



**Environmental
Hydraulics
Group**

**Coastal & River
- Environment**

**Project: Remedial Shoreline Erosion Works and
Setback Evaluation – Hydr. Structures**

1994-541

Location: Etobicoke, Toronto, Ontario

Client: Zanini Development

Completed: May 1995

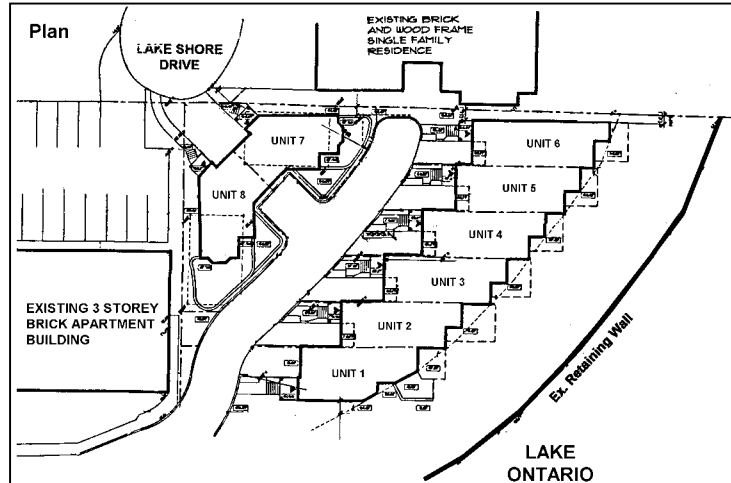
Description: EHG conducted the following analysis and documentation for a development site. The 0.24 ha subject site was located north of Lake Ontario waterfront and west of Sandbeach Road. The existing site configuration had a 3.5 m retaining wall. The two areas addressed in the study were:

1. A coastal analysis to present the shoreline protection works (i.e. retaining wall and overtopping).
 - The existing retaining wall along the waterfront was inspected, in good condition.
 - Flooding due to overtopping of the retaining wall had to be evaluated.
2. A temporary sedimentation control plan during the construction was required.

Benefit to the Client: EHG's findings:

1. There was no significant structural or hydraulic impact on the existing retaining wall as a result of the proposed works:

- i) The quantity of overtopping rate was very small;
- ii) A swale would be provided to drain out the flooded water (if any);
- iii) The residential development was 12.5 m away and 0.30 m above the top of the retaining wall. The intensity of overtopping behind a coastal structure decreased rapidly, in an order of exponential rate, with the distance away from the shoreline.
- iv) The armour stones placed in front of the toe would further diminish the impact of over-topping.



2. The following temporary sediment control measures would be implemented during the construction period:

- i) Place the two access lanes;
- ii) Install the cable anchorage;
- iii) Install the rock check dam;
- iv) Clean up the temporary interceptor ditch;
- v) Stockpile and clean the armour stones;
- vi) Place armour stones in front of the toe of the retaining wall;
- vii) Construct the permanent swale;
- viii) Remove the crushed stones from the access roads and the rock check dam;
- ix) Conduct a proper cleaning and sodding.

