

## APPENDIX H: PEER CITY COMPARISON

# PEER CITY COMPARISON

---

### Introduction

This chapter presents a comparison of the performance of a Southwest Rail Transitway to light rail transit (LRT) lines in peer cities across the country. The Southwest Policy Advisory Committee (PAC) requested that this information be prepared for their use in determining the future of rail transit in the Southwest Metro Area.

### Peer City Comparison

The performance of the proposed Southwest Rail Transitway was compared to that of operating light rail lines in the following cities: Baltimore, Boston (Green Line), Buffalo, Cleveland (Shaker Line), Dallas, Denver, Los Angeles (Blue Line), Memphis, Portland, Sacramento, Saint Louis, Salt Lake City, San Diego, San Francisco MUNI. Peer cities for the Minneapolis/St. Paul area exhibit similar characteristics in regard to transit fleet size, population, and urbanization pattern.

**Table A**  
Peer Cities – Light Rail

<b>Newer Systems</b>	<b>Year</b>	<b>Older Systems</b>	<b>Year</b>
Baltimore	1992	Boston – Green	1897
Buffalo	1992	Cleveland – Shaker	1927
Dallas	1996	San Francisco MUNI	1912/1980 <sup>b</sup>
Denver	1994		
Los Angeles – Blue	1991		
Memphis <sup>a</sup>	1993		
Portland	1986		
Sacramento	1987		
Saint Louis	1993		
Salt Lake	1999		
San Diego	1981		

<sup>a</sup> *Downtown trolley*

<sup>b</sup> *Restructured to downtown subway*

Light rail currently operates in all peer cities, except Memphis, which is a trolley line. The majority of light rail lines operate along exclusive right-of-way, at-grade or grade separated. Other than Boston and certain routes in San Francisco, few lines operate within mixed-flow traffic. Light rail is primarily grade separated in Buffalo and Los Angeles; significant sections of grade-separated right-of-way can be noted for Boston, San Diego, and San Francisco. While light rail has operated for many years in Boston, Cleveland, and San Francisco, light rail in other peer cities has opened within the last 25 years.

## APPENDIX H: PEER CITY COMPARISON

### Performance Measures

Transit systems across the country report their performance on an annual basis to the Federal Transit Administration (FTA). The FTA then compiles this information into the National Transit Database. The National Transit Database information for year 2001 was used to prepare this peer city comparison. Performance measures were calculated to reflect service effectiveness, cost effectiveness and service efficiency. For the proposed Southwest Rail Transitway, alternatives LRT 1A and LRT 3B were used for this comparison to show the range of performance.

It should be noted that the performance for the Southwest Rail Transitway is likely to improve as the operating plan and related costs are refined to maximize system performance. The service plan and related operating and maintenance costs used to calculate the performance for the Southwest Rail Transitway have not been evaluated to identify areas where cost savings may be realized. This is typically done as the next step in the transitway development process.

#### Service Effectiveness

- Passenger Trips/Vehicle Revenue Hour

#### Cost-Effectiveness

- Operating Cost/Passenger Mile
- Operating Cost/Passenger Trip

#### Service Efficiency

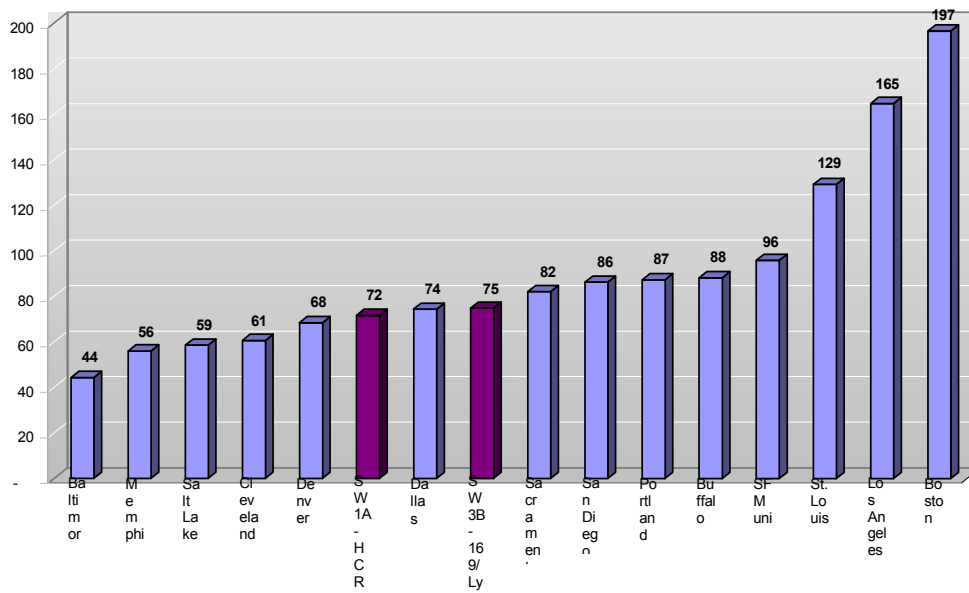
- Operating Cost/Vehicle Revenue Hour
- Operating Cost/Vehicle Revenue Mile

