

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT

REPORT TO: Infrastructure and Recreation
 Committee
MEETING DATE: October 16, 2012
REPORT NO.: EPW.12.079
SUBJECT: 2013 Bridge and Structure Repair
 Program
PREPARED BY: Jim McCannell, Manager of Roads and
 Drainage

A. Recommendations

THAT Council receive Staff Report EPW.12.079 entitled '2013 Bridge and Structure Repair Program';

AND THAT Council consider during the 2013 Budget deliberations advancing the repairs of Bridges 2, 3 and 17 such that the projects be initiated in 2013;

AND THAT Council consider during the 2013 Budget deliberations advancing the installation and repairs of guard rails as necessary for Culvert Structures 201, 202, 203, 204, 207, 208 and 210.

B. Background

The recent replacement of the Slabtown Bridge No. 15 yielded favourable pricing from contractors and as a result, there has been interest shown at the Infrastructure and Recreation Committee in moving proposed bridge and structure repair projects forward.

The July 10th 2012 Infrastructure & Recreation Committee meeting minutes included the following under new and unfinished business;

E.7 Addition - Slabtown Bridge

Committee Chair John McKean noted that since the work on the Slabtown Bridge is progressing at a steady pace, he asked Staff if there were any other bridges in Town which can be attended to.

Manager of Roads and Drainage Jim McCannell indicated that there are guard rails and approaches that need to be fixed, but he does not know off the top of his head which bridges could be worked on next.

Director of Engineering and Public Works Reg Russwurm suggested that Staff consider some options and report back to Committee at a later date.

The challenges with moving works forward to take advantage of favourable industry pricing are: i) lack of “shovel-ready” projects; and, ii) human resources to manage an additional project within 2012. Therefore Staff considerations evolved around advancing works for 2013.

There are three bridge and culvert projects scheduled in the near future that are good candidates to advance in 2013. These projects are contained in Biannual OSIM Inspection and Bridge Assessment Report (Assessment Report) as priority projects. The first two were identified in the 5 year capital plan adopted as part of the 2012 Capital Budget. The projects are:

1. Structure 201 located on the 18th Sideroad west of the 10th Line
2. Bridges 2 and 3 on the 6th Sideroad
3. Bridge 17 on Clark Street in Clarksburg

A map of all the Town’s bridges and culvert structures is provided as Attachment #1

Structure (a culvert) 201, 18th Sideroad, is currently planned to be initiated and completed in 2013. The major deficiency is the foundation scouring that is occurring on the downstream end. It is also recommended that approach guardrails be installed. The total estimated cost of the repairs is \$100,000. This project is anticipated to occur with the approval of the 2013 Budget.

The twin Bridges 2 and 3 on 6th Sideroad were planned to be initiated in 2014 for completion in 2017, at a total estimated cost of \$486,000. The first step in the repairs to Bridges 2 and 3 is to retain an engineering consultant for a detailed structural analysis to determine the exact scope of repairs. The Assessment Report provides a high level review of the structure and is not suitable to prepare a construction contract. After the analysis is completed, a tender can be issued for the actual works likely in 2014 or 2015 as funding and human resources permit. Based on the complexity of the final scope work, Staff may have the resources to administer this contract instead of an engineering consultant.

A deck analysis is required for Bridge 17 at a cost of \$20,000 with subsequent repairs estimated at \$122,000. It is possible to include the analysis of this bridge into the consulting assignment for Bridges 2 and 3. The actual construction works could also be planned for 2014 depending on the availability of resources.

Several of the Town’s culvert structures are lacking guardrails or require the replacement of the existing guardrails over several years. This has been identified in the current and past Assessment Reports. Culvert Structures 202, 203, 204, and 210 all require guard rail replacement. Culvert Structures 201, 207 and 208 have been identified as requiring the installation of new guard rails. The average cost is between \$30,000 and \$40,000 for each structure. There may be economies of scale that could allow for a better price per location if several or all the site were grouped together in one tender. If the 7 sites were able to be completed at the same time and assuming a 10% economies of scale, saving of around \$25,000 may be realized.

The next project in importance is structural repairs to Culvert 210 along Highway 26 at the Little Beaver River however it is not recommended for advancement at this time because the work should be included in an application to the Ministry of Transportation for connecting link funding. Although the current connecting link program is understood to be on hold, the funding program may become available again in a few years.

Although the Town received excellent pricing on the Slabtown bridge replacement, a large portion (55%) of the project was to be funded through long term debt. As such, any further works contemplated for advancement into 2013 would be funded through long term loan. With this in mind, Staff is suggesting that any potential savings from the reduced debt servicing payment be reallocated to future bridge capital works through the 2013 budget process. This will ensure that Staff can illustrate the net effect of the savings through the 5 year planning cycle to allow Council to make a fully informed decision.

In summary, Staff is recommending that Council consider during the 2013 Budget deliberations advancing the repairs of Bridges 2, 3 and 17 such that the projects be initiated in 2013, and the installation and repairs of guard rails as necessary for Culvert Structures 201, 202, 203, 204, 207, 208 and 210. Prior to undertaking the guard rail repairs for Culvert 210, Staff will investigate the practicality of delaying this work until connecting link funding is available from the Ministry of Transportation.

