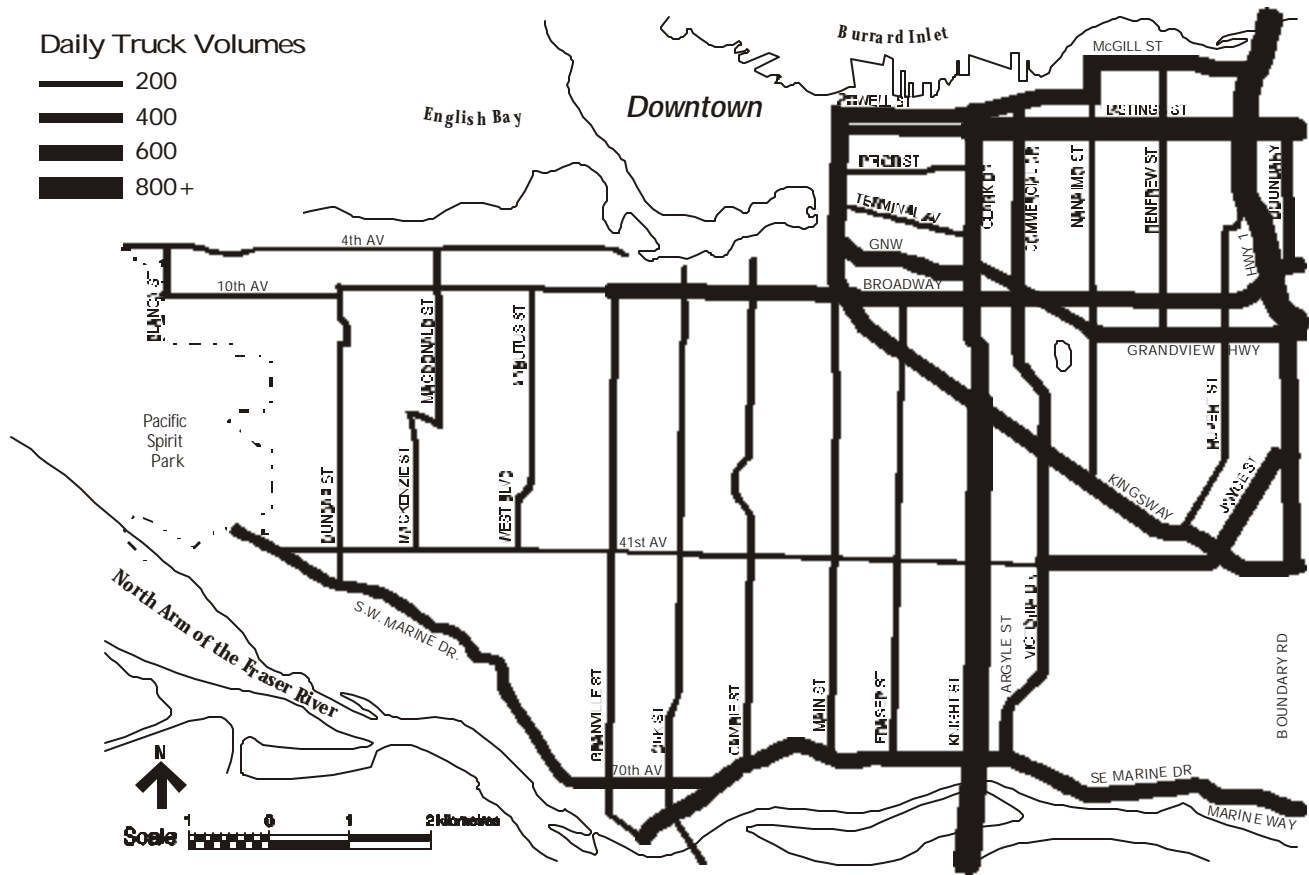


### 4.5 Goods Movement Plan

The economic health and competitiveness of the central business district are dependent upon its ability to move goods efficiently. This efficiency is often measured by the time it takes to deliver goods while travelling along the road or rail network. The road network is relied upon for most businesses in the downtown. Therefore the biggest problem for goods movement in the downtown is any delays that may result from an overall increase in traffic congestion. The Downtown Transportation Plan goals of minimizing traffic congestion and the promotion of alternative modes to the automobile are consistent with the objective of providing an efficient goods movement system.

The 1997 *Transportation Plan* recognized the importance of good truck access in the city by maintaining the existing truck route network. The downtown truck route network was reviewed with a similar intent to enhance truck access to main destinations without encouraging the use of streets where residential land uses are becoming more dominant. Currently, there are no major truck accessibility problems within the downtown because congestion is limited. Discussions with the BC Trucking Association confirmed this finding. Also, there is very little heavy truck traffic in the downtown as shown by Figure 4.5-A. Delivery vans and light trucks are common in the downtown, while most heavy trucks going downtown are usually related to construction or Port activities. The availability of loading zones appears to be the most important issue for efficient goods movement.

Figure 4.5-A  
**Heavy Truck Volumes** (Transportation Plan 1997)



In 1999, several truck routes were removed from the Yaletown area in light of the emerging residential land uses. It was determined that Yaletown's removal from the truck route network would not significantly affect deliveries to the area. The report also suggested a review of other potential changes to the Downtown Truck Routes and Truck Area as part of the Downtown Transportation Plan.

#### 4.5.1 The Port

The Port is the single most concentrated source of trucks and the main generator of heavy trucks in the downtown peninsula. Trucks from the Port predominantly head east towards Highway #1 or southeast towards the Knight Street Bridge. Fortunately, truck traffic within the downtown peninsula is well accommodated by the existing Port Road along the Burrard Inlet waterfront. The Port Road is controlled by the Vancouver Port Authority to serve their needs and contributes significantly to the efficient movement of Port related goods. It also reduces the potential impact of heavy truck traffic on downtown streets. Therefore, the Port Road should be maintained for Port related traffic and restricted from general traffic. The exception to this may be the use of the Port Roadway, by agreement with major downtown destinations near the waterfront (such as Burrard Landing and Granville Square developments), to allow servicing of these sites.

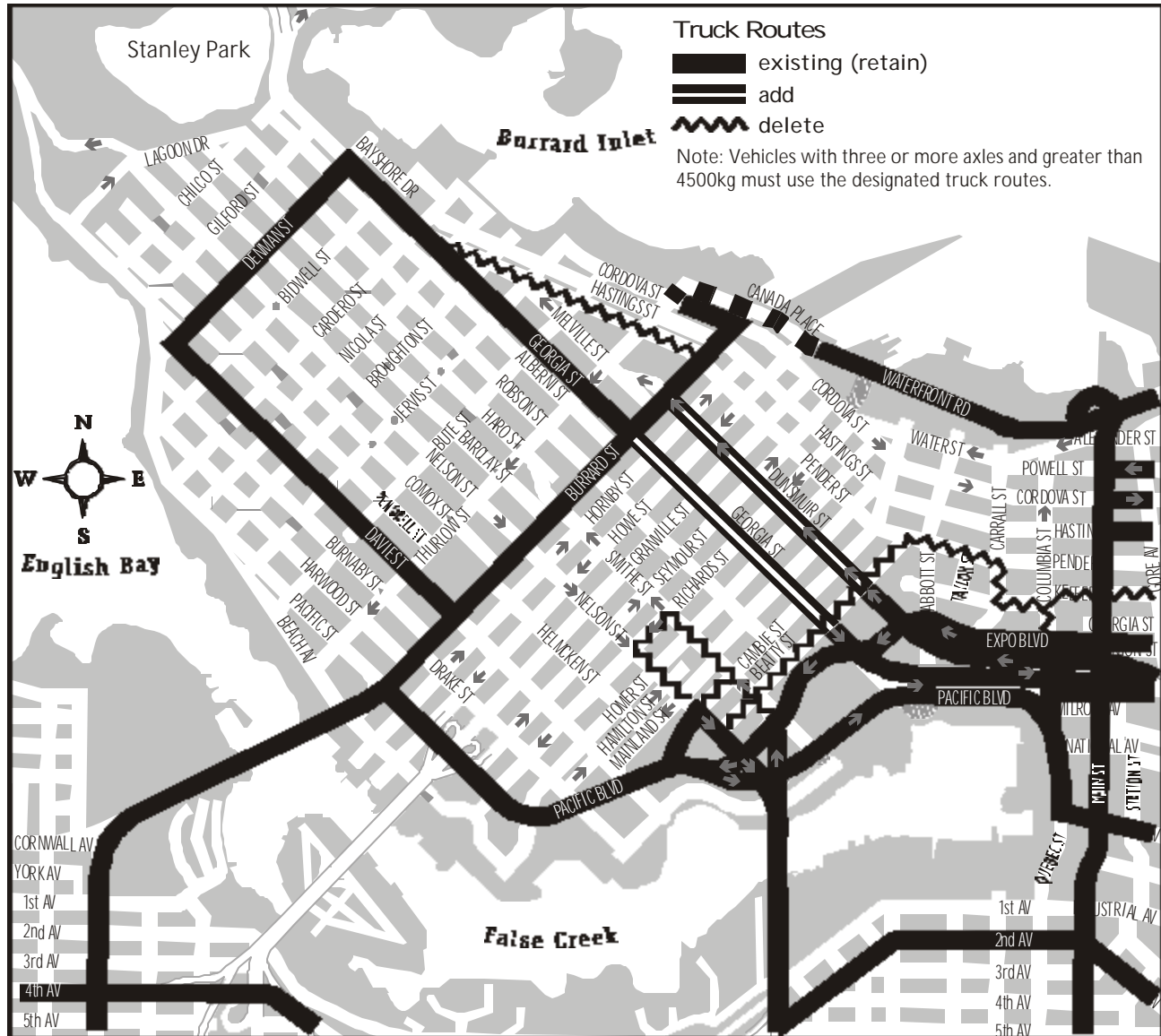
#### 4.5.2 Truck Routes

Large vehicles, like semi-trailer trucks, with three or more axles and a gross vehicle weight greater than 5,500 kg must use designated truck routes. For destinations not on a truck route, the shortest route between the destination and the closest truck route must be used. Figure 4.5-B shows the designated truck routes within the downtown. It should be noted that the Lions Gate Bridge is not a designated truck route. Although this is related to the carrying capacity of the bridge, it also helps to significantly reduce heavy truck traffic that might otherwise shortcut through the downtown and add to traffic congestion, and air and noise pollution.

