# A PROPOSAL FOR A METROPOLITAN WASHINGTON REGIONAL BUS STOP IMPROVEMENT PROGRAM





Application for Funding from the Federal Transit Administration (FTA)
Section 5309 Bus and Bus Facilities Livability Initiative Program Grants
("Livability Bus Program")

Submitted by Washington Metropolitan Area Transit Authority (WMATA)

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#### 1.0 EXECUTIVE SUMMARY

The Washington Metropolitan Area Transit Authority (WMATA) is submitting this grant application for a new Regional Bus Stop Improvement Program in the Washington, DC, metropolitan region. WMATA developed the application to respond to the Federal Transit Administration (FTA) Section 5309 Bus and Bus Facilities Livability Initiative Discretionary Program Grants ("Livability Bus Program") that was announced on December 8, 2009 in the Federal Register. The proposed Regional Bus Stop Improvement program would provide a direct infusion of needed funds for capital improvements to improve accessibility and provide additional transportation options for traditionally transportation disadvantaged populations in the metropolitan Washington area, including the economically disadvantaged people, older adults, people with disabilities, limited English speaking persons, and those with limited access to vehicles.

This proposal is requesting \$13,387,446 in federal funding from the Livability Bus program, for a total program cost of \$16,734,307which WMATA will provide to local governments to implement the bus stop improvements.

#### 1.1 Regional Context

The Washington, DC metropolitan area encompasses the District of Columbia and the surrounding suburbs in Northern Virginia and Suburban Maryland. The region is home to more than 5 million residents and nearly 3.5 million jobs, making it the 9th largest metropolitan area in the nation, according to 2008 census population estimates<sup>1</sup>. The seat of the national government, the District of Columbia alone receives 22 million visitors annually.

The Washington Metropolitan Area Transit Authority (WMATA) serves a population of 3.4 million within a 1,500-square mile jurisdiction. Metrorail serves 86 stations, has 106 miles of track and serves over 200 million passenger trips annually. Metrobus serves the nation's capital 24 hours a day, seven days a week with 1,500 buses providing over 130 million passenger trips annually. WMATA began its ADA paratransit service, MetroAccess, in 1994;

Figure 1.1 The Metropolitan Washington Region



it provides approximately 1.5 million trips per year to people with disabilities. WMATA has over 10,000 employees operating a heavy rail fleet of over 1,100 rail cars, over 1,500 buses and over 300 vans and sedans to serve MetroAccess customers.

The Washington region has a comprehensive bus transit system including Metrobus, operated by WMATA, and 13 local bus systems operated by city and county governments. These 13 bus transit operators in the region provide approximately forty-five percent of both the region's transit trips. Bus systems have a much greater reach than Metrorail, and provide lower-cost, flexible service that can be implemented quickly. Furthermore, bus services complement the Metrorail system by providing feeder service to stations, and by serving as a substitute for Metrorail in highly congested rail corridors.

Transportation planning at the regional level is coordinated in the Washington area by the National Capital Region Transportation Planning Board (TPB), which is composed of representatives of the transportation agencies of the State of Maryland, the Commonwealth of Virginia, and the District of Columbia, local governments, WMATA, the Maryland and Virginia General Assemblies, and members from the Metropolitan Washington Airports Authority (MWAA) and federal agencies. and federal agencies. Established in 1965, the TPB is the official Metropolitan Planning Organization (MPO) designated by the federal government to carry out the comprehensive regional transportation planning process.

#### 1.2 Project Overview



Environmental barriers prevent persons with disabilities from using the bus. Also important is the placement of the schedule, which this passenger cannot read from his wheelchair.

WMATA and TPB have collaborated with local city and county governments to put together a comprehensive program to improve bus stops in economically distressed areas. These improvements are needed to help persons with disabilities, those with limited-income and people with limited English skills access the bus system in the metropolitan Washington region. The TPB worked closely with city and county government staff to identify bus stop locations that met livability criteria based on principles from DOT-HUD-EPA Partnership for Sustainable Communities. The criteria included locations of public housing, enterprise zones, Community Development Block Grants (CDBG), state/local economic development projects and improvements that will lessen the dependency on the single-occupancy vehicles.

Bus stops are a critical but often overlooked component of a successful integrated transit system. On an average weekday, 630,000 boardings occur on the bus system, which is significant considering that the Metrorail average weekday ridership is approximately 750,000 boardings. MetroAccess, the ADA paratransit system, provides trips for persons with disabilities who are unable to use bus or rail, is experiencing significant growth in customers and trips, which. This increasing demand is occurring in a time of shrinking

revenues, resulting in mounting concerns in the ability of MetroAccess to sustain current service levels. One of the reasons some people with disabilities are unable to use the fixed route system is the presence of environmental barriers that prevent them from getting to a bus stop. Environmental barriers include the lack of connecting sidewalks, pedestrian ramps, landing pads, or trash receptacles and newspaper boxes that block access to the bus entrance. Twentytwo percent of riders access the Metrorail system via bus. Therefore inaccessible bus stops can also make Metrorail inaccessible for people with disabilities. By removing these environmental barriers, MetroAccess customers will have more transportation choices -both the Metrobus and

Metrorail system – and the opportunity for greater

levels of freedom and mobility.

Furthermore, bus stop amenities draw passengers of all abilities to ride the bus. Lighting at bus stops improves the safety at bus stops. A bus stop with a shelter to protect from the elements, good lighting, real-time information and a bench to sit is a benefit to users of all ages, abilities and incomes.

Because persons of all abilities use the bus system, improvements to bus stops will benefit all users, not just persons with disabilities. Bus stops improvements and their benefits include (1) lighting, which improves safety, (2) shelter, which provides protection and comfort, (3) benches, which provide comfort and convenience, and (4) real-time information, which provides convenience, predictability, and decision-making support. All of these improvements individually and collectively

Myth: Only a small percentage of users will benefit from bus stop accessibility improvements.

