JPE Engineering
41 Kestrel Street
Kitchener ON N2K 4K2 Canada
tel 519 577 2238
email: info@jpe-engineering.ca
web: www.jpe-engineering.ca

July 7, 2025

Dave Aston, MSc, MCIP, RPP
MHBC
540 Bingemans Centre Drive, Suite 200
Kitchener ON,
N2B 3X9

Dear Mr. Aston:

720 ERBSVILLE ROAD, WATERLOO
STORMWATER MANAGEMENT OUTLET

Further to the City's letter dated June 9, 2025 documenting comments on the 3rd submission, we are writing to address Comment #23 of that letter which read:

> *"Stormwater management methods have been changed to include an outlet pipe that extends into the woodland, wetland, and ESPA, which are Core Natural Features, and into Significant Wildlife Habitat and Laurel Creek, which are Supporting 'A' Natural Features. Per City Official Plan policies 8.2.4(3) and 8.2.5(3), development or site alteration within such features is only permitted in limited circumstances, including (c) essential infrastructure for which no other alternative is feasible and where crossings and the area of disturbance will be minimized. To address this policy, a supplementary memo should be prepared that confirms there is no other feasible alternative for the outlet, especially because it requires infrastructure to be built on another landowner's property, by identifying the alternatives that were considered and outlining their feasibility from a technical, environmental, and/or financial perspective."*

As part of the preliminary design, SWM options and outlets had been considered, including:

1. One SWM pond located in the northern corner of the Site. This pond proposed a spreader swale outlet and sheet flow to Laurel Creek.

2. Two SWM ponds with one located in the northern portion of the Site, and another pond in the southeastern corner. These ponds both had spreader swale outlets and sheet flow to Laurel Creek.

3. One SWM pond located in the southeastern corner of the Site. This pond will ultimately be expanded to service future development on 672 Erbsville Road. This option proposed a piped outlet to Laurel Creek.

Note that the former two options included allowance for future expansion of the SWM pond southerly to accommodate future development on 672 Erbsville Road.

Through numerous submissions and communications with the City and GRCA, the preferred option was identified as the one pond located in the southeastern corner of the Site (i.e., in the location currently proposed at time of writing). Further, through this process, the GRCA expressed concern with sheet flow of the pond's outlet through the buffer and wetland areas due to potential increased flows and saturation of the intermediate areas.

To address the outlet concerns, a piped outlet was considered as this would convey the pond's outflow directly to the Creek and avoid the potential inundation of the intermediate areas. It was concluded that the relatively small outflow was insignificant in relation to the flow within Laurel Creek and thus not cause impact. The GRCA concurred with this approach and indicated this is often the approach taken.

In terms of locating the piped outlet's route, a site visit was conducted. The proposed location selected:

- Minimizes the length of pipe installed (approx. 45m from control structure) – any other route would have an increased length;
- Minimizes the infrastructure required (e.g., due to the straight and short pipe length proposed, no intermediate manholes are needed);
- Minimizes the infrastructure within the wetland and buffer areas; and,
- Avoids any impact to vegetation as the length of pipe under vegetation is less than 5m and it is proposed to be trenchlessly installed.

It is noted that other alternative routes for the outlet pipe would be significantly longer and impact more buffer and wetland areas. Further, other routes southward would cross private lands and potentially impact/constrain future developable land.

Finally, we note we have had numerous consultations with the GRCA on this matter, and through our recent submission they have accepted the proposed outlet methodology and location.

During final design, the outlet's design and construction methodology will be further developed and any needed mitigation action identified.

We trust this letter addresses the City's aforementioned comment #23. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours truly,
JPE ENGINEERING

John Perks, MBA, P.Eng.
Senior Engineer, President

cc Water's Edge
Sunvest Development Corp.
NRSI