

National Capital Region Transportation Planning Board

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MEMORANDUM

TO: COG Board of Directors

FROM: Monica Bansal
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Department of Transportation Planning

SUBJECT: Proposal for TPB TIGER II Grant Submission of the Regional Expansion of Capital BikeShare

DATE: July 14, 2010

On June 16 the TPB approved the submission of a regional bike-sharing application and authorized the Steering Committee to approve the project's pre-application, which has a deadline of July 26. This memo outlines the project proposal and specific component details, as approved by the TPB Steering Committee on July 9.

Regional expansion of Capital BikeShare

TPB is proposing to submit a TIGER II competitive grant application for the regional expansion of DC and Arlington County's new Capital BikeShare program. Capital BikeShare will provide 1,000 bikes throughout DC and 117 bikes in the Crystal City and Potomac Yards areas of Arlington County. TPB proposes to more than triple the number of bikes to approximately 3,600 and to geographically expand the service area to reach ideal bike-sharing locations throughout the TPB planning area.

What is bike-sharing?

Bike-sharing is the provision of public-use bicycles available for short-term rental. The proposed system will consist of "stations" that include solar-powered bicycle docks that hold a given number of bike-sharing bicycles. Using smart card technology and a clear, low-cost fee structure, cyclists can pick up a bike from any station in the system and return it to any other station in the system, making a one-way trip if desired. Stations are typically located close to one another, allowing for high system convenience, accessibility, and flexibility. The ability for one-way use means that the bikes can be used to meet daily mobility needs, such as going to the transit station, place of employment, or shopping center. It differs markedly from recreation-oriented bicycle rental services because of the fast and easy access it provides. For this reason, bike-sharing should be thought of as public transit via bicycles.

Benefits of bike-sharing

The TPB approved the submission of this concept because of the variety of benefits bike-sharing can deliver to the National Capital Region at a relatively low cost. Bike-sharing systems require relatively modest initial capital costs and ongoing operating costs, and, when implemented properly, can deliver many livability, sustainability, and economic benefits. Some of the major benefits are:

- Provides a fast, convenient and flexible urban transport option;
- Can be a “door opener” to increase the acceptance of cycling as urban transport mode in areas that still lack a good level of bicycle use;
- Provides an affordable transport option
- Provides a sustainable transport option that has demonstrated an ability in other cities of similar size to encourage mode shifts from polluting modes, particularly for short trips
- Makes transit more accessible, which allows for a certain degree of mode shifts for longer trips as well
- Encourages intermodal travelling and creates another layer of regional connectivity
- Increases active transportation, allowing more people in the region to meet CDC daily physical activity requirements, which has significant public health benefits

Alignment with TIGER II criteria

The benefits above align well with the TIGER II grant criteria, likely making the TPB bike-sharing proposal nationally competitive. While a more developed discussion of the alignment of the project with TIGER II criteria will be completed to meet the August 23 final application deadline, some of the major considerations are outlined here:

- The regional expansion of Capital BikeShare demonstrates regional cooperation and a cohesive, connected regional project. Under the TPB’s highly successful TIGER I effort, it was clear that only the components that were not seen to be severable from one another and were part of a cohesive network were funded.
- Bike-sharing is relatively low cost. Total funds available under TIGER II are much lower than for TIGER I, with only \$425 million to be equitably distributed across the nation and across modes. It is likely that TIGER II individual grant awards will be smaller than TIGER I. Smaller grant requests closer to the \$10 million minimum will likely be more competitive.
- Bicycle and pedestrian projects are encouraged under the grant’s livability criteria; however, “projects that appear designed primarily as isolated recreational facilities and do not enhance traveler mobility will not be funded.” Bike-sharing, when implemented according to best practices, encourages short, one-way trips that increase traveler mobility and is distinctly different from bicycle rental, which is catered more for recreational use.
- Primary TIGER II criteria include enhancing sustainable transportation options, providing affordable options, increasing points of modal connectivity, improving safety, improving integration with the existing transportation system, and whether the project has a sustainable source of operating and maintenance funds. Bike-sharing achieves all of these goals, as discussed in the benefits section.

What makes bike-sharing successful?

In order to achieve the benefits outlined above and to successfully meet the TIGER II grant criteria, certain key conditions for implementation have been identified based on documented best practices:

- A minimum standard of bicycle infrastructure is necessary to ensure safety and accessibility to bike-sharing stations.
- Growing worldwide bike-sharing experience shows that sufficient resources for a large-scale scheme are needed for measurable success. The number of daily users per bike rise dramatically for larger, denser systems.
- Bike-sharing trips are meant to be short and infrastructure should be spatially oriented to allow for this type of travel.

