Swift Bus Rapid Transit (Community Transit and Everett Transit)

SUMMARY

Swift bus rapid transit (BRT) is a partnership between two transit agencies (Community Transit and Everett Transit) in the Central Puget Sound Region, WA. Community Transit directly operates *Swift*. Community Transit and Everett Transit developed an interlocal agreement calling for Everett Transit to contribute 0.05 percent of its sales and use tax toward Community Transit to fund *Swift* operations. The agreement also calls for Everett Transit to construct the northern terminus for Swift at Everett Station and to provide up to $4 million for construction of *Swift* stations within the city limits of Everett, as well as installation of transit signal priority technology at intersections along the *Swift* route. This case study describes the details of the *Swift* service and the interlocal agreement.

FINDINGS

Service Overview

Swift is a bus rapid transit system jointly funded by Community Transit and Everett Transit. Community Transit directly operates *Swift* along a 16.7-mile route on State Route SR-99, traversing the cities of Everett, Lynnwood, Edmonds, Shoreline, and unincorporated Snohomish County. The corridor includes six miles of business access/transit (BAT) lanes and traffic signal priority (TSP) improvements along the entire corridor. The corridor includes 14-paired *Swift* BRT stations and two terminal stations. The stations are located about 1-mile apart along the route. Figure 1 shows the sequence of stops (not to scale).

Source: http://www.commtrans.org/*Swift*/

Figure 1. *Swift* Stops

History

In the late 1990s and early 2000s, Community Transit (Snohomish County) operated several local bus routes along the SR-99 corridor. The bus routes operated within the city of Everett, outside of the Community Transit service area. Residents of both the city of Everett and Snohomish County used the service; however, the City of Everett did not provide funding to support the operation. Community Transit removed most service from the Everett portion of the corridor in 2003 and reallocated the resources to services within the agency's service area. Transit patrons using the entire corridor were then required to transfer between Everett Transit and Community Transit at the city boundary. Community leaders recognized the preferred transit solution in this corridor is seamless service across the city boundary. At the same time, the Puget Sound Regional Council (PSRC) was issuing reports documenting projected growth in the corridor, suggesting a growing need for transit services across the boundary between the two transit agencies.

Community Transit conducted a BRT feasibility study for the SR-99 corridor in 2003. The SR-99 corridor was the most heavily traveled corridor in the system and the preferred alignment for a BRT investment. Community Transit anticipated that BRT was a good fit for meeting the future travel demand growth forecast for Snohomish County and this new mode was likely to attract new customers to public transit. After receiving approval from the Board of Directors to proceed, Community Transit opened a dialogue with the City of Everett regarding the opportunity for Everett to partner on the project and route the service on SR-99 within the city. In 2007, Community Transit and Everett Transit entered into a partnership agreement providing for Everett to fund a portion of both capital and operating elements of the project. Subsequent to system implementation, Everett has updated land use regulations to incentivize transit-oriented development (TOD) around *Swift* stations within the City.

Service Area

Community Transit's service area consists of the majority of Snohomish County, excluding the city of Everett. The City of Everett operates Everett Transit within city limits.

Size and Population

Swift travels through Everett, Lynnwood, Edmonds, Shoreline, and unincorporated portions of Snohomish County. Table 1 provides an overview of the area in which *Swift* operates.

Table 1. *Swift* BRT Coverage Area Population and Size

Entity	2000 Population	2010 Population	2010 Land Area (Sq. Mi.)
City of Everett	91,488	103,019	33
City of Lynnwood	33,847	35,836	8
City of Edmonds	39,515	39,709	9
City of Shoreline	53,025	53,007	12
Snohomish County	606,024	713,335	2,089

Source: U.S. Census 2010

Demographics

Table 2 is a comparison of selected demographics for Snohomish County and Fort Bend County as of 2010 Census.

Table 2. Selected Snohomish County and Fort Bend County Demographics

Quick Facts	Snohomish County	Fort Bend County
Population, 2011 estimate	722,400	606,953
Population, 2010	713,335	585,375
Persons 65 years and over, percent, 2011	10.7%	7.7%
White persons, percent, 2011 (a)	81.7%	58.3%
Black persons, percent, 2011 (a)	2.8%	21.5%
American Indian and Alaska Native persons, percent, 2011 (a)	1.6%	0.6%
Asian persons, percent, 2011 (a)	9.2%	17.5%
Native Hawaiian and Other Pacific Islander persons, percent, 2011 (a)	0.5%	0.1%
Persons reporting two or more races, percent, 2011	4.2%	1.9%
Persons of Hispanic or Latino Origin, percent, 2011 (b)	9.2%	24.2%
White persons not Hispanic, percent, 2011	73.9%	36.1%
Foreign born persons, percent, 2006-2010	13.6%	24.5%
Language other than English spoken at home, pct age 5+, 2006-2010	17.6%	37.0%
Veterans, 2006-2010	60,605	25,352
Mean travel time to work (minutes), workers age 16+, 2006-2010	29.7	30.6
Housing units in multi-unit structures, percent, 2006-2010	26.1%	10.2%
Median value of owner-occupied housing units, 2006-2010	$338,600	$171,500
Persons below poverty level, percent, 2006-2010	8.4%	8.0%

(a) Includes persons reporting only one race.

