6. Key Study Findings

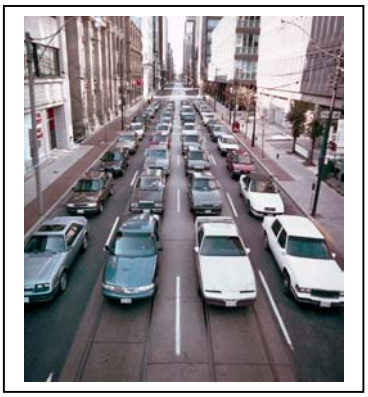
Introduction

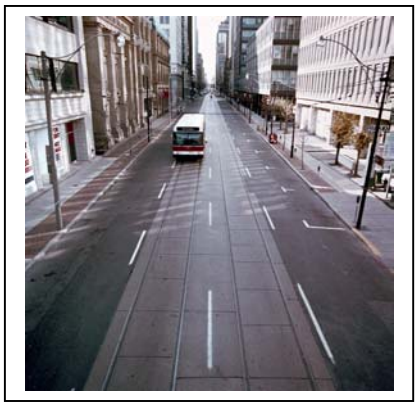
This chapter presents the key study findings for the Southwest Rail Transit Study. These findings are based upon the technical information that was generated as part of this study. A Southwest Rail Transitway was found to improve mobility, provide a competitive travel time to the private automobile, be reasonable in terms of costs, move passengers efficiently and effectively, provide service to population and employment concentrations, promote economic development and redevelopment at station locations, enhance the environment and improve the quality of life in the region, and be compatible with trails.

Improve Mobility

A Southwest Rail Transitway is estimated to carry between 16,500 and 19,500 trips per day. During the peak hour (rush hour), this line is expected to carry between 1,600 and 2,000 passengers, which equates to about one lane of roadway capacity (assumes 2,000 vehicles per lane and one person per vehicle).

In terms of the capacity provided, a Southwest Rail Transitway would occupy less space than private automobiles. The photographs below graphically depict the space occupied by a single driver in an automobile versus those same drivers in a light rail vehicle. The passenger capacity of a two-car light rail vehicle is in excess of 250 passengers.





Competitive Travel Time

A Southwest Rail Transitway is estimated to provide afternoon rush hour travel times that are competitive with the private automobile. Rail transitway passengers would also benefit from a travel choice not subject to delays caused by weather, congestion, and accidents.

Figure 6.1 Travel Time Comparisons

Origin/Destination Pair	LRT	DMU	SOV*
Nicollet Mall to SW Metro Transit Station	29-35	N/A	39
UMN (east bank) to SW Metro Transit Station	40	N/A	43
Nicollet Mall to downtown Hopkins	18-22	25	31
St. Louis Park to Minneapolis/St. Paul Airport	39-47	45	36
Downtown Hopkins to Uptown (Lake/Hennepin)	12	N/A	19

**The single-occupant vehicle (SOV) travel times were calculated assuming an average travel speed of 35 mph and a wait time of 5-minutes/ramp meter.*