Also shown in Figure 4.5-B is the recommended additions and deletions to the truck route network. Both Dunsmuir and Georgia streets between Burrard and Beatty are recommended to be added to the truck route network. This is based on the observation that heavy trucks are currently encouraged to use the Georgia and Dunsmuir viaducts to exit and enter the downtown peninsula from the east. If these trucks are coming from or destined to locations along Denman Street, the current truck route network would require them to travel along Pacific Boulevard, Burrard Street and Davie Streets. This routing is not only more circuitous, it also has greater impacts to the more sensitive residential land uses located along those streets. In comparison, the use of Georgia and Dunsmuir streets are more direct, and they do not have as many residential land uses.

Recommended deletions to the truck route network include Pender Street between Burrard and Georgia streets, and a series of streets generally north of Expo Boulevard. Pender Street as a truck route is seen as redundant given the availability of Georgia Street. The streets north of Expo Boulevard recommended for deletion include parts of Smithe, Nelson, Richards, Homer, Cambie, Beatty, Carrall, Keefer, Columbia and Gore. It appears that these streets were once appropriate when the land uses in the area were predominantly industrial. Now, with the emerging residential and high-tech office uses they appear unnecessary and too circuitous to be of any significant value to the truck route system. In comparison, Expo and Pacific boulevards provide a better connection for heavy trucks travelling east-west across the southern part of the peninsula. These deletions do not suggest that heavy trucks are not allowed on the streets, rather that they are not encouraged and should only be used if it is the desired destination or if it is the shortest route between the destination and the closest truck route.

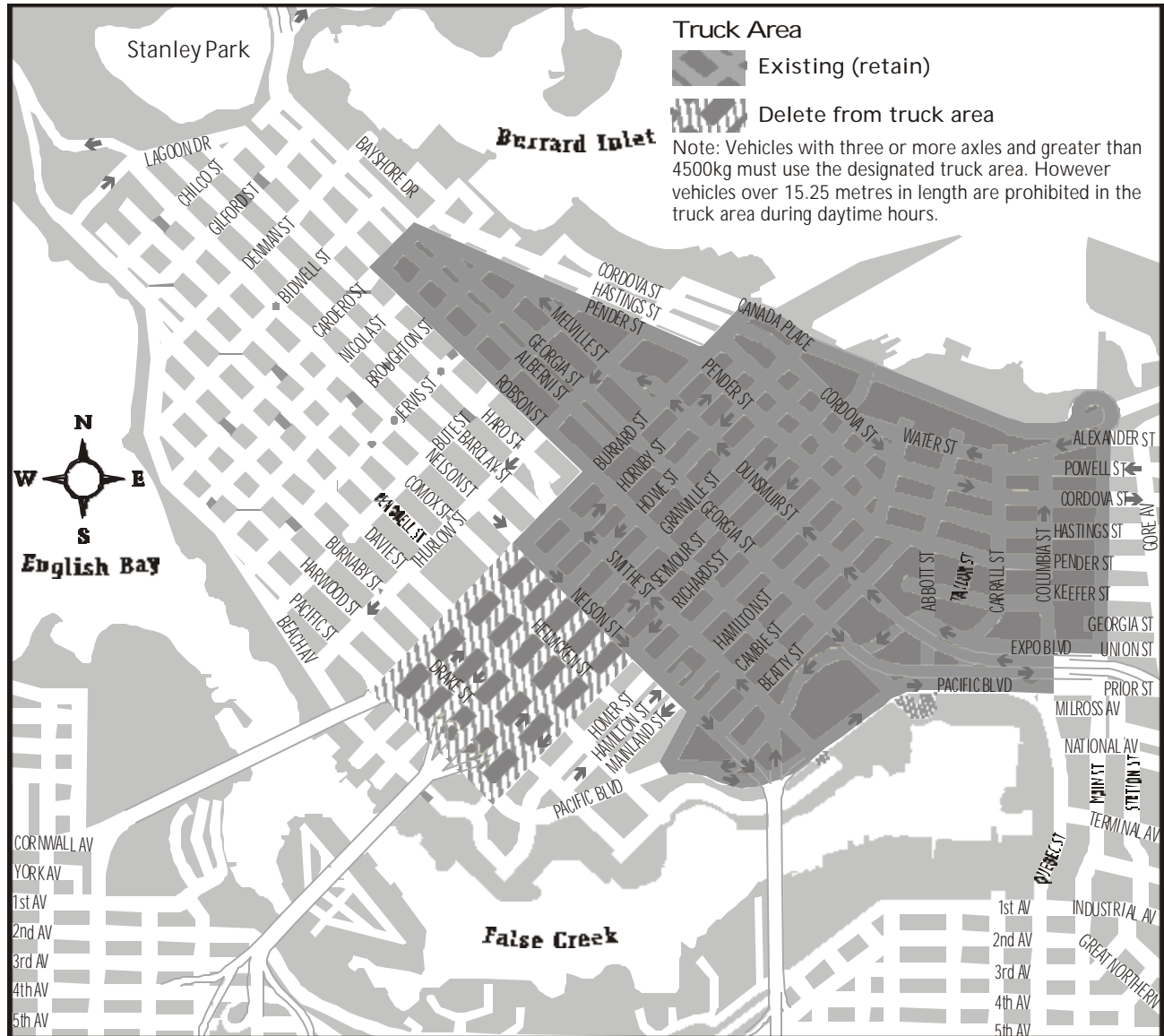
Figure 4.5-B  
Downtown Truck Routes



4.5.3 Truck Area

The Downtown Truck Area, as shown on *Figure 4.5-C*, enables the majority of trucks making deliveries in the downtown to complete their trips in the most efficient manner at any time throughout the day. It achieves this by not restricting truck operators to streets that are only the most direct route between a truck route and a destination or origin. However, trucks within the Truck Area must not exceed 15.25 metres in length between the hours of 7:00 a.m. and 6:00 p.m. For vehicles exceeding 15.25 metres in length and requiring access to destinations within the truck area, they would be confined to travel in the evenings. This has the effect of minimizing any potential congestion problems created by long trucks on many downtown streets during the day. Because of the benefits of allowing most trucks to travel efficiently within the downtown core and the ability to minimize potential traffic congestion during the day by longer trucks, the Downtown Truck Area should be maintained.

Figure 4.5-C  
Downtown Truck Area



A review of the Downtown Truck Area suggested that the area bounded by Burrard, Nelson, Richards and Pacific should be removed (see Figure 4.5-C). Similar to the rationale for removing Yaletown from the truck area, the area described above is an emerging residential area (Downtown South). The impact of the change to trucks wishing to access the area is not significant. The deletion of the truck area acknowledges the changing land uses in the area from industrial/warehouses to residential.

#### 4.5.4 On-Street Loading Zones

There is significant competition for the use of the curb lane along many downtown streets. Needs such as bus stops, loading zones, passenger zones, taxi zones, tour bus zones, consular parking zones, police zones, valet services, general public parking, bike lanes and moving traffic all compete for the curb lane. These needs are increasing as more trips to the downtown are made because of land use developments and the increasing employment and population. On the other hand, the curb lane supply remains static given that very few new streets are being constructed. Therefore, changes to the use of the curb lane along downtown streets are inevitable.

The allocation of curb space to the various uses to achieve a balance requires a careful assessment of the competing demands for curb space. The demand for curb space is expected to increase in the future. Because the delivery of goods to businesses is essential, the needs of truck loading must be accommodated. The following principles are recommended:

1. Truck loading requirements should be provided off-street. This is accomplished in new developments by ensuring that appropriate loading bays are incorporated as required by the Parking By-law. Reviews of the by-law should be done periodically to ensure they reflect the actual truck loading needs. As well, the unnecessary relaxations of the bylaw should be avoided in the downtown, especially if it may result in additional on-street loading activities; and
2. Where no off-street alternatives exist, on-street truck loading zones should be considered one of the higher priorities for use of the curb space. However, its provision must be balanced with other high priorities such as bus stops, safety and traffic flow considerations. It should be noted that on-street loading zones should not be provided if it is simply a desire for more convenient loading in comparison to an available off-street loading zone.

Despite all the changes proposed by this plan, the total number of full time on-street parking spaces within the downtown is maintained. In fact, the number of on-street parking spaces available during the rush hours is increased significantly. This was, in part, a response to the increasing demands on the use of on-street curb space. Although they are referred to as on-street parking spaces, these spaces would also provide additional spaces for on-street loading zones. In comparison to the provision of general public parking, the provision of on-street truck loading zones should take precedent. This is because off-street public parking spaces are available throughout the downtown core.