Figures A through E display performance data for Southwest Corridor Alternatives 1A and 3B as well as for peer cities. In general, values noted for the Southwest Corridor alternatives are in the mid-range of those noted for peer cities.

#### Service Effectiveness

**Passenger Trips/Vehicle Revenue Hour.** This measure reflects effectiveness in moving passengers within a corridor. Figure A indicates that the number of passenger trips/vehicle revenue hour for a Southwest Rail Transitway lies in the mid-range of peer cities and similar to those for Denver and Dallas.

Figure A Passenger Trips per Revenue Vehicle Hour

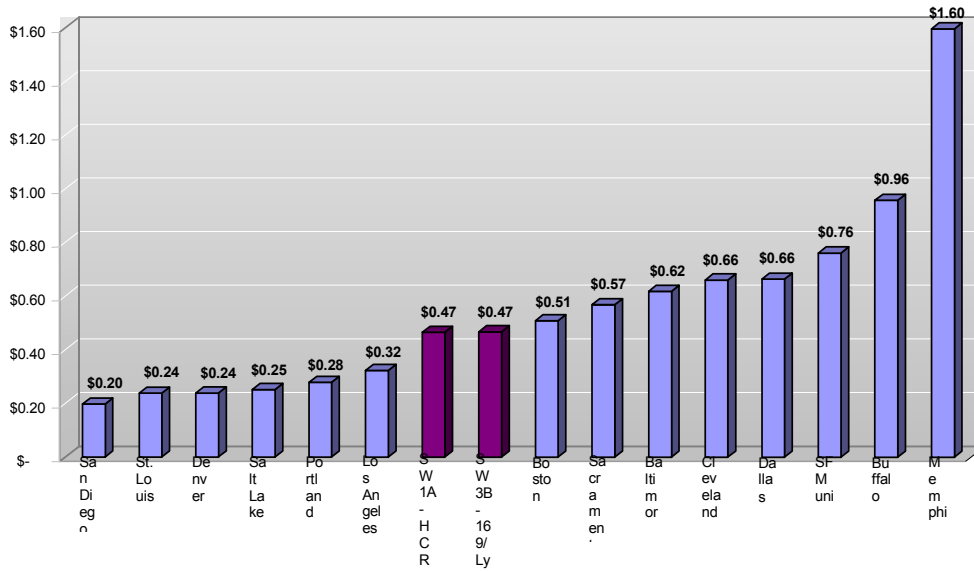


## APPENDIX H: PEER CITY COMPARISON

### Cost-Effectiveness

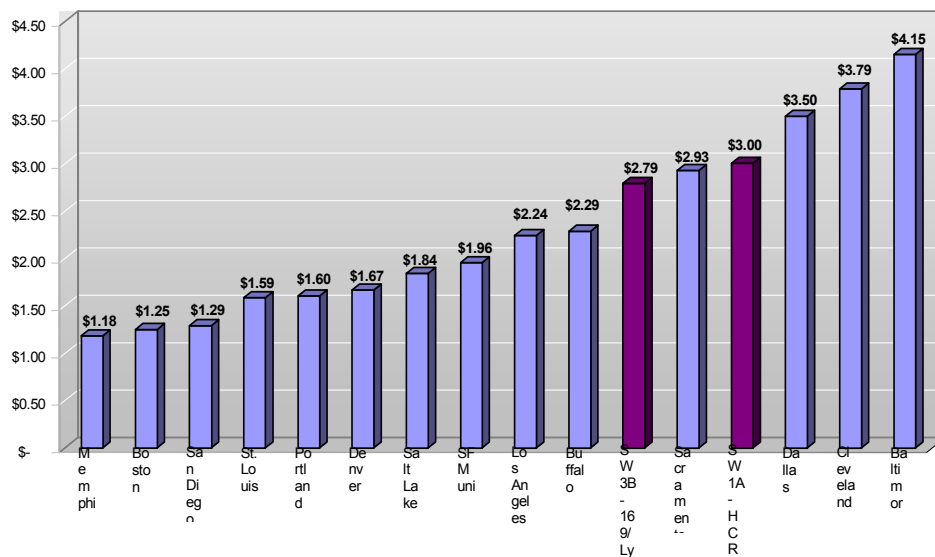
**Operating Cost per Passenger Mile.** This measure reflects the cost and average distance traveled by each boarding passenger. Figure B indicates that the operating cost per passenger mile for a Southwest Rail Transitway is in the mid-range of the peer cities.

**Figure B Operating Cost per Passenger Mile**  
[\$2002/3]



**Operating Cost per Passenger Trip.** This measure reflects operating cost for each passenger trip. Recurring annual costs for administration, vehicle and maintenance labor are included, but the amortized capital costs are not. Figure C indicates that a Southwest Rail Transitway is slightly higher than the mid-range for