



ARLINGTON COUNTY, VIRGINIA

**County Board Agenda Item
Meeting of April 22, 2005**

DATE: April 13, 2006

SUBJECT: Endorsement of the Modified Streetcar Alternative as the Preferred Transit Alternative for the Columbia Pike corridor.

C. M. RECOMMENDATION:

Endorse the Modified Streetcar Alternative, attached to this Board Report as Attachment A, "1.6 Findings and Recommendations," of the Columbia Pike Transit Alternatives Analysis, prepared by the Washington Metropolitan Transit Authority in cooperation with Fairfax County and Arlington County, dated July 2005, as the preferred transit alternative for the Columbia Pike corridor.

ISSUE: Should the Arlington County Board endorse the Modified Streetcar Alternative as the preferred transit alternative for the Columbia Pike corridor?

SUMMARY: Staff recommends that the County Board endorse the recommendation of the recently-completed Columbia Pike Transit Alternatives Analysis (the Pike Transit Initiative), which is to proceed with development of the Modified Streetcar Alternative in the Columbia Pike corridor between the Pentagon/Pentagon City area in Arlington and the Skyline area of Fairfax County.

BACKGROUND: In 1999, the Washington Metropolitan Transit Authority (WMATA) *Transit Service Expansion Plan* identified the Columbia Pike corridor as a corridor well-suited for high-capacity fixed guideway transit service. Also in 1999, the *Northern Virginia 2020 Transportation Plan* of the Northern Virginia Transportation Coordinating Council (the predecessor of the current Northern Virginia Transportation Authority) identified Columbia Pike as a key corridor for bus (2010) and rail (2020) transit improvements.

In March 2002, the *Columbia Pike Initiative, a Revitalization Plan* (CPI Plan) was adopted by the County Board. This plan, developed with extensive community input, recommended a vision for pedestrian-friendly transit-oriented development in the Columbia Pike corridor that would be appropriately served by a level of transit service that would attract a significantly greater travel share than the high-quality Metrobus service currently in place. The adoption of the CPI Plan was followed in September 2002 by a community charrette that refined the community's vision for the corridor. To implement this vision, staff and consultants developed a Form Based Code

County Manager: _____

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Staff: Richard Hartman, DES, Division of Transportation

to guide development within the Columbia Pike Special Revitalization District, which has four activity nodes along Columbia Pike. The Form Based Code included a Regulating Plan that located required building lines along the existing and proposed new streets in the Revitalization District.

The Board adopted the Form Based Code in February 2003, and at that time established the Columbia Pike Street Space Planning Task Force to make recommendations on the street width and components of Columbia Pike within Arlington County. The Street Space Task Force report was accepted by the Board in February 2004, and most of its recommendations were adopted and incorporated into the Master Transportation Plan. Included was a recommendation that any future transit on Columbia Pike operate in mixed traffic and be located for the most part in the curb lanes. This would allow the sidewalks to function as transit platforms and accommodate high-volume transit service within street section that is generally under 60 feet (exclusive of parking).

During the comprehensive planning process for the Columbia Pike corridor, the County and WMATA were proceeding with studies to define future transit improvements in the corridor. WMATA's 2002 *Regional Bus Study*, along with County transit planning studies, led to the establishment of Pike Ride bus service in the corridor. This was intended as an interim improvement until higher capacity transit could be developed. In the 2002 *Transit Study for Columbia Pike and Leesburg Pike*, WMATA and its consultants provided a detailed engineering feasibility study of rail alternatives along Columbia Pike and Leesburg Pike in Arlington and Fairfax County.

DISCUSSION: The earlier planning work led to the recently-completed *Columbia Pike Transit Alternatives Analysis*, also called the Pike Transit Initiative. This was also conducted by WMATA and its engineering consultants with the cooperation of Arlington and Fairfax County. The Alternatives Analysis was organized as a three-step screening process to develop and evaluate alternatives and recommend a preferred alternative. The first screen looked at a wide range of transit alternatives and then selected a short list based on the physical and policy constraints in the corridor. The policy framework specified that the transit should be surface running, that it should operate in shared travel lanes, and that it should be compatible with the planned urban scale of the study area.

The second screen evaluated the small set of alternatives against measures derived from the project goals and objectives. In the third screen, costs and impacts of the alternatives were evaluated to determine which alternative met the project purpose and need most efficiently and had the most potential to be advanced. The four alternatives that were evaluated in detail are:

- The Baseline Alternative, which included enhancements to the current Pike Ride service and other planned transportation improvements in the corridor.
- The Bus Rapid Transit (BRT) Alternative, which would introduce premium transit service with 60-foot BRT vehicles and curb-to-curb roadway reconstruction to facilitate bus movement and passenger comfort. The vehicles would operate at three-minute peak-period headways and six-minute off-peak (base) headways, running between the Pentagon and Baileys Crossroads. While this alternative has several traits commonly associated with BRT systems around the country, it does not have one of the key elements: a dedicated transit lane.