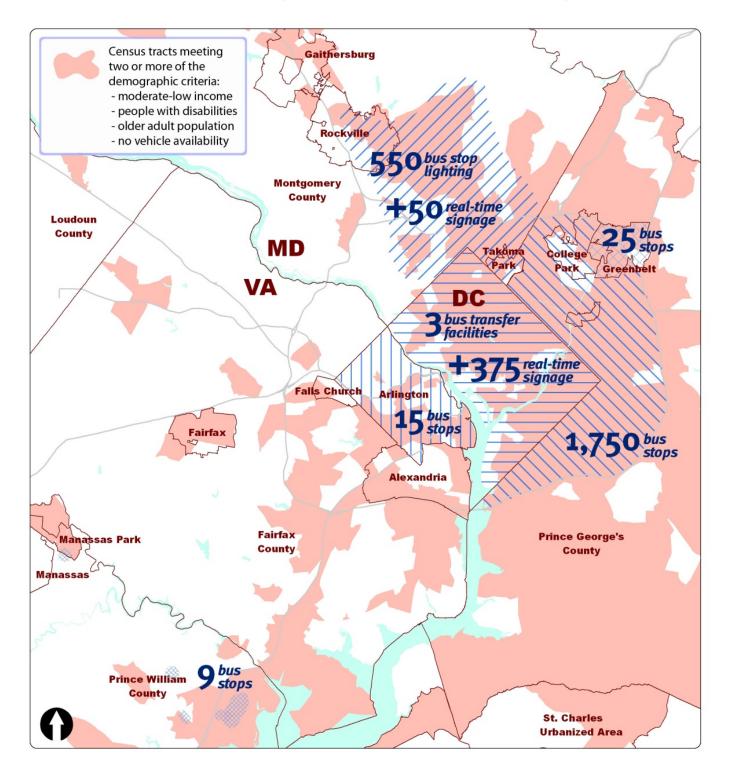
**Fact: Accessibility improvements** enhance bus usability for all riders including people with a range of disabilities, people carrying packages or luggage, or pushing children in strollers.

> -From the "Toolkit for the Assessment of Bus Stop Accessibility and Safety". Easter Seals Project ACTION.

provide substantial enhancements to the bus riding experience and promote the use of bus as an attractive, safe and convenient form of transportation for all persons.

Local governments are key partners in the project proposed in this grant application. The majority of the 20,000 bus stops in the metropolitan region are owned by local governments (WMATA owns and maintains the shelters and stops located at Metrorail stations as well as a small number in various jurisdictions). As a result, local agencies are the best vehicle for implementing the bus stop improvements. This program proposes site improvements at approximately 2,800 bus stops. Figure 1.2 identifies the general location of the proposed improvements to be made within six jurisdictions- Washington, DC; Arlington and Prince William counties in Virginia; and Montgomery and Prince George's counties and the City of Greenbelt in Maryland. Table 3.1 provides more details on the improvements. The proposed Regional Bus Stop Improvement Program totals \$\$16,734,307 and identifies approximately **2,800** bus stops for improvements, with a federal grant request of \$13,387,446.

Figure 1.2: Locations and Improvements in the Regional Bus Stop Program



#### 2.0 APPLICANT INFORMATION

The applicant is the Washington Metropolitan Area Transit Authority (WMATA), which was created by an interstate compact in 1967 to plan, develop, build, finance and operate a balanced regional transportation system in the metropolitan Washington area. The Recipient ID is 1398.

#### 2.1 Points of Contact

<u>Planning</u> <u>Grants Management</u>

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#### 2.2 Description of Capacity to Implement the Project

WMATA has a strong technical, legal and financial capacity to implement the Regional Bus Stop Improvement Program. WMATA will draw from many different departments within the agency as well as work closely with the local city and county government agencies that will implement the various components of the project

WMATA is a regional body, corporate and politic, organized pursuant to Public Law 89-774, 80 Stat. 1324; Maryland Acts of General Assembly, Chapter 869-1965; Virginia Acts of Assembly, Chapter 2-1966; and Resolution of D.C. Board of Commissioners adopted November 15, 1966. WMATA has the legal capacity to implement the projects described in this application and is eligible and authorized under Section 12 of the WMATA Compact to request, receive and spend FTA funds to administer FTA-assisted projects.

The staff of WMATA's Bus Planning office (BPLN) is composed of professionals in bus service planning and bus stop amenities. BPLN has individuals who possess the knowledge and ability to work with jurisdictional civil and construction engineers to bring projects to completion in a timely manner and within the overall intent and in accordance with grant requirements. The office is divided into three functional areas, one of which is specifically charged with enhancing the customer experience and bus stop amenities. For additional support, the office will also hire a bus stop manager position with the direct task of overseeing the grants implementation.

Grants Management is responsible for administering all federal and local grants that the Authority receives, including formula and discretionary programs. Staff are well versed in the federal process and regulations. WMATA Grants Management will provide legal, financial, and technical guidance from FTA to all potential subrecipients. The subrecipient agreements will be

written to affirm that all parties agree to adhere to FTA grant execution and reporting requirements.

#### 3.0 PROPOSED PROJECT

The project proposed in this grant application is a Regional Bus Stop Program in the Washington, DC, metropolitan region. The grant would provide a direct infusion of needed funds for capital improvements at 2,777 bus stops to improve accessibility and provide additional transportation options for traditionally transportation disadvantaged populations in the metropolitan Washington area, including the economically disadvantaged people, older adults, people with disabilities, limited English speaking persons, and those with limited access to vehicles.

#### 3.1 Project Need

The bus system provides an essential, affordable service to the region's residents, evidenced by spikes in service during times of soaring gas prices and economic uncertainty. It has also provided a viable alternative for travelers as roadways have become increasingly congested. This proposed Regional Bus Stop Improvement Program seeks to augment this already successful system with an even greater ability to provide an increasing numbers of residents, particularly those in need, with affordable, accessible and high quality travel options.

