

M.J. Davenport & Associates Ltd.

CONSULTING ENGINEERS AND PLANNERS

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**343622 Church Side Road East
Part of Lot 27 Concession III
Geographic Township of Sarawak
Municipality of Georgian Bluffs**

SERVICING OPTIONS STUDY

Water Supply

Church Side Road East is currently serviced by a 400 mm diameter municipal watermain at the intersection of the proposed road into the plan of subdivision.

We propose to connect an 200 mm diameter watermain onto the 400 mm diameter watermain to service the plan of subdivision.

Sewage Disposal

The following options are available for the treatment of domestic sewage generated within the plan of subdivision:

1. Install a sanitary sewage collection system and sewage treatment plant to service the eight lot plan of subdivision.
2. Install a sanitary sewer northerly from the plan of subdivision to connect into the sewage treatment system installed for the Cobble Beach golf club and residential subdivision and golf club.
3. Install individual septic systems on each residential lot.

Option 1

The roads and services within any plan of subdivision is ultimately assumed by the municipality. The Municipality of Georgian Bluffs would prefer to not assume responsibility for the ownership and operation of a small sewage treatment plan to service an eight lot plan of subdivision. Option 1 is simply not practical.

Option 2

Option 2 proposes installing a sanitary sewer through the Cobble Beach Subdivision to connect into a sewage treatment plant currently owned and operated under the terms of a subdivision agreement with the municipality. The developer that constructed the sewage treatment plant has plans to develop in the order of 2,500 residential units on the Cobble Beach property so space will not be available to a competitor within a ten year time period. Option 2 is also not practical.

a) Servicing within the Plan of Subdivision

Sanitary Sewer	252.4 m @ \$175.00	\$ 44,170
Manholes	4 @ \$3,500.00	14,000
Contingency (10%)		5,830
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Subtotal		\$ 64,000
Engineering Design and Construction Supervision (10%)		6,400
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Total Estimated Cost		\$ 70,400

b) Servicing to an existing sanitary sewer outlet

Sanitary Sewer	851.7 m @ \$175.00	\$ 149,047
Manholes	10 @ \$3,500.00	35,000
Contingency (10%)		18,453
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Subtotal		\$ 202,500
Engineering Design and Construction Supervision (10%)		20,250
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Total Estimated Cost		\$ 222,750

Estimated Average Cost per Lot is \$36,643.75

Option 3

Excerpts taken from the hydrogeological assessment report prepared by GHD dated July 4, 2017 states as follows:

1. Section 6.5.2 Septic Waste Disposal

“...The Site is not considered to be hydrogeologically sensitive. No karst formations were observed. It is our professional opinion that the Site is suitable for the construction of septic waste disposal systems.”

“...Test Pits were excavated to a maximum depth of 3.4 m. Bedrock was not observed. No karst formations or indicators of karst were observed within any of the test holes.”

“The T-time of the underlying soil is estimated to be greater than 50 min/cm. Based upon the subsurface soils in the area of the proposed leaching beds, it is recommended that the waste disposal systems be designed as fully raised bed systems.....”

2. Section 6.5.2.2 Waste Disposal Requirements

“The tile beds should be sized accordingly and will likely be about 400 square metres for a conventional system based on a T-time of 8 min/cm and a 15 m mantle in the direction of flow. It is our opinion that there is sufficient area within the proposed lots to support the tile bed and house. New technologies are available to reduce the size of the footprint of the conventional septic system. If other new technology septic systems are incorporated into the design, it is recommended that the systems be installed as per the Ontario Building Code.”

Estimated Cost to Construct Individual Septic Systems
Ranges from \$5,000 to \$10,000 per Lot

Option 3 is the only practical solution to the treatment of domestic waste generated within the eight lot plan of subdivision.

Hydro Distribution System

Church Side Road East is serviced by overhead hydro distribution lines. The single family house located on the property is also serviced by an overhead hydro line.

We propose to have Hydro One Networks Inc. design an underground electrical system to service the eight lot plan of subdivision.

Telephone System

Bell Telephone has underground wiring servicing the single family house located on the subject lands. This telephone system will be reconstructed to service the entire development.

Cable Television System

Satellite television servicing is available on an individual house basis.

Gas Distribution System

The area is not currently serviced by natural gas.

Prepared by:

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