One location with problematic on-street loading conditions is Canada Place Way. The competition for the use of the north curb lane is particularly high during the peak tourist season among tour buses, shuttle buses, taxis, passenger vehicles and delivery trucks. Careful management of the street activities is helping to maintain order, but a permanent solution will require the provision of additional off-street facilities. This should be pursued as part of the convention centre expansion.

#### 4.5.5 Rear Lanes

Rear lanes within the downtown commercial core are a valuable resource, and their use by delivery vehicles should be promoted over the use of street space. This would reduce the competition for the use of on-street curb spaces. It would also enhance the pedestrian environment by eliminating sidewalk conflicts resulting from the loading activities and relocating higher polluting and noisier trucks away from the sidewalk.

Currently, all commercial lanes within the downtown core and throughout the City allow commercial vehicles to stop along the lane for the purposes of loading and unloading, as long as enough width remains along the lane to allow other commercial vehicles to pass. This system contributes a significant proportion of commercial loading spaces within the downtown, especially



To further enhance the rear lane as an efficient and attractive servicing area, it is recommended that all encumbrances be removed to the extent possible. Existing large waste bins should be relocated off-street or consolidated to minimize impact, utility poles should be removed and utilities be put underground, and geometric changes (widening, corner cuts, etc.) should be made to facilitate truck access into and within the lane. Any geometric changes should also consider impacts to pedestrians as outlined in section 4.3.

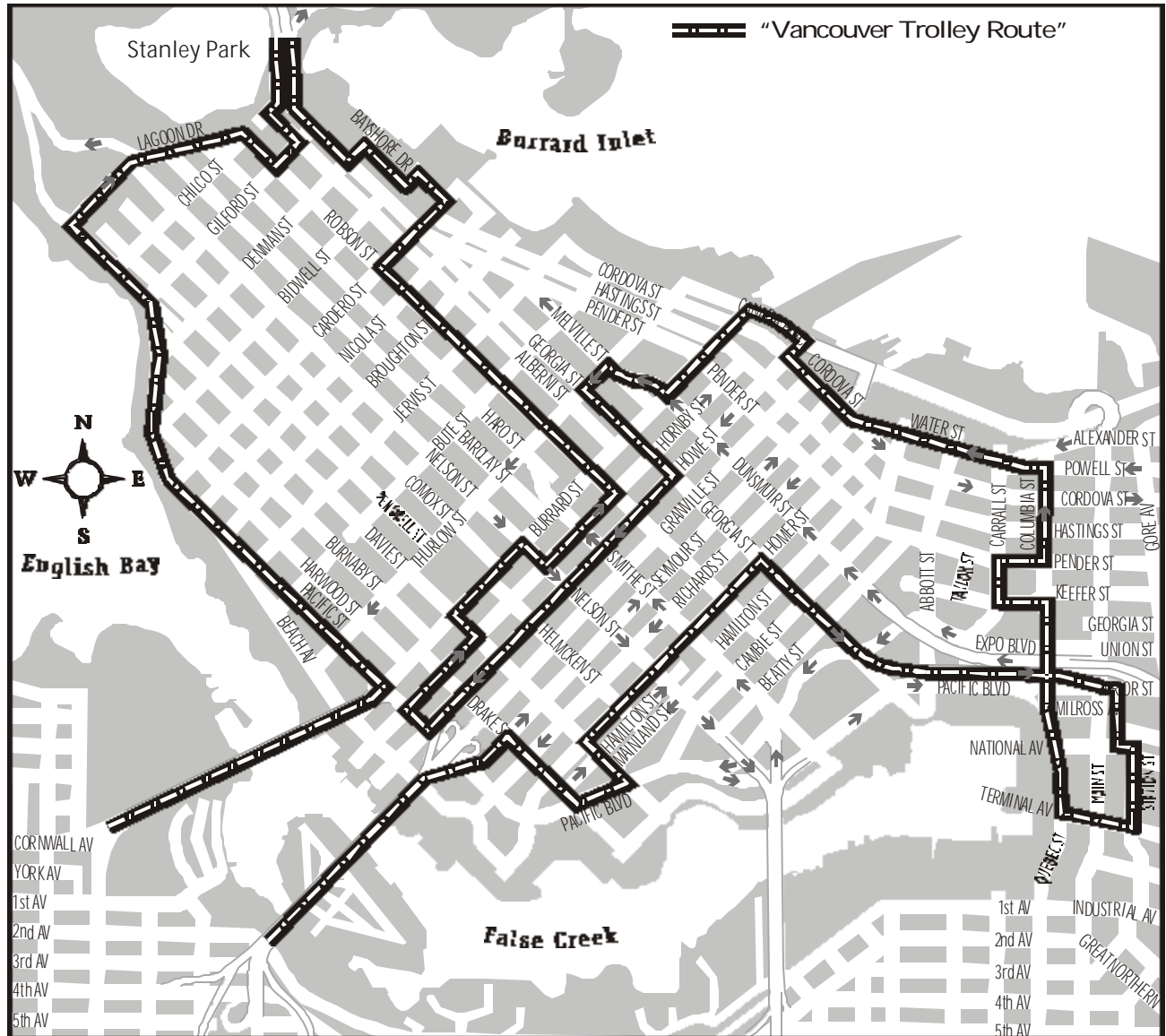
#### 4.5.6 Tour Buses

Tour buses are an important component of the tourist industry and they make a significant contribution to the overall downtown economy. The number of hotels and the major tourist attractions within the downtown (Stanley Park, Canada Place, Gastown, Chinatown, BC Place, GM Place and Science World) are a testament to this fact. With the emerging residential uses within the downtown and increasing numbers of tour buses, the conflict between residential neighbourhoods and the tour bus industry has grown. In 1999, a Bus Impact Task Force was created to provide Council with advice on various aspects of bus usage and to explore methods to manage the growth of bus traffic and improve the ability of residents and the bus and motor coach industry to co-exist with one another. One of the recommendations of the Task Force was for the Downtown Transportation Plan to create a downtown motor coach network that would include truck routes and major arterial streets.

Generally, all three-axle tour buses are required to use designated truck routes. For destinations not on a truck route, the shortest route between the destination and the closest truck route must be used. This applies to all unscheduled three-axle chartered tour buses that enter the downtown for a wide variety of reasons including the delivery of passengers to special events at BC Place, GM Place, or Canada Place, to conferences at hotels, or to a variety of tourist destinations.

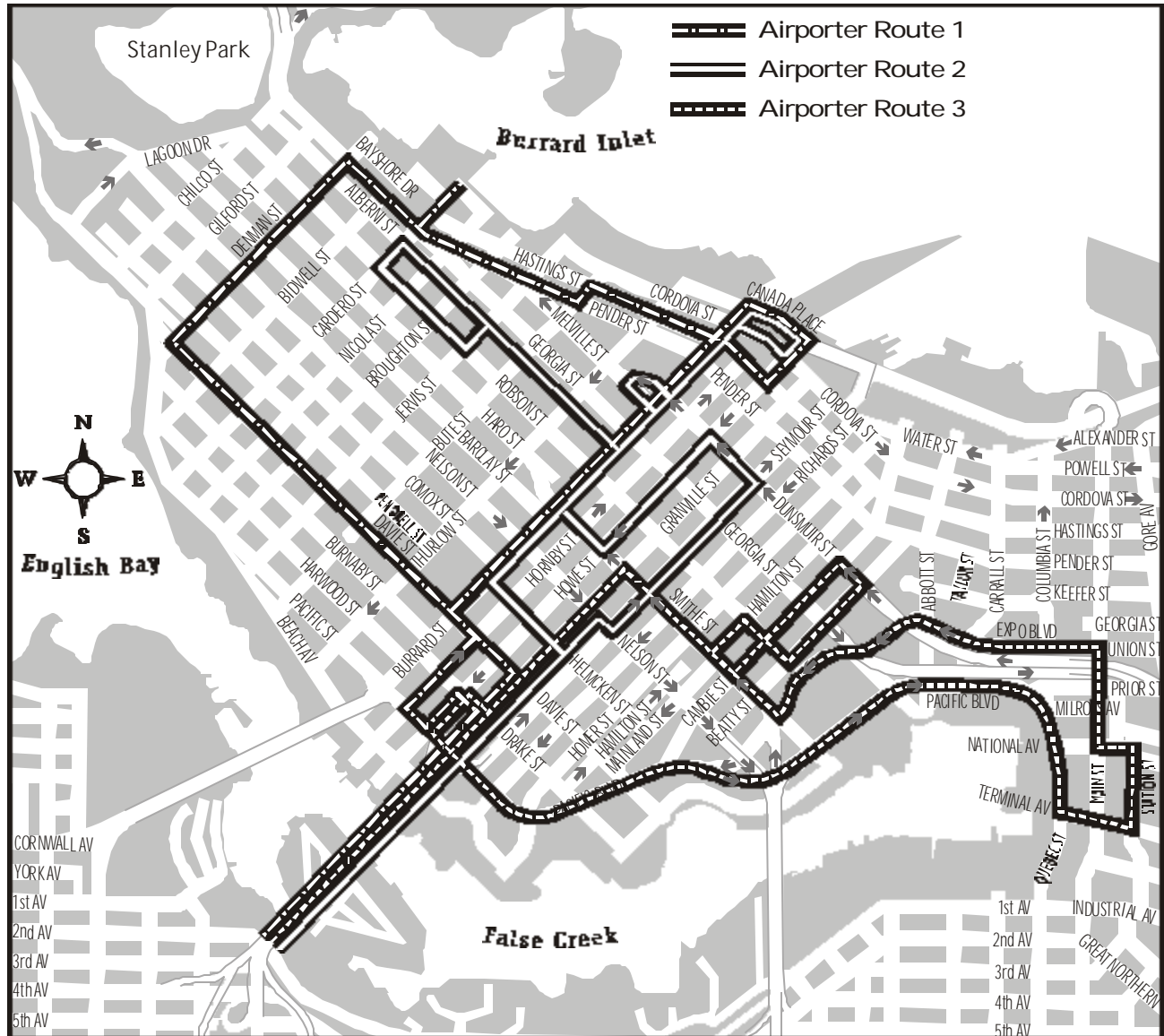
In addition to the unscheduled tour buses, there are a number of regularly scheduled tour buses that are further regulated by the Provincial Motor Carrier Commission and whose routing can be influenced by the City of Vancouver. They include the scheduled bus tours for sightseeing tourists, the scheduled tour buses to transport tourists between their hotels and the airport (Airporter), and the semi-scheduled tour buses that transport people to and from the cruise ship terminal or through the downtown towards Whistler (Whistler Express). These tour buses have special approved routes through the downtown as shown in *Figures 4.5-E, 4.5-F, 4.5-G*. The figures show the significant variation in routes depending upon factors such as the location of hotels, the location of tourist attractions, and scenery. From a tour bus operator's perspective, there is also a desire to select the most efficient route between destinations to minimize operating costs. This must be balanced with the need to minimize impacts on residential or other sensitive areas within the downtown.