Of the 20,000 bus stops in the metropolitan Washington region, approximately 40 percent of the stops are not accessible to people with disabilities. A recently-completed study by WMATA identified approximately 6,500 bus stops in the WMATA service area that are not accessible to people with disabilities. These bus stops may be missing sidewalk connections, curb ramps, landing pads for wheelchairs or have slope issues making them unusable for people with disabilities.

Directly related to this need, the TPB Access for All (AFA) Advisory Committee – the committee responsible for advising the TPB on



The Regional Bus Stop Improvement Program will target bus stops such as this one in Prince George's County, MD and replace or add shelters, signage and improve sidewalk connectivity and install pedestrian ramps for people in wheelchairs.

transportation issues, programs, policies, and services that are important to low-income communities, minority communities, and people with disabilities – has stated that many people with limited incomes, including people with disabilities and older adults, rely solely on bus

service to meet their daily travel needs because (1) Metrorail fare is simply too expensive for them, and (2) other modes of travel are not feasible options for them. Therefore, it is crucial that the bus system be fully accessible to accommodate these people who depend so heavily on this system for their work and other daily travel needs.

The AFA recognized that this proposed Regional Bus Stop Improvement Program will enable important improvements that ensure bus riders have access to bus stops, shelters, and better information about bus service, including real-time arrival information.

The benefits of this project will be shared across the region, with significant improvements planned for the region's core, as well as inner and outer suburban jurisdictions. Region-wide accessibility improvements to bus stops that are identified as a priority that are relatively low cost and easily scalable projects, and further have the potential to make permanent, placemaking improvements in areas of economic need.

#### 3.2 Project Components

This application for a Regional Bus Stop Improvement Program includes eight components that work together to enhance the accessibility of the region's bus stops and improve the livability of the communities where they would be implemented. Each component focuses on necessary improvements identified in the given jurisdiction, but taken collectively these eight components will improve the accessibility of the region's bus system.

The eight proposed components fall within six jurisdictions in the metropolitan Washington region – Washington, DC; Arlington and Prince William County, VA; and Montgomery and Prince George's County and the City of Greenbelt, MD. Specific improvements include creating accessible pathways and sidewalks; installing bus shelters; improving lighting; providing signage, benches and trash receptacles; and providing real-time bus arrival information for riders. The proposed Regional Bus Stop Improvement Program totals \$\$16,734,307 and identifies approximately **2,800 sites** for improvements, with a federal grant request of \$13,387,446. Below is a description of the each component.

#### Component 1: Rehabilitation of Bus Transfer Facilities (Washington, DC)

This component focuses on the rehabilitation of bus transfer facilities at three Metrorail stations – Anacostia, Brookland and Fort Totten – sponsored by the District of Columbia Department of Transportation (DDOT) and constructed by WMATA. The bus transfer facilities at these stations have had few improvements and little rehabilitation work in the last 10 years. DDOT proposes spending roughly \$250,000 per station to replace and add bus shelters, replace and add seating, install energy efficient lighting, install NextBus real time bus information screens, provide trash receptacles, install updated bus route maps, replace and improve bus signage, repair sidewalks and repaint crosswalks. This project includes the rehabilitation of 14 bus bays at Anacostia, 9 bus bays at Brookland and 9 bus bays at Fort Totten.

**Table 3.1 Project Components** 

	Project Component	Congressional District	Total	Federal Request	# of Stops	Description
1	Rehabilitation of Bus Transfer Facilities Washington, DC	DC 1st	\$750,000	\$600,000	3+	Rehabilitation of bus transfer facilities at 3 Metrorail stations.
2	Pathway Accessibility to Transit Arlington County, VA	VA 8th	\$275,000	\$220,000	15	Provide accessible sidewalks, ramps, concrete pad, shelter, bench, trash receptacle, landscape improvements.
3	Shelter and Sidewalk Enhancements Prince William County, VA	VA 1st VA 11th	\$103,000	\$82,400	9	Provide bus shelters to 7 stops; extend sidewalks to 2 stops.
4	Lighting Enhancements Montgomery County, MD	MD 4th MD 8th	\$4,125,000	\$3,300,000	550	Provide lighting to improve pedestrian safety.
5	Bus Stop Reinvestment and Upgrades Prince George's County, MD	MD 4th MD 5th MD 8th	\$7,947,500	\$6,358,000	1,750	Bus stop signage, shelters, trash can placement, benches, improved lighting and sidewalk and curb access improvements.
6	Upgrade to ADA standards Greenbelt, MD	MD 5th	\$96,400	\$77,120	25	Installation of bus shelters, concrete pads, and ramps.
7	ITS - NextBus Technology Washington, DC	DC 1st	\$1,500,000	\$1,200,000	375	Installation of real time bus arrival signs in District-owned bus shelters.
8	ITS - Automated Transit Information System Technology Montgomery County, MD	MD 4th MD 8th	\$1,450,000	\$1,160,000	50	Real time bus arrival information will become available to the Ride-On passengers on signs, the web, and cell phones.
	Project Admin & Overhead,	WMATA (3.0%)*	\$487,407	\$389,926		·
	Total	\$16,734,307	\$13,387,446	2,777		
	Local Match (20% of Project	•	\$3,346,861			

<sup>\*</sup>This item includes 0.97% for project administration costs and 2.03% for overhead costs. Appendix 7 includes the FTA Indirect Cost Rate Approval letter.

#### Component 2: Pathway Accessibility to Bus Transit (Arlington County, VA)

Arlington Transit will make improvements including the creation of accessible pathways to 15 existing high-priority bus stops at various locations throughout Arlington County, VA. Based on ridership, safety and accessibility, the County previously identified 100 high-priority bus stops for improvements. The improvements to these stops are currently undergoing environmental review in accordance with the requirements of the National Environmental Policy Act (NEPA),

but the County lacks sufficient funds to make improvements to all 100 high priority stops. The 15 bus stops improved by this component will be selected from the existing pool of priority stops based upon the proximity to origins and destinations for MetroAccess and STAR paratransit users and other targeted criteria. Pathway accessibility to bus stops will provide paratransit users the choice of independently using fixed route transit while increasing the attractiveness of transit to the general public. Improvements will include new bus shelters, benches, trash receptacles, signs, concrete pads, sidewalks, curb ramps, bulb outs and bus bays.

