

April 23, 2025

BY EMAIL ONLY

Mr. David Smith, Manager, Planning and Development
Municipality of West Grey
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Durham ON N0G 1R0

Tel: 519-369-2200
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Subject: Proposed Commercial Development
204 Garafraxa St South
Municipality of West Grey
O/Ref.: 06013

Dear Mr. Smith:

Cobide Engineering Inc. has been retained by 1872 Durham Corp. to complete the site servicing and grading design in support of the Re-zoning Application for the Proposed Commercial Development to be located at 204 Garafraxa Street South (herein referred to as the site), in the former Town of Durham, now the Municipality of West Grey.

The following letter outlines the servicing aspects of the proposed development with respect to water and sanitary sewer servicing and addresses the approach to stormwater management. This letter is being submitted to the Municipality of West Grey in support of the Re-zoning Application.

1.0 INTRODUCTION

1.1 Location and Site Description

The site is located at 204 Garafraxa Street South in former Town of Durham. The property is bounded by the following:

- Residential properties to the south and west.
- Saddler Street West to the north;
- Highway 6 (Garafraxa Street South) to the east with mixed residential and commercial properties.

The site is approximately 3,318 square meters in area and currently there is a restaurant situated to the east side of the property (see Figure 1). A copy of the Concept Plan (Drawing 06013-CP1) has been attached to this letter as Appendix A.

The existing site consists of both gravel and asphalt cover with patches of vegetation within the property boundary. The site drains to the storm infrastructure situated in the centre of the property that eventually outlets to the existing catchbasins on Saddler Street South. The additional commercial building will be built on the west side of the property and will drain to toward the parking area to the North that will be designated parking for the motel.



Figure 1 – Aerial Photo of the Site, Source: Grey County Maps 2024

2.0 PROPOSED DEVELOPMENT

The proposed development will consist of a ten (10) room motel building. The parking for the development will be accessed from Saddler Street west to the north of the building. A summary of how the development is proposed to be serviced with municipal water and sanitary infrastructure is provided below.

See Appendix A for the proposed Concept Plan (Drawing 06013-CP1).

3.0 SITE SERVICING

3.1 Water Servicing

The proposed development will be serviced with the existing 50 mm diameter municipex water service from the existing watermain on Garafraxa Street. Residential calculations were used to determine the water capacity required by the motel. In-house laundry servicing will be required and can be accommodated with the servicing recommended.

The theoretical water demand for the proposed development is summarized below. The water demand was calculated using the Ministry of the Environment and Climate Change's Design "Guidelines for Water Systems".

Table 3.1 – Domestic Water Demand

Type of Development	Water Demand (L/bed/d)	No. of Units	Average Demand (L/s)	Max. Day Peak Factor	Max. Day Demand (L/s)	Peak Hour Factor	Peak Hour Demand (L/s)
Motel	200	10 units	0.023	2.75	0.064	4.13	0.096

3.2 Sanitary Servicing

The proposed development will be serviced with a new 150 mm diameter sanitary service. The new service will be connected to the existing 250 mm diameter sanitary sewer on Saddler Street South. As completed above, the sanitary requirements were calculated using residential models and the suggested 150 mm service will adequately provide the needed service for the proposed usage.

The total design flow including extraneous flows has been calculated based on the flow rates specified in Table 8.2.1.3.B of the Ontario Building Code.

Table 3.2 – Sanitary Flows

Type of Development	Beds	Flow (L/bed/d)	Avg. Flow (L/s)	Peaking Factor	Peak Flow (L/s) (1)	Extran. Flow (L/s) (2)	Total Flow (L/s) (1+2)
Motel	10	200	0.023	4.13	0.096	0.014	0.11

- Extraneous Flow: $Q_{inf} = 0.28 \text{ L/effective gross area} \times 0.0495 \text{ ha} = 0.014 \text{ L/s}$

3.3 Stormwater Management and Site Drainage

As stated above, the subject property consists of both compacted gravel and asphalt cover with patches of vegetation within the property boundary. The site drains to the storm infrastructure situated in the centre of the property that eventually outlets to the existing catchbasins on Saddler Street South. The additional commercial building will be built on the west side of the property and will drain toward the parking area to the north that will be designated parking for the motel. The proposed parking will be located on an existing gravel parking surface. The remainder of the site will be landscaped which will allow for infiltration in comparison to the gravel surface that currently exists on site.

Based on the site configuration and current site development the new motel will be graded to drain to existing storm infrastructure and Saddler Street South causing no runoff to be directed to neighbouring properties.

The stormwater peak flows have been modelled using the rational method and are summarised in the table below:

Table 3.3 – Stormwater Flows

Storm Event	Pre Development Peak Flow (L/s)	Post Development Peak Flow (L/s)
5 Year	56	57
100 Year	104	107

As seen in the table above, there is a very minor increase in stormwater flows from the site. Such a minor increase is not expected to cause any downstream concerns as it will be a small percentage of the total overall flow within the municipal system.

A catchbasin can be installed in the parking lot which will allow for stormwater storage within the parking area during major events when the storm sewer reaches capacity. Any storage that occurs in the parking area would reduce the peak flow to below the pre-development conditions where it is sheet flowing to the street from the proposed motel area and is piped for the restaurant parking lot.

4.0 TRAFFIC AND PARKING

The proposed development will contain parking to the west of the building, entering from Saddler Street South and currently has been a site for parking and access to the rear of the commercial property. The proposed parking is substantially set back from the intersection approximately 70 meters to the West of the intersection of Garafraxa Street and Saddler St.

5.0 EROSION AND SEDIMENTATION CONTROL

Erosion and sedimentation control measures will be implemented during construction. Silt fence will be required to be installed around the perimeter of the site.

All proposed erosion and sediment control measures are to be installed to the satisfaction of the engineer and the Municipality of West Grey prior to undertaking any site alterations (i.e., filling, grading, etc.) and remain present throughout the duration of construction.

The General Contractor will conduct daily inspections during construction to ensure that the erosion and sedimentation control measures are working properly.

Erosion and sedimentation control measures to be implemented during construction will consist of the installation of light duty silt fencing around the perimeter of the property.

6.0 SUMMARY AND CONCLUSIONS

This letter has been prepared in support of the Re-zoning application for the proposed construction of a new motel development at 204 Garafraxa Street South in former Town of Durham.

Based on the finds of this letter, the following conclusions are made:

1. The proposed development will be serviced by connecting to the existing watermain and sanitary main infrastructure on Saddler Street South.
2. Stormwater will be controlled by using existing storm infrastructure that has been installed for the existing commercial restaurant establishment also on the same site.
3. Erosion and sediment control measures will be implemented throughout the duration of construction.

The above assessment demonstrates that the proposed development can be adequately serviced with water, sanitary and drainage will not impact surrounding areas. It is therefore recommended that the proposed servicing and stormwater management for the new commercial development be approved by the Municipality of West Grey as part of the Re-zoning Application.

If you have any questions regarding the above, please contact the undersigned at 519-506-5959, extension 101.

Yours truly,



Travis Burnside, P.Eng.
Director

Encl.

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