Overflow Control along Harbourfront Trunk Sewer, Brock Street to River Street

PREFERRED DESIGN CONCEPT

Alternative Design Concept 5 has been selected as the preferred design concept. See Figures 12 and 13.

It is the lowest-cost option, and ranks highly in terms of minimizing impacts on businesses and residents during construction.

As well, it ranks favourably in terms of minimizing potential impacts on archaeological resources in the project area.

The deep tunnel option (ADC 4) is better in terms of these impacts. However, these advantages are outweighed by the substantial additional cost (on the order of $ 5.0 million) of the deep tunnel option.

ADC 5 is based on constructing a relatively shallow interceptor sewer along Wellington Street within the downtown area. This approach minimizes the chance of encountering coal-tar contaminated soil, bedrock and groundwater that is known to be present around the site of the former coal gasification plant (once located on the block bounded by King, Barrack, Ontario and Queen Streets).

The deep interceptor options (ADCs 1, 2 and 3) present substantially higher risk of encountering subsurface coal-tar contamination. However, these options do provide the benefit of allowing for flow diversion from the existing Harbourfront Trunk Sewer from Brock Street to River Street Pumping Station. In contrast, ADC 5 provides this capability from only Bay Street northward. This capability would allow for rehabilitation of the existing trunk sewer which is now about 45 years old. However, this added capability of ADCs 1, 2 or 3 does not outweigh the substantial added costs (about $3.0 million more than ADC 5).

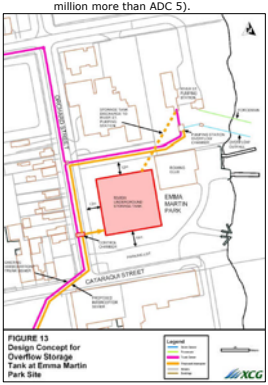

FIGURE 13
Design Concept for Overflow Storage Tank at Emma Martin Park Site

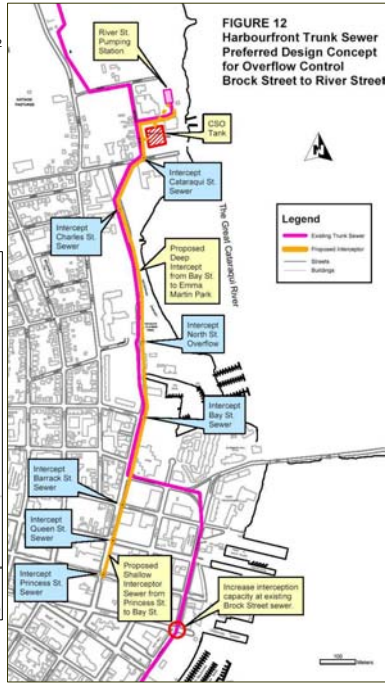

FIGURE 12
Harbourfront Trunk Sewer
Preferred Design Concept for Overflow Control
Brock Street to River Street

Proposed Underground Overflow Storage Tanks

TANK SITE DESIGN AND LANDSCAPE RESTORATION

Underground tanks for storing sewer overflows have been constructed in numerous municipalities, including cities in Ontario. Often the only space available for building these facilities is municipal parkland. An important aspect of design and construction is to restore the site so that there is no loss in park area. This is achievable because the facility is mostly underground.

Below are some photos of facilities recently built in Toronto and Sarnia (courtesy of CH2M Hill Canada Limited)

Kenilworth Avenue Tank, Eastern Beaches, City of Toronto

Located at the foot of Kenilworth Avenue, alongside the Martin Goodman Waterfront Trail and boardwalk at Kew Beach

MacLean Avenue Tank, Eastern Beaches, City of Toronto

Located at the foot of MacLean Avenue, east of the Kenilworth Ave tank, near Balmy Beach

Devine Street CSO storage tank, Sarnia, Ontario
Final landscape design incorporates playground area


Sarnia's Devine Street CSO facility