

11 Vancouver BC SkyTrain

OVERVIEW: TRANSIT SYSTEM CHARACTERISTICS

BC Transit operates the SkyTrain light rail system, as well buses, passenger ferries, and commuter rail in the Greater Vancouver metropolitan area and elsewhere in the province of British Columbia. SkyTrain provides service to 20 stations along its 17-mile route from the City of Vancouver to Burnaby, New Westminister, and Surrey.

Phase I, the first segment of the SkyTrain route, opened in late 1985, in preparation for Vancouver's Expo '86 world exposition. SkyTrain provided transportation to the major Expo event centers, and it also connected the downtown Vancouver business district to the neighboring Cities of Burnaby and New Westminister.

The route for Phase I traveled along the path of an older rail line, which went out of service in the 1950s. Since the neighborhoods along the SkyTrain route originally developed around the previous rail line, they included relatively high-density residential areas. However, warehouses, older industrial sites, and underdeveloped lands were also present along the route, and many planners and developers viewed these areas as prime locations for redevelopment. In the years since completion of Phase I, BC Transit has subsequently added additional track to the system.

SkyTrain is elevated for much of its route, though the stations and tracks in downtown Vancouver are located underground. Trains run every two to five minutes throughout most of the day. The trains are completely automated, though roving SkyTrain staff patrol the trains and light rail stations.

SkyTrain stations are shown in Table 11-1.

Table II-1.

VANCOUVER SKYTRAIN LIGHT RAIL STATIONS

	<i>Type of Structure</i>	<i>Parking Lot?</i>
Waterfront	Tunnel	No
Burrard	Tunnel	No
Granville	Tunnel	No
Stadium	Aerial	No
Main Street	Aerial	No
Broadway	Aerial	No
Nanaimo	Aerial	No
29th Avenue	Aerial	No
Joyce	Aerial	No
Patterson	Aerial	No
Metrotown	Aerial	No
Royal Oak	Aerial	No
Edmonds	Aerial	No
22nd Street	Aerial	No
New Westminster	Aerial	No
Columbia	Aerial	No
Scott Road	Aerial	Yes
Gateway	Aerial	No
Surrey Central	Aerial	No
King George	Aerial	No

STATION AREA PLANNING FRAMEWORK

In 1975, the Greater Vancouver Regional District, comprised of representatives of municipalities throughout the Vancouver area, adopted the Livable Region Plan that has guided much of the region’s urban planning in the subsequent decades. The Livable Region Plan, based on extensive citizen involvement and long-range forecasts, envisioned a regional network of development nodes linked by transit. The plan was designed to prevent sprawling development up the Fraser River Valley.

Indeed, transit – and SkyTrain in particular – has been instrumental in shaping and guiding growth in the region in recent years. The Plan established six Regional Town Centres, each of which was intended to function as a downtown for a community of 100,000-200,000 residents living and working in the area. The Town Centres were envisioned to have an array of higher-density housing, businesses, community services, social services, and public amenities.

In the 1980s, municipalities enacted local ordinances reflecting many of the goals of the Livable Region Plan.

SkyTrain serves the Regional Town Centres of Burnaby Metrotown, New Westminister, and Surrey City Center. These town centers are intended to have retail, office, and residential developments that are transit-friendly, though the different centers have had varying degrees of success in attracting appropriate transit-oriented development. Municipalities and BC Transit have used supportive zoning, parking restrictions, density increases, right-of-way easements, and other tools to foster transit- and pedestrian-friendly development in designated Regional Town Centres. Burnaby and New Westminister have both changed their zoning to allow density increases near light rail stations. However, New Westminister, east of Burnaby on the banks of the Fraser River, has been less successful than Burnaby to date in revitalizing its older downtown area. Downtown development has lagged as new projects have gone to competing areas within the City, such as Westminister Quay and the uptown entertainment district.

