

United Townships of Head, Clara & Maria Council

Request for Decision

Type of Decision									
Meeting Date	Monday, September 12, 2022				Report Date	Tuesday, September 6, 2022			
Decision Required	X	Yes		No	Priority	X	High		Low
Direction	X	Information Only			Type of Meeting	X	Open		Closed
Report #22/09/12/1201- Municipal Road Resurfacing									

Subject: Results of Request for Proposal for Municipal Road Resurfacing

Recommendation: That Council direct staff not to proceed with municipal road resurfacing at this time.

Resolution:

Resolution No.: 22/09/12/00

Moved by Councillor and seconded by Councillor

BE IT RESOLVED THAT Council of the United Townships of Head, Clara and Maria does hereby direct staff not to proceed with municipal road resurfacing at this time.

Background/Executive Summary:

On April 19, 2022, Council passed Resolution No: 22/03/22/005 directing staff to issue the Request for Proposal for Municipal Road Resurfacing.

The Request for Proposal closed on July 27th, 2022 with only one submission received containing two pricing options:

Double Surface Treatment for 1 km	$\$9.00/\text{m}^2 \times 6,100\text{m}^2 = \$54,900.00$
Double Surface Treatment for 2km or more	$\$7.88/\text{m}^2 \times 6,100\text{m}^2 = \$48,068.00$ per km x 6.1m wide

The scope of work for both costing options remains the same, which includes:

- Set up traffic control and mobilize;
- Fine grade and compact areas to be surface treated;
- Supply and apply a double treatment, consisting of one application of HF150 P Emulsion with class 3 stone and one application of HP150 P Emulsion with class 6 stone;
- Demobilization; and
- One year warranty.

The same resolution directed staff to recommend a road to be considered for resurfacing as Pine Valley Road was eliminated when private property issues were identified. The Public Works Leader suggested Mackey Creek Road as it has the highest maintenance costs. The Public Works Advisory Group has agreed that the road with the highest maintenance costs should have priority concerning resurfacing, however, has identified concerns that Mackey Creek Road has the heaviest logging traffic.

One member of the Public Works Advisory Committee has recommended that Council does not resurface any municipal roads as it is believed that the cost of resurfacing will not justify the current costs of maintaining the road.

In speaking with the representative at Greenwood Paving who submitted the RFP, it was clarified that if Council proceeded with resurfacing the road, there would be no annual maintenance (grading, calcium) as long as the road bed was adequate to apply the surface treatment. He also noted that the life expectancy of the treatment is 7-10 years. In consideration of an adequate road bed, typically 6" of gravel is required for a surface that sees regular traffic, and 12" or more is required for a road that sees heavy traffic such as logging operations.

Annual maintenance costs are included in the spreadsheet below. The grading figures for 2021 are based on 22.8kms while the prior years' figures are based on 33.6kms due to policy changes that occurred in April 2021.

	Grading	Cost/km	Calcium	Cost/km	Gravel	Cost/km	Total Cost/ km
2021	\$ 7,632.00	\$ 334.74	\$ 15,148.79	\$ 664.42	\$ 8,395.20	\$ 368.21	\$ 1,367.37
2020	\$ 12,084.00	\$ 359.64	\$ 14,333.92	\$ 426.60			\$ 786.25
2019	\$ 16,625.00	\$ 494.79	\$ 12,966.54	\$ 385.91	\$ 9,006.78	\$ 268.06	\$ 1,148.76
2018	\$ 18,539.14	\$ 551.76	\$ 11,417.48	\$ 339.81	\$ 7,288.06	\$ 216.91	\$ 1,108.47
2017	\$ 18,113.28	\$ 539.09	\$ 11,292.25	\$ 336.08			\$ 875.16

The cost of calcium has been continuously increasing due to increased cost of fuel and material, while grading costs have decreased due to a change in operations. A full grade used to occur once in the spring and once in the fall. Since 2020, with a change in contractors, it was advised that a full grade in the spring with spot grading throughout the season (instead of a full fall grade) would be more advantageous to the municipality.

Grading, Calcium and Gravel costs have been calculated above independently from general maintenance as they are more consistent and re-occurring. General maintenance costs are more difficult to determine as they are typically road/ site specific and vary each year. They can also largely depend on weather. However, in order to include all road maintenance costs, historical figures have been included below and generalized as a cost per kilometer, even though the work was not completed across each municipal road.

