

MEMO

DATE October 5, 2022 **PROJECT NO.** 1986-5779
RE Servicing Summary
 12563 & 12599 Highway 50 and 2 Industrial Road, Caledon

TO Mark DiCostanzo - Verdi Alliance
FROM Matt Britton, P.Eng. - C.F. Crozier & Associates Inc.

1.0 Introduction

The purpose of this memo is to summarize the extent of servicing works required to service the proposed development of the Site located at 12563 & 12599 Highway 50 and 2 Industrial Road, in the Town of Caledon. The information within this memo is based on the completed Functional Servicing & Stormwater Management Report (Revision 1), prepared by C.F. Crozier & Associates Inc. (Crozier), dated January 26, 2022, which details the preliminary servicing and stormwater management strategy for the Site.

2.0 Water Servicing

The FRSWMM Report (Crozier, January 2022) identifies the following existing water servicing infrastructure near the Site:

- Existing 300 mm diameter watermain on the north side of Industrial Road
- Existing 300 mm diameter watermain on the west side of Highway 50

Based on a proposed population of 4,917 persons for the Site, Region of Peel guidelines and the Fire Underwriters Survey, the proposed water servicing for the Site will need to meet the following water demands.

Avg. Day Flow	Max. Day Flow	Peak Hour Flow	Fire Flow
15.4 L/s	27.7 L/s	46.1 L/s	100 L/s

In addition to the water demands, the Ontario Building Code (OBC) 3.2.9.7.4 requires buildings higher than 84 m to have two (2) sources of water from public water systems. To meet the water demand and satisfy the OBC requirements, two (2) 300 mm diameter fire lines are proposed to extend from the existing 300 mm diameter watermain along Highway 50. A 150 mm diameter domestic line is proposed to branch from one (1) of the 300 mm diameter fire lines to provide domestic water service for the proposed development.

At this time, the Region has not identified any capacity concerns regarding water servicing for the Site and proposed development.

The material in this memo reflects best judgment in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. C.F. Crozier & Associates Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

3.0 Sanitary Servicing

The FRSWM Report (Crozier, January 2022) identifies the following existing sanitary servicing infrastructure near the Site:

- Existing 250 mm diameter sanitary sewer on Highway 50 conveys flows south.
- Existing 250 mm diameter sanitary sewer along the south side of Industrial Road conveys flows west.
- Existing 900 mm diameter Albion Vaughan Road sanitary trunk sewer approximately 480 m east of the Site conveys flows south.

Based on a proposed population of 4,917 persons for the Site, and the Region of Peel guidelines, the proposed sanitary servicing will have to meet a cumulative sanitary demand of 54.6 L/s.

As per email correspondence from the Region of Peel dated August 6, 2021, it is understood that the existing 250 mm diameter sanitary sewer on Highway 50 does not have sufficient capacity to service the entire proposed development. It is also understood that there are no planned upgrades to this sanitary sewer. Moreover, the Region of Peel recommends that a new sanitary sewer be constructed to connect the proposed development to the existing Albion-Vaughan trunk sewer, located within Albion-Vaughan Road. It is anticipated that the new sanitary sewer would follow the alignment of Industrial Road and the future George Bolton Parkway Extension. Details pertaining to the design and construction of the new sanitary sewer connection to the Albion Vaughan trunk sewer are being determined in coordination with the Region and Town.

To address the capacity constraints, two separate sanitary connections are proposed. The initial phases of the site will connect to the existing 250 mm diameter sewer on Highway 50 until the residual capacity is utilized. Once a new sanitary sewer is extended from the Albion-Vaughan trunk sewer, the remaining future phases will connect to it.

Details pertaining to the phasing and connection locations is subject to the ongoing coordination with the Region and Town. Additionally, as per email correspondence from the Region of Peel dated June 29, 2022, they have installed a flow monitor within the Highway 50 sanitary sewer to accurately determine the allowable flows for the initial phases of the proposed development.

4.0 Stormwater Management

Under existing conditions, stormwater runoff from the Site is split and drains via overland flow towards the existing ditches along Highway 50 and Industrial Road. The two ditches subsequently connect at the intersection of Highway 50 and Industrial Road, and flows are ultimately conveyed to the existing stormwater management pond located at the southeast corner of Highway 50 and George Bolton Parkway. The Region and City have not indicated any stormwater constraints or downstream capacity concerns.

Therefore, the proposed development has been designed in accordance with the following agency standard criteria:

- Water Quantity Control: Control post-development peak flows to pre-development peak flows for all storm events up to the 100-year event, using a pre-development maximum runoff coefficient of 0.50.
- Water Quality Control: 80% Total Suspended Solids (TSS) removal on an annual loading basis of the stormwater runoff leaving the development in accordance with Enhanced Water Quality Control Criteria (MECP, 2003).
- Water Balance: Retain runoff from a small design rainfall event (typically 5 mm) on-site through evaporation or rainwater reuse.

Under proposed conditions, the drainage split to the two (2) existing ditches is proposed to be maintained. Water Quantity Control will be provided via two (2) underground stormwater tanks located adjacent to each ditch outlet. At this stage of the design, it is assumed that the stormwater tanks will require a pumped outlet, and each pump will have a maximum pumping rate of 50 L/s. As a result, the tank discharging to the Highway 50 ditch will require a volume of 667.1 m³ and the tank discharging to the Industrial Road ditch will require a volume of 1215.5 m³.

Water Quality Control will be provided via catchbasin shields and oil/grit separators (OGS) sized to provide an enhanced level of protection (80% TSS removal).

Water Balance will be provided as dead storage within the proposed underground stormwater storage tanks, which will be re-used throughout the proposed development as grey water, or for irrigation purposes.

For complete details on the current servicing and stormwater management strategy for the proposed development, please refer to the Functional Servicing & Stormwater Management Report (Revision 1), prepared by Crozier dated January 26, 2022.

We trust the information provided in the letter is sufficient for your purposes at this time. Should you have any questions or require any further information, please do not hesitate to contact the undersigned.

Sincerely,

C.F. CROZIER & ASSOCIATES INC.



Matt Britton, P.Eng.
Project Manager

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