BURNABY METROTOWN

Burnaby Metrotown is the Regional Town Centre closest to downtown Vancouver on SkyTrain. The center is about six miles east of downtown Vancouver, and it provides a home to about 175,000 people. In the mid-1980s, BC Transit placed the Metrotown SkyTrain station in an older retail area with many abandoned warehouses. According to city planners, development rates in the station area doubled or tripled following the start of SkyTrain service. BC Hydro and BC Tel both located major offices in the Metrotown vicinity, helping spur more local development.

Citizen outreach helped Burnaby develop an Official Community Plan for Metrotown, and planners divided the community into several comprehensive zoning districts. Within each zoning district, the City has identified potential development areas and created area-specific zoning regulations that govern building character, placement, and architecture. Burnaby also invested in parks and other park infrastructure in order to foster additional private development in Metrotown. Plans for the town center also involved parking management, pedestrian and bike connections, and changes in bus service. Developers have recently constructed several major high-density, mixed-use facilities in Metrotown, including a 900,000-square-foot retail mall with offices, a 1.1 million-square-foot office/retail complex, and other mixed-use developments that include housing. In spite of its transit-oriented elements, Metrotown continues to provide considerable amounts of free parking and associated auto-oriented shopping opportunities. Despite these issues, the City of Burnaby is perceived to be the most successful of the Regional Town Centres in focusing development around SkyTrain.

PHASE I OLD INDUSTRIAL AREAS

The first segment of the SkyTrain route followed the former path of an interurban rail line that ended service in the 1950s. This route included a number of underutilized sites ready for revitalization, such as abandoned warehouses and older industrial sites. BC Transit made a concerted effort to locate its light rail stations in these underdeveloped areas. This strategy

helped avoid public protests from residents objecting to major new developments in their neighborhoods. However, simply locating rail stations in these areas would not have provided sufficient ridership for the new light rail system. Accordingly, BC Transit re-structured its bus service to feed passengers onto SkyTrain and provide sufficient rider-ship. This influx of riders helped drive transit-friendly revitalization of some of the un-derutilized areas.

STATION AREA DEVELOPMENT TRENDS

In April 1989, BC Transit produced a report called SkyTrain, A Catalyst for Development, which identified more than \$5 billion Canadian dollars worth of private investment that had occurred within a 10- to 15-minute walking distance of the SkyTrain light rail and SeaBus passenger ferry systems. The document implied that the two rapid transit systems were the driving force behind the economic investments that occurred in these areas, although it did not explicitly disaggregate the effects of general growth that would likely have occurred even without light rail. The report also estimated that the initial investments of Can\$5 billion triggered further investments totaling as much as an additional Can\$10 billion.

In preparing BC Transit's most recent five-year plan, planners are currently completing a comprehensive inventory of existing development as well as planned developments at each SkyTrain station. The report will also highlight the policy tools used to help implement transit-supportive developments in these station areas. This report should provide a wealth of information on development trends and property values by SkyTrain station, but it is not yet available.

FACTORS INFLUENCING STATION AREA DEVELOPMENT

VANCOUVER METROPOLITAN AREA REGIONAL ECONOMY

Although significant development has occurred around some SkyTrain stations, the recent economic environment in the Vancouver metropolitan area has not been strongly supportive of new development. The regional economy is gradually shifting towards a more service-oriented economy, but this transition is moving slowly. Currently the economy remains significantly based on resource-based industries like logging, mining, fisheries, energy production, and agriculture; revenues from some of these activities have faced major declines in recent years. Regional unemployment also remains relatively high, and the recent influx of population and wealth from Hong Kong has declined as of late. As growth slows, municipalities may feel greater pressure to accept less desirable projects, out of the belief that efforts to modify proposed projects will drive developers to alternate sites in other nearby cities with fewer restrictions on development.