The BRT Alternative would operate more like an enhanced bus service, very similar to the Baseline Alternative.

- The Streetcar Alternative would introduce a premium service operating along rails in the travel lanes of Columbia Pike. The analysis assumed the vehicles to be the 67-foot Skoda electric trams, powered by an overhead wire, that are used in Portland. The vehicles would operate on three-minute peak period headways and six-minute off-peak headways, running between the Pentagon and Baileys Crossroads.
- The Modified Streetcar Alternative was developed as a more affordable rail alternative, which could be constructed at a lower cost than the Streetcar Alternative. It has the potential to be developed without Federal Transit Administration's New Starts funding, since the project does not seem likely to be able to meet the specific criteria for funding under that program. This alternative could qualify for the recently-established Small Starts program. The Modified Streetcar Alternative uses fewer vehicles than the Streetcar Alternative, operating on six-minute headways and supplementing the peak-period streetcar service with buses to provide overall three-minute headways during peak periods. The length of the line is reduced as well, running approximately five miles rather than six miles, terminating at Pentagon City rather than the Pentagon and in the center of Skyline rather than at Carlyn Springs Road and Seminary Road.

After the recommendation was made to pursue the Modified Streetcar Alternative, some members of the community suggested that a more comparable "Modified BRT Alternative" be evaluated as well. This would use fewer BRT vehicles, providing six-minute headways, supplemented by additional regular buses during the peak periods, to achieve three-minute headways. But without a dedicated transit lane, this alternative would not be a true BRT, but would be an Enhanced Pike Ride. While this alternative was not modeled as the other alternatives were, it was evaluated in terms of several evaluation measures, and generalized capital costs have been estimated. There were also requests to evaluate the option of extending the Modified Streetcar Alternative to the Pentagon.

The following table presents the estimated costs for the various alternatives. While the original cost estimates included only the items necessary to implement the transit alternatives, in response to suggestions from community members the revised cost estimates were calculated to include curb-to curb roadway reconstruction for the Streetcar Alternative and the costs to extend the Modified Streetcar Alternative to the Pentagon.

Summary of Costs by Alternative

Cost Element	Baseline Pike Ride	Enhanced Pike Ride (Potential)	BRT	Streetcar	Modified Streetcar	Modified Streetcar (extended)
Length of Alignment	n/a	4.7 miles	5.9 miles	5.9 miles	4.7 miles	5.2 miles
Number of Fleet Vehicles	n/a	11	29	27	11	13
Total Estimated Capital Cost	\$28 million planned*	n/a	\$110 to \$120 million	\$185 to \$200 million	\$110 to \$120 million	n/a
Revised Estimated Capital Cost	\$28 million planned*	\$25 to 40 million	\$110 to 120 million	\$210 to 230 million	\$110 to 120 million	\$130 to 140 million
Total Estimated Operations and Maintenance Cost	\$7.0M	\$3M over baseline	\$8.2M over baseline	\$14.0M over baseline	\$5.4M over baseline	\$6M over baseline

Estimated costs are shown in year 2005 dollars.

* Programmed enhancements to Columbia Pike improvements in the approved 2005 to 2010 Transportation Improvement Program. Note: These improvements are not required to operate the Baseline service.

The following table summarizes how each of the alternatives performed in meeting community and economic development goals.

Summary of Community and Economic Development Measures by Alternative

Measure	Baseline	Enhanced Pike Ride	BRT	Streetcar	Modified Streetcar
Consistency with Adopted Local Plans—revitalization recommendations incorporated	No	No	Yes	Yes	Yes-with modification
Aesthetics—potential visual and noise impacts	No change from current condition	No change from current condition	No significant change from current condition	Reduced noise; overhead wire	Somewhat reduced noise; overhead wire
Potential of Alternative to Facilitate Planned Development	Low	Low	Medium +10%*	High +25%*	High +25%*
Extent of Probable of Private Sector Funding Support	Form-based code TIPIF	Form-based code TIPIF	Low	High	High

*According to a study in the District of Columbia, residential and commercial development would be 25 percent higher than base conditions within ¼ mile of proposed streetcar corridors and 10 percent higher within ¼ mile of proposed BRT corridors.

