

## Public Works Committee Minutes

### 1. Present

Attending: Chairperson Trask, Reeve Harwood, Councillors: Germs, Chuhaniuk, Greenwood, Pruum, Froese-Kooijenga and Vaandrager.

Absent: Councillor Haduik

Staff: Craig Clements, Director of Finance; Joel Cardinal, Director of Public Works; Audrey Shoard, Treasury/Corporate Records Clerk; Nicole Bowden, Administrative Assistant.

Chairperson Trask called the meeting to order at 11:01 a.m.

### 2. Agenda

The Committee approved the Public Works Committee Agenda with the following additions:

14. InterValley Water – Councillor Pruum
15. Whistle Cessation Bylaw – Councillor Germs
16. Saddle Ridge SB 90 – Councillor Germs – In-Camera

Chuhaniuk: That the Public Works Committee Agenda be approved.

**Carried Unanimously**

### 3. Public Works Carryforward Action List

The Committee was presented the Public Works Carryforward Action List.

#### ➤ **Recommendation**

Froese-Kooijenga: That the Public Works Carryforward Action List be received.

**Carried Unanimously**

### 4. Public Works Director's Report

#### ➤ **Recommendation:**

Chuhaniuk: That the Public Works Director's Report be received as information.

**Carried Unanimously**

### 5. Approach Application Specs Standards Revision

At the March 15, 2021 Committee meeting, Administration presented information concerning the need for an Approach Application Rate Increase from \$50 to \$200.00. This was deemed necessary in order to include the installation of the Civic Addressing signage that is required with every new approach. The rate increase was approved to be effective as of March 1, 2021.

#### **Update:**

In reviewing the specs associated with the current *Policy TS-011 Approach Construction*, Administration deems it necessary to update the current construction standards for road approaches, to establish proper infrastructure within the R.M.

Administration has reviewed the approach construction standards of other R.M.s and have provided an example for Council consideration.

Upon Council feedback/deliberation Administration is proposing a hybrid of both policies for review, and any amendments will be provided for Council approval at the May 17, 2021 Council meeting prior to giving 3 readings to Bylaw No. 17/21.

➤ **Recommendation:**

Vaandrager: That the Approach Construction Standard policy remain status quo and that the installation of rip rap be on a case by case basis as per inspection and recommendation of the Director of Public Works.

**Carried Unanimously**

**6. Dust Control Listings**

As per our current Dust Control Policy TS-014 Dust Control Policy and subject haul route segments, Administration has prepared a quick overview of the various dust control locations for Council information.

Amounts showing as invoiced, are based on the costs from 2020 dust control applications to give Council an idea of potential costing for this year.

Council was presented the 2020 dust control spreadsheet with items in yellow-possible dust control locations 2021.

➤ **Recommendation:**

Greenwood: That Council accept the information presented on Dust Control listings for the 2021 Construction Season.

**Carried Unanimously**

**7. Gravelock Stabilizing Agent**

**Background:**

The R.M. is currently experimenting with stabilizing agents in its roads. For areas where a hardened road surface is desired, the addition of liquid stabilizers added into a prepared or non-prepared road surface and/or base/sub-base/sub-grade or incorporated into a loose gravel material and worked into a blended compaction forming the finished grade/composition of the road; it is possible with the use of stabilizers to achieve an optimal road product with reduced maintenance and loss of gravel as well as achieve an ideal road surface.

The R.M. is currently experimenting with a stabilization agent for which a project (ST213444) is already in the works for this season however, the parameters of which the claims and benefits between the two products differs in its use-ability and back end maintenance/road strategy. Gravelock is also estimated to be approximately 50% or less than that of the cost of EMC square and has additional benefits in its claims of maneuverability of application and performance.

I have been informed of Gravelock being experimented within the past with the R.M. but have heard different criteria in regards to the application measures and subject conditions of the experiment with the product.

If this stabilization agent performs to the levels advocated by its suppliers, the potential benefit and opportunity involving this product would be exponential in lowering maintenance costs and improving roads within the R.M. I have experimented with this product myself last construction season on two separate occasions.

I would like to propose to do an approximate mile of a Gravelock application on an R.M. road this construction season in order to have a sample of two different stabilizers and to further explore/come to determinations in the R.M. utilizing sub-grade strengthened or stabilized roads with a capital planning or asset-management strategy moving forward and eventual transportation master plan. By conducting this test this season, it would allow for the observation turn-around of the next freeze-thaw cycle/s to be done in the next year to two years as opposed to pushing this back to a two year to three year basis or even further.