SUPPORTIVE LOCAL LAND USE AND DEVELOPMENT POLICIES

Communities in the Greater Vancouver metropolitan area have undertaken regional approaches to planning for more than half a century. This regional outlook has facilitated the

creation of a shared vision for future development. Citizens and their elected officials have sought to limit freeway construction in the Greater Vancouver metropolitan area since the 1960s, and the Livable Regional Plan that municipalities adopted in 1975 endorsed the approach of orienting new development around transit rather than highways. The agricultural reserve policy outlined in the Plan has also helped prevent sprawling development patterns. The geographic constraints that the region's mountainous and watery terrain imposes on the available land base also help favor compact development patterns. The limited supply of land available for construction results in high property values, making residents more willing or obliged to accept higher-density housing, which better supports mass transit. The Regional Town Centres identified in the Livable Region Plan have modified their zoning and community plans to help foster transit-supportive development around SkyTrain stations.

JOINT DEVELOPMENT

Aside from the efforts described in this case, joint developments of SkyTrain property by private developers have not played a major role to date in fostering transit-oriented development around light rail stations. Since BC Transit relies on easements rather than direct ownership of most of the SkyTrain right-of-way, fewer opportunities are available for true joint development. However, in planning for a future SkyTrain extension, BC Transit issued a Request for Proposals to local developers seeking their concepts for rail station locations and designs that integrated public and private uses.

PUBLIC FUNDING

BC Transit as well as other government and quasi-public agencies have relocated their offices to new developments near light rail stations. BC Transit moved its headquarters to the Gateway station in Surrey, and BC Hydro and BC Tel located new offices near Metrotown. Local redevelopment agencies and BC Transit's Capital Projects Division helped pave the way for private investment by taking the first step in investing in new station areas. The City of Burnaby's investments in parks and other public infrastructure also helped spur development in Metrotown.

IMPLEMENTATION TOOLS

STATION AREA PLANNING

BC Transit has worked closely and actively with a range of local and regional entities to spur development around station areas. Use of air rights and other properties along the light rail right-of-way has facilitated transit-supportive development as well as creation of additional public amenities, such as new park lands resulting from density transfers and land swaps. Additionally, BC Transit has located its stations strategically within existing Regional Town Centres designed to accept increased density as well as in underdeveloped areas in need of revitalization. Locating stations in underutilized areas helped BC Transit avoid NIMBY ("Not in My Back Yard") protests from local citizens opposed to redevelopment. For example, the



High density mixed-use development in Vancouver has benefited in some areas from redevelopment agency assistance.

recent extension of SkyTrain to the King George terminus in Surrey ended with a station in a vacant area ready for redevelopment. Additionally, BC Transit's strategy of rerouting bus service to feed SkyTrain provided sufficient ridership, which, in turn, helped drive redevelopment in underutilized areas.

NON-RAIL INFRASTRUCTURE INVESTMENTS TO IMPROVE PEDESTRIAN AMENITIES AND ACCESS

Due to resource constraints and perceived security concerns, BC Transit has not made significant investments in pedestrian access and amenities at its SkyTrain stations. The agency has generally not pursued a strategy of encouraging people to spend more time around light rail stations, since some stations have an undeserved reputation as places that criminals frequent. Other BC Transit planners have countered that having more people recreating and conducting business in station areas could enhance safety, but their arguments have not yet prevailed.

PARKING MANAGEMENT AND SHARED PARKING

Parking supply around stations is managed and restricted, with no parking provided at most rail stations. On-street parking is encouraged in most town centers, in accordance with the traditional neighborhood model. Surface parking lots are typically restricted or prohibited for new developments. New off-street parking is primarily in-structure or underground; these requirements limit the parking supply by increasing the costs of parking construction. Some station areas have free parking spaces to serve offices and retail activities, but BC Transit pro-

vides a Park-and-Ride for SkyTrain users at only one station, Scott Road in Surrey. Parking has continued to pose challenges for BC Transit because the transit agency cannot mandate the parking policies of municipalities along the SkyTrain route.