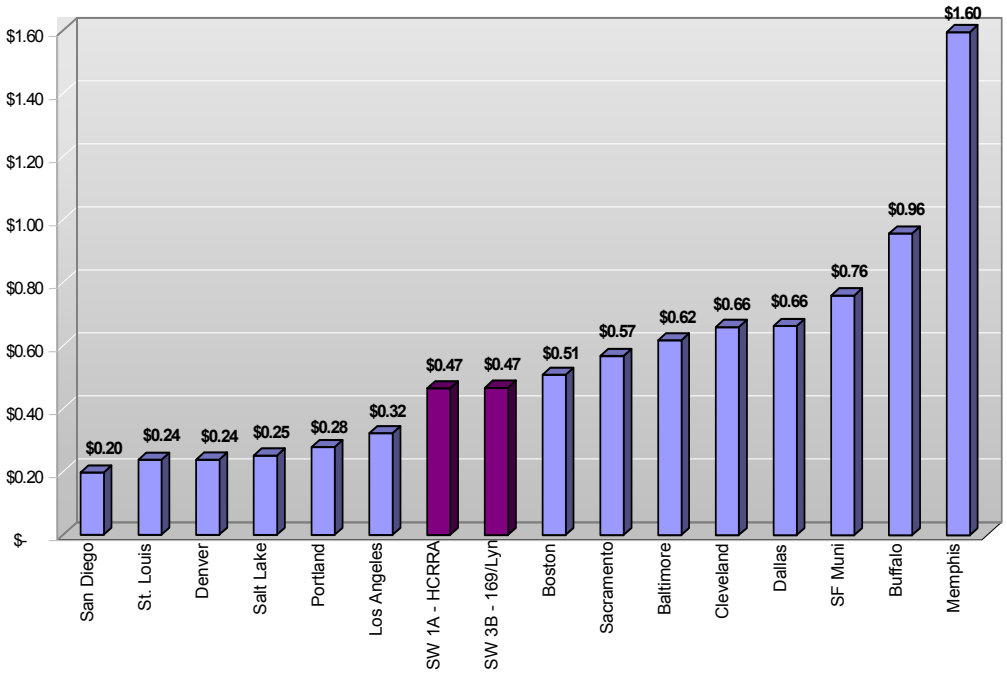
Reasonable Cost

The cost to construct a Southwest Rail Transitway is estimated to range from $431 million to $926 million in 2010 dollars. In terms of capital cost per mile, a Southwest Rail Transitway is within the range of federally funded light rail transit (LRT) systems throughout the country. On a per mile capital cost basis, a Southwest Rail Transitway would range from $28 to $52 million per mile depending upon alignment, which is slightly higher than Denver ($30 million) and St. Louis ($39 million), but lower than Dallas ($54 million), Portland ($63 million), San Diego ($68 million), San Francisco ($98 million), and New Jersey ($113 million).

Cost-Effectiveness

Operating cost per passenger mile measures the cost and average distance traveled by each boarding passenger. Figure 6.2 indicates that the operating cost per passenger mile for a Southwest Rail Transitway is expected to be $ 0.47, which is higher than Denver and Portland, but lower than Baltimore and Dallas.

Figure 6.2 Operating Cost Per Passenger Mile ($2002/3)



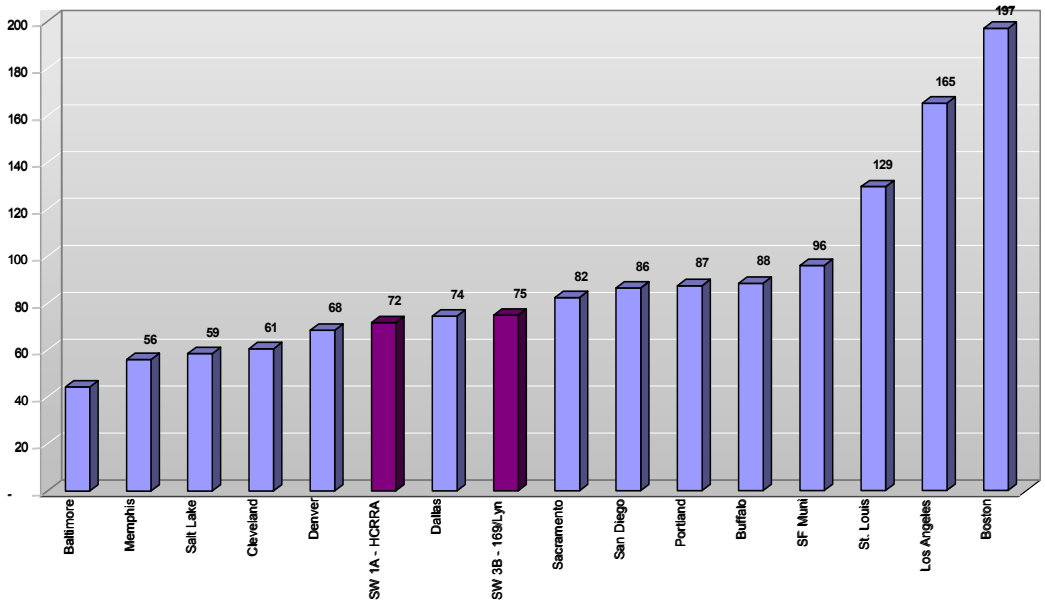
Effectively and Efficiently Moves People

In terms of service effectiveness and efficiency, a Southwest Rail Transitway is within the range of federally funded light rail transit (LRT) systems throughout the country.

Service Effectiveness

The number of passengers carried per hour of revenue service is a commonly used indicator of the effectiveness of transit service. A Southwest Rail Transitway is projected to carry between 72 and 75 passengers per revenue hour, which is similar to Denver and Dallas systems.

