



4.0 Impact Assessment and Reporting

Detailed measurement, analysis and reporting of the effectiveness of individual Showcase measures will be undertaken to demonstrate the success of the Yonge Street Transitway. The benchmarks for measurement will be derived from other operating systems in Canada, either directly or through the Canadian Urban Transit Association or Kyoto targets.

Ridership is a critical factor for measuring the success of transit projects because it drives so many of transit's other benefits, which are less easily measured. Increases in transit ridership translate into reductions in automobile use and traffic congestion. These, in turn, result in reductions in air pollutant emissions, including the greenhouse gases identified under the Kyoto accord. Improvements in travel times through areas served by the Transitway will also reduce emissions and noise from the transit vehicles themselves.

Each element of the project, such as ITS information, the stations, the median transitway and transit signal priority, will make an incremental contribution to achieving the desired outcomes. The synergistic effect of all of the elements of rapid transit are capable of producing greater ridership gains than the sum of the individual elements.

4.1 TRANSPORTATION AND MOBILITY BENCHMARKS

Examples of transportation performance indicators include comparisons of the following measurements over time:

- System wide transit ridership
- Reductions in travel times between origin-destination pairs
- Service reliability and frequency

- Transit fare analysis
- Financial indicators (revenue to cost ratio, cost per passenger)
- Service utilization (number of annual passengers per capita, passengers per vehicle hour, passengers per route)
- Service provision (revenue vehicle hours per capita)
- Improved non-motorized access to transit services (pedestrian facilities)
- Customer satisfaction surveys

All of these measures will affect ridership. As changes are monitored and measured, continuous service improvements can be implemented to further increase ridership and reduce automobile use.

4.2 NATURAL AND SOCIO-ECONOMIC ENVIRONMENT BENCHMARKS

An assessment of the environmental impacts of the Yonge Street Transitway has been conducted in the context of the ongoing EA. Relying on relevant criteria, data sources and studies, this assessment included consideration of:

- The natural environment (aquatic, terrestrial, noise, vibration, air quality, contaminated soils)
- The socio-economic environments (residences, businesses, public amenities, community character, parks and open space, future land uses, cultural heritage, pedestrian and cyclist facilities)
- Transportation levels of service and safety



4.0 Impact Assessment and Reporting

As part of the EA process, the significance of the residual environmental effects is being assessed and documented. A recommended mitigation strategy is being developed and described in the EA report. The strategy, relying on technically and economically feasible mitigation measures, will minimize any adverse effects while increasing beneficial effects, and also include recommendations for a monitoring program.

Transit projects with the greatest positive impact on Smart Growth are those that are most attractive to potential customers. Rapid transit station areas are attractive places for real estate investment of all kinds—they are highly accessible both locally and regionally, visible to large numbers of potential customers, and a focal point for pedestrian traffic. Smart Growth performance indicators include land use and assessment values, building permits and Official Plan objectives for population and employment targets.

A primary goal of the Showcase project is to reduce greenhouse gas emissions from urban transportation through an integrated strategy. As an Action Plan 2000 initiative, this project will contribute to the reduction of greenhouse gas emissions towards meeting Canada's Kyoto target.

Air quality and other environmental benchmarks include:

- Air quality data and meteorology from MOE monitoring stations are being used to determine air quality and the potential for improvements resulting from operation of the Transitway.
- Air quality dispersion effects will be predicted using methodologies developed in comparable studies.
- Emissions of carbon monoxide, carbon dioxide, nitrogen oxides, total suspended particles, and particulate matter (PM₁₀ and PM_{2.5}) will be compared to provincial Ambient

Air Quality Criteria to assess the potential for improvement of any adverse effects.

- Vehicle kilometers of travel and total vehicle emissions in the Transitway corridor will be measured and compared on a regular basis.

4.3 BEFORE-AND-AFTER ANALYSES

A variety of mechanisms will be utilized to gauge the ongoing impacts of the project with a comprehensive before-and-after comparative framework.

A large part of the plan will involve data collection, which will begin immediately upon project approval in order to obtain the “before project” information required for later analyses. Sources of transportation information will include:

- Current transit operating budgets and schedules
- Ridership and traffic counts
- Transit travel times/delay runs
- Targeted boardings/alightings
- Automobile user surveys

Much of this data is already collected or is being collected as part of the EA process. A series of focus group interviews will also be undertaken before the project gets underway.

Development and real estate value information will be collected from municipal building permit files, assessment rolls and real estate sales data sources (e.g., newspaper reports, municipal deed records). Periodic surveys and focus groups will be conducted with the real estate community. A “before” analysis will be undertaken and the results documented in a comprehensive “Current Conditions” report.



4.0 Impact Assessment and Reporting

The same data collection approach and sources will be used after the project is completed. The initial “after” analysis will be done one year after the project’s formal opening. This initial report will be prepared to meet the Urban Showcase schedule, which requires completion by the end of 2006. As ridership for a new rapid transit project usually takes between two and three years to mature to a secular growth rate, a second “after” analysis will be done three years after opening, with a final analysis undertaken five years after opening when the project is fully mature from a transit market perspective. The “after” analyses will include all of the changes in the transportation system (i.e. service levels, operating and maintenance costs) resulting from the project.

On the development side, the project is expected to result in accelerated private and public investment in the adjacent community in the form of both refurbishments to existing establishments and totally new development. Recent BRT investments in North America have resulted in dramatic increases in real estate values and investment. It is reasonable to expect benefits to become visible after direct transportation changes are made.

The first analysis of real estate value and development effects in comparison to the “before” case will be done after three years and again after five years. To meet the Urban Showcase schedule, an interim report will be prepared before the end of 2006.

4.4 LESSONS LEARNED – INFORMATION SHARING

The “before-after” study approach will enable a better sharing of the lessons learned from the project’s planning, implementation and operation with other Canadian communities.

The YRTP Project Office has been very effective in sharing the lessons learned to date through a variety of Greater Toronto

Area, Canadian and North American associations, forums and publications. To date, presentations on the York Rapid Transit Plan have been given to numerous groups and at various events: Toronto Board of Trade; Toronto Transportation Summit; Southern Ontario Chapter of the Institute of Transportation Engineers; Canadian Urban Transportation Association; American Public Transportation Association.

Presentations are planned for the Transportation Research Board Summer Transit Planning Conference and for the annual meeting in Washington in January 2004. This active communications program is expected to continue through the national information program is expected to continue through the national information network that will be established as part of the Urban Showcase program.

The capacity for both transit and land use planning innovation, and the communications effectiveness that have been hallmarks of the YRTP to date, can be expected to continue through Urban Showcase project implementation and the post-project evaluation period.

4.5 PROGRAM INTEGRATOR

In order to plan, implement, operate and maintain the proposed rapid transit system throughout the Region of York, the Region is in the process of finalizing, in conjunction with its private-sector partner, a special purpose company. A Program Integrator will manage the company and the activities described in this section.

The Program Integrator will form the nucleus of the “client” organization, providing the required services, including developing the system and monitoring operational efficiencies.