

17 July 2001  
File: 12870584

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Lacombe County  
5432 56 Avenue  
Lacombe, AB  
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**Attention: Mr. Allan Williams**

Dear Mr. Williams:

**Reference: Sigurdson Developments – Gull Lake Subdivision**

Stantec was commissioned by Sigurdson Developments to provide engineering services for the design and construction of a rural residential subdivision located at NE 29-40-28-W4M. The proposed development consists of twenty-two lots with a lot area of not less than 1.5 acres. The lots face onto an internal road system. The road system will be constructed with ditching on both sides. The lot configuration and drainage patterns are shown on the attached plan.

The flow of water from the north lots will continue to drain to the existing County roadway adjacent to the property. No work has been planned by the Developer to upgrade drainage of the existing County roadway. The County has indicated that the roadway may require upgrading and that the County will be completing the work when required. The developer is expected to pay for a portion of this work as a condition to his development. Design of the ditching for the County roadway has not been completed by the Developer as this will be completed by Lacombe County at the time reconstruction of this roadway is required. The water currently draining to the existing County roadway will be decreased with this development as half of the site which currently drains to the north will be intercepted by the internal roadway system.

Water will drain from the south lots and the roadway into the ditches and will follow the ditches to the north west corner of the property. The water from the ditches will be routed through a storm water retention facility located at the north west corner of the development.

The storm water retention facility has been sized to retain water such that the predevelopment flow rate is not exceeded in the 1:100 year storm event. The storm water retention facility is designed such that it will retain all flow above the 1:100 year event predevelopment flow and release the water over a longer period of time. The

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retention area is designed to hold water only during such events. Therefore, the area will be designed in such a fashion as to allow for multiple uses such as overflow parking, baseball or soccer fields.

Storm water modeling was completed for the proposed development utilizing the modified rational method. The volume required to be retained during a 1:100 year storm event is approximately 960 cubic metres. The storm water retention facility has been designed to manage an excess volume of approximately 1,200 cubic metres. The excess capacity is a result of incorporating the recreation facilities into the design.

The storm water retention facility releases water to the existing roadway adjacent to the development. The storm water drainage would continue west along the existing road and then North along the existing winter access road to Gull Lake. Again, no design has been completed for drainage requirements outside the boundaries of the proposed development as it will be completed with upgrading of the existing roadway.

As a general commentary, it should be noted that this development will help control runoff and reduce the drainage problems currently occurring along the existing County roadway and adjacent development.

Should you require further information, please contact me at your earliest convenience.

Sincerely,

**STANTEC CONSULTING LTD.**

Wayne Gustafson, P.Eng.  
Project Manager

Attachment

c. Mr. Dave Sigurdson