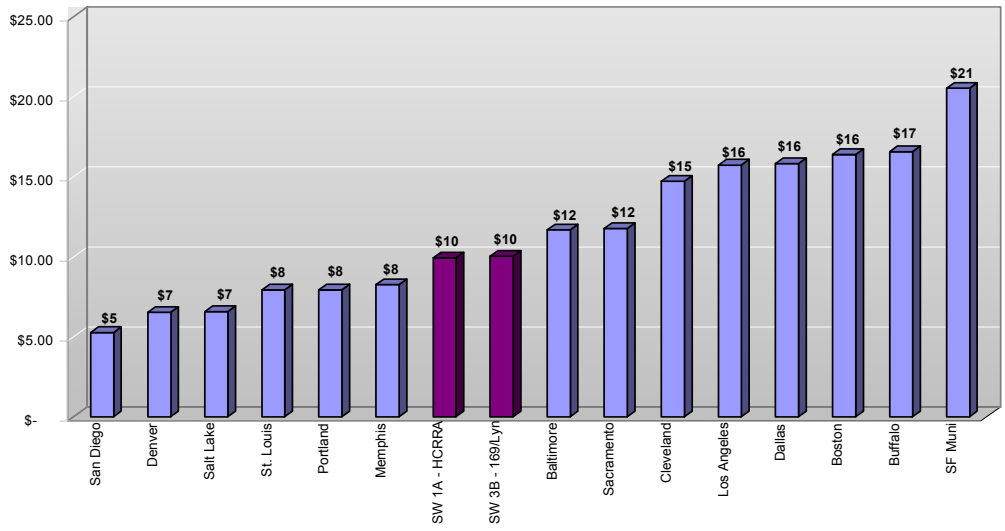
Figure 6.3 Passengers-per-Revenue Hour



Service Efficiency

The operating cost per vehicle mile of revenue service is a commonly used measure of transit service efficiency. A Southwest Rail Transitway's operating cost per revenue vehicle mile is expected to be $10, which is close to that of St. Louis, Portland, Memphis, Baltimore, and Sacramento.

Figure 6.3 Operating Cost Per Revenue Vehicle Mile ($2002/3)



Service to Population and Employment

According to the 2000 U.S. Census, the study area encompassed over 233,200 households and over 454,000 jobs. By 2030, the study area households are expected to increase to over 270,500 and the jobs to over 553,400.

A Southwest Rail Transitway is expected to serve over 31,000 households and over 200,000 jobs, which are currently located within a 1/2 mile radius of proposed stations.

Economic Development/Redevelopment

Opportunities exist at the proposed stations for development and redevelopment that is compatible with rail transit service. Examples include the Elmwood area of St. Louis Park, downtown Hopkins, the Golden Triangle in Minnetonka, and the Opus area of Minnetonka.

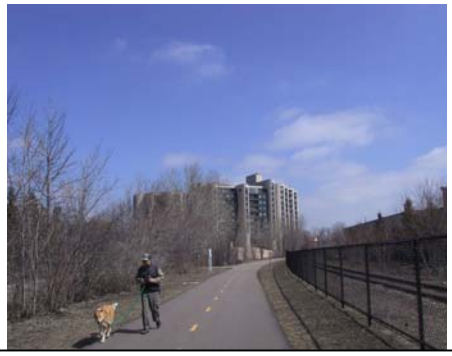
Proposed Wooddale Station

Enhance the Environment

A Southwest Rail Transitway is projected to reduce carbon monoxide emissions by 72,000 to 180,000 tons annually and to reduce hours of automobile travel by 90,000 to 330,000 hours annually.

Trails & Rails Co-Existence

According to the Rails-to-Trails Conservancy, rails and trails co-exist in over 60 locations in the United States, including the Southwest Study Area. Within the study area, freight rail and trails currently co-exist in the Kenilworth Corridor, the Cedar Lake Corridor, and in the portions of the Southwest Corridor in through St. Louis Park and Hopkins. Until recently, freight rail and a trail co-existed in the Midtown Greenway Corridor. Pictured below are the existing Kenilworth Corridor and an example of light rail transit co-existing with a trail in Strasbourg, France.



Kenilworth Trail and Rail

Strasbourg Trail and LRT