	Maintenance	Cost per km	Total Cost/km	
2021	\$ 2,986.66	\$ 130.99	\$ 1,498.36	Adelard Road, Mclsaac Drive, Kenny Road
2020	\$ 305.28	\$ 9.09	\$ 795.33	Crusher Dust
2019	\$ 867.50	\$ 25.82	\$ 1,174.58	Mackey Creek Road, Kenny Road
2018	\$ 11,916.00	\$ 354.64	\$ 1,463.12	Tree Removal and Road Maintenance - Brushing
2017	\$ 1,340.00	\$ 39.88	\$ 915.05	Kenny Road

The total cost per km above includes the figures for grading, calcium, gravel and general road maintenance. It does not include the cost to remove nuisance beavers or ditching, with the exception of 2018. The figure of \$11,916 includes a large ditching project as well as road maintenance. The figures also do not take into consideration Public Work's time spent on road repairs; only contracted services.

It would take *approximately* 32- 36 years of the highest annual contracted road maintenance costs to amount to resurfacing one kilometer of roads at the proposed RFP costs. If Council were to resurface all municipal roads it would ultimately cost between \$1,095,950.40 and \$1,251,720.00, if the current

road beds are adequate. This figure does not include any costs associated with adding gravel to the road bed if required, and therefore the total cost may be higher.

Information obtained since the original report to Council (22/08/20-1201- Municipal Road Resurfacing) was presented at the August 20th, 2022 meeting of Council:

The Public Works Leader met with the contractor at Greenwood Paving and it was determined that each road/section to be resurfaced will require ditches of one meter in depth on each side of the road. This is to ensure that water does not sit on top of the road once the surface treatment is applied; maintaining the integrity of the surface treatment and maximizing the life expectancy of the road. Many existing driveways that are intersecting municipal roads do not require a culvert because ditches have not been required; essentially the landscape is flat. However, any road/sections that will be resurfaced, and therefore ditched, will need to have culverts installed to accommodate the new ditches. Six to eight inches of gravel will also need to be applied to any road/section selected for resurfacing to provide an adequate road bed to have the surface treatment applied.

If Mackey Creek Road was selected for resurfacing, approximately two kilometers of the road will need to have ditching, brushing and grubbing completed on each side in order to create proper ditching to have the surface treatment applied. 25 new culverts, 12" in diameter and 20 feet in length, would need to be installed as a result of the ditching. This does not include the large culvert replacement (>3m) that Council has been budgeting for. Five existing metal culverts will need to be replaced with 20 foot plastic culverts. Sections of Mackey Creek Road will require rock blasting in order to complete ditching as well. It will cost a minimum of \$30,000 to have 30 culverts installed/replaced on Mackey Creek Road (excluding the large culvert). The municipality would require permission from the County of Renfrew to have the culvert replaced along the Algonquin Trail.

If Ashport Road was selected for resurfacing, approximately 1.1 km of the road will need to be ditched and grubbed on each side of the road and 18 new culverts will need to be installed (12" x 20ft plastic). One larger culvert intersecting Francoeur Road will also need to be replaced.

The life expectancy of the surface treatment is 7-10 years. It could be longer on roads that have a lower volume of traffic and/or light duty traffic. The municipality is able to contract out the work to have the ditching, brushing and grubbing completed, however Greenwood Paving would only be able to provide the estimated life expectancies if they were to complete the prep work for the road bed as per their specifications. Once the surface treatment has reached its life expectancy, a treatment can be applied on top of the existing surface that will fill cracks and repair holes etc. at an approximate cost of \$25,000-28,000 for 4-5 kilometers (depending on the width; 6 or 7 meters).

The costs of ditching, brushing and grubbing are unknown at this time as well as the cost to have gravel applied to the road.

Options:

Award the contract to Greenwood Paving for resurfacing one kilometer of road at a cost of \$54,900.00 plus HST plus the cost of site prep work.

Award the contract to Greenwood Paving for resurfacing two kilometers or more of road at a cost of \$48,068.00 plus HST plus the cost of site prep work.

Do not proceed with resurfacing municipal roads at this time.

Create a long term capital plan with the project being completed in a phased in approach.

Financial Considerations/Budget Impact:

Council approved \$40,000 for road resurfacing in the 2022 budget. Any amounts over that would be required to be transferred from reserves.

Others Consulted:

Jesse Gagnon, Public Works Leader
Kent Plummer, Greenwood Paving
Public Works Advisory Group

Approved and Recommended by the Clerk
Crystal Fischer, Clerk-Treasurer