

Schuylkill Valley MetroRail

Philadelphia – Reading, Pennsylvania

(November 2002)

Description

The Southeastern Pennsylvania Transportation Authority (SEPTA) and the Berks Area Reading Transportation Authority (BARTA) propose to develop the Schuylkill Valley MetroRail (SVM) project extending northwest from Philadelphia approximately 74 miles to Reading. The alignment of the proposed rail project, a hybrid of light and commuter rail services, would generally parallel the Schuylkill River along existing SEPTA and Norfolk Southern railroad right-of-way. The SVM corridor is comprised of 52 municipalities in four counties, including the smaller cities of Norristown, Pottstown and Phoenixville; suburban centers at King of Prussia and Great Valley; and regional activity centers and attractions such as Center City Philadelphia, King of Prussia Mall, Valley Forge National Park and the Reading Outlet Stores Mall. The project would access all mass transportation lines in the corridor including connections to: SEPTA's light rail lines, Subway Rapid Transit lines, the Norristown High Speed Line, and all its Regional Rail lines; Amtrak and New Jersey Transit trains; Port Authority Transit Corporation High Speed line to New Jersey; SEPTA, BARTA, Pottstown and New Jersey Transit local, suburban, long distance and feeder bus routes; and Greyhound and other intercity bus services.

The SVM project proposes to utilize an innovative technology consisting of conventional commuter rail car design modified to permit operation by a single person. Key features include service at subway/light rail system levels of frequency, off-train fare collection, and high performance rolling stock (i.e., with high acceleration and braking rates). MetroRail would operate on shared track with regional rail, Amtrak and freight trains, and would use Philadelphia's Center City Tunnel. SEPTA is also examining a possible linkage to the proposed Cross County Metro project between King of Prussia and Norristown.

Summary Description	
Proposed Project:	MetroRail (hybrid light and commuter rail) 74 Miles, 34 Stations
Total Capital Cost (\$YOE):	\$1.8 Billion
Section 5309 New Starts Share (\$YOE):	\$1.5 Billion (80%)
Annual Operating Cost (2020 \$YOE):	\$65.9 Million
Ridership Forecast (2020):	47,800 Average Weekday Boardings 27,400 Daily New Riders
Opening Year Ridership Forecast (2010):	41,200 Average Weekday Boardings
FY 2004 Finance Rating:	Low
FY 2004 Project Justification Rating:	Medium
FY 2004 Overall Project Rating:	Not Recommended

The SVM project would directly serve the newer growth centers in the corridor and provide a transportation alternative to the two principal highways, Schuylkill Expressway (I-76) and US Route 422 Expressway, serving this rapidly developing area of southeastern Pennsylvania. The SVM project would also serve as the catalyst to spark economic development in older towns in the rail corridor and help to focus growth in a more sustainable fashion.

This overall project rating of *Not Recommended* based on the “Low financial rating resulting from a Section 5309 New Starts funding share of 80 percent. This project has received a rating of *Not Recommended* based on the Federal New Starts share requirement in effect during fiscal year 2003. The Conference Report accompanying the FY 2002 Department of Transportation Appropriations Act directs that, as of October 1, 2002, no new Full Funding Grant Agreement may be executed with a Federal New Starts share greater than 60 percent. The project’s “low” share rating and summary financial rating reflect this Congressional direction. In addition, the Administration is seeking legislation that would limit the Federal New Starts share to no more than 50 percent beginning in FY 2004. Future ratings of this project would be affected by this change.

The overall project rating applies to this *Annual Report on New Starts* **and reflects conditions as of November 2002**. Project evaluation is an ongoing process. As New Starts projects proceed through development, the estimates of costs, benefits, schedule, and impacts are refined. **The FTA ratings and recommendations will be updated annually to reflect new information, changing conditions, and refined financing plans.**

Status

SEPTA and BARTA completed a Major Investment Study/Draft Environmental Impact Study (MIS/DEIS), for which MetroRail was adopted as the Locally Preferred Alternative. The project is included in the financially constrained long range plans of both the Delaware Valley Regional Planning Commission and the Berks County Planning Commission, the two responsible MPOs. FTA approved the project into Preliminary Engineering (PE) in January 2002. The DEIS was published in December 2001, and notes FTA’s concern with the continued proposed level of Section 5309 New Starts funding. Initiation of the Final EIS is expected in spring 2003. SEPTA is providing technical oversight of project development. MetroRail service is scheduled to open in 2010.