#### Component 3: Shelter and Sidewalk Enhancements (Prince William County, VA)

The Potomac and Rappahannock Transportation Commission (PRTC) proposes to improve 9 bus stops in areas of Prince William County, VA with high concentrations of transit dependent and limited English speaking populations. Improvements include the installation of 7 new bus shelters and extended sidewalks to 2 existing bus shelters to enhance their accessibility.

#### Component 4: Lighting Enhancements (Montgomery County, MD)

Montgomery County has a bus stop improvement program that has been successful in making approximately 1,500 stops more accessible, convenient and attractive to users. Bus stop enhancements have included items such as sidewalk connections, improved pedestrian access, pedestrian refuge island and other crossing safety measures, paved passenger standing areas and other safety upgrades; however, the current bus stop improvement program does not include adding bus stop lighting. This component will add lighting to 550 bus stops to improve the safety and comfort of transit users in target priority areas and corridors where bus stop improvements will best enhance livability. These include areas with high concentrations of both low income residents and crime, and also where bus use is high –.

#### Component 5: Bus Stop Reinvestment and Upgrades (Prince George's County, MD)

This component represents a complete reinvestment in bus stop and shelter improvements in targeted urban areas within Prince George's County, MD, including bus stop signage, shelters at high usage stops, trash can placement, benches at medium usage stops, improved lighting and complementary sidewalk and curb access improvement. The County has approximately 4,200 bus stops and approximately 40 percent or 1,750 will be targeted for some type of improvement.

#### Component 6: Upgrading Bus Stops for Accessibility (City of Greenbelt, MD)

The City of Greenbelt has approximately 150 bus stops located within its boundaries, and of those, only 34 have bus shelters; most of these are not fully accessible. This component proposes the upgrade of 25 high-usage bus stops located in various areas of the city that are not currently accessible. Proposed improvements include new bus shelters, new concrete landing pads, accessibility improvements to existing bus shelters and landing pads, and new curb ramps.

#### Component 7: NextBus Real-Time Arrival Signage (Washington, DC)

The WMATA NextBus system is fully in place, but currently only available to those riders with computers, cell phones, or internet-enabled smartphones. The installation of real-time signage within District bus shelters (which are all pre-wired for NextBus sign installation) will enable persons without access to mobile technology to know when buses will arrive and reduce their out-of-vehicle wait times, thus making riding the bus a more convenient and attractive option. Under this component, NextBus signs are proposed for installation at 375 bus shelters in the District of Columbia.

#### Component 8: ATIS Real-Time Arrival Signage (Montgomery County, MD)

Real time bus arrival information allows the public to make informed decisions concerning their mode of transportation as well as increase satisfaction with public transit. This component will enhance integration of Automated Transit Information System (ATIS) subsystems into Ride-On's Computer Aided Dispatch/Automatic Vehicle Location (CAD/AVL) system by providing information technology solutions to allow for better operations of the transportation network and information dissemination to all Ride On passengers. As a result of these upgrades, real-time bus arrival information will be made available to Ride On passengers on signs, the internet, on cell phones and through the use of the phone system utilizing voice integrated response. ATIS signs are proposed for installation at 50 bus stops in areas that benefit transit-dependent and limited-English speaking communities.

#### 4.0 HOW THE PROJECT MEETS THE EVALUATION CRITERIA

#### 4.1 Demonstrated Need for Resources

The proposed Regional Bus Stop Improvement Program would provide needed funds for capital improvements at approximately 2,800 bus stops to enhance accessibility and provide additional travel options for traditionally transportation-disadvantaged populations in the metropolitan Washington area.

Improvements to create functionally accessible bus stops will allow some MetroAccess and other paratransit users to utilize fixed route bus service to accomplish some of their travel needs, instead of relying solely on paratransit service. Therefore, not only do these proposed accessibility improvements provide a greater level of independence to some current paratransit users, but they also allow paratransit providers to focus more of their limited resources on providing high-quality service for paratransit users who cannot use fixed service transit. This is important because the cost of providing paratransit service is relatively high compared to comparatively higher than the cost of providing fixed route service. So these accessibility improvements would relieve some of the financial strain placed on paratransit service providers as a result. In the metropolitan Washington region this is particularly significant because MetroAccess use has been rising steadily and is forecast to increase substantially in the years to come.

From within their strained budgets, jurisdictions participating in this grant application have identified local and state funds to be used in conjunction with the federal funds available through the FTA Livability Bus Grant Program to provide major improvements to the accessibility of the region's bus system, signaling that the improvement of bus stops in the metropolitan Washington region is a high priority. Importantly, these improvements will facilitate access to work and school, as well as other daily travel destinations, including doctor's appointments, grocery shopping and other errands. Increasing the accessibility of bus stops across the region will promote greater independence for people with disabilities, while providing benefit to all bus users and improving the livability of communities across the region.

#### 4.2 Project is a Regional Planning Priority

### 4.2.1 Access for All Advisory Committee and the Coordinated Human Service Transportation Plan

The TPB established the Access for All (AFA) Advisory committee to provide input in the metropolitan transportation planning process on issues and services important to low-income communities, minority communities and persons with disabilities. The AFA has identified bus stop improvements as a regional need for low-income communities and persons with disabilities have been identified as a regional need by. Specifically, the AFA has made the following recommendations:



- Prioritize bus stop improvements in areas with the highest concentrations of poverty and where bus use is also high;
- Redesign existing bus stops in a way that safely accommodates the widest range of potential users, including people with disabilities and limited-English speakers; and
- Provide comprehensive information (i.e. maps and schedules) at bus stops that is easy to understand for both English and non-native English speakers.

