

EXECUTIVE SUMMARY

South Jackson Streetcar Extension

2005 Seattle Streetcar Network South Jackson Street Corridor Report

Department of Transportation

City of Seattle

BACKGROUND

Presently, over a dozen North American cities have streetcar systems that have either been expanded or initiated operation in the past 15 years. In addition, at least twice as many other cities have new systems or new lines under active planning. Several specific reasons why streetcar's are viewed as an excellent form of transit is:

- **Streetcars attract more riders than a bus.** Streetcars have been able to attract new users and draw at least 15-50 percent more riders than buses
- **Streetcars attract private investment.** Property owners are often willing to contribute financially to the building of a streetcar because they realize the benefit it will have to property values and the neighborhood. Over 50% (\$25.7 million) of the South Lake Union Streetcar's capital costs were funded by area property owners who formed a Local Improvement District (LID).
- **Streetcars are easily integrated into densely developed, pedestrian-oriented, urban neighborhoods.** Streetcars are able to operate in a travel lane with other vehicles and have less disruption to on-street parking in the area.
- **Streetcar construction is low impact.** Streetcar lines can be rapidly constructed. A typical block of rail line for the Portland Streetcar was built in three weeks.

INTRODUCTION

South Jackson Street is the major arterial linking Pioneer Square and the Stadium Area, Chinatown, Japantown, Little Saigon – International District, Jackson Place and the Central District (west to east). Jackson Street also links two of Seattle's major bodies of water, Lake Washington and Puget Sound, and provides access to the King Street Transit Hub.

Historically a streetcar ran on South Jackson Street. The route was established in 1887, connecting Pioneer Square to Leschi Park via Yesler Way and Jackson Street. The line linked the Elliott Bay steamers with the Lake Washington Ferries, creating an early intermodal transportation system. By 1941, the streetcar system was disbanded.

During the development of the Seattle Streetcar Network and Feasibility Analysis Report (June 2004), the extension of the waterfront streetcar line along South Jackson Street was identified as a promising corridor for future streetcar service.

Several benefits of extending the Waterfront Streetcar along the Jackson corridor that were identified were that a streetcar line would:

- **Improve mobility.** Provide residents, commuters and visitors improved local transit service through the dense, mixed-use communities along the corridor.
- **Improve connections.** Link neighborhoods to the regional transit system at the International District and King Street stations, as well as Colman Dock.

- **Encourage economic development.** Help to attract local residence and tourists to these unique and historic Seattle tourist and entertainment destinations.
- **Provide critical link into and out of south downtown & waterfront during Alaskan Way Viaduct and Seawall construction.**

ALTERNATIVES CONSIDERED

The Seattle Streetcar Network South Jackson Street Corridor Report considered two phases of South Jackson Streetcar extension.

- First phase – Streetcar line from Occidental Park/1st Avenue S. and S. Main Street to the existing terminus at 5th Avenue S. and S. Jackson Street and then form a couplet between S. King and S. Jackson Streets to either 8th or 10th Avenue S.
- Second phase - Extending the Jackson Streetcar from the initial operating segment to 23rd Avenue S. along S. Jackson Street.

During the course of the study several alignments were considered. These include:

Phase #1

- A couplet on S. Jackson Street and S. King Street, transitioning to double track on S. Jackson Street at either 8th or 10th Avenue S., then continuing with both tracks on S. Jackson Street to 23rd Avenue S.
- Double-track on S. King Street, turning at either 8th or 10th Avenue S., then double-track on S. Jackson Street to 23rd Avenue S.

Phase #2

- Double-track S. Jackson Street to 23rd Avenue S.