A preliminary cost-estimate for a 1 mile (1600m) application of Gravelock for a 7.5m roadway would be as follows:

- The product is priced at \$400.00/L but the supplier would be able to provide for this season due to a remainder of product from last years (non-covid affected pricing) the product at \$300.00/L
- 1600m long x 7.5m wide = 12000m<sup>2</sup>
- Product conversion rate of .0045/m<sup>3</sup> = 12000m<sup>2</sup> x .0045 = 54L of product required
- 54L x \$300.00/L = \$16200.00 of Gravelock Product
- Addition of 12.5mm application of gravel, 12000m<sup>2</sup> x .0125mm = 150m<sup>3</sup> of gravel
- 150m<sup>3</sup> of gravel x 2.2t/ m<sup>3</sup> = 330 tonnes of gravel
- 330 tonnes of gravel x \$32.00/tonne = \$10560.00
- Total Gravel & Gravelock Material Cost = \$26760.00 + 10% contingency = \$29436.00
- The addition of internal construction costs would also have to be applied to the construction operations

As a comparison the costs in product alone for the EMC square project is \$75000.00/mile, the Gravelock product alone is \$16200.00/mile

➤ **Recommendation:**

Harwood: That Council approve the addition of carrying-out a 1 mile application of Gravelock as a designated road project within the R.M. for this construction season with site selection to be determined by the Director of Public Works.

**Carried Unanimously**

**8. Road Rehabilitation Program**

**Background:**

The R.M. has approximately 889 miles of gravel roads to maintain. These roads are typically maintained by motorgrader and cyclical gravelling programs that spread a pre-determined amount of gravel approximately every three years. Over time, due to traffic volumes and load bearing wearing, some roads can start to exhibit signs of stress caused by its life-cycle, changing criteria in its use or other extenuating physiological, direct or in-direct circumstances among other possibilities. These signs often present themselves in the form of surface or structural failures, extensive wash boarding, widening of the road, inconsistencies in the profile or cross section of the road and accelerated reversion to its poor form following typical maintenance procedures.

Gravel Road Rehabilitation involves work that stretches beyond typical routine maintenance. This involves reshaping not only the road surface, but the shoulder area and possibly the fore slope and ditch as well as some type of surface-base depth reconfiguration and proportional re-establishment of a desirable crown, cross-section and blend of surface to depth material with a preferred distribution/uniformity (improved compaction rate and moisture content)

An example of a road rehabilitation for a road identified as a good candidate could involve the following procedures:

- Redefinition/cleaning of ditches as able without re-construction (goal to re-establish road back slope and ditch bottom line)
  - Aggressive shoulder pulls (goal to re-establish preferred fore-slope)
  - Scarification of road surface, could range anywhere from 25mm (1 inch) to 300mm (12 inches)
  - Grading, disking, retransfer of surface depth type of materials to reshape the road surface and base depths (goal of removing surface defects and re-proportionately distributing and incorporating the existing material which based on the typical road compositions of the R.M. could be clay, gravel and other type of granular fines infiltrated with particles or chemicals such as dust control agents, stabilization agents, salt etc..)
  - Recompaction of material with water (goal is to achieve an optimal compaction of the surface layer to increase resistance and improve its structural capability as much as possible without conducting any structural depth type of repairs and at the same time rejuvenate the material to an optimum moisture content)
  - Recommendation to incorporate a minimal fresh layer of surface or traffic gravel as specified
  - Shape the final surface layer, water and compact to an optimal state
- This is one possible example in how a road rehabilitation can be conducted. This type of work can be done with a grader, water-truck, Bomag packer (or other types of packers) and Tractor with a harrower. The type of rehabilitation applied and the type of equipment required can vary based on the rehabilitation technique decision chosen and resources available.

In my opinion, road rehabilitations are known to be the best type of non-routine maintenance techniques available and the most cost-effective measure known to drastically improve road conditions without the need to undergo extensive or expensive type of construction/re-construction requirements.

In observation of many R.M. roadways, a road rehabilitation would likely rectify the distress exhibited by some roads and improve the ride-ability and performance. It would be in the interest of the R.M. to consider adopting a road rehabilitation program and/or identifying some roads to be designated for a rehabilitation.

➤ **Recommendation:**

Trask: That further discussion of a Road Rehabilitation Program be added to the 2021 Strategic Planning Session for further discussion.

**Carried Unanimously**

**9. Borrow Pit Agreements**

**Background:**

The R.M. is in a position whereas it needs to negotiate arrangements in order to secure adequate borrow material (clay/granular type material) when doing in-house construction projects and other types of activities. It has been indicated that the ability to secure borrow material from adequate sources in the R.M. are not necessarily abundant (I have to research this further).

