Memorandum

To: Township of North Dumfries
Engineering and Public Works Department

MTE File No.: C55318-200

Date: April 25, 2025

From: Chelsea Dahmer, P.Eng.

Project Name: 50 Rose Street

Re: SWM Technical Memorandum
Registered Plan: Plan 67 R – 1718 ; Assessment Roll #: 300101000114505

MTE Consultants Inc. was retained to complete the grading and servicing design for the proposed single residential dwelling to be constructed at 50 Rose Street in Ayr, Township of North Dumfries.

The site is bounded to the north and south by existing residential dwellings, to the east by Rose Street, and to the west by the Nith River. The site is currently vacant and comprises approximately 0.103ha. The developable area for the proposed dwelling is 0.055ha due to required setbacks from the Nith River. Under the proposed conditions, the site's imperviousness will be 31.8%.

In the existing condition, drainage from the site currently drains towards the Nith River to the west of the site. Based on a review of the current survey by Van Harten (dated April 5, 2024) and road information from an older survey conducted for the 70 Rose Street property by ACI Survey Consultants (dated November 21, 2003), it has been confirmed that a drainage split exists along the east property line and adjacent boulevard, preventing right-of-way runoff from draining through the subject site toward the river. This drainage split and berm continues southward along Rose Street and terminates before the Rose Street wastewater pumping station at 10 Rose Street. Elevation checks along the asphalt edge and road centerline confirm that runoff within the right-of-way flows south along Rose Street, not through the site.

Under the proposed condition, a swale is proposed along the south property line of the proposed house. Grading for the driveway is proposed such that most of the runoff will drain toward a low point located just south of the driveway at the property line. From there, drainage will flow into a swale within the front yard landscaped area and continue into a proposed property line swale between the subject property and 70 Rose Street. This swale will collect runoff from part of the front landscape area and the south side yard, as well as the northerly side yard of 70 Rose Street, ultimately discharging west to the river. Only a small portion of the driveway, located within the boulevard, will drain toward the Rose Street right-of-way, which is consistent with the existing drainage conditions. Runoff generated from the building rooftop, side and rear yards is proposed to drain towards the Nith River via the side yard swales proposed to the north and south of the proposed house.

There is an existing low-laying area located within the site near the southwest corner of the proposed building. Areas flowing towards this area are determined to be only within the property boundary and some external drainage area from the northern neighboring property. This low-laying area is located within the re-grading limit proposed for the building and is proposed to be filled. As per the proposed design, all runoff north and south of the proposed building will be directed to the side yard swales onto the Nith River. External drainage from the neighboring properties will not be blocked by the proposed house. Refer to MTE Drawing C2.1 for the detailed grading design.

No water quantity control is required for this site due to the proximity of the Site to the Nith River. Runoff from the driveway is minimal and will be directed via grassed swales. Furthermore, runoff generated from the building rooftop and landscape areas is considered clean. Therefore, no water quality control is required for the site.

Due to the size of the site and the insignificant increase in imperviousness of a residential dwelling, we do not anticipate any major impact on the existing drainage conditions.

If you have any questions or concerns, please feel free to reach out to the undersigned.

Yours truly,

MTE Consultants Inc.

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JHN:dlb

https://mte85.sharepoint.com/sites/55318-200/Shared Documents/Reports/rpt-2025-04-25_SWM Memo.docx