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September 19, 2025

Matt Coffey, Planning Coordinator
The Corporation of the County of Prince Edward
Shire Hall – 332 Picton Main Street
Picton ON, K0K 2T0

Dear Mr. Coffey,

Regarding: Adolphus Reach Resort
Application for Zoning By-law Amendment – 3rd Submission
Response to Technical Comments

On behalf of the landowner and developer, please find enclosed the Response to Zoning By-law Amendment Comments for Adolphus Reach Resort Technical Circulation #2. Enclosed are:

- This Response Letter
- Revised Stormwater Management Report

The following provides a response in **bold** from Forefront Engineering to the outstanding technical comments. For reference, the comments from PEC staff and Quinte Conservation staff are identified in *italics* below.

<u>County Engineering Stormwater Review</u>

> *4. Based on the preliminary SWM report (dated June 2021) and the comments provided, it is understood the preliminary report increased the 5-year runoff coefficient by 25% for the 100-year storm to account for majority of the rainfall now becoming runoff. It is also understood from the comments that only the 100-year storm used a different runoff coefficient, and that all the other storms (such as the 25mm 4-hour quality event, 2 year, and 5 year) used the runoff coefficient identified for the 5 year. It is understood this method was as per the MTO Drainage Management Manual Part 4 Design Chart 1.07.*
>
> *However, the comments note that for the revised preliminary SWM report (dated February 2023) only a single higher range runoff coefficient was selected to be used for all storm events. Based on the calculation table in Appendix B, the pre-development conditions use the runoff values originally calculated for the 5-year storm (from the previous report). The post-development flows use a mixture of the runoff values originally calculated for the 5 year and runoff values between the 5-year and 100-year storm (from the previous report). Please clarify what is meant by using a higher range runoff coefficient?*

MTO Design chart 1.07 is appropriate for 5 to 10 year event runoff coefficients, and provides a minimum and maximum range of values for a given surface type, depending on slopes and level of impervious, whether it's disconnected or directly connected. For example, the minimum recommended roof coefficient is 0.70 to a maximum of 0.95. Where downspouts are disconnected, a value of 0.70 is more appropriate, as there is a greater opportunity for infiltration. To be conservative, we have used 0.90 for roofs in the higher range, even though the

roofs are disconnected. The same argument applies to gravel, where a minimum of 0.40 and a maximum of 0.60 are provided from the MTO design chart, and the proposed design uses 0.70.

We note that the 2021 SWM design applied increased coefficients for the 100-year event as recommended by MTO Design Chart 1.07 for fully urban conditions. MTO Drainage Manual Chapter 8 notes that such increases are only required for urban development. The current site is smaller in scale than the original (2021 buildout) and more consistent with rural development. The proposed works use coefficients closer to the maximum to ensure a conservative runoff estimate. An alternative method is to use the lower range values in line with the flatter slopes and disconnected impervious surfaces, and increase the value by 25% for the 100 year event, the results would be the same.

> *5. It is understood Outlet 1 and Outlet 2 direct runoff from the site onto the neighbouring property. Drainage from the site cannot be directed to the neighbouring property without an easement agreement. Is there a drainage easement in place for this? Additionally, it appears as though Outlet 1 directs runoff towards the existing building on the neighbouring lot, which is concerning.*

Drainage may be directed to a neighbouring property where this occurred under existing conditions. Refer to the revised SWM Report, Outlets 1 and 2 will be undisturbed. Outlet 1 will be restricted to existing flows, with all post-development area surface runoff directed to Outlet 3.

<u>Quinte Conservation Stormwater Review</u>

> *Outlet 1 continues to be a concern. This discharge point is onto an adjacent property whose ownership is not specified. As water is being collected and discharged at elevated levels to predevelopment, and being discharged uncontrolled, the full impacts on the external property must be clearly analyzed. Also, Outlet 2, which is primarily sheet flow, sees a significant rise in flows onto the same property. The owner of the external property is not legally required to receive increased surface flows or flows from a charged flow regime. A drainage easement and agreement would be required.*

Refer to the revised SWM Report. Outlet 1 and catchments draining to Outlet 1 are to remain undisturbed in their pre-development condition. Drainage directed to Outlet 2 under pre-development conditions is proposed to be directed to Outlet 3, directly to Adolphus Reach.

> *The impact of the increased flows needs to be assessed. There is a building immediately proximal to the drainage path. Impacts to this structure, as well as conveyances and erosion should also be analyzed. With Adolphus Reach immediately available as a receiving water body, it is very likely these impacts would be minimal, or easily obviated. Regardless, participation and permission of this property owner would be required in pursuing a strategy of uncontrolled stormwater discharges across said property. The requirement for quantity control (post development runoff peak flows and flow regimes to match predevelopment) is normally required to alleviate impacts to stormwater receiving offsite properties.*

Refer to the revised SWM Report. As noted above, there are no increased flows directed to the neighboring property. Outlet 3 (direct to Adolphus Reach) will experience increased flows.

Stormwater that is released directly to Adolphus Reach at Outlet 3, can be discharged uncontrolled. Only erosion and quality concerns would be applicable.

Erosion and quality concerns are addressed in the SWM Report.

Sincerely,
FOREFRONT ENGINEERING INC.

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