We are currently in the process of considering adjustments and revisiting our internal construction operations and coordinating methodologies of which are sometimes on a reactive as opposed to a proactive measure. This can be challenging when trying to negotiate with nearby landowners. Historically in the past, the R.M. has been able to negotiate exchanges in order to secure borrow from sources, but this is becoming more and more challenging.

In order to be able to retain adequate material and investigate and ensure we can source projects efficiently, we recommend that the R.M. adopt a standard Borrow Pit Agreement/Policy with a pre-determined amount for compensation of material extracted within private properties.

Ideally and optimally, if negotiations become difficult and the R.M. is not able to come to terms where there is an adequate borrow source available to

facilitate our operations and minimize haul distances, it is with this type of agreement/policy that can possibly facilitate some negotiations.

This would be one component of others to be considered in the refinement of internal construction operations with the hopeful intent to eventually streamline its effectiveness and improve its liability retention. Other off-setting components can be explored during the post-construction season due to constraint timelines.

➤ **Recommendation:**

Trask: That Administration prepare a Draft Borrow Pit Policy for Council review.

**Carried Unanimously**

*Lunch Break 12:30 p.m. to 12:58 p.m.*

**10. 2021 In-House Construction & Contracted Projects**

Based on feedback from Public Works operators and ratepayers the following projects have been identified for the 2021 Construction season to be completed with a combination of internal and external resources.

The projects identified for this year include the 2021 Gravel Program. Pit reclamations, gravel road buildups, seal coating, surfacing, rock mulching, and soil stabilization. The various locations where work will be done are noted in the following table:

In-House Road Projects	
Priority	Projects
1	Bussiere Pit Reclamation - Vonda SK
2	Jabusch Pit Reclamation (SE 25-37-4 W3)
3	Twp Rd 374 between Rge Rd 3042 & Rge Rd 3043 (1.0 mile) <b>Div. 1</b>
4	Twp Rd 401 between Rge Rd 3043 & Rge Rd 3044 (1.0 mile) <b>Div. 6</b>
5	Twp Rd 382 between Rge Rd 3070 & Rge Rd 3071 (1.0 mile) <b>Div. 8</b>
In-House Seal Coat Projects	
1	Clarence Ave (Rge Rd 3053) from City of Saskatoon limits to Twp Rd 360 (1.6 miles) <b>Div. 2</b>
2	Hidden Ridge Estates- internal roads (2.3 miles) <b>Div. 1</b>
3	Twp Rd 360 (Merrill School Road) from Rge Rd 3061- Rge Rd 3062 (1.0 miles) <b>Div. 4</b>
4	Rge Rd 3062 from Twp Rd 360 (Merrill School Road) to Hamlet of Merrill Hills (1.7 miles) <b>Div. 4</b>
5	Twp Rd 362 from Rge Rd 3063 to the western boundary of Cedar Villa (0.6 miles) <b>Div. 4</b>
6	Old Hwy 305 from COS limits to new Hwy 305 (1.6 miles) <b>Div. 6</b>
7	Old Dalmeny Access between Hwy 16 and Hwy 305- 3 segments ( 1.6 miles) <b>Div. 6</b>
8	Old Hwy 684 access to Hwy #16 (0.9 miles) <b>Div. 8</b>
Contracted Road Projects	
Surfacing	ST213443 - Rge Rd 3053 (Clarence Ave) from Grasswood Rd to the southern boundary of Casa Rio (2.6 miles) <b>Div. 2</b>
EMC Squared	Twp Rd 374 from Rge Rd 3064 to Rge Rd 3070. Application of EMC <sup>2</sup> product (2.0 miles) <b>Div. 4</b>
SB-90	Internal roads of Saddle Ridge Estates - Application of SB-90 product. (1.3 miles) <b>Div. 1</b>
	Internal roads of Ashwood Estates- Application of SB-90 product. (? miles) <b>Div. 2</b>

	Swityk Lane within Grasswood - Application of SB-90 product. (1.0 mile) <b>Div. 2</b>
	Rge Rd 3040 Discovery Ridge Access/Betker Rd - Application of SB-90 product. (1.0 mile) <b>Div. 1</b>
Rock Mulching	Rge Rd 3041 between Twp Rd 392 and Twp Rd 390 (2.0 mile) <b>Div.5</b>
	Twp Rd 390 between Rge Rd 3080 and Rge Rd 3074 (2.25 miles) <b>Div.7</b>

The order of the projects to be completed was determined by the need to maximize productivity and the reduction of mobilization time and costs, including presiding site conditions and the availability of borrow sources. The project order and number of projects completed in 2021 is highly dependent on weather and the ongoing Covid-19 pandemic.

➤ **Recommendation:**

Chuhaniuk: That Council approve the In-House Construction & Contracted Projects as presented.