Figures 4.5-E  
Current Tour Bus Routes

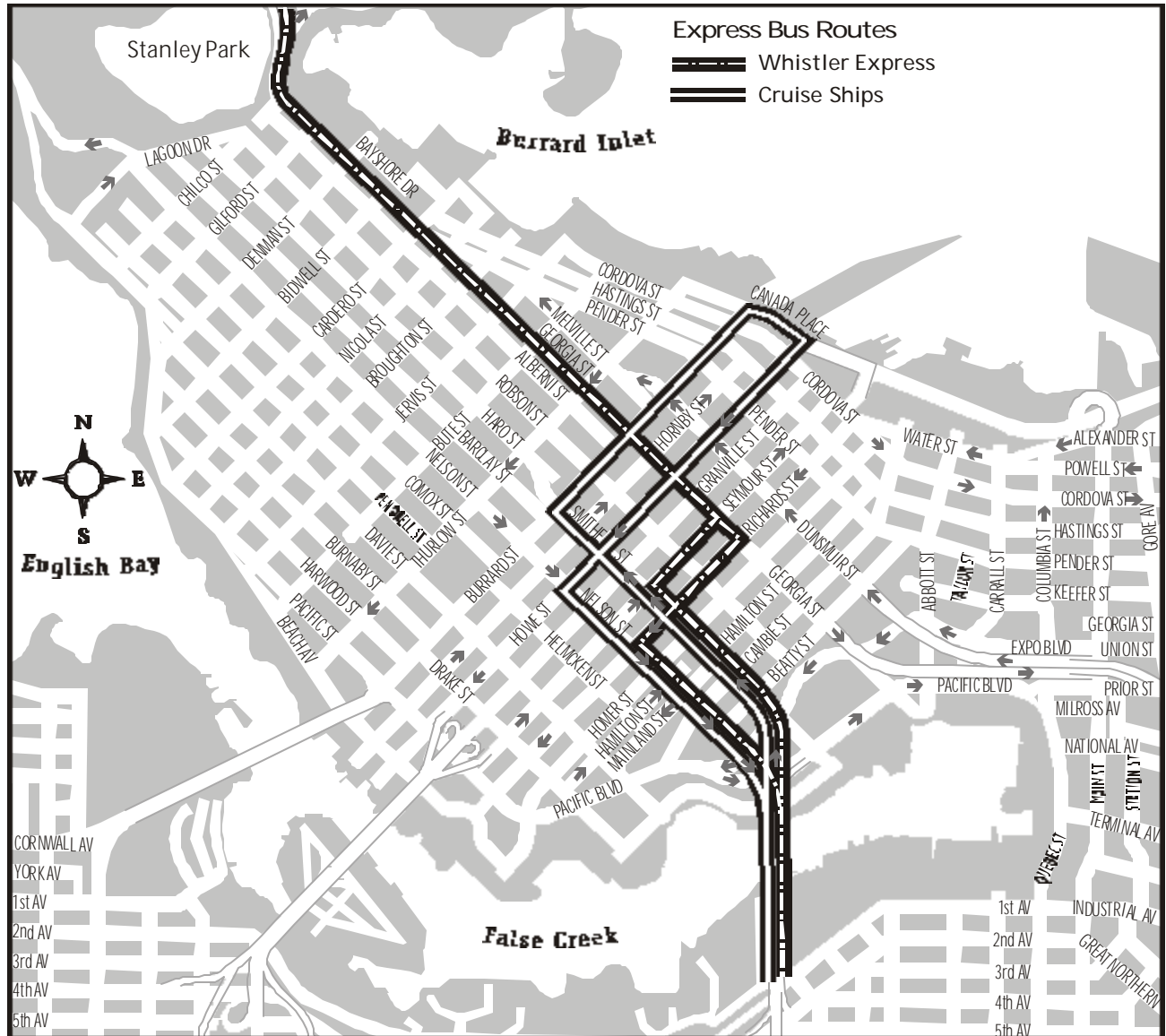




Figures 4.5-F  
Current Airporter Bus Routes



Figures 4.5-G  
Current Express Bus Routes



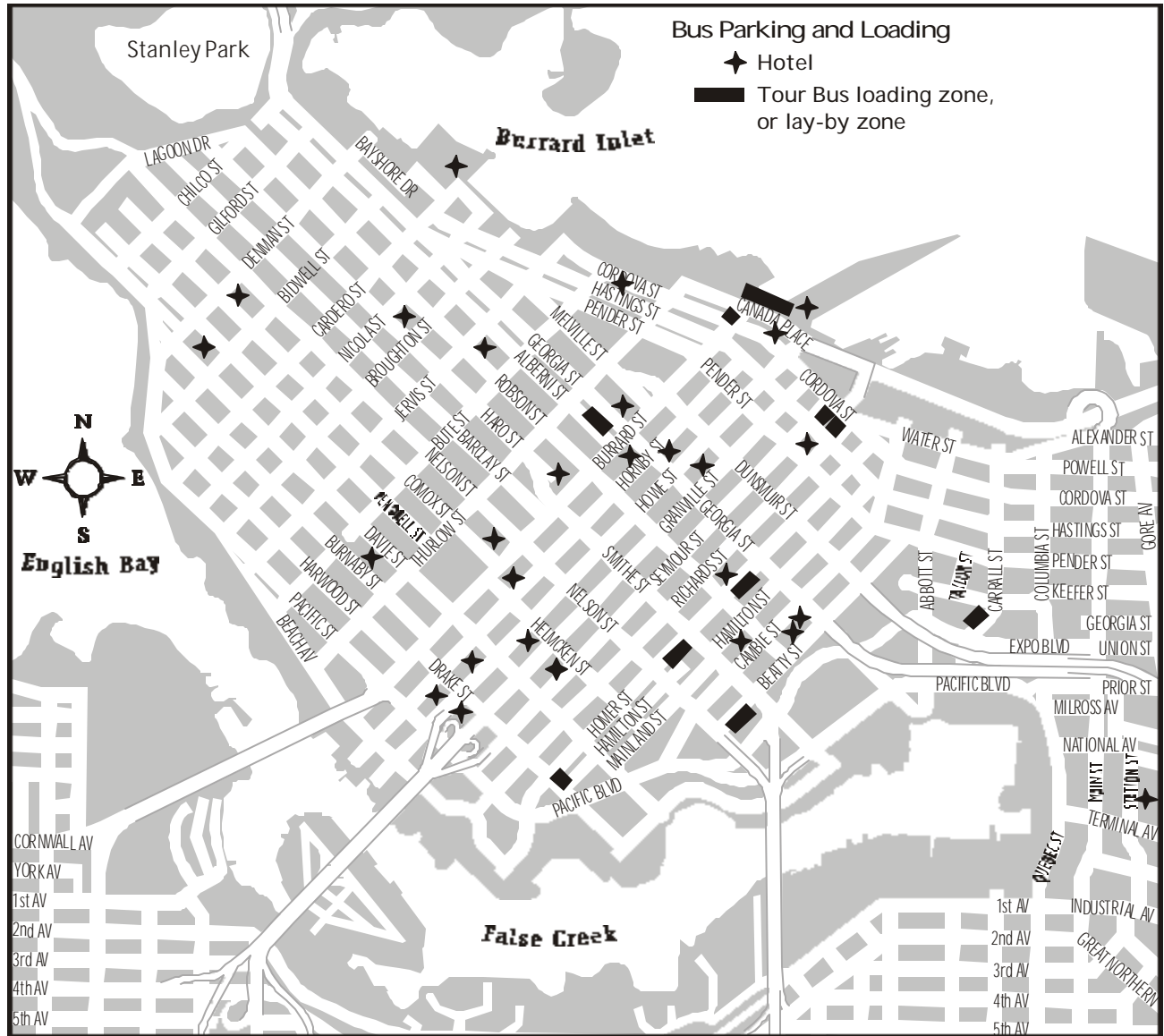
As recommended by the Bus Impact Task Force, consideration was given to the creation of a downtown motor coach network. It was concluded that such a network would not be practical for the following reasons:

- The differing needs of the various tour bus operations both scheduled and unscheduled;
- The necessity to update the network frequently to reflect changing conditions (e.g. new hotels, new tourist destinations, road construction activities, changes to the road network or tour bus loading and parking areas);
- The inclusion of many streets within the network of tour bus routes, both sensitive and and less sensitive streets, because of the need to access specific hotels or tourist destinations; and
- The lack of flexibility to manage the scheduled tour buses on a route by route basis. An approved network of bus tour routes may result in some streets experiencing a disproportionately higher number of tour buses in comparison to other streets.