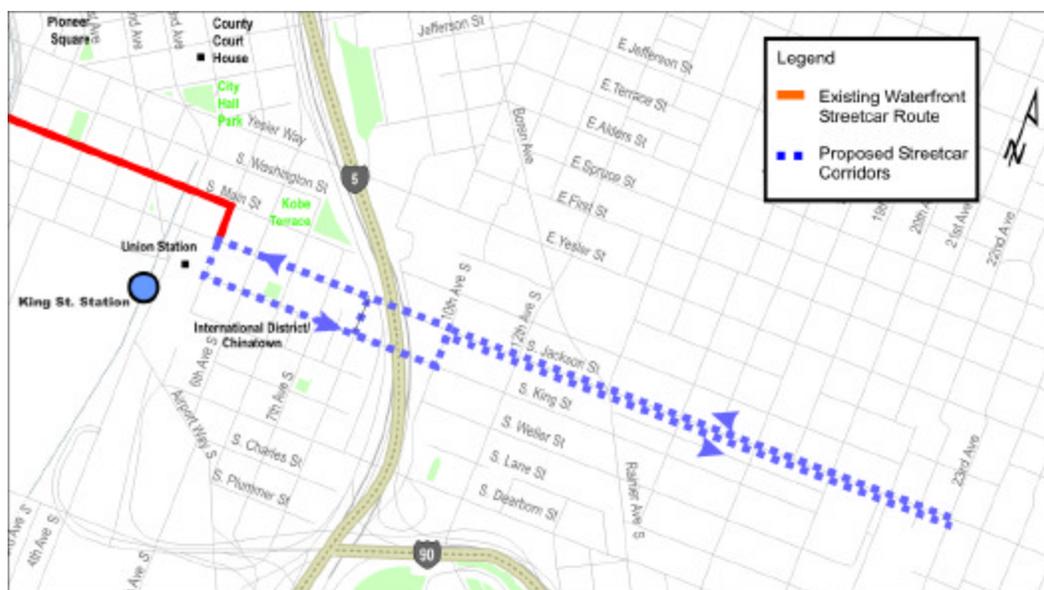
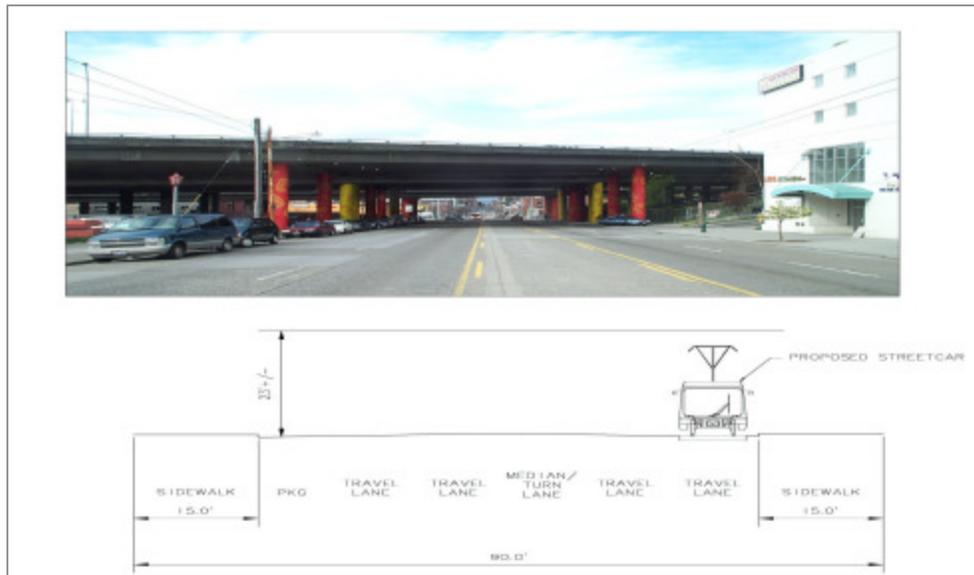


Figure 1-1: Streetcar Route Extension through the International District Avenue

Table 1-1: Alternatives Considered for ID Route Extension

Issues	Double –track King Street (DTK)	Double-track Jackson (DTJ)	Jackson-King Couplet
	DTK to 8 th /10 th ; double-track on Jackson east to 23 rd	Continue DTJ to terminus at 23 rd	Couplet to 8 th or 10 th ; double track on Jackson further east to 23 rd
Traffic Operations	Reduction in street capacity in both lanes of travel. Auto access to parking under I-5 restricted. New signal required at 8 th .	Operational conflicts with bus movements. Competes with high east-west traffic volumes and reduces vehicular capacity and bus movement efficiency.	Some track placement issues on loop portion.
Parking	Eliminate all parking between 8 th and 10 th ; auto access to parking under I-5 restricted	May eliminate parking on both sides.	Jackson: May eliminate parking both sides. King: Maintain 2 lanes of parking until 8 th Ave.
Transit operations	No conflict with Metro trolley.	Turning movements to/from 5 th very difficult	Turning movements to 5 th very difficult
Utilities	Increased detention requirements. Lower impacts with 8" water main.	Minimal detention required. Major impacts to 30" water line. Minimal clearance over 12" sewer, north of 7 th Ave.	Along Jackson: Minimal detention required. Major impacts to 30" water line. Along King: Increased detention required.
Historic	Showcases park and historic architecture along King Street. Passes thru Pioneer Square and Chinatown Historic District.	Historic streetcar route - - Passes thru Pioneer Square and Chinatown Historic District.	Showcases park and historic architecture along King Street. Passes thru Pioneer Square and Chinatown Historic District.
Community	Encourage revitalization of King Street. Would unite King Street. Strong connections to multi-modal center.	Unites the District east and west of I-5.	Encourage revitalization of King Street. Would unite King Street. Strong connections to multi-modal center.
Schedule	Limited complexity. Must accommodate truck	Very complex due to maintenance of auto and bus traffic.	Moderately complex due to maintenance of auto and bus traffic on Jackson.

Figure 2-1: South Jackson Street, looking west



STREETCAR VEHICLES - Modern versus Vintage

The extension of the Waterfront Streetcar line raises questions about whether the existing streetcar fleet can be used for an expanded service and increase in frequency. Though a number of systems, including Portland, mix vintage and modern streetcars, is the most cost effective and provides the greatest flexibility for the system. Several advantages to a modern streetcar system are that it will:

- Maximize passenger accessibility for all riders, especially for those in wheelchairs or who have difficulty walking up and down steps.
- Maximize passenger boarding speed, and allowing for the possibility of more frequent service.
- Improve efficiency in vehicle maintenance - All vehicles are maintained in the same way at the same shop.
- Allows for maximum flexibility in interconnecting routes and sharing vehicles.
- Minimizes operating costs since the current vintage cars require two operators per vehicle, and modern streetcars require only one.