Member organizations of the AFA submitted letters of support for this proposed Regional Bus Stop Improvement Program exhibiting the importance of this project to the AFA. Appendix 6 includes letters from the Coalition for Smarter Growth, the Association for the Advancement of Retired Persons (AARPs) of Maryland, Virginia and Washington, DC, Multicultural Community Service, DC Language Access Coalition, and the National Multiple Sclerosis Society National Capital Chapter, and the ENDependence Center of Northern Virginia.

In addition, the TPB's Coordinated Human Service Transportation Plan<sup>3</sup> identified improved pedestrian access and infrastructure at rail stations as bus stops as an unmet transportation need.

#### 4.2.2 Regional Bus Stop Inventory

Over the past several years, WMATA (consistency on this throughout) and its local partners have been collecting bus stop attribute information for the almost 20,000 bus stops served by multiple operators in the WMATA service area. Data collected includes information on safety, accessibility, maintenance, operations and amenities, as well as three photos of each stop. Each stop also received a unique identification number that ties together different data sets maintained by each operating entity. The data is housed in an Access database, with on-going maintenance occurring at the regional and jurisdictional level. WMATA staff routinely uses the data in planning activities, and is able to identify stops with infrastructure deficiencies.

Locally, jurisdictions use the WMATA database to identify and prioritize improvements as well. For example, Prince George's County recently received a grant to prioritize stop improvements near rail stations; Arlington County has created a Top 100 list that identifies the highest priority stop locations; the City of Alexandria is using data to guide stop replacement when development

occurs; and, the District of Columbia Mayor's Office on Disability Rights has used the information to identify stop needs around government-owned buildings.

#### 4.2.3 MPO Endorsement

The National Capital Region Transportation Planning Board (TPB), the Metropolitan Planning Organization (MPO) for the Washington D.C. region, endorsed the proposed Regional Bus Stop Improvement Program on January 20, 2010. The resolution with the endorsement is included in Appendix 2.

#### 4.3 Livability

#### 4.3.1 Transportation Benefits

Improving Existing Transportation Options: The Regional Bus Stop Improvement Program emphasizes accessibility improvements to bus stops in key areas where there are high concentrations of older adults, persons with disabilities, persons with limited access to vehicles, and low-income individuals. For these populations, relying on public transportation is in many ways a necessity of daily life. At the same time, according to a Bus Stop Inventory conducted recently by WMATA, many of the bus stops identified in these key areas are not functionally accessible. Consequently, accessing public transit presents a significant challenge.



To address these regional challenges with a coordinated approach, this bus stop improvement program identifies accessibility improvements to over 2,777 stops in key areas that serve these identified populations, including areas with affordable housing, public housing and accessibility improvements. The program will such as adding sidewalks and pedestrian paths; installing concrete landing pads, ramps, bus shelters and seating; enhancing lighting and signage; and providing real-time bus arrival information. Making bus stops more accessible will significantly improve existing transportation options for people who may have previously had difficulty accessing the bus at all, and will result in less reliance on other modes of travel

**Providing More Convenient Transportation Options:** This program also enhances user mobility by offering convenience for users. Real users through the installation of real-time information displays at 425 bus stops with high ridership. These improvements, known as Automated Transit Information System (ATIS) and NextBus, will provide real-time bus arrival information to passengers through signage at bus stops, the internet, and cell phones. Straightforward access to this information reduces the mystery of headway timing for passengers, allowing passengers to more accurately plan trip time. As a result, riding the bus will become more predictable, thereby making it a more convenient transportation option for users.

Advancing Mobility: By enhancing intermodal connections between residential and commercial areas, this Regional Bus Stop Improvement Program will also advance user mobility. This project includes rehabilitating the Anacostia, Fort Totten and Brookland stations, three major intermodal transfer stations that serve, on average, approximately 21,000 weekday riders. Such comprehensive rehabilitation includes replacing and adding bus shelters, replacing and adding seating, installing energy-efficient lighting, updating bus-route maps, repairing sidewalks, and repainting crosswalks. Given that the 2007 WMATA Rail Passenger Survey noted that approximately 47% of the customers at these three rail stations arrive by bus, the proposed comprehensive improvements will enhance bus-to-rail, rail-to-bus, and bus-to-bus transfers for approximately 11,200 weekday riders. By making transfer centers safer, walkable, and more efficient, the Regional Bus Stop Improvement Program will advance regional mobility, connecting users from residential to commercial areas of the region in a safe, efficient, and sustainable way.

#### 4.3.2 Livability Benefits

In addition to bestowing transportation benefits, the Regional Bus Stop Improvement Program will have lasting benefits as they relate to livability. The livability benefits of this program are consistent with principles outlined by the DOT-HUD-EPA Partnership for Sustainable Communities, and will have a positive impact on the qualitative measures of community life throughout the Metropolitan Washington region. These benefits include:

- Providing more transportation choices
- Valuing communities and neighborhoods
- Supporting existing communities
- Enhance economic competitiveness
- Coordination of policies

**Providing More Transportation Choices:** This program outlines a mechanism for providing accessibility and transportation services to economically disadvantaged populations throughout the region. In targeting areas within the region to focus improvements, WMATA worked in conjunction with TPB to analyze demographic data from the US Census and the HUD Neighborhood Stabilization Program to ascertain the areas within the region with the most need. Map 1 (Appendix 1) illustrates locations of identified functionally-inaccessible bus stops as well as areas with high concentrations of persons with disabilities, older adults, persons with limited

vehicle availability, and middle-to-low income households. By targeting these areas for bus stop improvements, this program delivers accessibility and transportation services to traditionally disadvantaged populations within the region, thereby providing high-quality transportation options to users in need of them.

#### Valuing Communities and Neighborhoods:

Accessibility improvements will also provide permanent, placemaking benefits to many of the region's neighborhoods. The benefits outlined in this program are a result of collaboration among



six jurisdictions within the region, yet specific improvements such as the addition of bus shelters, lighting, way-finding, and curb access will all be constructed in accordance with plans and objectives of the jurisdiction that owns the identified bus stop. Consequently, the lasting impact of each individual improvement will be consistent with the character of the immediate surrounding neighborhood.