D. Environmental Impacts

Normal environmental impacts from bridge repair and rehabilitation would be present during construction.

Silt control and management practices would be required and included in design and contract documents.

E. Financial Impact

The 2012 Capital Plan includes:

- Culvert Structure 201 project being completed in 2013 at a total estimated cost of \$100,000 (\$10,000 engineering, \$90,000 contract services).
- Initiation of the Bridges 2 and 3 project in 2014 at an estimated cost of \$30,000 for consulting, \$30,000 in 2015 for engineering, no expenditure in 2016 and in 2017, \$30,000 for engineering, \$416,000 for contract services and a \$40,000 contingency.
- No allowance for works on Bridge 17 on Clark St in Clarksburg
- No allowance for guard rails other than the Installation of guard rails on culvert Structure 202, 10th Line.

F. In Consultation With

Darcy Chapman, Capital Accountant

G. Attached

1. Municipal Structure Inventory location map

Respectfully submitted,

Jim McCannell

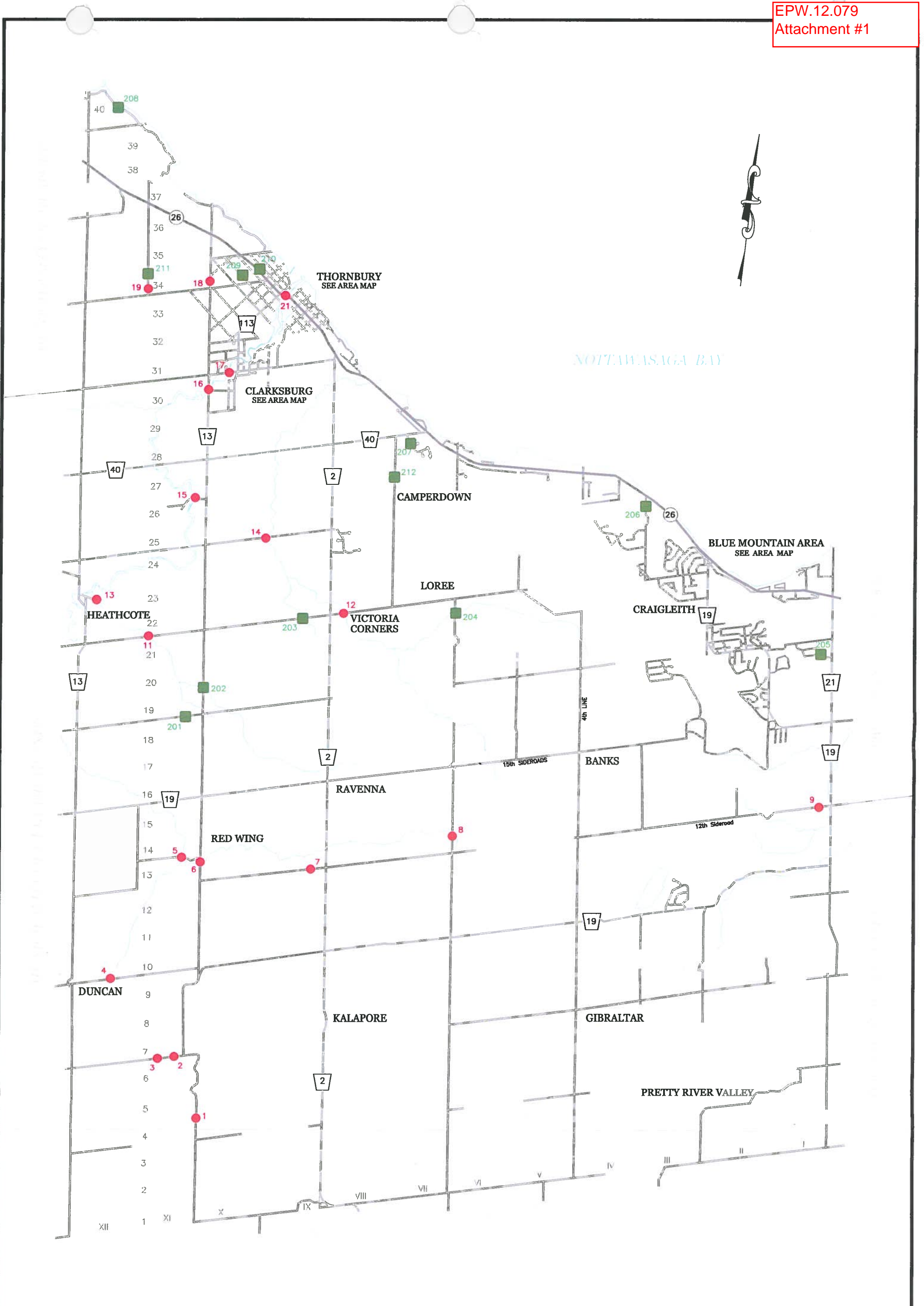
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Reg Russwurm

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Director, Engineering and Public
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Town of the Blue Mountains

Structure Inventory

- ⁵ Bridge Structure (Span 3.0m & Greater) Location & No.:
- ²⁰⁵ Culvert Structure (Span 3.0m & Greater) Location & No.:

0 1 2 3km
SCALE 1:75,000