



417 1000 ISLANDS PARKWAY
LANSDOWNE, ON

STORMWATER MANAGEMENT BRIEF



EASTERN ENGINEERING GROUP INC.

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OCTOBER 2024

REVISION RECORD					
REV	DESCRIPTION	PREPARED BY		REVIEWED BY	
0	ISSUED FOR REVIEW	CJ	2024-03-15		
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Prepared by 
(Signature)

Colin A. Jardine, P. Eng

President, Eastern Engineering Group

Director of Civil Engineering

PROJECT BACKGROUND

Eastern Engineering Group Inc. was retained by Mr. Dave Seal to prepare a site plan for new visitor parking lot on vacant land at Point Comfort, 417 1000 Island Parkway, just immediately east of the Glen House Resort. The parking will be used by visitors. There will be 56 spaces including 3 accessible spaces on a gravel parking lot.

SUPPORTING INFORMATION

The Stormwater Management Report was developed using background information provided by the Owners and the Township of Leeds and 1000 Islands.

Project Name: Point Comfort Visitor Parking Area
Owner: Glen House Resort/Point Comfort
Contact: Dave Seal
Email: daveseal@glenhouseressort.com
Legal Address: 417 1000 Islands Parkway, Lansdowne, ON

LOCATION

The proposed parking area is located at 417 1000 Islands Parkway, Lansdowne, ON.

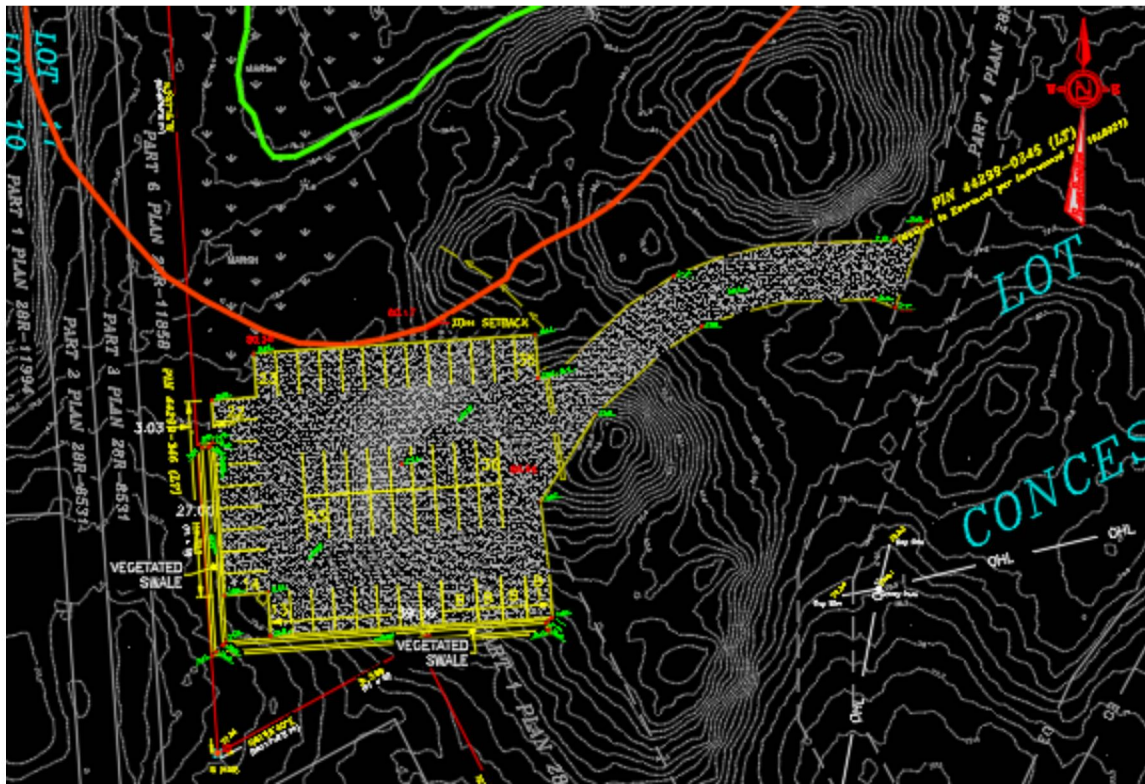


EXISTING STORM DRAINAGE CONDITIONS

The existing area is located at the west side of the site in an undeveloped portion of the lot. The existing area is grassed area adjacent to a former marshy area which drains easterly across the property and to the St Lawrence River eventually.

