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INNOVATIVE ENGINEERING DESIGN & CONSTRUCTION FOR VALUE ENGINEERED PROJECT DELIVERY

### SITE SERVICING OPTIONS REPORT WAREHOUSE AT 6787 HIRAM DRIVE, OTTAWA, ON (LIGHT INDUSTRIAL BUILDING)

PREPARED FOR:

Venom Motor Sport

6820 Mackeown Drive, Ottawa ON

DATE : May 20<sup>th</sup> 2018 (**RESVISED March 15<sup>th</sup> 2019**)

Distribution : City of Ottawa (5), Venom Motor Sport (1)

## **INTRODUCTION**

The proposed development is for a single storey warehouse building with a GFA of 998 sq. m two (2) bays at the rear side (west) and situated at the intersection of Hiram Drive and Mackeowon drive.

The development lot under consideration is approximately 4003 sq. metres.. Other development features will be : asphalt access parking lot with underground storm water management storage system at the front of the building, underground fire-fighting water storage tank, landscape area, storm water management outlet structure, on-site septic system at the rear of the building and a 15 meter 'no-touch' area at rear of the lot per South Nation Conversation requirement. The project features are designed to meet City of Ottawa site plan control requirements, in spite of the lot's peculiar configuration which posed numerous challenges to design of the civil structures.

The Shield Creek Watershed Study was consulted for relevant information. The ESA Phase 1 & 2 was executed to satisfy environmental requirements due to presence of an auto scrap yard at the rear side. had. The geotechnical report was consulted for soil information.

This report will serve to provide the City of Ottawa with our serviceability brief to address the proposed site servicing for property.

## **EXISTING SITE CONDITIONS AND SERVICING**

The lot is undeveloped and relatively flat and drains predominantly east to west across the site. At the rear of the lot there is a 15 m "no Touch" zone. There is an earth berm constructed across the rear of the lot to delineate this area for flood protection. The existing ground surface of the lot is an open field and mostly grass covered. The rear portion of the lot is bushed.

There are no municipal services to serve this site. There is a ditch along Hiram drive (east side) that flows towards south and the site's SWM is designed for a controlled discharge to the ditch.

The lowest elevation of the building is required to be 0.30m above the 100-year flood plain elevation which is given as 99.78 m at the west side.

## **PROPOSED WAREHOUSE BUILDING**

A 2-vehicle entrance located at the front south side of the lot is proposed to serve this property along with the associated asphalt roadway to direct vehicular traffic in and out of the site front parking lot. A compacted gravel rear yard is designed service the loading bays and leading to it is an asphalt driveway on south side. The parking lot is at the front of the building.

### **SERVICING - Water Supply**

A drilled well is proposed to provide potable water to service this site. The well depth and pumps was established by a hydrogeologist and the report has been submitted.

### **SERVICING - Sanitary**

An on-site private septic system proposed for the rear of the building and will be constructed to provide wastewater treatment for this site. It is a tertiary treatment unit for an approximate daily flow of 3775 L/day. The septic system design ie being forwarded a permit application to the Ottawa Septic Office the SNCA.

### **SERVICING - Storm Flow**

Storm water outlet for this proposed property will be the existing roadway ditches on Hiram drive on the east end of the property. No storm water storage on the roof of the proposed building will be available due to pitched roofing within the storm water management (SWM) controlled area. On-site drainage will be graded by directing surface water to the proposed catch basins and SWM underground storage and by incorporating the proposed grades of the asphalt access road and parking area so that the designed storm water storage will be achieved.

The detailed SWM plan is presented in the accompanying document titled 'Site Servicing and Storm Water Management report' and the plan drawing titled 'Servicing, Grading and Erosion Control Plan'.

## **EROSION AND SEDIMENT CONTROL**

The contractor or the developer shall implement Best Management Practices per OPSD 219.110 to provide for protection of the catch basins during

construction as described in 'Site Servicing and Storm Water Management report' and the plan drawing titled 'Servicing, Grading and Erosion Control Plan'.

## CONCLUSION

We trust that this brief gives a summation of design considerations for the options chosen for servicing of this project.

Chinedu J Enendu, P.Eng