(b) Hispanics may be of any race, so also are included in applicable race categories.

Source: US Census Bureau State & County QuickFacts

Swift Service Characteristics

Service Description

Swift serves a 17-mile stretch of the SR 99/Evergreen Way/Rucker Avenue corridor between Shoreline and Everett. *Swift* operates every 12 minutes weekdays from 6 a.m. to 7 p.m. and every 20 minutes weekdays from 5-6 a.m., weeknights after 7 p.m. and on Saturdays. The final bus leaves each terminal at 9:40 p.m. Service is not offered on Sundays or major holidays.

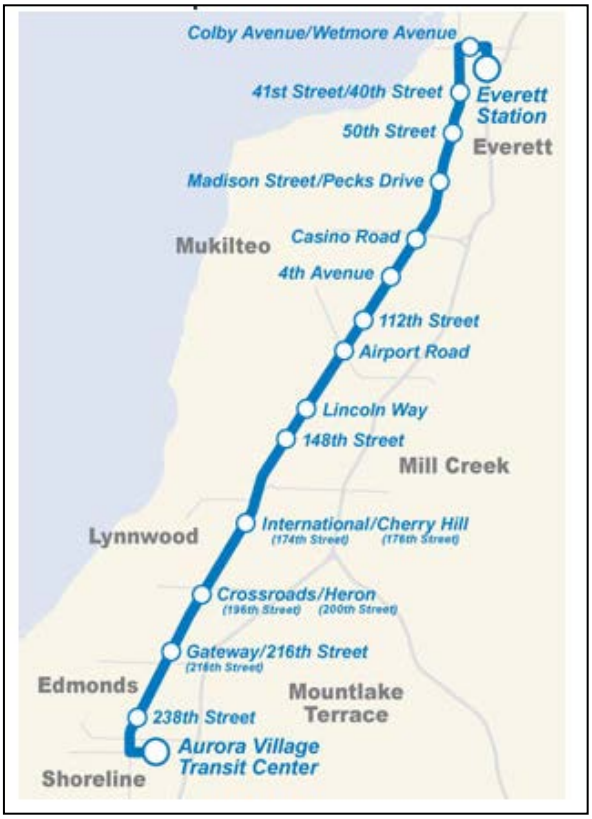
Both *Swift* terminals are major transit hubs. At the south end, the Aurora Village Transit Center offers connections to Community Transit and King County Metro Transit buses that serve south Snohomish County, north King County, and downtown Seattle. At the north end, Everett Station offers connections to Community Transit, Everett Transit, Island Transit, Skagit Transit and Sound Transit buses, as well as Sounder commuter trains, Greyhound and Amtrak. Local stops near *Swift* stations offer transfers to additional stops in the corridor as well as east-west service provided by Community Transit and Everett Transit.

Key destinations served by *Swift* include:

- Snohomish County Campus - Downtown Everett
- Everett Clinic – Gunderson Building
- Edmonds Community College
- Premera Blue Cross
- Swedish/Edmonds Hospital

The *Swift* BRT route capitalizes on previously made infrastructure investments, including over 6 miles of business access/transit (BAT) lanes and over 10 miles of traffic signal priority (TSP) improvements. BAT lanes provide queue bypass for transit. The lanes are shared with right-turning traffic along a roadway. At signalized intersections, the BAT lanes change to a right-turn only lane except for transit that can continue through the intersection. TSP allows traffic signal timing to be adjusted based on transit request to either extend a current green time or to provide an early delivery of green time for transit. BAT lanes and TSP improvements will assist the timeliness of the *Swift* BRT service.

The project uses 12 paired *Swift* BRT stations, one single station southbound in Edmonds, and one single full-service *Swift* BRT station (29 total) located about one mile apart at key transit service intersections along the route. A BRT station is also at an existing bay in the Aurora Village Transit Center. The stations are designed to maximize safety and efficiency for *Swift* BRT customers. Measuring about 10 feet wide by 40 feet long behind the existing sidewalk, the *Swift* BRT shelters include a large, lighted, all-weather canopy, protected seating areas, ticket vending machines, and both static and electronic customer information signs. The shelters sit atop a 60- to 70-foot-long platform that are ADA compliant and have design features to aid customers in entering and exiting the coaches. Figure 2 provides a map of the *Swift* BRT corridor, and Table 3 provides additional specifics about each stop along the corridor.



