab	1.1	62,866	4.8	174,536	1.8	111,040			7.7	451,499
TOTAL		14.89	4,087,798	81.55	12,529,209	94.24	24,234,089	190.02	50,955,206	380.7	91,200,282
% of Total		3.91%	4.46%	21.42%	13.73%	24.76%	26.57%	49.91%	55.21%		



STATE OF THE INFRASTRUCTURE -LEVEL OF SERVICE



Needs by Length

LOS - System Adequacy

Time of Need	3		4		5		6		Total	
	CL km	Lane-km	CL km	Lane-km	CL km	Lane-km	CL km	Lane-km	CL km	Lane-km
NOW	7.73	15.45	162.57	325.14	19.73	39.45			190.02	380.04
1-5			9.55	19.1	5.33	10.66			14.88	29.76
6-10	2.21	4.9	63.39	126.78	15.95	31.9			81.55	163.58
ADEQ	2.51	5.23	40.87	81.74	13.54	27.08	37.32	74.64	94.24	188.69
Total	12.45	25.58	276.38	552.76	54.55	109.1	37.32	74.64	380.7	762.08
% of Total	3.27%	3.36%	72.60%	72.53%	14.33%	14.32%	9.80%	9.79%		
System Adequacy %	37.9	39.6	41.2	41.2	63.8	63.8	100.0	100.0	50.1	50.1

Road Management Services Inc.



Road System Adequacy

$$\text{System Adequacy} = \frac{\text{Total System (km)} - \text{NOW Deficiencies (km)}}{\text{Total System (km)}} \times 100$$

Current System Adequacy is 50.1

Meaford Minimum target range should be 60%

***9.77% of the system is adequate due to less than 50 AADT**

Road Management Services Inc.



