

VINTAGE RAIL TROLLEY STUDY

29TH STREET AND SOUTHWEST CORRIDORS
HENNEPIN COUNTY & METROPOLITAN COUNCIL
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Prepared by:

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EXECUTIVE SUMMARY

The *29th Street and Southwest Corridors Busway Feasibility Study* was completed in February 2000. The study objective was to determine the feasibility, defined in terms of ridership forecasts and costs, of constructing and operating a busway and to determine if a busway is a practical first step toward future light-rail transit (LRT). This vintage rail trolley study was initiated by Hennepin County and the Metropolitan Council in April 2000 at the request of the Midtown Greenway Coalition. This study is intended to determine the feasibility, defined in terms of ridership forecasts and costs, of constructing and operating a vintage rail trolley and to determine whether a vintage rail trolley is a practical step toward future LRT. This study is intended to be an addendum to the *29th Street and Southwest Corridors Busway Feasibility Study*. For more detailed information regarding a busway the *29th Street and Southwest Corridors Busway Feasibility Study* should be referenced.

VINTAGE RAIL TROLLEY

Vintage rail trolley systems currently operate in a number of U.S. cities including Portland, Dallas, New Orleans, Seattle, and Memphis. Vintage rail trolley systems are generally two to four miles in length, use either refurbished PCC-type cars or newly-constructed replica trolley cars, and operate on rails with an overhead power system similar to that used to operate light rail vehicles. Figure 1 depicts a vintage rail trolley vehicle operating in Portland, Oregon.

FIGURE 1
Vintage Rail Trolley in Portland, Oregon



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For purposes of this study, vintage rail trolley service is assumed to be a state-of-the-art system operating on dual tracks with service levels and infrastructure equivalent to a busway or LRT (i.e., transit stations, park-and-ride lots, fare collections systems and trackwork). The assumed purpose of the vintage rail trolley is transportation, not tourism. (See Appendix A for a summary of vintage rail trolley characteristics.)

The following two alignments were analyzed in this study:

1. *29th Street Alignment* defined as West Lake Street to Hiawatha Avenue.
2. *Southwest to Minneapolis CBD Alignment* defined as 5th Avenue in Hopkins to downtown Minneapolis via either an exclusive right-of-way or a surface street.

STUDY FINDINGS

Based solely on ridership forecasts and cost estimates, a vintage rail trolley in the 29th Street and Southwest Corridors is considered technically feasible. Furthermore, based on capital costs, constructing a vintage rail trolley will not preclude conversion to LRT in the future.

2020 Ridership Forecasts

By 2020, a vintage rail trolley system is expected to carry 6,100 passengers per day along the 29th Street alignment and 14,500 passengers per day along the Southwest to Minneapolis CBD alignment (see Table A).

TABLE A
2020 Transit Ridership Forecasts

Alignment	Busway	Vintage Rail Trolley	LRT
29th Street Corridor (West Lake – Hiawatha)	7,300	6,100	7,700
Southwest Corridor to Minneapolis CBD (Hopkins – Minneapolis CBD)	16,000	14,500	16,500



Cost Estimates

For the 29th Street alignment, a vintage rail trolley is expected to cost \$84 million to construct and \$2.2 million annually to operate and maintain. For the Southwest to Minneapolis CBD alignment, a vintage rail trolley is expected to cost between \$144 and \$194 million to construct and \$11.2 million annually to operate and maintain. The vintage rail trolley construction and operations/maintenance (O&M) cost estimates in 2005 dollars are presented in Tables B and C below.

TABLE B
Capital Costs (2005 Dollars)

Alignment	Busway	Vintage Rail Trolley	LRT
29th Street Corridor (West Lake – Hiawatha)	\$59M	\$84M	\$122M
Southwest Corridor to Minneapolis CBD (Hopkins – Minneapolis CBD)	\$84-95M	\$144M - \$194M	\$244- \$289M

TABLE C
Annual Operating and Maintenance Costs (2005 Dollars)

Alignment	Busway	Vintage Rail Trolley	LRT
29th Street Corridor (West Lake – Hiawatha)	\$2.0M	\$2.2M	\$2.3M
Southwest Corridor to Minneapolis CBD (Hopkins – Minneapolis CBD)	\$9.1M	\$11.2M	\$8.4M

Issues Identification

A number of issues relating to vintage rail trolley service arose during the study process. These include intermodal connectivity (between trolley cars, LRT, and/or exclusive busway vehicles), compatibility with other transportation modes (freight rail, pedestrian and bicycle), physical design (transit stations, transitway treatments, retaining walls, bridge work, and landscaping), and potential social, economic and environmental impacts. Although outside the scope of this study, these issues will be explored in greater detail if future planning for vintage rail trolley is initiated in either the 29th Street or Southwest Corridors.