- The TPB 2007/8 Household Travel Survey shows the average bicycle trip length to be 1.5 miles. Therefore, bike-sharing best practices recommend placement of bike-sharing stations 300-500 meters (1/5 to 1/3 of a mile) from one another and from major origins and destinations, such as dense residential areas, commercial centers, and transit stations.
- Short trips are further encouraged by the pricing structure of Montreal's Bixi system, which has been selected for Capital BikeShare. The first half-hour is free, after which costs escalate rapidly with each subsequent half-hour.
- This distinguishes bike-sharing from bike rental. The latter is often utilized for longer, recreational rides, while bike-sharing essentially serves as small-scale public transit.
- Availability of bikes must be guaranteed.
 - As with transit, service reliability is paramount. Sufficient bicycles and docks are needed to guarantee accessibility of bikes. If travelers cannot rely on the availability of a bicycle or a dock (to return a bicycle) within a reasonable walking distance, they will not choose to or in many cases be able to use the system. Therefore, a high number of bikes and pick-up points that are highly visible throughout the service area are important for success.
 - Additionally, to ensure the availability of bikes, redistribution of bikes across stations is included in the current DC-Arlington vendor contract, which includes a COG rider. The further apart stations are, the higher the redistribution costs will be, which will raise the operating costs of all jurisdictions beyond what is currently in the contract.
- Bikes and stations should be co-located with transit, as well as important origins and destinations. This will allow bike-sharing to serve as an important link to larger transit services, solving the first or last mile problem.

A regional process for proposal development

After the U.S. DOT released an interim notice of funding availability for the TIGER II discretionary grant program on April 26, the idea of submitting a regional bike-sharing proposal for TIGER II funding was discussed at the May 19 TPB meeting and generated positive interest. The TPB gave staff a green light to proceed in developing a regional application that would center on bike-sharing, and could also potentially include bike infrastructure projects to improve connectivity between bike-sharing locations and transit stations, bike paths, and activity centers.

Through the TPB Technical Committee and Bicycle and Pedestrian Subcommittee, TPB staff solicited input and gauged interest in participation on the development of a regional proposal. After meeting on June 9 to discuss project details and issues with representatives of jurisdictions that expressed interest, a July 1 deadline was set to finalize jurisdictions' components of the regional proposal.

Recommended proposal details

The TPB is partnering with six jurisdictions and the University of Maryland to expand bike-sharing across the region. Project partners provided TPB staff with project details, including signed letters with NEPA and local match assurances, as need for the required pre-application submission. Additional information is being requested by July 23 to complete the final application and benefit cost analysis and allow time to compile the regional application for submittal prior to the August 23 deadline. The submissions received reflect a strong regional commitment to bike-sharing and largely follow bike-sharing implementation best practices to ensure regional success. After considering the TIGER II grant criteria and what makes bike-sharing successful, the following table shows the recommended proposal and details on the specific components.

Table 1: Proposal for TPB TIGER II Competitive Grant Submission, Regional Expansion of Capital BikeShare

Jurisdiction	Project Description	Total Project Cost	Total TIGER request	Total Matching Funds	Match %
Arlington County	1028 bikes and 137 stations throughout the County, including the Columbia Pike, Orange Line, and Route 1 corridors, as well as Shirlington and Buckingham.	\$5,625,014	\$4,177,200	\$1,447,814	26%
District of Columbia	1000 bikes and 100 stations throughout the city in each ward.	\$5,100,000	\$4,080,000	\$1,020,000	20%
Montgomery County	250 bikes and 50 stations in the Bethesda-Chevy Chase, Silver Spring, and Wheaton/Kensington Planning/Policy Areas.	\$2,000,000	\$1,600,000	\$400,000	20%
City of Alexandria	146 bikes and 17 stations around metrorail, Old Town, Del Ray, Potomac Yard, and the Eisenhower Ave corridor	\$870,000	\$690,000	\$180,000	21%
Fairfax County, Virginia	100 bikes and 16 stations at various locations around Reston including the new Reston Station (construction starting 12/1/2010), the Reston Town Center Transit Center, and major employers/activity centers in the greater Reston area. Bike-sharing will be co-located with a bicycle storage facility at the Reston Transit Center.	\$600,000	\$480,000	\$120,000	20%
University of Maryland, College Park	43 bikes and 7 stations throughout the UMD campus.	\$214,000	\$164,000	\$50,000	23%
City of College Park	16 bikes and 4 stations in the downtown and Hollywood commercial districts of College Park, as well as at the Village at College Park and Mazza Grand Marc developments. Will link directly with UMD's component.	\$175,000	\$140,000	\$35,000	20%
TOTAL	2590 bikes (+1000 already planned bikes in DC) and 332 stations (+100 already planned stations in DC)	\$14,584,014	\$11,331,200	\$3,252,814	22%

The project components combine to form a logical and integrated regional system that directly connects to the region's expansive transit network. Although a few locations currently resemble bike-sharing islands separate from the larger service area, they provide a sufficient density of bikes to begin localized programs and connect to the larger service area via high quality regional transit.

The proposed bike-sharing system meets the key conditions for success as outlined previously. It provides bike-sharing in areas where a commitment to bicycle and pedestrian safety has been demonstrated via trails, bike lanes, and bike parking. A sufficient number of stations and bikes have been proposed in each location to ensure usage for short, non-recreational trips, availability of bikes and docks, and minimization of any increases in projected operational costs. Lastly, the proposal includes many intermodal connections between bike-sharing and various forms of transit.

The project total cost is \$14.5 million, with a TIGER II grant request of \$11.3 million, and a local match percentage of 22%. The grant request is just above the minimum grant request of \$10 million, which was the target amount in order to remain competitive. The match percentage is slightly above the required 20% local match.