operating costs per passenger trip. While this is true if the subsidy per trip is calculated by deducting the average fare (\$1.25) from the operating cost per passenger trip of \$2.79 to \$3.00, the subsidy per passenger trip for a Southwest Rail Transitway is between \$1.75 and \$1.54, which is lower than the average for this region of \$1.88 for Metro Transit.

**Figure C Operating Cost per Passenger Trip**  
[\$2002/3]

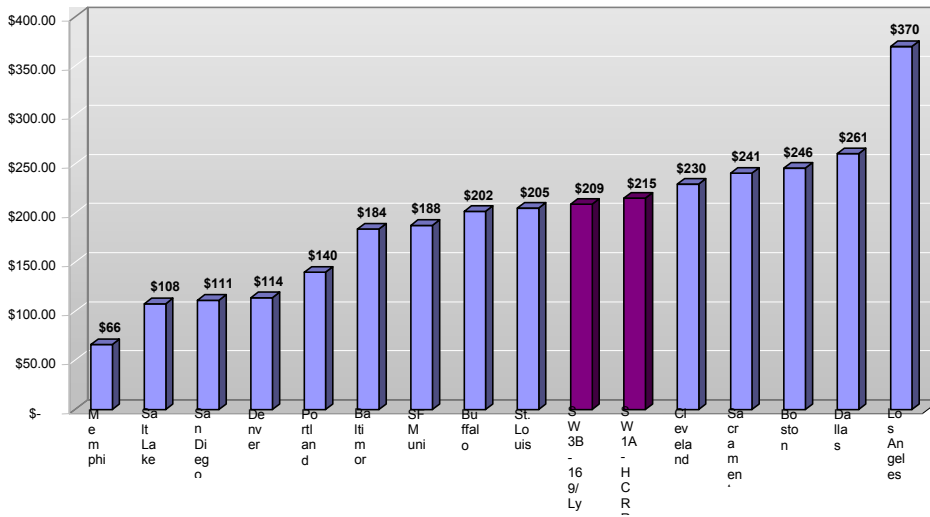


# APPENDIX H: PEER CITY COMPARISON

## Service Efficiency

**Operating Cost per Revenue Vehicle-Hour.** This measure reflects the cost of operating rail vehicles in the corridor. This measure takes into account the number of cars per train in order to reflect the total vehicles in service. Figure D indicates that a Southwest Rail Transitway lies in the mid-range of the peer cities.

**Figure D Operating Cost per Revenue Vehicle Hour**  
[\$2002/3]



**Operating Cost per Revenue Vehicle-Mile.** This measure reflects operating cost for all rail vehicles operated in service, considering multi-car trains. The number of revenue vehicle, or car, miles will be higher for systems that operate a significant share of multi-car trains. Figure E indicates that a Southwest Rail Transitway's operating cost per revenue vehicle mile lies within the mid-range of the peer cities.

**Figure E Operating Cost per Revenue Vehicle Mile**  
[\$2002/3]