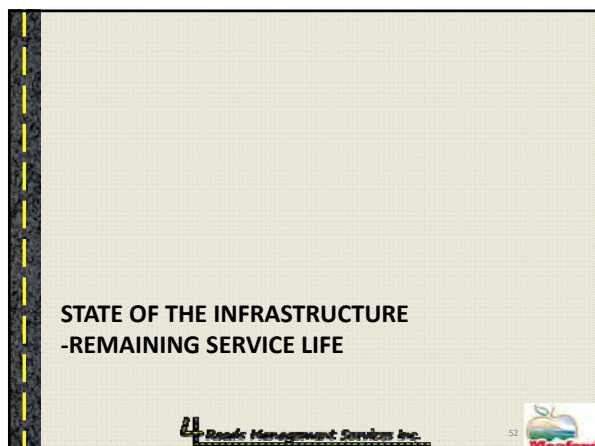
Condition by Length

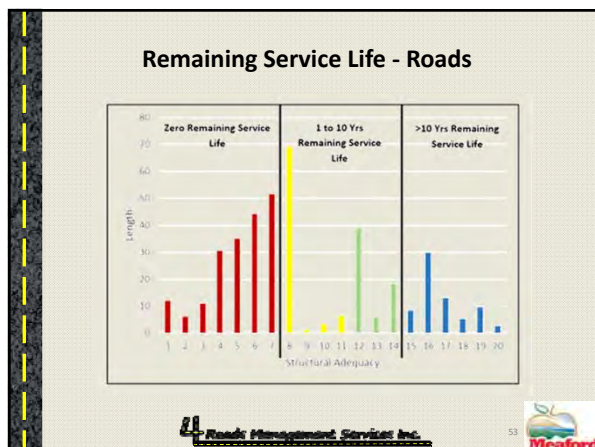
LOS- Good to Very Good

Structural Adequacy	NOW	3		4		5		6		TOTALS	
		CL KM	LN KM	CL KM	LN KM	CL KM	LN KM	CL KM	LN KM	CL KM	LN KM
1	NOW	0.42	0.82	3.73	7.46	0.35	0.71	6.43	12.86	11.48	22.96
2	NOW	1.7	3.4	0.78	1.56	0.76	1.52	1.37	2.74	4.61	9.22
3	NOW			5.89	11.78	0.89	1.78	3.95	7.9	10.73	21.46
4	NOW			23.44	46.88	2.97	5.94	2.82	5.64	29.23	58.46
5	NOW			27.33	54.66	5.01	10.02	0.43	0.86	32.77	65.54
6	NOW	4.95	9.9	32.63	65.26	3.78	7.56			41.36	82.72
7	NOW			34.99	69.98	3.03	6.06	12.08	24.16	50.1	100.2
8	1 to 5			50.56	101.11	9.57	19.14	7.84	15.68	67.97	135.93
9	1 to 5			0.85	1.71	0.13	0.26			0.98	1.97
10	1 to 5			2.75	5.5	0.28	0.56			3.03	6.06
11	1 to 5	0.24	0.48	4.35	8.7	1.67	3.34			6.26	12.52
12	6 to 10			30.39	60.78	4.25	8.5	2.03	4.06	36.67	73.34
13	6 to 10			1.8	3.6	1.03	2.06			5.73	11.46
14	6 to 10	1.05	2.1	11.15	22.3	5.82	11.64	0.17	0.34	18.19	36.38
15	Adeq			5.75	11.5	2.51	5.02			8.26	16.52
16	Adeq	0.1	0.2	21.03	42.06	3.87	7.74			25	50
17	Adeq	0.45	0.9	8.46	16.92	3.89	7.78			12.8	25.6
18	Adeq	0.2	0.4	4.5	9	0.47	0.94			5.17	10.34
19	Adeq	2.68	5.36	4	8	1.58	3.16	0.2	0.4	4.46	8.92
20	Adeq	0.66	1.32			1.23	2.46			1.89	3.78
TOTAL		12.45	25.58	276.38	552.76	54.55	109.1	37.32	74.64	380.7	762.08
Good to Very Good		41.3	42.9	32.2	32.2	46.8	46.8	6.4	6.4	32.1	32.2

Road Management Services Inc.







Programming Information

- National Centre for Pavement Preservation (NCP) provides related pavement management information that will be useful
- Quick Check of Highway Network Health demonstrates effect of programming decisions

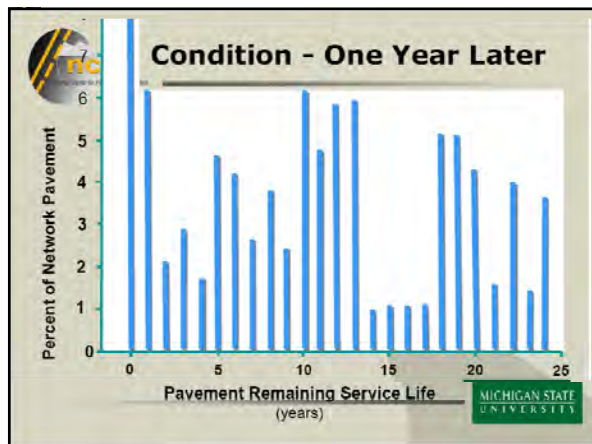
A Quick Check of Your Highway Network Health

By Larry Goldstone, Director,
National Center for Pavement Preservation
and
Jim Sorenson, Team Leader,
FHWA Office of Asset Management

Historically, many highway agency managers and administrators have tended to view their highway systems as simply a collection of projects. By viewing the network in this manner, there is a certain comfort derived from the ability to match pavement actions with their physical-functional needs. However, by only focusing on projects, opportunities for strategically managing entire road networks and asset needs are overlooked. Although the "bottom up" approach is analytically possible, managing networks this way can be a daunting prospect. Instead, road agency administrators have tackled the network problem from the "top down" by allocating budgets and resources based on historic estimates of need. Implicit in this approach is a belief that the allocated resources will be wisely used and will prove adequate to achieve desirable network service levels.

