

Downtown Transportation Plan

Organization

City of Vancouver

Status

Started 2000, adopted 2002

Overview

Downtown Vancouver is one of Canada's most vibrant city centres and the Greater Vancouver's primary employment, retail and tourism centre. With over 80,000 people already living downtown there are conservative projections for an additional 20,000 residents and a total of 175,000 jobs by 2021.

To maintain and improve Downtown Vancouver's livability and economic performance, the City of Vancouver created a new Downtown Transportation Plan. The plan includes a coordinated palette of sustainable transportation initiatives that focus on creating new bicycle facilities and routes, pedestrian improvements and surface and rapid transit.

The plan was recognized in 2003 with a planning innovation award of excellence from the Canadian Institute of Planners.

Budget for plan development: \$906,000

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Resources

- Downtown Transportation Plan (www.city.vancouver.bc.ca/dtp)

Community context

Downtown Vancouver is the primary employment, retail and tourism centre of the Greater Vancouver region. The area is also home to a robust and growing residential community that is fairly unique among North American cities of similar size. Approximately 80,000 Vancouverites currently call downtown home.

With current land use policy actively encouraging ongoing downtown residential development, the area's residential and daytime populations are expected to increase even more over the next 20 years. By 2021, the downtown peninsula is expected to be home to more than 100,000 people, or an increase of 61% over 1996. Employment is also expected to increase to 173,000 by 2021, or an increase of 28% from 1996.

Given its role as a high-density employment centre, current travel patterns to the downtown also feature a higher use of transit than anywhere else in the Great Vancouver region. High transit use is supported by a range of transit options, including SkyTrain rapid transit, SeaBus pedestrian ferries, commuter rail and special B-Line express buses. It is also supported by relatively restricted road access and parking—there is no highway access—and fairly constrained parking. Currently, almost 40% of downtown commuters use transit as compared to a regional average of roughly 10%. Nearly 15% of commuters are walkers or bikers, amongst the highest level for North American cities, and walking is the number one modal choice amongst downtown workers and residents on a 24-hour basis.



Policy context

The Downtown Transportation Plan builds on the directions and policies established in earlier regional and City plans including:

- **Central Area Plan** (City of Vancouver, 1991). This plan scaled back potential office development to balance future transportation demand and supply. It also encouraged the development of downtown residential land uses.
- **Transport 2021** (Greater Vancouver Regional District [GVRD], 1993). A joint GVRD/Provincial report that makes numerous recommendations to encourage public transit and discourage single-occupant automobile travel throughout the region.
- **Livable Region Strategic Plan** (GVRD, 1995). The region's guiding planning document. Among other things, it recommends transit priorities for servicing major employment centres like Downtown Vancouver.
- **CityPlan: Directions for Vancouver** (City of Vancouver, 1995). A framework for City programs, priorities and actions on a range of topics, including transportation. CityPlan recommends putting a greater emphasis on walking, biking and transit, within and between neighbourhood centres and downtown.
- **Vancouver Transportation Plan** (City of Vancouver, 1997). The plan sets out major policy directions including the establishment of pedestrians, bicycling, transit, goods movement as transportation priorities. Its objectives formed the basis of the Downtown Transportation Plan.
- **Strategic Transportation Plan** (TransLink, 2000). A plan developed by the region's transportation authority. It calls for a major expansion of transit, including new buses and rail service.

Rationale and objectives

Despite the City of Vancouver's success in encouraging residential growth downtown and the transit options available to commuters, downtown rush hour trips are nevertheless projected to increase by 40% by 2020. Population and job growth in Downtown Vancouver have also outpaced projections made in 1997's Vancouver Transportation Plan.

Given these statistics, the city staff determined that a downtown-specific transportation plan was required to help steer Downtown Vancouver trip demand, improve travel choices, accommodate efficient goods movement and, perhaps most importantly, maintain the area's much celebrated livability.