TEA-21 Section 3030(a)(61) authorizes the “Philadelphia – Schuylkill Valley Metro” for Final Design and construction. Through FY 2002, Congress has appropriated \$25.72 million in Section 5309 New Starts funds for this project.

Evaluation

The following criteria have been estimated in conformance with FTA’s *Reporting Instructions for the Section 5309 New Starts Criteria*, updated in June 2002. The project will be reevaluated for next year’s New Starts Report and when it is ready to advance into Final Design.

Project Justification Qualitative Criteria		
Mobility Improvements Rating: Medium		
	<u>New Start vs. Baseline</u>	
Average Employment Per Station	11,213	
Average Low Income Households Per Station	824	
Transportation System User Benefit Per Project Passenger Mile (Minutes)	0.6	
Environmental Benefits Rating: High		
	<u>New Start vs. Baseline</u>	
<u>Criteria Pollutant Reduced</u> (tons)		
Carbon Monoxide (CO)	869	
Nitrogen Oxide (NO_x)	146	
Hydrocarbons	102	
Particulate Matter (PM₁₀)	11	
Carbon Dioxide (CO₂)	65,260	
<u>Annual Energy Savings</u> (million) BTU	818,140	
Cost Effectiveness Rating: Low-Medium		
	<u>New Start vs. Baseline</u>	
Cost per Transportation System User Benefit (current year dollars/hour)	\$23.78	
Operating Efficiencies Rating: Medium		
	<u>Baseline</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (current year dollars)	\$0.27	\$0.26

[] indicate an increase in emissions.

Project Justification

Rating: Medium

The *Medium* project justification rating reflects strong transit-supportive land use throughout the corridor and the weak cost-effectiveness of the project. Based on 1990 Census data, there are an estimated 28,031 low income households and 381,240 jobs within a ½-mile radius of station areas of the Schuylkill Valley MetroRail. EPA currently designates the Philadelphia-Wilmington-Trenton, PA-NJ-DE-MD area as a “severe non-attainment area” for ozone. The incremental cost per incremental trip for the project is \$17.42.

Existing Land Use, Transit-Supportive Land Use Policies and Future Patterns

Rating: Medium-High

The *Medium-High* land use rating reflects strong existing land use and transit-supportive policies in the corridor. The region’s growth management policies have worked well in creating transit-

supportive communities throughout the corridor. Development is continuing in the corridor at a steady pace; many of the proposed developments provide a transit-supportive mix of residential, office and commercial space.

Existing Conditions: The Schuylkill Valley MetroRail (SVM) study area includes Center City Philadelphia and contains major concentrations of office employment, two of the largest universities in the City of Philadelphia, the University of Pennsylvania Hospital, Allegheny University Hospital, and the University Science Center. The 30th Street Station serves as an intermodal connection point between Amtrak and New Jersey Transit trains, and the SEPTA Regional Rail system lines. Employment densities within the corridor are approximately 103 employees per acre (1,939 jobs per square mile), whereas the density of the employment within ½-mile of the stations throughout the corridor is approximately 15,866 jobs per square mile. Residential development ranges from high-rise projects to traditional low-rise neighborhoods. Center City Philadelphia has residential densities of almost 17,900 people per square mile. The average population density throughout the corridor is approximately 7,600 people per square mile.