Supporting Existing Communities: In addition to making improvements that are consistent with local planning guidelines, this program also coordinates transportation and land-use planning at both a local and regional scale to support existing communities. In many ways, the Regional Bus Stop Improvement Program is an extension of TPB's flagship livability initiative, known as the Transportation/Land-Use Connection (TLC) Program. Since its inception in 2007, The TLC program has facilitated the integration of transportation and land-use at the community level for jurisdictions in the Metropolitan Washington Region, and serves as a catalyst for enhancing planning efforts linking transportation and land-use, and improving the efficiency of public works and investments. More than 20 TLC projects have addressed challenges associated with bus accessibility, and many projects have centered on transit-oriented development, pedestrian safety, walkable neighborhoods, and "complete streets." A Regional Bus Stop Improvement Program serves a shared goal outlined by both the TLC Program and the DOT-HUD-EPA Partnership for Sustainable Communities: integrating transportation and land-use as a measure to supporting existing communities.

Enhance Economic Competitiveness: A Regional Bus Stop Improvement Program will also enhance the economic competitiveness of the metropolitan Washington region. Through providing intelligent transportation systems (ITS) improvements at 425 bus stops, this program will supply real-time arrival information to passengers, resulting in more reliable and timely access to employment centers, educational opportunities, services, and other basic needs. This, combined with improving existing transportation options, will result in increasing the economic competitiveness of the Metropolitan Washington Region by enhancing the bus as a convenient, consistent and dependable means of transportation, that gets the region's workforce where it needs to go safely and efficiently.

Coordination of Policies: Finally, this program is the result of a major collaborative effort between several local governments, WMATA, and the TPB. Participating jurisdictions identified specific project improvements as well as the requisite local match, and will be working with WMATA to implement the improvements. Accordingly, the Regional Bus Stop Improvement Program has and will continue to serve as a means to coordinate policies and increase accountability and effectiveness at all levels of government. Consistent with the DOT-HUD-EPA Partnership for Sustainable Communities, this program has already created bridges for collaboration between local jurisdictions, the TPB, and WMATA, and will advance these inroads through a fully funded Regional Bus Stop Improvement Program if awarded.

#### 4.4 Other Evaluation Criteria

#### 4.4.1 Sustainability

#### Reduces Reliance on Autos and Improves Pedestrian Environment

The bus stop improvements will reduce reliance on automobile travel, and improve the walkable environment of many communities in the metropolitan Washington region. Respondents to the 2008 Regional Bus Survey noted they used more than 13 different modes (including walking, bicycle, taxi, car and wheelchair) to access the bus system. The majority of respondents reported walking to access the bus. However the disabled community reported a low walking mode choice. Although all Metrobus vehicles are accessible to people with disabilities, more than half of the 12,000 bus stops in the WMATA service area are considered functionally inaccessible for people with disabilities. The components in this grant will connect missing sidewalks, provide shelter and landing pads, support real-time bus arrival information and provide better lighting at stop locations, all of which support a more walkable and accessible transportation network and reduce the reliance on automobile travel. The shelters are long lasting, low maintenance with glass roofs and capable of incorporating solar panels. Adjacent streetscape work (included in the project) includes the addition of trees and other greenery.

By providing safe and convenient access for all riders, including riders with disabilities, the system provides a necessary link among home, work, and play without adding cars to the region's congested roads. It is expected that the Regional Bus Stop Improvement Program will increase ridership by 5 percent by allowing persons with disabilities to use the bus stops who were previously to unable to use them and by attracting riders who currently drive through the installation real-time information displays.<sup>4</sup>

#### Improves Environmental Efficiency and Reduces Greenhouse Gases

WMATA currently has approximately 1,500 buses fueled by a combination of compressed natural gas, advanced technology diesel, and diesel-electric hybrid buses. About 45 percent of WMATA's fleet is composed of clean technology, low-emission vehicles. By using advanced engines, fuel and exhaust treatments, WMATA greatly reduces fleet emissions and fuel consumption. CNG-fueled buses decrease WMATA's diesel fuel usage by over 4.5 million gallons annually and eliminate more than 90 percent of carbon monoxide and particulate matter emissions and approximately 50 percent of nitrogen oxide emissions. The advanced technology diesel buses enable WMATA to reduce more than 67 percent of nitrogen oxide emissions and 50 percent of particulate matter emissions. The diesel-electric hybrid buses decrease WMATA's diesel fuel consumption by more than 50,000 gallons annually and reduce more than 90 percent of carbon monoxide, particulate matter and hydrocarbon emissions, and more than 67 percent of nitrogen oxide emissions.

The Regional Bus Stop Improvement Program provides environmental benefits primarily from shifting trips that were previously made by auto to a transit system that has demonstrated environmental benefits, as described in the preceding paragraphs. As Table 4.1 indicates, the bus stop improvement program in aggregate is estimated to eliminate more than 59,800,000 daily Vehicle Miles of Travel (VMT) by the end of the twenty-year period (2012 to 2031). This

translates into more than 20,000 tons of CO2 and a fuel savings of \$8.3 million over the twenty-vear period.

Table 4.1: Estimated Greenhouse Gas Reductions and Fuel Savings from the Regional Bus Stop Improvement Program

Summary, 20-Year Period (2012-2031)	
CO2 Reduced, tons	20,000
Value of CO2 Reduced	\$1,020,000
Fuel Savings, gallons	2,490,000
Cost Savings to Residents from Fuel Savings	\$8,300,000
Vehicle Miles of Travel (VMT) Reduced	59,800,000

<sup>\*</sup>Assumes a 5% increase in transit ridership in three years. For other assumptions, see Appendix 3.

#### 4.4.2 Leveraging of Public and Private Investment

For each of the project components, local or state funds are identified as a match to the FTA Livability Bus Program funds sought through this grant application. In choosing to participate in this grant application, jurisdictions identified funds from within their strained budgets to put toward improving bus stops in order to leverage the additional funds available through this grant program. In doing so, these jurisdictions seek to do more with their limited budgets in pursuit of creating a more accessible bus system and improving the livability of communities in the metropolitan Washington region.

