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## MEMORANDUM

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DATE: September 26, 2018

TO: **City of Ottawa**  
110 Laurier Avenue

**Attention: Shoma Murshid**

SUBJECT: Mattamy Homes  
Summerside West – Phase 4, 5 and 6  
Review of Functional Servicing Report  
McKinnon's Creek and Pond Lowering

OUR FILE: 15-766 A-7

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This memo has been prepared in response to the following comments provided by the City of Ottawa with the request to lower the pond operating levels by lowering McKinnon's Creek between the existing Avalon West SWM Facility and Tenth Line Road.

### McKinnon's Creek and Pond Lowering

It is understood that McKinnon's Creek downstream of Tenth Line Road is planned to be lowered in the future as part of the overall McKinnon's Creek Reconstruction Project. We were requested to investigate whether the portion of McKinnon's Creek between the Avalon West SWM Facility and Tenth Line Road could be lowered to take advantage of the overall lowering. It is understood that the purpose of this request was to confirm if the operating levels in the existing SWM Facility could be lowered.

To look into the possibility of lowering the operating levels, a comparison of existing water levels and MECP recommended relationships is presented in **Table 1**.

Component	Design Objective	Elevation (m)	Criteria	Depth (m)
Pond	Bottom	81.00		
	Permanent WL	83.15	Design	2.15
			MECP Maximum	3.00
			MECP Preferred	2.50
	Extended Detention WL	83.35	Design	2.35
	100-YR WL	84.64	Design	3.64
			ECA 1339-A28J6Z (October 2, 2015)	3.73
			Active Storage Permanent WL to 100-YR WL	1.49
			MECP Minimum	1.00
			MECP Preferred	1.50
Forebay	Bottom	82.00		
	Permanent WL	83.15	Design	1.15
			MECP Minimum	1.00
			MECP Preferred	1.50

**Table 1 – Avalon West (N5) SWM Pond Water Levels**

MECP values based on *Stormwater Management Planning Design Manual Table 4.6: Wet Ponds – Summary of Design Guidance (MECP, March 2003)*

As can be seen in **Table 1**, the permanent pool elevations in the forebays do not have much opportunity to be lowered as they are only 0.15 m above the minimum criteria. Furthermore, the depth in the main cell is below the preferred depth and cannot be economically lowered. Given this review of standards, the only way to lower the pond would be to excavate the bottom of the pond. From a constructability perspective, it would be extremely difficult and costly as it is an existing pond, which was constructed in soft clays.

Yours truly,  
**David Schaeffer Engineering Ltd.**

Per: Jennifer Ailey, P. Eng