ZONING AND REZONING

The 1975 Livable Region Plan established six Regional Town Centres in the Vancouver metropolitan region to provide higher-density residential communities, commercial activity, community service, social services, and public amenities. SkyTrain serves three of these Town Centres. Local policies in designated town centers include design criteria, density transfers, and zoning to restrict parking. Communities established comprehensive zoning districts along with specific zoning regulations for sub-areas, including building character specifications, building location requirements, and architectural design criteria. Upzoning in selected portions of station areas has facilitated development attracted to transit, and such projects have helped create an atmosphere of success that draws other developers.

LAND ASSEMBLY

BC Transit has not undertaken significant land assembly efforts in promoting development around SkyTrain, though the system has encouraged some creative redevelopment of right-of-way easements. BC Transit typically acquires easements rather than fee simple ownership of the land its aerial system crosses. As a result, landowners along the guideway retain their rights to develop the property under SkyTrain as well as the air rights above it. In locations suitable for redevelopment, some property owners have constructed high-density developments around and above the SkyTrain route. In cases where the SkyTrain crossing resulted in loss of the original use of site, BC Transit sometimes purchased property and resold it to other developers. In other locations, developers could transfer unused development rights along the SkyTrain guideway to increase density at nearby development sites. In such cases, the unused lands along the SkyTrain route were made into public open space.

DIRECT PUBLIC INVESTMENT IN PROJECTS

As described above in the public funding section, BC Transit as well as other government and quasi-public agencies relocated their offices near light rail stations. Local redevelopment agencies and BC Transit helped jump-start private investment by taking the first step in investing in new station areas. Other community investments in parks and public infrastructure also helped spur development around SkyTrain stations.

LOCAL TRANSIT SERVICE DESIGN

BC Transit rerouted its bus service to feed passengers onto the SkyTrain light rail system, forcing a bus-to-rail transfer for many riders. Bus routes that crossed the light rail line were split into two separate routes, each terminating at a SkyTrain station. This policy enabled the location of the light rail line in underdeveloped areas, and the ridership this configuration

provided helped spur transit-related development in vacant areas. Since BC Transit reports to the provincial government instead of local communities, it was somewhat insulated from negative public response to this service change. BC Transit's policy of not providing parking at most light rail stations also helped encourage the bus-to-rail transfers.

SUMMARY ASSESSMENT; IMPLICATIONS FOR SEATTLE

In the Vancouver metropolitan area, rapid transit has been central to development in designated Regional Town Centers. However, the SkyTrain experience also illustrates that light rail alone is not necessarily enough to attract appropriate development to the desired locations.

- **Zoning and Other Policy Tools.** Additional policy tools, such as zoning changes and direct public investments, are often needed to promote transit-supportive development around rail stations. In addition to upzoning around rail stations, it is also important to exercise land use controls in areas away from transit where new development is not wanted. Municipalities should not expect appropriate station area development to come of its own accord, nor should they expect development to help fund the system. For example, the City of Surrey imposed development charges on new construction, and little development has occurred to date despite its designation as a Regional Town Centre.
- **Geography and Land Use Patterns.** Like Seattle, the Vancouver area's natural features pose significant physical constraints to development that can encourage more compact land use patterns. The Greater Vancouver area, however, has made more concerted efforts to limit freeway access into the central city and to restrict conversion of agricultural lands to other uses.
- **Clear Common Goals.** Establishing consistent goals can help guide development. For example, the shared vision that communities in the Greater Vancouver area articulated in 1975 in the Livable Region Plan has continued to shape development patterns today. In contrast, the Surrey City Council's goal of seeking to spread development around the city has proven incompatible with efforts to focus transit-oriented development around the light rail station in its Regional Town Centre.
- **Working with Private Developers.** Cities and transit agencies can employ a range of policy and financial tools to help implement their development goals around transit stations, but the support of the development community and appropriate market signals are essential for success. Municipalities and light rail providers cannot force the development community to accede to their wishes. They can, however, work to gain the support and buy-in of developers through cooperation, negotiation, and good examples of successful projects. Targeting initial efforts to generate early successes can go a long way towards encouraging developers to make future projects into transit-oriented developments.

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