** Tax Increment Public Infrastructure Fund

The Transit Alternatives Analysis process included extensive community participation, with more than 40 meetings with the public and community groups. Periodic input from a Policy Advisory Committee and frequent meetings with a Technical Advisory Committee helped guide the selection and evaluation of the alternatives. The Arlington Transit Advisory Committee has discussed the Columbia Pike Alternatives Analysis on several occasions over the past two years, and on March 14 voted to request analysis of a “Modified BRT Alternative.” The study team responded with the additional analysis of the “Enhanced Pike Ride” alternative that is included in the tables above. On April 6, the Transportation Commission discussed the Alternatives

Analysis and voted 10-0 to recommend that the County Board endorse the Modified Streetcar Alternative. On April 10, the Planning Commission voted 9-1 to recommend that the County Board endorse the Modified Streetcar Alternative.

Members of the Arlington Bicycle Advisory Committee have raised concerns that the streetcar tracks would be a hazard to bicyclists riding along Columbia Pike and crossing the tracks at intersections. They are also concerned about maneuvering around vehicles that are stopped to pick up and discharge passengers. While the situation is not ideal for cyclists, streetcars and bicycles do co-exist in cities around the world. Some strategies that will be studied further include using “flange fillers” to reduce the gap between the tracks and the roadway and designing stops that will allow bicycles to travel behind the station. Additionally, the Columbia Pike plan calls for the establishment of parallel bike routes in the corridor for riders who are not comfortable riding on Columbia Pike. Staff will be working this summer to create the first of these routes on 12th Street South between South Quincy and South Cleveland streets.

The community process was highlighted by a public meeting on March 20, 2006, that attracted about 160 people. They heard presentations on how streetcar systems in Portland and Tampa have generated increased transit modal share, enhanced those communities, and fostered transit-focused development. Portland operates modern Skoda streetcars, like those modeled in the Columbia Pike Alternatives Analysis, on a streetcar line that connects with the region’s higher-capacity MAX light-rail system. Since the streetcar alignment was identified in 1997, Portland has seen over \$2.8 billion in development within two blocks of the Portland Streetcar alignment. The system is so popular that several extensions are being planned.

Tampa started its system using restored historic streetcars. The 2.4-mile line has attracted \$600 million in private development. The Tampa system was originally conceived as a tourist attraction. Plans are now being made to expand the Tampa system using modern streetcars and to make it more attractive for commuters.

Also at the March 20 community forum, the former director of transportation for the District of Columbia, who is currently WMATA’s Interim General Manager, described plans for streetcars along several corridors in the District. An initial installation is planned in Anacostia, using the Skoda streetcars assumed in the Columbia Pike study. He described how streetcars in Arlington and the District could eventually be integrated into a regional system.

In addition to the potential economic development benefits, the Modified Streetcar Alternative meets other important criteria. It is an affordable, fixed-guideway rail system that has the ability to attract private-sector funding support. It would generate new transit ridership as well as serve future transit demand in the corridor. And the system’s quiet, bright and attractive vehicles are compatible with the community’s vision for Columbia Pike as mixed-use, pedestrian-friendly “Main Street” environment.

Based on the analysis and the input received from the community and stakeholders, the preferred alternative for transit in the Columbia Pike corridor should be a relatively small-scale project that could be advanced through local sponsorship and minimum federal participation. The project should also be advanced under federal requirements so that it may be kept eligible for federal

funding under the Small Starts program. The Pike Transit Initiative study team has recommended that the Modified Streetcar Alternative be carried forward into the next phase of the project development process, preliminary engineering and environmental review. The recommendation is based on its ability to generate transit ridership and serve transit demand in the corridor, ability to serve as a catalyst for economic development, and overall project affordability including attractiveness for private-sector funding support.

In addition to consideration by the Arlington County Board, the recommendation of the Transit Alternatives Analysis will go to the Fairfax County Board of Supervisors for endorsement on May 1, 2006. The endorsement of these two jurisdictions will allow the project to be placed on the regional long-range transportation plan, which will enable the project to receive federal transportation planning funds. It will also permit the Pike Transit Initiative to continue forward into the preliminary engineering and environmental assessment phases of development.

FISCAL IMPACT: Currently a financial capacity analysis for the project is underway. This analysis will evaluate a variety of potential sources of funding for the project, including public sector and private sector funding sources.

CONCLUSION: Staff recommends that the County Board endorse the recommendation of the Columbia Pike Transit Alternatives Analysis, which is to proceed with the next phase of development of the Modified Streetcar Alternative in the Columbia Pike Corridor between the Pentagon/Pentagon City area in Arlington County and the Skyline area in Fairfax County. This will allow the project to be placed on the regional long-range plan, which enables the project to receive federal planning funds and allows the Pike Transit Initiative to continue forward into the preliminary engineering and environmental assessment phase of development.