Source: http://www.commtrans.org/swift/

Figure 2. Swift Route Map

Table 3. *Swift* BRT Stations and Jurisdictions

Station Name / Location / Intersection	Direction	Jurisdiction
Everett Station	Northern Terminus	Everett
Pacific/Wetmore	Westbound	Everett
Pacific/Colby	Eastbound	Everett
41st Street	Southbound	Everett
40th Street	Northbound	Everett
50th Street	Southbound	Everett
50th Street	Northbound	Everett
Pecks Drive	Southbound	Everett
Madison Street	Northbound	Everett
Casino Road	Southbound	Everett
Casino Road	Northbound	Everett
4th Avenue W	Southbound	Everett
4th Avenue W	Northbound	Everett
112th Street	Southbound	Everett
112th Street	Northbound	Everett
Airport Road	Southbound	Snohomish County
Airport Road	Northbound	Everett
Lincoln Way	Southbound	Snohomish County
Lincoln Way	Northbound	Snohomish County
148th Street	Southbound	Snohomish County
148th Street	Northbound	Snohomish County
174th Street	Southbound	Lynnwood
176th Street	Northbound	Lynnwood
196th Street	Southbound	Lynnwood
200th Street	Northbound	Lynnwood
204th Street1	Southbound	Edmonds
216th Street	Southbound	Lynnwood
216th Street	Northbound	Edmonds
238th Street	Southbound	Edmonds
238th Street	Northbound	Edmonds
Aurora Village Transit Center	Southern Terminus	Shoreline

Source: http://commtrans.org

Partnerships and Interlocal Agreements (ILA)

Swift BRT is a joint partnership between Everett Transit and Community Transit. The partner led to an interlocal agreement (ILA) between the two agencies. The ILA calls for Everett Transit to contribute 0.05 percent of its sales and use tax toward the cost of operations by Community Transit. The agreement also calls for Everett Transit to construct the northern terminus for *Swift* at Everett Station and to provide up to $4 million for construction of *Swift* stations within the city limits of Everett, as well as installation of transit signal priority technology at intersections along the *Swift* route.[1]

Community Transit needed significant contribution from Everett in order to justify the creation of the *Swift* system. The Community Transit Board of Directors felt that the revenue generated from the 0.05 percent of the sales and use tax would be significant commitment in operating funds. The tax yields to about $1.5 million per year in operating. Total annual operating expense of *Swift* is about $7.8 million.

The purpose of the *Swift* BRT service is to promote and enhance transit ridership in the SR-99 corridor by significantly improving transit image, capacity, speed, and reliability, and to provide continuous service into and out of the City of Everett. The Rucker Street/Evergreen Way/SR-99 corridor is a high-priority corridor that connects five cities and two counties. In recent years, traffic congestion has become a serious and growing problem. Drivers along much of the corridor experience delays moving through intersections. During evening and morning peak commute periods, several intersections along the project corridor experience significant congestion and delay, causing traffic in some cases to back up for approximately three signalization cycles.

Over the next 20 years, vehicle travel is expected to double. The SR-99 corridor has the heaviest volume of transit riders in the Community Transit system (about 1.5 million riders a year) and connects with a dense network of local and regional transit services. Everett Transit Route 9 also has the heaviest ridership in the SR-99 corridor. Public transportation could be an important factor in maintaining existing and future mobility in the corridor.

Objectives and benefits of the proposed *Swift* BRT service include improved transit system efficiency through[2]:

- Closure of service gaps.
- Travel time savings and improved reliability.
- Improved transit performance. Transit performance with *Swift* BRT will be enhanced by use of BAT lanes throughout much of the corridor. BAT lanes enable buses to bypass general-purpose lane traffic congestion. Use of TSP for buses will also enhance performance by "holding" green lights as a *Swift* BRT bus approaches an intersection, allowing the bus to access the station, generally located on the far side of the intersection.
- Increased transit ridership. Based on planning level estimates, *Swift* BRT will increase transit ridership in the corridor from about 1.5 million riders in 2008 to about 2.4 million riders by 2015 (an approximate 57 percent increase). Predicted increases are made possible by a combination of factors, including high-frequency service, reduced travel times, attractive and comfortable buses and stations and enhanced passenger information systems. Extended service hours will also allow *Swift* BRT to attract a wider market of passengers.

[1] http://www.commtrans.org/News/New.cfm?id=1229

[2] *Swift* Bus Rapid Transit Project for SR-99 between Everett Station and the Aurora Village Transit Center, SEPA Environmental Checklist, Prepared by OTAK, May 2008for Community Transit.

