

CHAPTER 6

Recommendations

The analysis conducted during this study has demonstrated that there is demand for Priority Bus/BRT routes within the corridor in future years (2030), particularly for trips destined to Washington D.C. and to Tysons Corner. Demand for service has also been documented at stations and major destinations throughout the corridor, including such areas as Seminary Road where BRAC Reservation 133 is under construction, in Prince William County near the PRTC transit center, and along the corridor at military facilities such as EPG and Fort Belvoir. Station infrastructure has been developed at a conceptual level for the Priority Bus/BRT routes and preliminary cost estimates developed. In summary, it is estimated that an investment of approximately \$52 million in services and \$21 million in fixed facilities would be needed to initiate the system.

This section discusses how this investment package is related to the previous investment strategy included in the Transit/TDM Study. Implementation issues and additional analyses are also identified.

6.1 Relationship to Transit/TDM Study

The purpose of this market analysis was to build on the recommendations of the 2008 Transit/TDM Study and to provide additional analysis of the BRT options for the corridor. There are many elements of this study that were not analyzed as part of the effort – thus this new analysis does not specifically alter the previous conclusions regarding BRT services. **Table 6-1** compares the results of this market analysis to the expenditures included in the Fiscally Constrained Refined Alternative as documented in the Transit/TDM Study (shown in Table 9-1 of that study).

As noted in section 5 of this report, the analysis in this current study verifies that there is BRT demand in the corridor and recommends that the results of the Transit/TDM Study be revised only in two ways. First, the demand modeling indicates that a Priority Bus/BRT system with seven routes as shown in this report would meet demand. These routes, as documented in **Table 5-2**, would cost slightly more than the three Express Bus/BRT routes anticipated in the Transit/TDM Study. Second, the types of stations recommended as a result of this more refined market analysis are different than the program envisioned in the Transit/TDM Study. Four in-line stations (as well as an in-line station at Lorton) have been refined into 12 station areas located off-line as part of this analysis. The costs for these stations would be estimated to be \$21 million, or about half of the \$40 million identified in the Transit/TDM Study. At this time, there is not enough information available about funding to complete a full assessment of funding sources, for these envisioned improvements, and a full financial assessment for providing these facilities will need to be conducted at a future stage.

6.2 Next Steps/Additional Analysis

The results of this I-95/I-395 BRT Study will continue to be coordinated with the overall I-95/I-395 HOV/Bus/HOT Lane Project.

This study documents that an investment of just over \$70 million dedicated towards a Priority Bus/BRT system of routes would provide mobility benefits, resulting in 6,000 boardings during the AM and PM peak periods. This investment is less than the total expenditures estimated in the Transit/TDM Study for BRT improvements.

The modeling results in Chapter 4 conclude that there is market demand for Priority Bus/BRT service that is not significantly affected by increases in running times in the corridor, as tested by moving stations from in-line

Element	Cost from Transit/TDM Study (millions)	Cost from I-95 / I-395 BRT Study (millions)	Notes / Description of Changes
Bus Service Modifications	\$29.6	\$29.6	Unchanged from previous study. Current study included these routes in base modeling and does not preclude them from being implemented as they serve different purposes than Priority Bus / BRT system.
New Shuttle Bus	\$7.4	\$7.4	Unchanged from previous study – shuttle services not coded in regional model. However, route structure from Lorton VRE to EPG to Fort Belvoir does overlap southern portion of the proposed Priority Bus / BRT Route and could be re-configured in future.
New Bus Service (this includes proposed BRT in previous study)	\$130.3	\$134.3	Three routes originating from Fredericksburg would be deleted saving \$48.0 million. Seven new Priority Bus / BRT Routes requiring \$52 million would be added. If the Kingstowne-Shirlington-Pentagon route or the Lake Ridge –Seminary Road Area routes were reconfigured additional cost savings would occur as they overlap Priority Bus / BRT Routes.
VRE	\$21.6	\$21.6	Unchanged from previous study.
TDM	\$20	\$20	Unchanged from previous study.
Metrorail Station Improvements	\$5.0	\$3.0	Previous study included \$2.5 million per station for Pentagon and Franconia-Springfield. Pentagon unchanged, estimate for Franconia-Springfield is now \$500,000.
BRT Stations	\$40.0	\$19.5	Previous study provided \$40 million for 4 stations, not including investment for Lorton. Priority Bus / BRT improves 12 stations in corridor, including Massaponax and a replacement for Lorton, which may be deferred as an investment.
Other Transit Centers	\$1.5	\$0	Amount included in above.
VRE Platforms and Yard Facility	\$5.3	\$5.3	Unchanged from previous study.
Park-and-Ride Lots	\$37.5	not applicable	Previous study included 3,750 new spaces. Complete parking studies not re-calculated as part of this study, but that amount of parking greatly exceeds demand required at Priority Bus stations, funding for which is included in the BRT station estimates.

Table 6-1. Comparison of Expenditures Required for Priority Bus to Transit/TDM Study

locations to off-line locations. This result indicates that demand for Priority Bus/BRT service is not specifically related to minor changes in travel time. However, all of the modeling conducted does assume that HOT Lane investment in the I-95/I-395 corridor would ensure that running times remain consistent and that BRT buses would not experience congested conditions in the corridor. This study supports all such investments that will enhance the flow of Priority Bus/BRT vehicles into major activity centers.

This study has not completed environmental assessment of the investments identified as part of the evaluation, nor has it completed detailed operational modeling as was originally envisioned. These studies would still need to be completed if funding for the Priority Bus/BRT system were committed and the project was moved into the next phase of analysis. In addition, the following additional analyses are recommended:

- ***Continued coordination and participation in planning and design for I-95/I-395 HOT lanes project, including support for inclusion of enhancements*** that would support Priority Bus/BRT movements in the corridor such as additional slip-ramps and potential bus access ramps as needed to support transit investments.
- ***Continued coordination with the Mark Center Access Study*** currently underway. As illustrated in Chapter 5, the potential routing of Priority Bus/BRT services through the rotary on Seminary Road is circuitous and better access to the BRAC site is being considered. In addition, coordination with the City of Alexandria will continue in order to determine the best access for transit.
- ***Location or access studies for each of the proposed stations***. The station concepts developed in this report are representative of how each station will function and the elements of each station. Transit oriented development studies for new Priority Bus/BRT Stations are recommended to better define access requirements and land use densities that support transit, particularly at Massaponax, Celebrate, Route 610 and Prince William County. The next step is to plan each station in greater detail with local stakeholders.
- ***Environmental documentation will be required for the Priority Bus/BRT system*** – especially for any off-line stations that require the purchase of right-of-way. This would include full detailed corridor model development and comprehensive assessments of impacts associated with proposed facilities.
- ***Documentation of parking needs unrelated to Priority Bus/BRT system*** that would support overall goals of the previous Transit/TDM Study.
- ***Detailed study of costs/benefits*** for various management structures that would be required to operate a regional Priority Bus/BRT system. Alternatives include the potential for multiple existing operators to use Priority Bus/BRT facilities, development of one managing partner in the region, or development of a new regional authority.
- ***Development of detailed implementation plan and regional coordination plan*** for Priority Bus/BRT routes in the corridor, including prioritization of investments and a detailed phasing plan.
- ***Additional public involvement and coordination with Transit Operators*** in corridor to explain the benefits of the proposed Priority Bus/BRT routes and integration with existing services.

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