It is recommended that scheduled tour bus routes within the downtown be managed on a case-by-case basis to better reflect the needs of the bus tour operators and to better manage the impacts to sensitive areas within the downtown. This would allow the greatest flexibility in mitigating the impacts of tour bus routes that must go through sensitive areas.

The establishment of tour bus routes does not solve the problems of the tour buses themselves. The complaints about tour buses are often about the noise and air pollution they generate while stopped or parked. These are best managed with the education of tour bus operators and the enforcement of tour bus regulations. The most important of these regulations is the requirement to shut off engines while parked or stopped for more than three minutes. Therefore an education program or reminder to tour bus operators is recommended along with a responsive enforcement program. The other important aspect is to minimize the unnecessary circulation of tour buses while searching for a parking space or a tour bus, commercial loading or passenger zone to pick up or drop off passengers. Given the scarcity of curb space and the challenge of managing these spaces, it is recommended that the tour bus parking and loading provisions within the Parking Bylaw be adhered to, given the recent review of hotel loading facilities. Where necessary and practical, additional on-street tour bus parking and loading zones should be provided. Figure 4.5-H shows the current locations of on-street tour bus parking and loading zones.

Figure 4.5-H  
Tour Bus Parking and Loading Zones



## Goods Movement Recommendations

**Recommendation GM1** *Modify the downtown truck route network as shown in Figure 4.5-B.*

**Recommendation GM2** *Remove Downtown South from the Truck Area.*

**Recommendation GM3** *Review the truck loading requirements in the Parking By-law to ensure they are adequate and avoid relaxations.*

**Recommendation GM4** *Monitor the municipal commercial plate program to reduce unnecessary demands on the limited on-street loading facilities.*

**Recommendation GM5** *Maintain the existing system of one-way entry only to many of the rear lanes within the Central Business District and remove all lane encumbrances to the extent possible.*

**Recommendation GM6** *Manage the motor coach and tour bus routes on a case-by-case basis to provide flexibility in managing conflicts.*

**Recommendation GM7** *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.*

**Recommendation GM8** *Avoid downtown relaxations of the tour bus parking and loading provisions within the Parking By-law.*

**Recommendation GM9** *Pursue additional off-street loading facilities as part of the convention centre expansion.*



## 4.6 Parking

The price and availability of commuter parking directly affects future demand for vehicular travel to downtown. Managing the supply of parking is one of the few tools available to local jurisdictions in British Columbia for influencing transportation mode split. Other tools, such as gasoline taxes and bridge tolls, are generally not available to local jurisdictions.

Commuters constantly trade time, convenience and out-of-pocket costs (gasoline, transit fares, possible tolls, etc.) in deciding on transportation modes. Higher driving and parking costs (time and money) reduce the demand for vehicular travel. Lower costs and greater availability of parking, other things being equal, will result in more vehicular trips. Analysts concluded from a recent consumer survey that almost half of all transit trips by GVRD residents arose from traffic congestion and parking availability or costs in downtown Vancouver in TransLink's 1999 Regional Travel Survey (Canadian Facts, 2000).

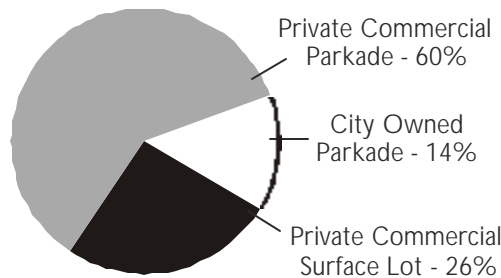
### 4.6.1 Background

The City of Vancouver has a long history of concern for both the potential negative impact of commuter autos and for assuring the accessibility and economic viability business in downtown Vancouver, especially relative to other business centres in the region. This has meant simultaneously pursuing policies regulating the development of commuter parking and other policies assuring the availability of short-term parking for downtown Vancouver.

In 2000 there were about 50,000 off-street commercial parking stalls with about 13,000 in surface lots (mostly on undeveloped land), 7,000 in city-owned parkades and about 30,000 in off-street commercial parkades. See figure 4.6-A. These represent a decrease of about 3,000 parking stalls from 1998, primarily the result of surface lots vanishing with development.

Figure 4.6-A

### Commercial Off-street Parking Stalls by Type and Provider



Commercial developers are required to provide a specified number of parking spaces under the Vancouver Parking By-law. Developers may choose to make a payment-in-lieu of providing parking in much of the downtown. Unlike suburban municipalities and most city areas outside of downtown, Vancouver's parking by-law specifies minimum required and maximum permitted parking stall ratios to regulate commuter parking availability in the downtown area.

### 4.6.2 Downtown Parking By-laws

Vancouver has had a variety of parking standard amendments since establishing stringent parking supply restraints in 1975. It was apparent by 1979 that the 1975 standards were too restrictive. The recommendation of a Special Advisory Committee that a new standard of a maximum of one space per 1000 square feet (93 m<sup>2</sup>) be generally allowed was adopted by Council in May 1979.

An extensive review of the 1979 standard was carried out in 1983-1984. That review generally confirmed that the office parking standard maximum of about one space per 93 m<sup>2</sup> continued to be effective and was consistent with transit modal share objectives. The 1984 review was the last comprehensive review of Vancouver's downtown parking requirements to be carried out, and culminated in the creation of the Parking By-law in 1986.

#### 4.6.3 Projected Future Parking Supply and Objectives

Assuming that developers build the maximum number of parking spaces allowable in their developments under the current Parking By-law, 54,000 parking spaces in downtown Vancouver are projected for 2021, an eight percent increase over the year 2000. Although this represents an increase in the absolute numbers of parking spaces from 2000, it also represents a tightening of overall parking supply. The total overall number of commercial parking spaces per employee, which was .44 in 1990 and .37 in 2000, would be reduced still further to .32.

In 1996, the total number of commercial parking spaces was capable of accommodating some 40 percent of downtown employment, and the proportion of car drivers was 38 percent of all trips in the AM peak hour. The EMME/2 regional transportation model projects that 29 percent of AM peak hour trips will be drivers to downtown destinations in 2021. The projected total number of projected parking stalls in 2021 would accommodate about 31 percent of total employment.

Since it has been almost two decades since Vancouver's Parking By-law for commercial properties was reviewed, a review is recommended to better monitor parking supply for comparison with parking demand and to assure that adequate, but not abundant, supply is provided. A contribution towards such studies may be available from TransLink. Figure 4.6-B below depicts some of the relevant key standards in Vancouver's Parking By-law with those of other cities - Seattle and Portland in the United States and Calgary, Montreal and Toronto in Canada.



Figure 4.6-B  
**Comparison of Off-Street Parking Requirements for Vancouver and Other Selected Cities, 2002**

Type of Land Use	Vancouver		Seattle		Portland		Toronto		Montreal		Calgary	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
<b>Offices</b>	1 stall per 93 - 115 m <sup>2</sup>	1 stall per 80 - 100 m <sup>2</sup>	1 stall per 123 m <sup>2</sup> in high transit areas 1 stall per 91 m <sup>2</sup> in moderate transit services	None	No Minimum	0.7-1 stall per 94.7m <sup>2</sup> (graded by transit accessibility)	1 stall per 300 m <sup>2</sup>	1 stall per 135 m <sup>2</sup>	1 stall per 350 m <sup>2</sup>	1 stall per 150 m <sup>2</sup>	1 stall per 140 m <sup>2</sup> north of the CPR 1 stall per 90 m <sup>2</sup> south of the CPR	None
<b>Hotels</b>	0.3 per room	0.5 per room	1 stall per 4 rooms	None	No Minimum	1 stall per room	1 space per 371 m <sup>2</sup>	1 space per 100 m <sup>2</sup>	1 stall per 5 rooms	1 stall per room	1 stall per 3 rooms in Central Business Area	None
<b>Retail</b>	1 stall per 93 - 115 m <sup>2</sup>	1 stall per 80 - 100 m <sup>2</sup>	0.9 stalls per 94.7 m <sup>2</sup> in areas with high transit access 1.2 stalls per 94.7 m <sup>2</sup> with moderate transit access	None	No minimum	1 stall per 94.7 m <sup>2</sup>	1 stall per 100 m <sup>2</sup>	1 stall per 25 m <sup>2</sup>	1 stall per 350 m <sup>2</sup>	1 stall per 150 m <sup>2</sup>	1 stall per 140 m <sup>2</sup>	1 stall per 56 m <sup>2</sup> where retail exceeds 9300 m <sup>2</sup>

The planned opening of the Millennium SkyTrain line in late 2002 and the availability of additional transit services to downtown would make such a review timely. The next future comparable opportunity would be the development of rapid transit services to Richmond.