Downtown Vancouver: a livable but physically constrained peninsula

The following policies, as approved by Council, provided the basis for the Downtown Transportation Plan:

- The increase in peak period trips to downtown should be accommodated by a major expansion in transit.
- Overall road capacity into the downtown will not be increased above the present level.
- Facilities for pedestrians will be improved within downtown.
- Bicycle access both to and within downtown will be improved by providing bike facilities on bridges, and providing a safe and effective network of routes throughout downtown.
- The downtown street circulation system will be reviewed to support downtown neighbourhoods.
- Short-term parking will be managed to ensure there is sufficient parking to meet normal demand.
- Parking and unloading of trucks in downtown commercial lanes will be reviewed with the intention of improving access to businesses.

Actions

The Downtown Transportation Plan is separated into seven principal components including sections on transit, pedestrians, bicycles, parking, goods movement, the road network and intelligent transportation systems. It also includes smaller sections on the public realm and marine transport.

Its recommendations emphasize walking, bicycling and transit, recognizing that improvements made in these areas will also help achieve an overall reduction in vehicle congestion.

The plan involved a six person planning team and considerable effort, time and funds. The entire process lasted over two years and directly involved over 2,000 residents and stakeholders through the plan's public involvement component.

“It was very hard to make a plan that supports residents and businesses,” says Jeffrey Patterson, the senior planner responsible for leading the project team. “Frequently, the demands of the downtown’s 80,000 residents were at odds with those put forward by the business community.”

A number of tools were used to help develop and assess the plan, including Greater Vancouver’s regional transportation model (EMME/2) and environmental and social impact assessments. EMME/2 is a computer program used to help plan transportation infrastructure by assigning trips to a multi-modal transportation network (vehicle, transit, walk, etc.) based on the fastest (least expensive) mode and route for an individual trip.

The completed plan is divided into seven main components. These are reviewed below.

Road Network Plan

This section addresses the need to update Downtown Vancouver’s road network to service the area’s maturing residential neighbourhoods. Some of its key recommendations include:

- Maintain the Granville Street Transit Mall (pictured below) as a transit, pedestrian and service vehicle corridor and future greenway
- Convert key one way streets to two way traffic to improve traffic flows and create a more efficient road network
- Distinguish and recognize the role of important circulation streets and local streets in future street modifications.



Granville Mall – Vancouver’s transit-only street

Transit Plan

The Transit Plan seeks to improve transit service for trips within and to and from the downtown. Currently, transit carries the largest share of commuters to downtown by all modes, with about 40% of commuters traveling this way. This share is expected to increase to 45% by 2021. About 90% of all increased commuter trips to the downtown by 2021 will be accommodated by transit. Planned rapid transit improvements will accommodate about three-quarters of the new commuters. Local transit ridership wholly within downtown is projected to increase by 85% in the morning rush hour over the next 20 years. Most of this increase will take place on local bus routes.

This component proposes a broad range of improvements including:

- Construction of a new rapid transit line from the downtown to Vancouver’s southern suburbs and the airport, as well as additions to another rapid transit line serving the northeast sector and the Central Broadway area in the City of Vancouver.
- Construction of streetcar lines in the downtown and connecting downtown to the industrial and information technology employment area to the east and to Vancouver’s Central Broadway area.
- Operate downtown circulator bus routes with easy-to-read colour-coded maps at bus stops to clearly describe their routes.
- Investigate the potential for introducing transit/HOV lanes on key arterials and extend existing lanes
- Investigate the potential for bus-passing opportunities and transit signal priority on key roads.
- Encourage TransLink to review the potential for a reduced fare for short trips in downtown.

Pedestrian Plan

The Pedestrian Plan proposes a broad range of pedestrian improvements including the creation of a Great Street network made up of a hierarchy of streets with unique architectural features or settings that distinguish them from other streets and make them suitable for special uses. These special uses can include parades, festivals, events, or more everyday experiences such as shopping or entertainment.