By using a quick-check tool, road agency managers and administrators can assess the needs of their network and other highway assets and determine the adequacy of their resource allocation efforts. A quick-check is readily available and can be readily applied with minimum calculations.

It is essential to know whether present and planned program actions (reconstruction, rehabilitation, and preservation) will produce a net improvement in the condition of the network. However, before the effects of any planned actions to the highway network can be analyzed, some basic concepts should be considered.



Meaford Observations

- Traffic information is very limited. Traffic counts were available for only 6% of the road system. The remainder were estimated which should be satisfactory for the purposes of this study however should not be relied upon to determine Regulation 239/02.
- The database included a number of assets that were identified as road assets which were either private roads, unopened road allowances or other assets. The result being that the overall road system is significantly shorter than previously identified, by approximately 10%.
- GIS mapping was a reflection of the original database. A separate layer should be created in the GIS system to identify only the road assets. The GIS mapping should have a live link to the WorkTech database

24 Road Management Services Inc.



Meaford Observations

- Substandard drainage was an issue on approximately 70% of the road system. Some of the sections will require correction through major rehabilitation or reconstruction. Other sections identified with an improvement of Spot Drainage (SD) may be improved through the maintenance programming.
- The overall condition of the road system is less than the target system adequacy when conditional grants were provided.
- Approximately 22.64% (86.48 km) of the road system is recommended for hot mix resurfacing or surface treatment. If not addressed, the resurfacing needs will become major rehabilitation or reconstruction needs at significantly greater cost.
- Approximately 9.5% (37.78km) of the road system has a structural adequacy score of 15 or 16, indicating that those roads would be an additional resurfacing need in the next 1 to 4 year period. (all surface types are included)

24 Road Management Services Inc.



Road Budget Recommendations

- **\$190,500,800** to replace the road system. Annualized, this would be **\$3,810,000** for the roads capital/depreciation, based upon a 50-year life cycle.
- The Preservation Budget recommendation of \$2,117,300 includes
 - **\$748,700** for average annual hot mix resurfacing, based upon a 19 (19.4)-year cycle. (This would approximate an average of 5.2km per year)
 - **\$316,100** annually, for single surface treatment of existing surface-treated roads, based on a seven-year cycle (this does not include additional padding or geometric correction).
 - **\$1,008,800** annually, for resurfacing gravel roads on a three-year cycle (this does not include any additional gravel road conversion costs; nor ditching, re-grading, dust control, etc.).
 - **\$43,700** annually for crack sealing

Road Budget Recommendations

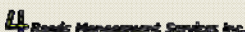
- To sustain or improve the road system, the annual budget has to be between the Preservation budget and the Capital Depreciation Budget
- Due to the composition and condition of the road system, the annual budget should be at the Capital Depreciation Budget level for the foreseeable future.

Recommendations

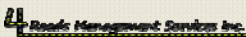
In addition to the budgetary recommendations, the following recommendations are provided for the management of the road inventory.

1. The information and budget recommendations included in this report should be used to further develop and evolve the corporate Asset Management Plan.
2. The Financial Plan has to be further developed to address the recommended funding requirements and the road system needs identified in this report.
3. The cycle for review of the road system should be continued, reviewing the entire system on a four year cycle.

Recommendations

4. Programming should be reviewed to ensure that resurfacing and preservation programs are a priority and are optimized.
5. Traffic counts should be updated and repeated on a regular basis. The counting should include the percentage of truck traffic.
6. Assets have to be rationalized in the WorkTech databases by creating different asset types.
7. A separate layer should be created in the GIS system to identify only the road assets. The GIS mapping should have a live link to the WorkTech database.





Recommendations

8. A separate layer should be created in the GIS system to identify road features such as safety devices.
9. Further analysis should be undertaken on the Gravel Road system, with respect to the potential for conversion to a hardtop surface.
10. Roadside brushing should be undertaken on a regular basis to ensure drainage in maintained and road life cycle optimized.





QUESTIONS???