Managing commuter parking has used the “carrots” and “sticks” approach to elicit desirable behaviour by commuters. Changes in consumer behaviour with respect to other environmental issues - recycling for instance - has followed extensive communications programs. Thus, communication programs in cooperation with major employers should be formulated to encourage employees to carpool or not drive to downtown jobs. It is downtown commuters that generally have the greatest range of alternatives. Such a program might begin with City employees in downtown and near-downtown locations and may involve the Office of Sustainable Development if appropriate.

#### 4.6.4 Qualitative Considerations

Parking can have a significant impact on downtown’s streetscape and retail environments. Commercial parking in the downtown area is generally required to be off-street in underground facilities. Surface parking lots are generally not permitted, and those that do exist are sites awaiting redevelopment. The Downtown Transportation Plan recommends a number of streets for pedestrian priority. Driveway entrances across sidewalks on these streets would conflict with pedestrian movements and should therefore be discouraged. Generally, driveways across all sidewalks downtown and in the West End downtown should be discouraged as well.

In Section 5 of the Downtown Official Development Plan, a number of downtown areas are identified as having a deficiency of parking spaces. Accordingly, parking garages not ancillary to another use on the site were permitted within the areas shown in Figure 4.6-C. Figure 4.6-D depicts the availability of off-street commercial parking by sub-area within downtown in 1996 and projected to 2021 on the basis of anticipated development and capacity. It shows that in the longer term, there will likely not be a parking shortfall. It is recommended that Section 5 be reviewed to confirm its need.

Figure 4.6.-C  
Areas in which Freestanding Parking Garages are Permitted

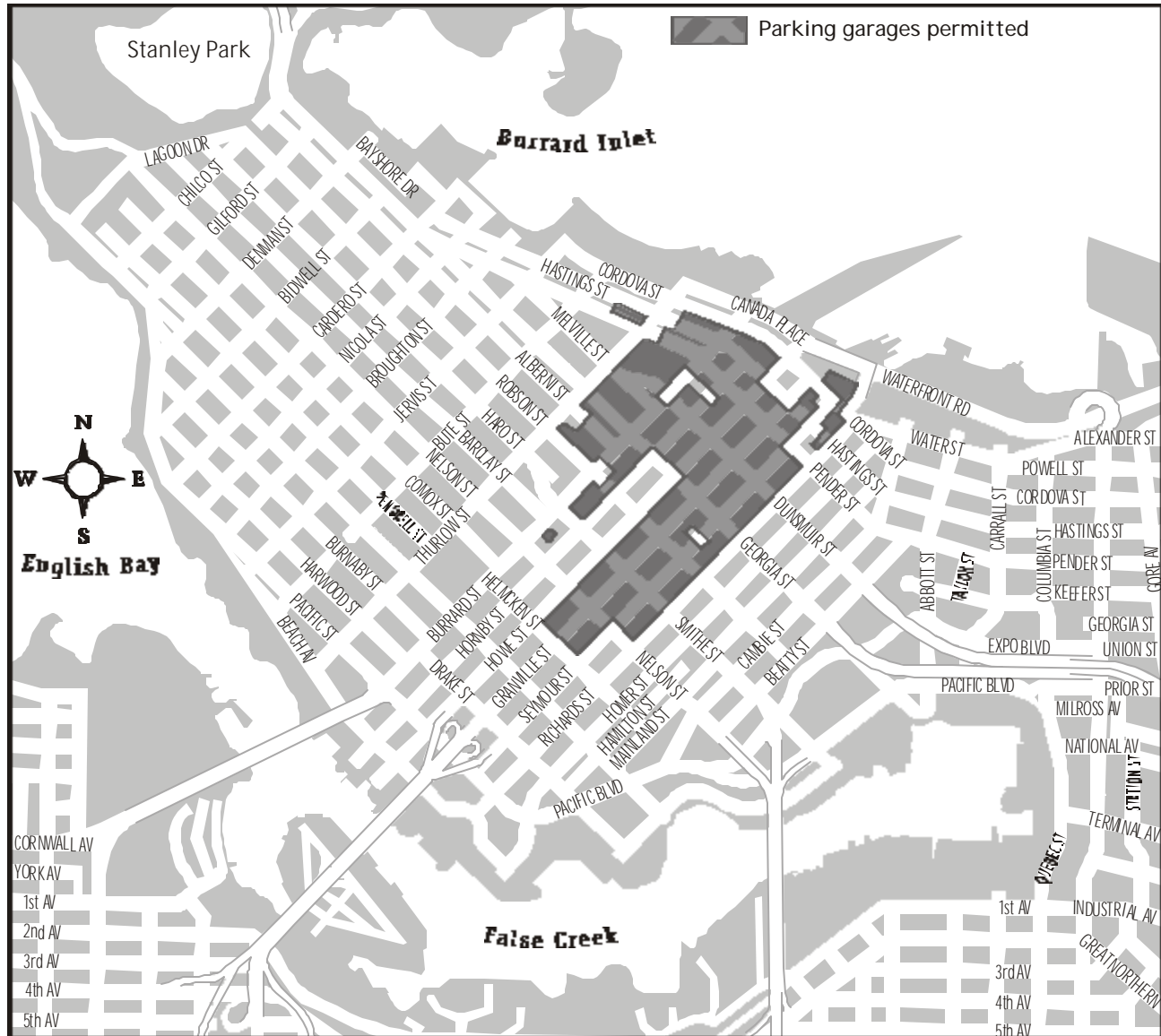
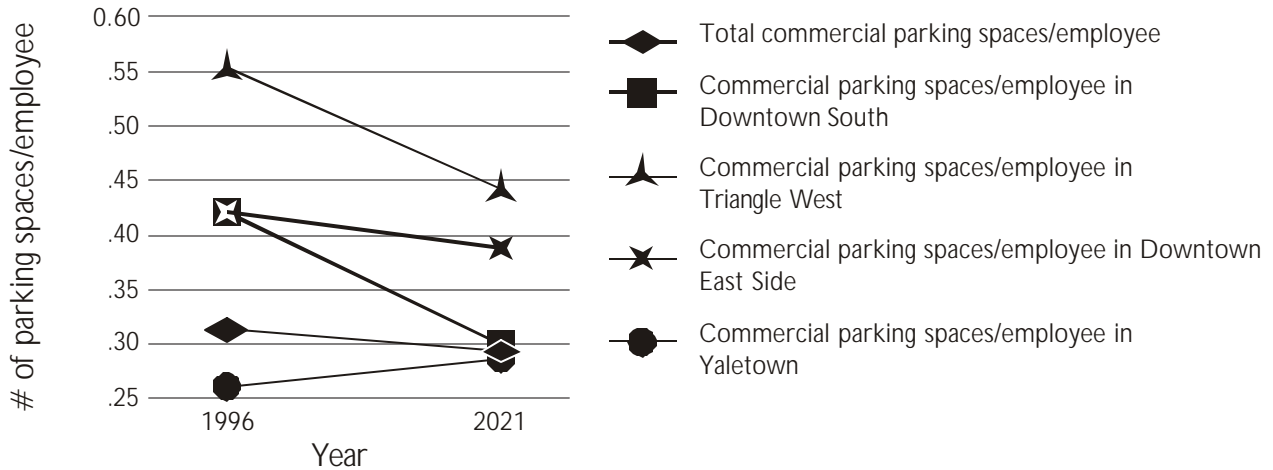


Figure 4.6-D

**Number of Commercial Parking Spaces/Employee in Downtown Sub-Areas**



One of the primary concerns being addressed in this recommendation is the lack of street animation on frontages occupied by parkades. The renovation of existing parkades to add active uses to street level edges needs to be encouraged. This could begin with City-owned facilities.

**4.6.5 Short-stay Parking**

Ensuring the adequacy of short-stay parking is one of the primary objectives of the City. Given its importance to downtown retail customers and business, there is no desire to reduce the amount of short-stay parking. A review of parking opportunities near the Granville retail/entertainment and Robson retail corridors shows that parking opportunities will increase between 1996 and 2021 by about 300 spaces along Granville. No change is projected in the Robson Street business area. Together with other information and data, it is concluded that short-stay parking in at least a couple of critical locations will stay the same or become more plentiful in the future.

**4.6.6 Car Co-ops**

Car co-ops may be a partial solution to the social and environmental problems stemming from excessive dependence on automobiles. They enable residents, especially in dense urban areas such as downtown Vancouver, to enjoy some of the benefits of auto ownership without the cost of full-time ownership and maintenance. Vancouver already possesses one such co-op with about 800 members, most of whom live in the central area. As is shown in Figure 4.6-E, the Vancouver Co-operative Auto Network possesses a variety of plans for a variety of car use patterns. Several civic policy innovations have been designed to facilitate the co-ops operations. Foremost is an amendment to on-street parking by-laws allowing co-op cars to park legally in all residential permit zones. Although suitable arrangements seem to have been made for car retrieval locations throughout the downtown, this is the one area in which the City might assist in the future.

