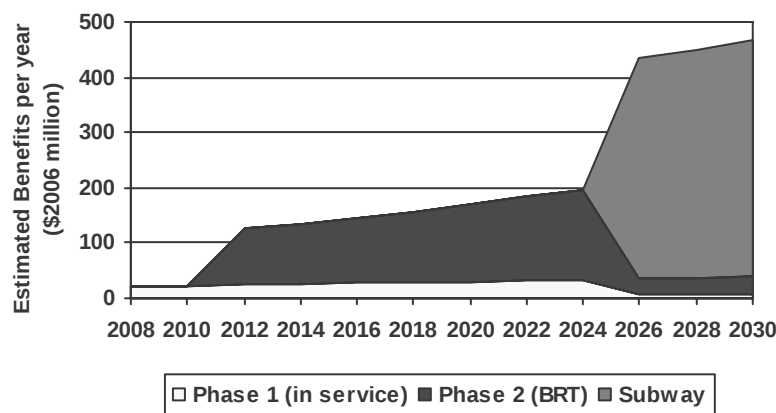


Business Case for Viva Y1 Rapidway & Yonge Subway to Richmond Hill Terminal

As shown in Exhibit 1, a solid business case supports Phase 2 BRT investment on the Y1 segment of the Yonge corridor. The matching funding contributions from the Government of Canada and Province of Ontario contribute to 66% of the cost of Viva implementation. The cost-benefit analysis prepared for the Federal funding submission shows a payback period of less than four years. This means that the BRT rapidway will pay for itself two or three times before the subway extension can begin service.

Exhibit 1: Estimated Annual Benefits of Implementing the Y1 BRT Rapidway



Benefit values were estimated using the TransDEC model as prescribed by the Government of Canada's Strategic Infrastructure Fund (CSIF) program. The model was used by the Federal government to justify its recent funding of the Viva Phase 2, Stage 1 project on the basis of the benefits the project would generate. These benefits are comprised of travel time savings (89%), environmental and social aspects (7%) and reductions in traffic accidents (4%).

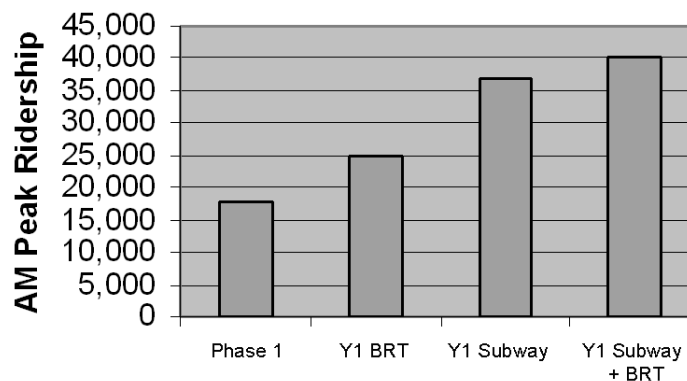
The Y1 Phase 2 benefits surpass the excellent eight-year return on the investment already made for Viva Phase 1. Investment in the BRT rapidway begins to generate a significant fraction of the subway's benefits as soon as the rapidway becomes operational—for less than 10% of the equivalent subway cost and 11-16 years earlier than when a Yonge subway extension to Richmond Hill Centre Terminal would likely start operations.

The Y1 BRT investment supports growth and development of the entire network by providing largest improvement in travel times to the 70% of Viva Phase 1 riders, or the 5.2 million boardings that currently travel through the Y1 corridor each year.

After the subway extension is in service, Y1 BRT will continue to provide payback by providing surface transit service between subway stations. The relatively close spacing of Phase 2 vivastations presents an opportunity for both subway construction savings (i.e., the cost for a single subway station is approximately \$100 million, the estimated cost for the entire Y1 BRT rapidway) and faster subway trip times between Richmond Hill Centre and Toronto.

Ridership demand estimates for the year 2031 across the rapid transit system, with some consideration of likely growth over the following 20 years, indicate solid and growing ridership on the South Yonge Street corridor. Exhibit 2 shows a comparison of rapid transit technologies for estimated morning peak-period Y1 ridership in 2021.

Exhibit 2: Impact of Transit Technologies on Y1 Transit Ridership



With no additional improvements to Viva Phase 1, morning peak period ridership would be about 18,000. The corridor demand with a BRT rapidway (Phase 2) would increase this by almost 40% to 25,000. With a subway to Richmond Hill Centre without Phase 2 Viva, ridership is estimated at 37,000. The demand for the BRT rapidway operating in conjunction with the subway is estimated at about 40,000. Year 2021 average travel times along and within the Y1 segment also would be reduced by more than 50%--from over 16 minutes for Viva Phase 1 peak period service to approximately 6½ minutes for the combined Y1 BRT plus subway service.