Not only have jurisdictions prioritized funds for inclusion in this grant application, but they also selected areas for bus stop improvements that leverage other investments already committed to for areas of need within their jurisdictions. Specifically, many of the project components include proposed improvements for areas that are slated for state or local economic development projects, contained within HUD Empowerment Zones, near Community Development Block Grant (CDBG) sites, and/or proximate to public or affordable housing (see Table 4.2). Pursuing bus stop improvements in areas of need that are receiving other investments related to housing and community development will multiply the benefit and impact that each investment offers individually.

Table 4.2: Leveraging Public and Private Investment

Public or Private Investment	Project Component
State/Local Economic	1: Rehabilitation of Bus Transfer Facilities
Development Projects	5: Bus Stop Reinvestment and Upgrades
	7: ITS – NextBus Technology
HUD Empowerment Zones	1: Rehabilitation of Bus Transfer Facilities
	5: Bus Stop Reinvestment and Upgrades
	7: ITS – NextBus Technology
CDBG Project Locations	2: Pathway Accessibility to Transit
	6: Upgrade to ADA Standards
Affordable/Public Housing	1: Rehabilitation of Bus Transfer Facilities
	2: Pathway Accessibility to Transit
	7: ITS – NextBus Technology

#### 4.4.3 Ready to Implement

The project components in the Regional Bus Stop Improvement Program are all ready to implement, as shown in Table 5.2: Project Timeline. The majority of sites are in existing rights of way for sidewalks and bus shelters and there will be no substantial land acquisition or traffic disruption. Construction of passenger shelters is categorically-excluded under 23 CFR 771.117 (c) 8. Implementation and design plans are complete for all project components that require them, including initial design of facilities. Some state and local permits will be required to conduct the work but those permits can be obtained in time to begin work within 3 months of the grant award.

The funds identified as the local match by each submitting jurisdiction have been obligated and can be spent soon after the grant award. This is described further in the following section "Budget and Timeline".

As one of the largest transit agencies overseeing extensive regional bus and rail systems, WMATA possesses the depth and breadth of personnel and capabilities to successfully administer a project of this magnitude. These technical and administrative capabilities are described in greater detail in Section 2.2: Description of Capacity to Implement the Project.

#### 5.0 BUDGET AND TIMELINE

#### 5.1 Budget

This program for a Regional Bus Stop Improvement Program will cost a total of \$16,734,30. Of this, the federal request is \$13,387,446, and the remaining \$3,346,861 or 20 percent, will be matched through a variety of local sources. An overview line item budget that indicates key components of the project as well as the source for matching funds is indicated in Table 5.1, below. Each participating jurisdiction has identified a 20 percent match for its respective component of the Regional Bus Stop Improvements Program. WMATA has also identified an additional three percent match for overhead costs and project-related administrative expenses. A budget that provides further detail on each project element can be found in Appendix 4. Letters of financial commitment from each participating jurisdiction indicating financial support for its identified local match can be found in Appendix 5.

This application includes eight components that would collectively enhance the region's bus transit system and allow the region's most vulnerable populations to make complete door-to-door trips efficiently, sustainably and affordably. Each package focuses on one specific area; yet each can stand alone and therefore be funded and implemented individually.

Table 5.1: Summary Line-Item Budget and Source of Local Match

	Component 1: Rehabilitation of Bus Transfer Facilities	Pathway	Component 3: Shelter and Sidewalk Enhancements	Lighting Enhancements	Bus Stop	Component 6: Upgrade to ADA Standards	Component 7: ITS - NextBus Technology	Component 8: ITS - ATIS Technology	Project Admin. and Overhead*	
Jurisdiction	Washington, DC	Arlington County, VA	Prince William County, VA	Montgomery County, MD	Prince George's County, MD	City of Greenbelt, MD	Washington, DC	Montgomery County, MD	WMATA	TOTAL
Total Cost	\$750,000	\$275,000	\$103,000	\$4,125,000	\$7,947,500	\$96,400	\$1,500,000	\$1,450,000	\$487,407	\$16,734,307
Federal Share	\$600,000	\$220,000	\$82,400	\$3,300,000	\$6,358,000	\$77,120	\$1,200,000	\$1,160,000	\$389,926	\$13,387,446
Local Match (20%)	\$150,000	\$55,000			. , .	\$19,280	. ,	, ,		\$3,346,861
Source of Match	Unallocated D.C. Project Development Funding at WMATA	County Capital Funds	Capital Funds and State Grant	County Funds	County Mass Transit Account	Capital Projects Budget	Existing budget for NextBus transferred to WMATA	County Funds	WMATA funds	
# of Bus Stops	3+	15	9	550	1,750	25	375	50		2,777
Improvement Type										
Landing Pad		x			х	х				
Bus Shelter	х	х	х		х	х	Х			
Lighting	х			х	х		Х			
Amenities	Х	Х			х					
Sidewalks	Х	х	х		х					
Pedestrian Ramps	Х	х			х	х				
Bulb-Outs		х			х					
Signage	х	х			х		х	х		
Maps & Schedules		1		12.020/ 6	х	A 1: 7:	X	X		

<sup>\*</sup>This item includes 0.97% for project administration costs and 2.03% for overhead costs. Appendix 7 includes the FTA Indirect Cost Rate Approval letter.

#### 5.2 Project Timeline

The Regional Bus Stop Improvement Program includes eight cohesive components that, together, will enhance the accessibility of the region's bus stops and improve regional livability. As a whole, the Regional Bus Stop Improvement Program will begin immediately upon receipt of award. Within the first three months of award, WMATA will work with the six participating jurisdictions to formalize and complete subrecipient agreements. Once these agreements are official, the project partners will begin implementing the project components for which they are responsible. Overall program implementation will take a total of 27 months to complete, including the original three-month contracting phase with WMATA. While WMATA is the designated recipient, each distinct project component will be implemented by the jurisdiction that owns the land on which specific improvements will be made. Accordingly, each component will have an individual project timeframe, and will be completed within the 27 month overall program timeframe. An overall program timeline is illustrated in Table 5.2.