Figure 4.6-E  
Car Sharing Programs and Characteristics

Name of Program / Web Address	Number of Cars for Rent	Number of Members	Costs
Vancouver Co-operative Auto Network  <i>www.cooperativeauto.net</i>	49	800	One-time \$20 membership fee and a \$500 refundable security deposit. There are membership plans that cater to different needs. <b>The Higher Usage Plan:</b> for those driving more than 3000 km/year (over 250 km per month) \$35 monthly admin fee, \$1.75 per hour (to a max. of \$21 daily) and 17¢ for every kilometre driven. <b>The Moderate Usage Plan:</b> for those driving less than 3000 km /year (from 100 to 250 km per month) \$12.50 monthly admin fee, \$1.75 per hour (to a max. of \$21 daily) and 27¢ for every kilometre driven. <b>The Lower Usage Plan:</b> for those driving less than 1000 km/year (100 km per month or less) \$60 yearly admin fee, \$1.75 per hour (to a max. of \$21 daily) and 32¢ for every kilometre driven.
Seattle Flexcar  <i>www.flexcar.com</i>	44	4000	<b>Test Drive Membership Plan:</b> \$25 fee to join, and to rent, \$3.50/hr +\$0.90/mile  <b>Bronze Membership:</b> \$250 fee + \$20/month, and to rent \$2/hr + \$0.90/mile Gas and Insurance are included
Portland Car Sharing  <i>www.carsharing-pdx.com</i>	25	500	One-time \$25 membership fee and a \$250 refundable security deposit. In addition, there is a \$10/month or \$100 /year fee. To rent: \$2/hr + \$0.40/mile Gas and Insurance are included

#### 4.6.7 Regional Parking Policies

Many studies, both locally and in other regions, have concluded that an ad hoc municipality-by-municipality approach to planning for parking will likely be ineffective in managing overall travel demand. A regional approach is necessary. Such an approach has the potential to overcome the limitations of municipalities pursuing their respective self-interests.

Because local development policies and standards are within municipal jurisdiction, municipalities need to be closely involved in developing a regional strategy. TransLink's and the GVRD's parking controls are currently limited to the levying of a seven percent tax on fee paid parking, scheduled to increase to 21 percent in 2005. The GVTA (Greater Vancouver Transportation Authority) legislation does enable TransLink to levy a flat parking space tax on any facility in the region (by area or parking space). Since TransLink's powers are limited to taxation, there is need to implement more robust parking supply and pricing policies. Limiting parking taxes to fee paid

spaces means effectively a tax on downtown Vancouver, which is inequitable. A fairer, broader-based tax would have roughly equal impact on all municipalities in the region.

TransLink's Strategic Transportation Plan, 2000-2005 recommends developing a regional parking strategy with the region's municipalities by the end of 2000 to manage the supply, pricing and regulation of parking. Although this has already been initiated, more progress needs to be made.

It is anticipated that a regional strategy would feature the levying of parking charges on a stall basis, as opposed to a tax on parking fees paid that has its greatest impact on parking and costs in the City of Vancouver. A transformation of parking charges is a key component of TransLink's overall transit ridership objectives.

#### **4.6.8 Off-street Residential Parking**

The City of Vancouver's policy with respect to residential parking downtown has been to accommodate without encouraging car ownership among downtown residents. Past policy development has been careful about ensuring only minimal parking for residents is provided to avoid leasing to downtown commuters. Downtown South parking requirements based on residential unit size is one good example. There is a need to continue to undertake periodic surveys of downtown residents to ensure that the Parking By-law continues to reflect car ownership.

#### **4.6.9 On-street Parking**

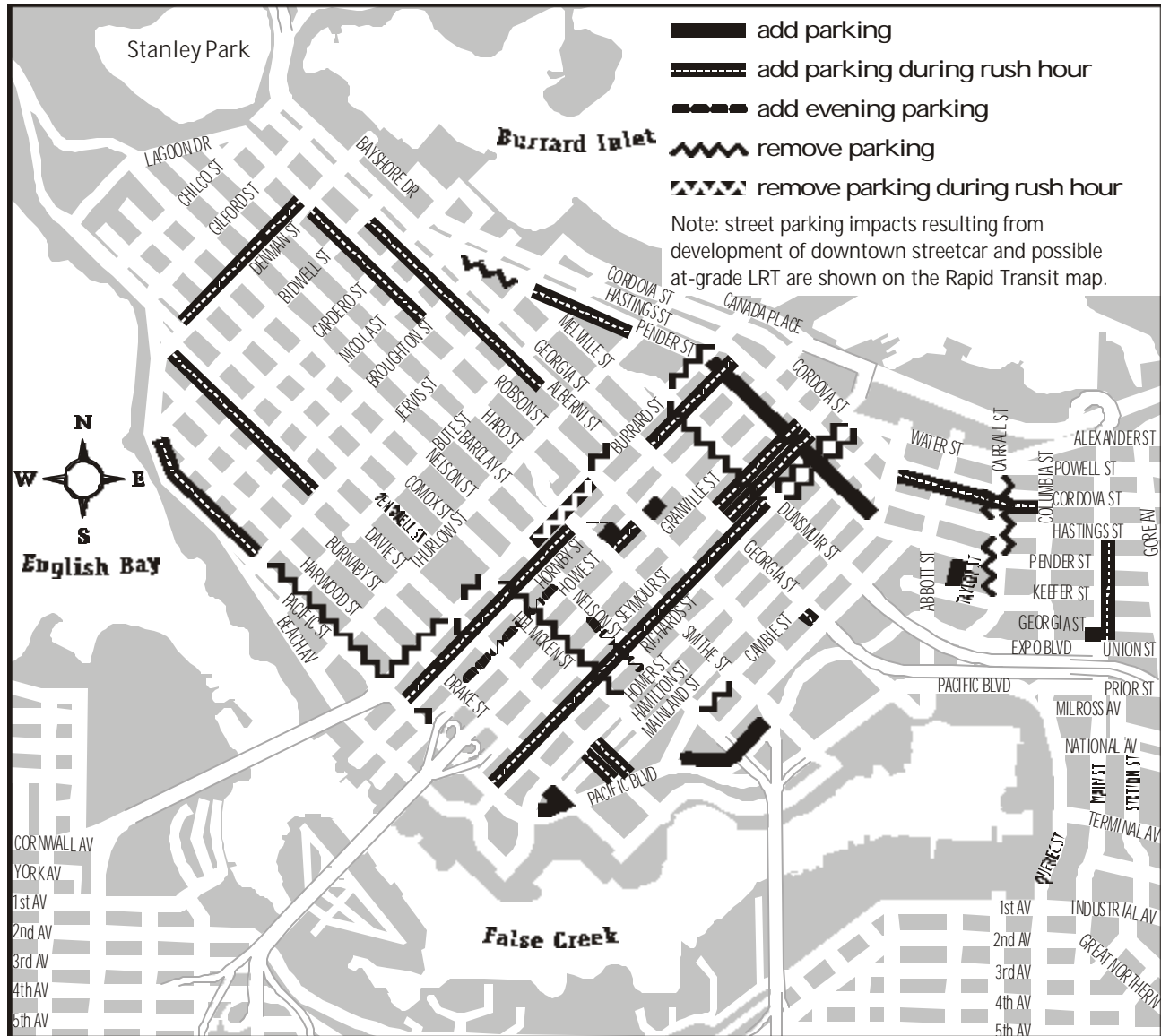
On-street parking provides access to downtown businesses and properties. On-street parking also enhances pedestrian comfort and safety by providing a buffer between pedestrians and moving traffic. In an urban context, such buffers serve the same role as boulevards in less dense contexts. In 2000, there were a total of about 4,700 on-street parking spaces in non-residential areas. About 3,600 of these were controlled by parking meters. Many spaces are available most of the day, but some might be restricted for parts of the day due to rush hour regulations.

Parking proposals have been developed to accommodate plans for the different modes of transportation, including transit and cycling, while also maximizing the continued availability of on-street parking. Additional full-time parking would increase opportunities for corner bulges at many downtown locations.

#### **On-street Parking Recommendation Summary**

Figure 4.6-F summarizes the on-street parking recommendations of the Downtown Transportation Plan. About 130 parking spaces are to be added to the on-street inventory. The biggest concentration of such spaces would be along the north side of Pender Street between Burrard and Cambie. While these spaces are desirable for businesses on this street, especially hotels, they are dependent on the recommendation to make Pender Street one-way in this section. Other additions are shown on Drake, Expo, Howe, Main, Pacific and Taylor Streets where prohibiting parking along these street sections appear unnecessary.

Figure 4.6-F  
Changes to On-street Parking



A total of about 125 spaces would be eliminated to provide for improved bus priority measures (east side of Burrard, Nelson to Robson Streets), general traffic improvements (Cambie Street, Smithe to Nelson) and cycling facilities (proposed Carrall and Helmcken/Comox Greenways, Burrard Street south of Nelson and the south side of Pacific Street, Bute to Jervis).

Assessment shows rush hour parking prohibitions may be eliminated for about 600 spaces at specific locations. Locations include portions of Beach, Alberni, Hornby, Seymour, Richards, Pender, Cordova, Main, Davie, Denman and Robson Streets. New rush hour parking prohibitions are proposed to be added on Burrard Street to reduce congestion and facilitate transit operations.

Parking is not permitted on a number of downtown streets for the entirety of the day because the curb lane is required for traffic operations. However, on many of these streets, parking would be suitable during the evening when traffic is generally not congested. As in other places downtown,

parking on such streets would help to make streets more comfortable for pedestrians. Streets suggested for evening parking after 8 p.m. include Howe and Nelson Streets

The elimination of a further 115 spaces to assist the implementation of the proposed streetcar on Cordova and Columbia Streets and on Pacific Boulevard is recommended. This is further detailed in section 4.2.