**Carried Unanimously**

**11. Bettker Road SB-90 1 Mile, Hwy 5 Northbound**

**Background:**

The R.M. has considered a cost-share agreement with the R.M. of Aberdeen and the Hamlet of Discovery Ridge in order to do a 1 mile application of the SB-90 product on Bettker Rd. northbound from Highway 5. Some preliminary feedback was received.

Based on the feedback received from Council at the April 19<sup>th</sup>, 2021 Meeting, a site inspection was conducted in order to evaluate the current conditions of the subject segment of the road. Based on the inspection, determinations were observed on the existing condition and it is suggested that some surface and perhaps minor structural repairs (soft-spot) repairs should be contemplated before conducting the SB-90 application.

Some discussions were shared with the Administrator and Roads Foreman on behalf of the R.M. of Aberdeen and they shared the same opinion but noted some potential challenges in accommodating the scope of work. Ultimately, the road is within the jurisdiction of the R.M. of Aberdeen to maintain.

In order to ensure the optimal performance of the SB-90 product, it would be prudent or logical for any extenuating structural criteria to be resolved and to do some minor preparation.

➤ **Recommendation:**

Germ: That Council receive the update regarding a proposed cost-share agreement with the R.M. of Aberdeen and the Hamlet of Discovery Ridge for application of SB-90 on a 1 mile portion of Bettker Road north of Highway No. 5 as information.

**Carried Unanimously**

**12. Clarkboro Ferry Road Guard Cables**

**Background:**

The District Operations Manager on behalf of the Ministry of Highways has reached out mentioning the need for the R.M. to repair the guard cable on the road leading down to the Clarkboro Ferry crossing from the intersection of RR 3041.

The condition of the existing guardrail is dilapidated and becoming more and more compromised due to the age and life-cycle of the infrastructure. The ability to conduct a make-shift repair with the current components is becoming

more challenging and a non-viable solution given the condition of the existing pieces and the business-case for a wholesale repair seems to be a likely solution.

A high level non-detailed cost estimate of a solution such as pounding in new piles or installing new screw-piles with retained guard cables (based on hearsay exchanges with the superintendents in regards to SMHI's preferred solutions) could range within the vicinity of \$150 000.00- \$200 000.00

Within the early developments of this situation I have represented the R.M. with the position of getting SMHI to prove that the infrastructure is of the jurisdiction of the R.M. to maintain. It has been instructed that the R.M. has historically graded the road, but this could be a gesture that the R.M. has always taken pro-actively. I do know that once the R.M. concedes in doing any type of repair or rectification to the guard-cable, the R.M. will be determined as the agent responsible for the infrastructure as time remains unless an alternate arrangement or transfer were to happen.

Future correspondence will be initiated with the Ministry of Highways to determine a solution, coordinate planning/operations or negotiate in regards to the matters of the situation.

➤ **Recommendation:**

Pruim: That Administration respond to the Ministry of Highways that maintenance of the guard-cable on the road leading down to the Clarkboro Ferry crossing from the intersection of RR 3041 is the responsibility of the Ministry.

**Carried Unanimously**

**13. InterValley Water**

Councillor Pruum brought forward a question from InterValley Water regarding the potential purchase/sale of private utilities.

➤ **Recommendation:**

Pruim: That Administration bring further information back to Committee.

**Carried Unanimously**

**14. Whistle Cessation Bylaw**

Councillor Germs requested an update regarding the Whistle Cessation Bylaw and the next step in the process. A Quote was received from CN for upgrades to affected crossings in the amount of \$400,000.

At the April 19, 2021 Council Meeting it was determined that no further action be taken by the R.M.

**15. In-Camera**

*In-Camera at 1:13 p.m.*

➤ **Recommendation:**

Greenwood: That due to the nature of the matter, discussion pertaining to Twp Rd 390 & Highway 305-02 Jurisdictional Transfer and Saddle Ridge SB-90 Application occur in-camera as per Section 16(1) of the *Local Authority Freedom of Information and Protection of Privacy Act*.

**Carried Unanimously**

*Out of Camera at 1:34 p.m.*

Germ: That Council comes out of camera.

**Carried Unanimously**

➤ **Recommendation:**

Harwood: That the R.M. deny the overlay proposal from the Ministry of Highways to the existing Twp Rd 390 and Highway 305-02 Jurisdictional Transfer, and for Administration to continue negotiations.

**Carried Unanimously**

➤ **Recommendation:**

Harwood: That Administration review the Saddle Ridge Road Settlement Agreement and bring forward results to Council for discussion.

**Carried Unanimously**

**16. Adjourn**

Harwood: That the Public Works Committee Meeting be adjourned at 1:38 p.m.

**Carried Unanimously**



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**Administrator**