STREETCAR STOPS

Streetcar stops, in general, would be provided as side platform corner curb bulbs located within the parking lane at the far side of an intersection. Stations would be approximately 1000 feet apart (three to four blocks), with stops at intersections that provide: support to designated pedestrian routes and green streets; the optimum pedestrian access to existing public attractions and facilities and proposed new developments; and connectivity with other transit stops. Station locations would be determined in collaboration with community stakeholders and other public agencies.

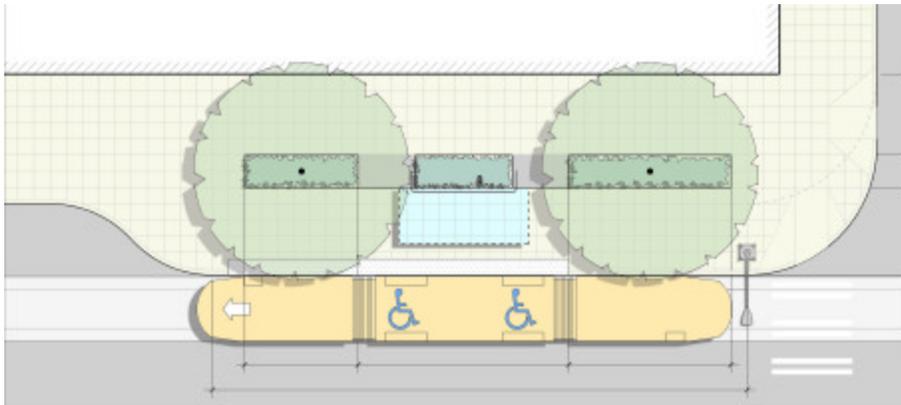


Figure 2-2: Plan view of Typical Streetcar Station along curb

OPERATIONS

Modern, one-operator streetcars vehicles will be used. To expedite and ease boarding and alighting, there will be proof of payment fare collection, low floor boarding, and wide doors. The streetcar is planned to run on 15-minute headways and a consistent 15 hour service span 7-days a week.

	Alignment A: 10 th Avenue S.	Alignment B: 23 rd Avenue S.
Roundtrip travel time (without layover)	9 min	17 min
Peak vehicles to provide service	1	2
Number of vehicles required (including spares)	3	4

Ridership for the South Jackson Street Corridor was estimated as part of the June 2004 Seattle Streetcar network and Feasibility Analysis. Based on the estimated productivity, a stand-alone line from 1st and Main to 12th and Jackson would serve 93,000 to 110,000 passengers per year. Once the Viaduct project is complete, with double streetcar tracks on the waterfront, a line to 12th and Jackson would serve 250,000 to 270,000 riders per year and a line to 23rd and Jackson would serve 219,000 to 246,000 additional passengers each year.

CAPITAL COST

Based on this preliminary level of study, the total capital costs for both phases of the Jackson Streetcar extension is \$55 to \$60 million dollars (2005 dollars). The initial segment, South Jackson Street / S. King Street loop turning at 10th Avenue South, is estimated to range between \$20 to \$25 million in 2005 dollars.

The costs include upgrading facilities for the modern streetcar vehicles from 1st Avenue S. along the existing alignment to S. Jackson Street and 5th Avenue S. (modifying existing high platforms to platforms for low floor vehicles, etc.). From S. Jackson Street and 5th Avenue S. the costs include new track and facilities for an alignment that includes the S. Jackson Street / S. King Street couplet to 10th Avenue S. and a double track extension from 10th to 23rd Avenue S. A new OCS system, separate from the Metro trolley bus wires, is included.

**Costs were based on 2005 dollars.*

OPERATING COST

The cost for the initial operating segment (S. Jackson Street / S. King Street loop turning at 10th Avenue S.) is approximately \$700,000 per year, and the full route to 23rd Avenue S. is approximately \$1.4 million per year.

**Costs are based on 2004 dollars.*

PUBLIC INPUT

In coordination with the technical review the City of Seattle conducted a community involvement process in the Chinatown/International District and the Central Area to obtain feedback on the proposed extension of the waterfront streetcar along Jackson Street. The outreach consisted of stakeholder interviews, a community open-house (February 22, 2005), and public feedback forms.

Overall, citizens expressed support for the streetcar in all communities along the Jackson Street Corridor. Many residents appreciated the increased mobility and access and businesses felt their neighborhood business district benefit from a streetcar. The funding proposal through a Local Improvement District (LID) was a source of concern, but stakeholders understood the need to contribute to an asset that will benefit the area.

When asked how they will use the streetcar, respondents provided the following information:

Commuting	38%
Errands	46%
Shopping in the adjacent neighborhoods	54%
Sightseeing with family/friends	62%
Other <u> cultural events </u>	8%