Overall, the on-street parking proposals in the Downtown Transportation Plan would see little or no net change in the total number of parking spaces and the net addition of approximately 570 spaces during rush hours.

#### 4.6.10 Motorcycle Parking

Motorcycles comprise less than two percent of Vancouver's registered vehicles. Their numbers in recent years have tended to decrease slightly. Motorcyclists have expressed some concern about the cost of on-street parking, some reasoning that motorcycles should be encouraged because they are smaller and usually more energy-efficient. This may not, of course, be sufficient cause to provide free on-street parking for motorcycles, but it may be sufficient rationale to establish smaller on-street spaces with smaller fees specifically for motorcycles.

The City of Vancouver established a number of test demonstrations for free on-street motorcycle parking in 1999. Evaluation thus far has determined that there does not appear to be a high demand for special provisions for motorcycle parking. Should demand increase, further review may be necessary.

### Parking Recommendations

**Recommendation PK1** Regularly review downtown residential and commercial off-street parking standards to ensure that adequate, but not abundant, parking is provided to meet needs.

**Recommendation PK2** Formulate communication programs in co-operation with major employers to encouraging employees to car pool or not drive to downtown jobs.

**Recommendation PK3** Discourage driveways across all sidewalks in the downtown, particularly along pedestrian oriented streets and bikeways.

**Recommendation PK4** Review existing policies that permit the development of free-standing parking garages.

**Recommendation PK5** Consider renovating city-owned parkades to animate street frontages and encourage private owners to do the same.

**Recommendation PK6** Urge TransLink and the GVRD to develop and implement an equitable regional parking policy to achieve regional livability and transportation goals in consultation with affected municipalities.

**Recommendation PK7** Adjust on-street parking regulations as per Figure 4.6-F to better balance the needs of all users.

**Recommendation PK8** Monitor the demand for special on-street parking provisions for motorcycles.



## 4.7 Intelligent Transportation Systems

**Intelligent Transportation Systems (ITS)**, refers to the use of technology to make our transportation system safer and more efficient. This technology includes computer hardware and software, sensors and monitors, telecommunications devices, display devices and data warehousing. ITS has a number of applications that are relevant to the downtown transportation system.

The importance of ITS has been recognized by TransLink. TransLink has created an ITS Corporation (a subsidiary of TransLink) to help co-ordinate ITS initiatives regionally and provincially. In this regard, TransLink has developed a Provincial ITS Vision and Strategic Plan to ensure that ITS is developed and deployed such that it can be shared by various agencies and used for a variety of applications without duplicating effort.

ITS includes providing current information to travellers, making transit faster and more convenient, managing traffic movements safely, and improving emergency response times. For example, the auto industry has developed car navigation systems and sophisticated collision avoidance warning systems to make driving more convenient and safer. These advancements would serve the needs of many drivers throughout the region including the downtown. However, given the Downtown Transportation Plan goals of minimizing congestion and creating a better transportation balance by providing more transportation choices, the objective is to use ITS to meet those goals.

### 4.7.1 Current ITS applications

Many ITS technologies are already being used within the City. A new state-of-the-art traffic signal management system (TSMS) was recently installed to monitor and co-ordinate Vancouver's 650 traffic signals, with the capability to expand to 1200 signals. The TSMS has increased the ability to control and co-ordinate the signal system in conjunction with new technologies. These include co-ordinating the traffic signal timings to encourage traffic flow at desired speeds (progression speed), and adjusting signal timings to cater to rush hour traffic demands or special events.

Other existing examples include:

- Closed circuit TV cameras to monitor traffic conditions from the traffic control centre at City Hall;
- Microwave vehicle detection systems and traffic counting equipment to monitor, count and classify vehicles on a continual basis;
- Intersection safety cameras to detect and identify vehicles running a red light, as well as their speed, date and time of infraction;
- Audible and tactile push buttons for pedestrians to aid those that are hearing or visually impaired;
- Wireless technology for more effective and efficient parking enforcement;
- Internet connections to provide information on road construction activities;
- Electronic Fare Box/Smart Card throughout the transit system; and,
- Automatic vehicle location system to help provide up-to-the-minute arrival time information and signal priority measures for the 98-B Line buses.

#### 4.7.2 Potential Downtown ITS Applications

It is recommended that ITS technologies be pursued to make downtown travel by pedestrians, cyclists and transit passengers more convenient and safe. ITS should also be used to minimize overall road congestion by making the most efficient use of available road space. Examples of some potential future applications are outlined below:

- Use of microwave detection systems or similar technology to give priority to specific modes (like pedestrians, cyclists and transit buses) at signalized intersections or other select locations. Currently, loop detectors or push buttons may unintentionally give priority to modes other than the one targeted;
- Adaptive traffic control signal system that optimizes traffic flow and minimizes congestion by continually evaluating the traffic conditions and automatically adjusting traffic signal timings accordingly;
- Use of the traffic signal control system to establish of a 40 km/h progression speed during peak periods to better reflect current and safe vehicle operating speeds in dense downtown residential neighbourhoods;
- Provision of real-time up-to-the-minute transit schedule information at all bus stops and through the internet;
- Allow transit buses, behind schedule, to extend the green phase of a traffic signal to get back on schedule;
- Use of traffic micro-simulation analysis to help evaluate traffic conditions for proposed changes to the transportation network;
- Use of ITS for road pricing and other transport demand management measures in coordination with TransLink;
- Provision of traveller information through wireless technology, roadside displays, the telephone or the internet. The information could include road and weather conditions, parking availability, real-time video images, bus tracking, construction activities, bike routes and transit routes;
- Management of traffic and other data as a commodity for potential use by third parties; and,
- Use of wireless technology or smart cards to manage and operate parking meters.

### ***Intelligent Transportation Systems Recommendations***

***Recommendation IT1 Pursue ITS technologies to make downtown travel by pedestrians, cyclists and transit passengers more convenient and safe, and minimize overall road congestion.***

## 4.8 Public Realm

The Downtown Transportation Plan is envisaged as an important first step in developing and implementing a transportation system to serve the downtown for the next 20 years plus. It is also the first step in the development of a public realm plan for downtown Vancouver. The 1991 Central Area Plan identified public realm as one of the policy areas in which future plans would be formulated.

For the downtown to remain competitive for conferences, special events (Winter Olympic Games) and tourism, as well as an attractive location for offices and residents, a consistent and high quality of public realm is important. A major goal of the Downtown Transportation Plan has been to improve the liveability of downtown for the thousands of new residents that have chosen to call downtown home. For all trips to downtown destinations, walking and other non-motorized transportation have become the most common mode of transportation, and greater ease, safety and comfort in making those trips will, along with improved access to the downtown, help downtown to remain an attractive place to live and do business, as well as to visit, shop and have fun.

Public Realm work has been undertaken on a sub-area basis, but not comprehensively in the downtown. Examples of sub-areas with public realm plans are Downtown South, Triangle West, Library West, Georgia Street, Yaletown and Yaletown Edge and the Coal Harbour and False Creek North areas. Even these plans often do not cover every component of the urban public realm. Lighting and sometimes water are, for instance, frequently neglected.

The contribution of public realm planning to the quality of downtown life is nonetheless well accepted. One of the most outstanding results is the Seawall recreational biking and pedestrian way system. More recently, the city embarked on a comprehensive redesign of downtown Pacific Boulevard with the assistance of renowned urban designers Allan Jacobs and Elizabeth Macdonald in conjunction with the Downtown Transportation Plan. It likely marks the first time in the city's history that a street has been subjected to such a thorough urban design review. The result, including the positive reception given the result, both officially and publicly, provides evidence of the benefits of a comprehensive approach to the design of the public realm. Understanding the transportation role of Pacific Boulevard with the downtown transportation network was key to the success of this project. In May 2002 the city once again decided to subject a major, or great, street - Granville Street and Mall - to similarly thorough review and design. The task in some respects daunting - to take one of Vancouver's oldest streets with numerous historic buildings and with limited right-of-way, and design it such that it might accommodate the ten bus routes that use it without loss of transit efficiency. Pacific Boulevard/Street and Granville Street/Mall nonetheless illustrate two factors important in the future design of the downtown public realm:

- roads and transportation links are a major component of the public realm; and
- a comprehensive approach to public realm design increases the appeal of the result.

A public realm plan for downtown will include both publicly owned lands and privately owned lands to which the public has access. The public realm plan will include streetscape design, particularly for ceremonial and high streets, and design standards, a street furniture strategy, the design and programming of open spaces and park acquisition for emerging users, urban greening and greenways, way-finding and the integration of semi-public spaces. The Public Realm Plan would focus on the design of these projects, as well as other projects that may be incremental in nature upon redevelopment of sites. None of this diminishes the role of streets in providing access to downtown Vancouver. In this manner, a Public Realm Plan would provide guidance to projects in the Downtown regardless of who finances them or whether they are done bit by bit or all at once. The Streetscape Design Standards Manual could be a model for this type of work. It is recommended that a strategy and work program for undertaking a comprehensive public realm plan for downtown be developed.

## **Public Realm Recommendation**

**Recommendation PR 1:** *Develop a strategy and work program for undertaking a downtown public realm plan.*