- Reductions in vehicle trips and vehicle miles traveled. *Swift* BRT is predicted to increase transit ridership in the corridor from about 4,200 riders per day today to approximately 6,600 riders per day by 2015. Vehicle trip reductions are estimated at over 800,000 per year. Reduction in vehicle miles traveled (VMT) is estimated at 8,036,800 miles annually.

Performance Monitoring

Community Transit is responsible for monitoring the performance of *Swift* BRT. *Swift* is Community Transit's highest ridership route. In August 2012, *Swift* averaged 31.5 boardings per revenue hour and 1.5 boardings per revenue mile. Because of the need to reduce operating expenditures over the past couple of years, Community Transit reduced *Swift* service by eliminating service on Sundays and increasing headways from 10 minutes to 12 minutes.

Fares and Transfers

Passengers must pay for their fare prior to boarding a *Swift* bus either by purchasing a *Swift* ticket or by using the regional fare card known as ORCA. Each *Swift* station has two *Swift* ticket vending machines (Figure 3) which accept cash or credit. Each *Swift* station is also equipped with two ORCA card readers (Figure 4). ORCA users get a two-hour window to take another bus or train while getting credit for the fare they have already paid.

Figure 3. *Swift* Ticket Vending Machine

Figure 4. ORCA Fare Card and Card Reader

Community Transit sets the fares for the *Swift* BRT service. The Community Transit fare structure reflects local bus fares and commuter bus fares for transit services to Seattle. Community Transit local fares apply on all trips within Snohomish County. Community Transit commuter fares to Seattle are based on distance. Customers who board "North/East" of Everett pay a higher fare for commutes into Seattle than customers who board in the "South/Everett" area. Table 4 provides the Community Transit fare structure.

Table 4. Community Transit Fare Structure

Fare Category	Local	Commuter South/Everett	Commuter North/East	Paratransit
Adult 19 to 64	$1.75	$3.50	$4.50	$1.75
Youth 6 to 18	$1.25	$2.75	$3.75	$1.75
Reduced Fare Permit	$0.75	$1.50	$1.75	$1.75
Monthly Pass (Adult Fare)	$63.00	$126.00	$162.00	$63.00

Source: http://commtrans.org

The Community Transit Board of Directors has proposed a fare increase for all services that will take effect Feb. 1, 2013. The proposal would see local bus fares increase by 25 cents per boarding. South County/Everett commuter bus fares increase by 50 cents and North/East County commuter bus fares increase by 75 cents. Paratransit fares are proposed to increase by 25 cents.

Fleet

Photo courtesy of Community Transit, Snohomish County, Washington

Figure 5. *Swift* BRT Bus with Logo

Swift BRT uses 2009 New Flyer BRT Hybrid/Electric vehicles, as shown in Figure 5, for the operation of the route. These vehicles are equipped with:

- *Swift* branding
- 62-foot Articulated Coach
- 3 doors, internal bike racks
- 45 seats and room for 50 standing passengers

The buses and stations used by *Swift* have many bus rapid transit features.

The buses have three doors and passengers can get on or off at any door. Wheelchairs board at the front door and are secured via a passive restraint system that doesn't require the driver to help; bicycles board at the rear door, and are stowed in bike racks just inside. The buses have especially low floors, which combined with raised curbs at stations makes near level boarding. This is especially useful for speeding up wheelchair access.

Facilities

Figure 6. Swift Station

Community Transit and Everett Transit constructed all of the *Swift* stations using a combination of local revenue and State of Washington Department of Transportation grant funding. The partners utilized no federal funding in the creation of the BRT stations. Community Transit owns, maintains, and operates all *Swift* facilities. If *Swift* service were cancelled, the stations constructed by Everett Transit would be given back to Everett Transit.

Larger than a standard bus shelter, *Swift* stations are designed to appear more like miniature light rail stations (see Figure 6). Stations are identified by a roadside marker and have ample lighting, translucent, graffiti-resistant weather barriers, and a real-time monitor to let waiting passengers know when the next bus will arrive. Frequent visits are made by transit police as well as regular upkeep of the facility. All passengers pay their fares before boarding. Passengers without transit passes need to buy a ticket at a vending machine located at the station. The combination of off-board fare collection, three door loading, and level boarding onto the buses results in faster boarding and less time spent at each stop. Buses only stop at *Swift* stations, and stations are located about a mile apart.

Promotion and Public Information

Community Transit is responsible for providing public information and promoting the service. The agency offers information on the internet at http://www.commtrans.org/*Swift*.

Challenges and Barriers

The main challenge of *Swift* development and implementation was the building of the relationship between Everett Transit and Community Transit. Once each entity realized that it was in their best interest to develop the service and share the costs, planning and development was made possible. Another challenge was determining station locations. The corridor goes through five jurisdictions, so all jurisdictions played a role in determining station locations.