PROPOSED SITE WORKS

The proposed site will include new gravel parking area, 40m x 45m, asphalt (1735 sqm), with an 8 m wide gravel access lane from an existing roadway on the property. The area of the parking lot will be stripped to native material and constructed of granular B and granular A materials, compacted to achieve 95% density.



STORM WATER MANAGEMENT

The normal requirement for a site is to match pre-development to post-development conditions. The intention of the design in this report does not aim for pre to post as the increase we feel is negligible and presents a minimal risk to the surrounding properties.

The stormwater from the parking lot will continue to flow naturally to the ditch and marsh which will filter any sediment naturally with the marshy lands trapping sediment prior to it's 215m flow path to the St. Lawrence River.

QUALITY – BEST MANAGEMENT PRACTICES

The area being modified is below 2 ha, as defined in the MOE stormwater design manual, section 4.1.1, we treat this as a smaller developable site and recommend Lot Level and Conveyance Controls should be allowed for the site.

The flow from the parking lot will flow from the north-east corner to the south-west corner, and will then go into the vegetated swale around the west and south sides of the parking lot. The flow will then exit to the ditch located on the west side of the site and follow natural drainage paths. To help with water quality, Best Management Practices and Low Impact Development strategies are addressed by the rural nature of the development which includes the following factors:

Infiltration

Long flow paths will help with the removal of sediment and keeping temperature of the water lower. The flow path from the developed area to the east, eventually to St Lawrence River. The area is a very low sloped, marshy, grassed area which allows for infiltration to the top layer of topsoil and earth.

Preserve areas of undisturbed soil and vegetation

Areas that can retain their natural soils and current conditions should be included in the planning.

Fit design to terrain

The parking area will be constructed to closely match existing grades. The grass land area will be utilized to promote infiltration and sediment removal.

Lot level Controls

At the lot level, the effects of runoff reduction measures are enhanced by minimizing lot grades to promote natural infiltration. Due to the natural topography or relief of the site, the existing grading of the entire site will be maintained and thus allowing natural filtration and absorption to continue while maintaining base flows and reducing TSS levels.

Conveyance Control

The use of low gradient grassed waterways having minimal side slopes is one of the best conveyances controls available. The flat grades help to reduce flow velocities, reducing erosion potential.

Treatment Target and Anticipated Treatment Level

We are aiming for a normal level of treatment as per typical CRCA SWM guidelines. Best management practices such as grassed surface can achieve this objective.

QUANTITY

There are no quantity controls proposed for this development. Stormwater flows will be minimal from the lot as it is permeable and infiltration into the gravel base will be first level of quantity control. The vegetated swale will also slow water flows. The site has a large area for infiltration and there is no risk of contaminated water being introduced to storm sewers outside the property.

SEDIMENT AND EROSION CONTROL

To control sediment and erosion during construction the Contractor shall install silt fences on the site as per OPSD 219.110 as needed around the construction area.

Sediment and erosion control barriers shall be monitored daily and maintained, as necessary. The Contractor shall remove the sediment and erosion control measures upon completion of construction and after re-vegetation has occurred. Care shall be taken at the removal stage to ensure that any silt that has accumulated is properly handled and disposed of.

The owner shall be responsible for monitoring and maintaining the stormwater facilities.

The Sediment and Erosion Control Plan shall be considered a 'living document' that may need to be changed or adjusted during the life of the project to be effective.

CONCLUSION – LOW RISK SITE

Stormwater runoff from the developed area will flow overland to the east area of the property, following existing drainage paths.

The site has controls for Lot Level controls naturally on the site with reduced grading, and areas of grassed, vegetated land for infiltration.

The site as proposed, is a low risk with regards to stormwater runoff affecting neighboring properties due to the location of the site, the amount of area for dispersion and infiltration of runoff from the developed portion. The increase in runoff is negligible when considering the wide sheet flow and very low flow velocities of the stormwater.

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