Future Plans, Policies and Performance: The Commonwealth of Pennsylvania and the Delaware Valley Regional Planning Commission have transportation and growth management policies that focus development in existing and emerging centers and corridors and maintain existing rural areas. The Commonwealth’s Municipal Planning Code provides for the creation of “Locally Designated Growth Areas” as part of their comprehensive plans. The Schuylkill Valley MetroRail corridor is the subject of a Transportation and Community and System Preservation (TCSP) Pilot Program that includes a regional Location Efficient Mortgage (LEM) product, a regional TOD advocacy and educational support campaign; and a prototype corridor case study to prepare five station area plans.

Land use policies and market demands throughout the corridor have fostered numerous recent development projects. The region and corridor are expected to continue to grow substantially over the next 20 years. Key areas in the corridor that are expected to contain a large percentage of the growth include Center City, which continues to experience a strong upward trend in office and housing, with a 93 percent office occupancy rate and an even higher residential occupancy rate; Conshohocken, which has numerous developments under construction and more planned; the King of Prussia area; as well as several of the suburban townships such as Limerick and Upper Providence which are successfully attracting biotech and pharmaceutical industries. Recently, over 550,000 square feet of office space has been built in Conshohocken along the Schuylkill Valley Corridor.

Local Financial Commitment

Rating: Low

The *Low* rating is based on the proposed share of New Starts funding exceeding acceptable levels.

Proposed Non-Section 5309 New Starts Share of Total Project Costs: 20 %

Rating: Low

The SVM financial plan includes Section 5309 New Starts funding, and State and local funding.

Locally Proposed Financial Plan		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Percent of Total</u>
Federal: Section 5309 New Starts	\$1,465.4	80.0 %
State: Act 26 Appropriations	\$ 305.3	16.7 %
Local: Infrastructure Safety Renewal Program	\$ 61.1	3.3 %
Total:	\$1,831.7	100.0 %

NOTE: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions. Total may not add due to rounding.

Stability and Reliability of Capital Financing Plan

Rating: Low-Medium

The *Low-Medium* rating reflects the incomplete capital financing plan, especially the omission of the proposed Cross County Metro project and discrepancies in identifying State allocations between the two projects.

Agency Capital Financial Condition: The financial plan for the Schuylkill Valley MetroRail project does not include historical financial data for use in assessing the current financial condition of the Southeastern Pennsylvania Transportation Authority (SEPTA). The average age of the bus fleet is nine years. The plan does not include information regarding the rating of prior outstanding debt included in the plan.

Capital Cost Estimate and Contingencies: The Schuylkill Valley MetroRail Project capital cost estimate includes a 20 percent contingency, which is low for a project still in the early planning stage. An inflation factor of three percent was applied to the estimated year of expenditure costs for the different cost categories. The plan does not mention if unit costs were obtained from similar recent construction projects.

Existing and Committed Funding: All non-New Starts capital funding sources are committed. Non-New Starts sources include revenues from Act 26 of 1991 (Public Transportation Assistance Fund, PTAF) and from the Infrastructure Safety Renewal Program.

New and Proposed Sources: No new sources of funding are planned for this project.

Stability and Reliability of Operating Finance Plan

Rating: Medium

The *Medium* rating for the operating financial plan is based on the stability of projected revenue sources to be used to support the existing transit services operated by SEPTA. The proposed plan assumes that the State will continue to provide financial support to public transportation services and expects a continuous increase in financial assistance.

Agency Operating Financial Condition: The operating plan is incomplete and does not include historical data or an audited financial statement.

Operating Cost Estimates and Contingencies: Operating and maintenance cost estimates for the Schuylkill Valley MetroRail project were developed using historical cost data from similar transit services operated by SEPTA and from a 1997 report on experience in Dallas. The operating plan suggests that any gap between revenues and expenditures will be covered with a supplemental operating subsidy, proposed as increases of existing state and local funding sources.

Existing and Committed Funding: Operating and maintenance funds are derived from existing state and local assistance, systemwide fares, and other income. No evidence of funding commitments to the project was provided.

New and Proposed Funding Sources: New funding sources include the Schuylkill Valley MetroRail operating subsidy and other new allocations.

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