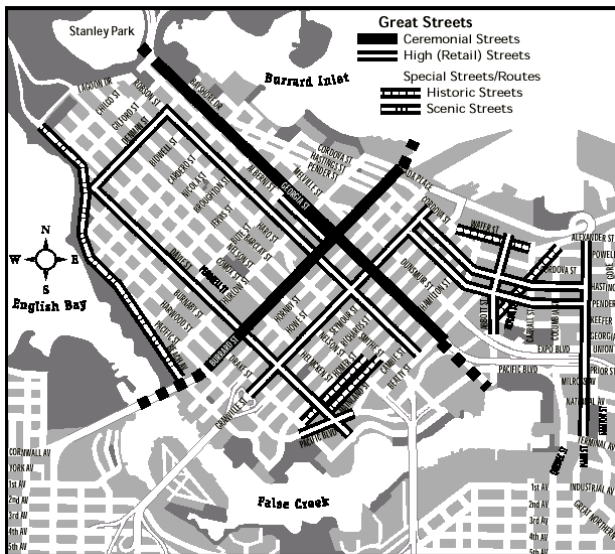
Great Streets are sub-categorized according to their major purpose or use:

- Ceremonial Streets — major streets that have a peninsula-wide connection and gateway function where one would expect a ceremonial procession to be held
- High Streets — streets that are easily identified as major neighbourhood or even city-wide shopping and entertainment locations

- Special Streets — streets that have an historical or functional significance and may also have scenic qualities or distinct designs

Other Pedestrian Plan recommendations include:

- Provide mid-block crossings near significant pedestrian generators where safe and direct connections are desired.
- Design and implement a universal downtown way-finding system of pedestrian signage.
- Implement corner bulges in locations where crossings are long and traffic capacity would not be greatly impacted.
- Provide pedestrian weather protection on retail/commercial (High) streets.
- Provide wider crosswalks at intersections with high pedestrian volumes.
- Install automatic pedestrian detectors and provide sensory devices for sight and hearing impaired pedestrians.



Downtown Vancouver's Great Streets Network

Bicycling Plan

Cycling is growing rapidly as a commuting mode in Vancouver. Travel surveys performed during the wet weather months indicate that the number of cycling trips to downtown doubled between 1994 and 1999. This occurred in the absence of any major improvements to downtown cycling facilities. The number of bike trips is expected to more than double again by 2021.

The Bicycling Plan component proposes a broad range of improvements, the most significant of which is the development of a 25 kilometre bicycle network to connect key downtown entry points (bridges, existing bikeways) to major activity centres. Routes will be designed to minimize

its effects on other road users by preserving on-street parking and traffic lanes wherever possible. In some cases travel lanes will be narrowed slightly to accommodate bike lanes.

Other Bicycling Plan recommendations include:

- Install a way-finding system in conjunction with development of the downtown cycling network.
- Provide related bike facilities to encourage and make bicycling safer and more convenient (e.g. bike parking facilities, way-finding/destination signage, education).
- Design all new streets and multi-use paths to adequately accommodate cycling.



New "Bike Box" pavement markings with a cyclist advance red light

Goods Movement Plan

Downtown Vancouver includes a truck route network. Defined truck routes and restriction of heavy trucks using key bridge connections into downtown effectively eliminates heavy trucks from using the central business district as a bypass to other destinations.

The Goods Movement Plan makes the following recommendations:

- Restrict truck access in areas where industrial and commercial uses have been replaced by residential uses.
- Maintain the existing system of one-way entry only to many of the rear lanes within the Central Business District.
- Manage tour buses by undertaking an education and enforcement program, and where necessary and practical, provide additional on-street tour bus parking and loading zones.
- Monitor the municipal commercial plate program to reduce unnecessary demands on the limited on-street loading facilities.

Parking Plan

Regulating the number of off-street parking spaces is one of the few means currently available to the City to control the number of vehicles coming into downtown. The Parking Plan includes the following recommendations:

- Adjust on-street parking regulations to accommodate an additional 570 short-stay parking spaces during the rush hours.
- Regularly review downtown residential and commercial off-street parking standards to ensure that adequate, but not abundant, parking is provided to meet needs.
- Discourage driveways across all sidewalks in the downtown, particularly along pedestrian oriented streets and bikeways.
- Review existing policies that permit the development of free-standing parking garages.
- Consider renovating city-owned parkades to animate street frontages and encourage private owners to do the same.



