



Municipality of Middlesex Center
Planning and Development Services
10227 Ilderton Road
Ilderton, ON N0M 2A0

July 16, 2019
File: LD-00240

VIA EMAIL

**Attention: Mr. Jake DeRidder, C. Tech.
Development Review Coordinator**

Dear Jake:

**Reference: Proposed Senior's Apartment Development
MN 22447 Komoka Road
Site Servicing Brief**

Introduction

LDS Consultants Inc. (LDS) has been retained by 1571145 Ontario Limited to provide a servicing strategy for a proposed senior's apartment development located at MN 22447 Komoka Road in the village of Komoka, (hereinafter referred to as the site).

The site is approximately 5.91 hectares (14.6 acres) in area, and is bordered to the north by commercial land-uses, to the east by Komoka Road, to the west by the Bella Lago residential development and large private pond area, to the south by low density residential lands and a pond area connected to the lands to the west. The site is occupied in part by a privately-owned pond measuring approximately 2 hectares in area which occupies the south end of the site, and a relatively flat plateau area which has potential to accommodate the proposed development.

The subject site is proposed to be developed as a high-density residential use comprising two five-storey apartment buildings yielding a total of 152 apartment units, and having an approximate even split between one-bedroom and two-bedroom type units. The development is proposed to be serviced via connections to full municipal services contained within (stormwater management), adjacent to (domestic and fire water supply), or within close proximity (sanitary) to the site.

Subject to securing requisite approvals, construction of the project is anticipated to commence within a period of six to twelve months following the receipt of Site Plan approval. The project is planned to be phased with construction of the first apartment building taking upwards of eighteen months to complete. From an occupancy perspective, it is anticipated that it may be upwards of three years to four years before the first building is fully occupied.

Development Charge Revenue Projection

A financial snapshot of the proposed development from a Development Charges Reserve Fund perspective is presented in Table 1. Revenues presented in Table 1 are based upon the Municipality of Middlesex Centre Development Charges Background Study prepared by Watson & Associates Economists Ltd., dated May 8, 2019. As highlighted in Table 1, the proposed development is projected to contribute approximately \$1.65M towards the Municipality's Development Charges Reserve Fund. Of the approximate \$1.65M of total revenue generated, approximately \$762,000 and \$113,744 is attributable to wastewater and water infrastructure projects (i.e. Urban Services) whereas the balance (\$773,536) is attributable to services required on a municipal wide basis.

Table 1 – Development Charge Revenue Projection

Service	Apartments (2 Bedrooms)	Apartments (1 Bedroom)	Total Revenue
Part 1 - Municipal Wide Services			
Roads	\$ 2,107	\$ 1,328	\$ 264,176
Public Works	\$ 1,037	\$ 654	\$ 130,048
Fire Protection	\$ 978	\$ 616	\$ 122,592
Parks and Recreation	\$ 1,819	\$ 1,146	\$ 228,032
Library	\$ -	\$ -	\$ -
Administration - Studies	\$ 229	\$ 144	\$ 28,688
Total Part 1	\$ 6,170	\$ 3,888	\$ 773,536
Part 2 - Urban Services			
Wastewater	\$ 6,078	\$ 3,830	\$ 762,000
Water	\$ 907	\$ 572	\$ 113,744
Total Part 2	\$ 6,985	\$ 4,402	\$ 875,744
Total Projected DC Revenue			\$ 1,649,280

Storm Drainage & Stormwater Management

Under current conditions, developments along the north and northwest sides of the site have two stormwater outlets for treated water which drain across the site and discharge into the existing onsite pond. The Municipality also has a stormwater outlet serving a portion of the developed village of Komoka which is located on the east side of the subject property which also discharges untreated runoff into the existing onsite pond.

Under proposed conditions, external flows from the north and northwest will be maintained through the site as will the Municipality's untreated flows. Stormwater runoff (minor system flows) from the proposed development is anticipated to be pre-treated using a combination of at-source measures such as infiltration galleries, LID's, OGS technologies, etc., and will be directed to the onsite pond for further treatment. Similar to minor system flows, major system flows will be contained on site and routed to the onsite pond.

It is noted that the Municipality has initiated a municipal wide Stormwater Master Plan, and although not complete, it is expected that the stormwater management strategy serving the proposed development can be readily integrated to meet the objectives of the yet to be determined preferred stormwater management alternative.

Sanitary Servicing

The sanitary outlet for the proposed development is the existing 300 mm diameter gravity sewer located in the vicinity of the intersection of Komoka Road and Glendon Drive. A preliminary review of servicing alternatives which is contingent upon final site grading, includes a gravity servicing option, a private pumping station and pressure forcemain option and / or a hybrid of the two.

As mentioned previously in this letter report, it is anticipated that it may be upwards of three years to four years before Phase 1 is fully occupied. Under full occupancy Phase 1 is estimated to generate and direct approximately 180 m³/day of wastewater to the Municipality's collection, conveyance and treatment systems.

In terms of the Municipality's infrastructure, it was recently revealed by the Municipality that components of the downstream wastewater conveyance system (i.e. Main Street Sewage Pumping Station) may be approaching capacity limits. Supporting documentation, including excerpts from Main Street Sewage Pumping Station Operations Manual, indicates the pumping station to have a peak flow pumping capacity of 2,800 m³/day whereas flow data from the Komoka WWTF, also provided courtesy of the Municipality and presented in Table 2, indicates peak flows increasing monthly to 1,176 m³/day in the month of April '19. Since flows at the treatment plant are conveyed exclusively by the Main Street Sewage Pumping Station, it can be concluded that there is a direct correlation between the two facilities and that sufficient capacity exists in the pumping station to support the proposed development.

Notwithstanding the availability of capacity, the Municipality, as evidenced by the inclusion of select wastewater projects in their Development Charges Background Study, has taken proactive measures, to ensure adequate conveyance capacity is available for growth anticipated within the pumping station's service area over the course of the next twenty-year planning horizon.

Table 2 - Komoka Wastewater Treatment System Flows ¹.

Year	Description	Units	Jan	Feb	Mar	April	May	June
2018	Effluent Total	m ³	14,727	16,541	19,867	21,605	19,711	15,251
	Effluent Average	m ³ /day	475	591	641	720	636	508
	Effluent Max	m ³ /day	635	781	789	921	1,335	711
2019	Effluent Total	m ³	20,057	22,509	26,023	26,956	31,321	
	Effluent Average	m ³ /day	647	804	839	899	1010	-
	Effluent Max	m ³ /day	782	982	1,035	1,176	2,001	
Effluent Max (year/year)		m ³ /day	147	201	246	255	666 ².	-

1. Komoka WWTF System Flows: Average Daily Flow Rate 2,250 m³/day, Max Flow Rate 9,000 m³/day

2. Represents statistical anomaly due to major inflow of groundwater associated with pipe failure.

Domestic and Fire Water Supply / Servicing

Domestic and fire water supply for the proposed development can be provided via a connection to the recently installed watermain situated in the west boulevard of Komoka Road.

Should you have any questions concerning the foregoing and attached, please do not hesitate to contact the undersigned.

All of which is respectfully submitted by,

LDS CONSULTANTS INC.

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