Project Timeframe (in months after award date) **Regional Bus Stop Improvement Program** 2 3 4 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 **Project Element** WMATA and Local Governments Sign Subgrant Agreements Rehabilitation of Bus Transfer Facilities (Washington, DC) Pathway Accessibility to Transit (Arlington, VA) Shelter and Sidewalk Enhancements (Prince William County, VA) 4 Lighting Enhancements (Montgomery County, MD) Bus Stop Reinvestment and Upgrades (Prince George's County, MD) Upgrade to ADA Standards (City of Greenbelt, MD) 7 ITS - NextBus Technology (Washington, DC) ITS - Automated Transit Information System Technology (Montgomery County, MD) Grant Period of Performance

Table 5.2: Regional Bus Stop Improvement Program Timeline

Because the Regional Bus Stop Improvement Program is characterized by 8 separate but related components, each component has its own timeframe and a unique set of milestones. A more detailed outline of component timelines, including key milestones, is below.

#### Rehabilitation of Bus and Bus Transfer Facilities (Washington, DC):

- ➤ Begin construction six months after subrecipient agreement is signed.
- Complete construction nine months after start date.
- ➤ Key Milestones: Add bus shelters, replace and add seating, install energy efficient lighting, install NextBus real time bus information screens, install train arrival time information screens if feasible, provide trash receptacles, install updated bus route maps, replace and improve bus signage, repair sidewalks as needed and repaint crosswalks. Funding for each station will be based on the number of bus bays at each station (9 each at Fort Totten and Brookland, and 14 at Anacostia).

#### Pathway Accessibility to Transit (Arlington, VA):

- ➤ Begin construction three months after subrecipient agreement is signed.
- Complete construction 7 months after start date.
- > 50 percent of project will be completed within 2 months if start date.
- ➤ Key Milestones: Improvements will include adding fully accessible pathways, sidewalks, accessible ramps, concrete pads, shelters, benches, trash receptacles and landscape improvements.

#### Shelter and Sidewalk Enhancements (Prince William County, VA):

- > Begin construction one month after subrecipient agreement is signed
- > Complete construction 9 months after start date.
  - Month #1: Obtain building and land development permits from Virginia Department of Transportation.
  - Month #2: Begin and complete site preparation for PW Pkwy before Trowbridge, Route 1 (SB) before Bel Air, and Potomac Library in second month of project.
  - Month #3: Install shelters for Trowbridge, Route 1 (SB) before Bel Air, and Potomac Library; Begin and complete site preparation, and install shelter at Merlott/Delaware Drive
  - Month #6: Obtain Land Use Permit for Sidewalk Extensions
  - Month #7: Begin and complete site preparation for Manassas and Signal View Drive and Sidewalk Extension Projects; Install shelter at Manassas and Signal View Drive; Obtain VDOT land development permits for Opitz and Montgomery
  - Month #8: Begin and complete site preparation for Opitz Blvd before Montgomery and Route 1 (NB) after Village Drive
  - Month #9: Install shelters at Opitz Blvd before Montgomery and Route 1 (NB) after Village Drive

#### **Lighting Enhancements (Montgomery County, MD):**

- > Begin construction one month after subrecipient agreement is signed
- Complete construction 15 months after start date

➤ Key Milestones: construct and enhance lighting to improve pedestrian safety at bus stops that were established on roads, which were not originally built to accommodate pedestrians and incur safety, security and/or right-of-way issues

#### Bus Stop Reinvestment and Upgrades (Prince George's County, MD):

- > Begin construction one month after subrecipient agreement is signed
- ➤ Complete construction 12 months after start date
- ➤ Project duration will be 1 year with even quarterly progress (or 25 percent progress every 3 months)
- ➤ Key Milestones: contractor currently under contract, few permits are required and will be procured at project inception as a blanket approval; improvements represents a complete strategy to provide a "significant upgrade or "beautification" of all amenities (install or replacement) that will improve the transit experience and promote future growth and development in high arterial corridors

#### **Upgrading Bus Stops for Accessibility (City of Greenbelt, MD):**

- Begin construction one month after subrecipient agreement is signed
- ➤ Complete construction 18 months after start date
- Key Activities: Installation/improvements to concrete landing pads, curb cuts, bus shelters

#### NextBus Real-Time Arrival Signage (Washington, DC):

- > Begin construction three months after subrecipient agreement is signed
- > Complete construction 18 months after start date
- ➤ Key Milestones: Installation of real-time signage within District shelters (that are all prewired for NextBus sign installation)

#### ATIS Real-Time Arrival Signage (Montgomery County, MD):

- Begin construction one month after subrecipient agreement is signed
- ➤ Complete construction 15 months after start date
- ➤ Key Milestones: install 50 signs that provide real-time bus information, as well as web based and voice integrated system

<sup>&</sup>lt;sup>11</sup> (U.S. Bureau of the Census, Metropolitan and Micropolitan Statistical Area Estimates: April 1, 2000 to July 1, 2008, accessed from <a href="http://www.census.gov/popest/metro/CBSA-est2008-annual.html">http://www.census.gov/popest/metro/CBSA-est2008-annual.html</a>, accessed August 20, 2009).

<sup>[</sup>ii] Status Report on the Bus Systems in the National Capital Region. Report of the Regional Bus Subcommittee to the National Capital Region Transportation Planning Board. February 20, 2008.

 $\underline{www.mwcog.org/tpbcoordination/documents/Updated\_Coordinated\_Human\_Service\_Transportation\_Plan.pdf}$ 

<sup>&</sup>lt;sup>2</sup> Washington Metropolitan Area Transit Authority (WMATA) 2007 Metrorail Passenger Survey.

<sup>&</sup>lt;sup>3</sup> Update to the Coordinated Human Service Transportation Plan for the National Capital Region. Adopted by the National Capital Planning Board on December 16, 2009. Available at