A new "green" City-owned parkade under construction

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) are already being used in Vancouver including a centrally coordinated traffic signal management system and red light cameras. The Downtown Transportation Plan recommends pursuing ITS technologies to make downtown travel more convenient and safer and minimize overall road congestion. Potential ITS applications to implement include:

- Microwave detection to give priority to pedestrians, cyclists or transit buses at intersections
- Use of the traffic signal control system to establish a 40 km/h progression speed
- Use of wireless technology or smart cards to manage and operate parking meters

Results

Vancouver City Council approved an implementation program that would see work advanced on 85% of the approved recommendations by the end of 2005. Several of the plan's recommendations have already been achieved, including:

- Conversion of targeted one-way streets to two-way traffic
- Initiating the main bike lane routes proposed through the centre of the downtown
- Initiating the design of the downtown greenways

If all of the plan components are implemented within the next twenty years, it is expected that:

- Walking trips will more than double from current levels.
- Bicycling trips will more than double from current levels.
- Rush hour transit trips will increase from 50% to 60%.

It is anticipated that these improvements will be made while the number of vehicles entering downtown will decrease slightly or remain about the same.

The Downtown Transportation Plan was recognized in 2003 with a planning innovation award by the Canadian Institute of Planners.

Participants

Development of the Downtown Transportation Plan involved a large number of stakeholders, including residents, businesses commuters and the general public.

At every step of the planning process, stakeholder participation and plan review was encouraged and facilitated through public open houses and meetings, workshops information newsletters and reports. Official comment was also invited from business organizations and transportation-related advocacy organizations. In all, over 2,000 residents and stakeholder took part in the process.

Resources

The proposed changes in the Downtown Transportation Plan could result in a need for substantial capital funding over a 20-year period. To date, the cost of transportation improvements has generally been paid in one of four ways:

- Senior government (provincial and federal) contributions
- The City's capital budget
- Development charges (Development Cost Levies [DCLs] or Community Amenity Contributions [CACs])
- TransLink capital and operating funds for links in the Major Road Network

These four sources are being reviewed for the implementation of the Downtown Transportation Plan recommendations.

To address the need for additional capital funds to accommodate future growth, interim city-wide charges on new developments began to be levied in 2000, expanding a tool that had only been used in a few localized areas within Vancouver. Currently, a formal city-wide financing growth strategy is being developed and should be a consistent source of plan implementation funding in the future.

Timeline

The process of developing the Downtown Transportation Plan can be broken down into the following six steps:

- **June-September 2000.** Gathering ideas and issues
- **October 2000 - April 2001.** Creating plan components
- **May-August 2001.** Developing options and choices
- **September-December 2001.** Creating a draft plan for discussion
- **April 2002.** Completing the final draft Downtown Transportation Plan
- **July 2002.** Plan approved by Council

Lessons learned

The completed Downtown Transportation Plan took a little longer to develop than expected, but it has been widely accepted and embraced by Downtown Vancouver's various, and often disparate, communities. "It took over two years to complete," says Senior Planner Jeffrey Patterson, "but in the end I think we managed to meet all of our goals and the needs of residents and businesses."

Some of the other lessons learned in developing the Downtown Transportation Plan included:

- **Enhanced public consultation can be necessary.** To improve the public response rate to the draft plan and to better validate the representation of the responses, it was necessary to carry out an enhanced public consultation program. This program involved a random sample survey of downtown residents, businesses and employees (200 from each group), focus groups, increased advertising, and blanket newsletter distribution to all addresses on the downtown peninsula at a cost.

The enhanced consultation cost an additional \$83,000, but the City is confident that it was worth the cost. "The surveys were the key to bringing it all together," says Senior Planner Jeffrey Patterson. "The results confirmed our ideas and helped gain the support of key business groups."

- **Include a graphics technician on the planning team.** High quality presentation materials can help improve public response and build greater public awareness. The availability of an in-house graphics technician allows for greater continuity and flexibility, and prompt updates to the draft plans as they evolved. In comparison to the outside consultants, an in-house graphics technician was found to be more cost effective because of the additional services provided.

Next steps

The City is currently working on developing new Streetscape Design Standards. These standards will be integrated with the Downtown Transportation Plan's recommendations.

As an important public benefit, the implementation of plan recommendations may also be done in coordination with the development of an overall Public Benefits Strategy for Downtown Vancouver. The development of such a strategy was called for by City Council in 1998.

Images are courtesy the City of Vancouver