



Priority Bus Transit in the National Capital Region

TPB's TIGER Grant Opportunity

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Presentation to the Bicycle and Pedestrian Subcommittee

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Why Should Priority Buses be a Priority for this Region?

We have a successful, integrated transit system:

- Metrorail
- Commuter Rail
- Numerous regional and local bus systems which are critical for expanding the reach of fixed guideway services



Yet quality bus service faces many obstacles:

- Traffic congestion
- Overcrowding
- Schedule adherence
- Service reliability

What is Priority Bus Transit?



Why Priority Bus for the Washington Region?

- Bus prioritization strategies can:
 - Increase bus operating speeds
 - Reduce travel time variability
- Increasing bus speeds can greatly reduce operating costs, which can provide for increase service levels.
- The perception of a “new transit system” will:
 - Raise the perceived level of service for bus passengers
 - Provide increased levels of mobility across the region

How Does Bus Priority Save Operating Costs?

	Before Priority Treatments		After, keeping headway the same		After, keeping buses the same	
Route Distance	5	miles	5	miles	5	miles
Headway	10	minutes	10	minutes	6.67	minutes
Avg. Speed	10	mph	15	mph	15	mph
Round Trip Time	1	hour	0.67	hour	0.67	hour
Buses Needed	6.0	buses	4.0	buses	6.0	buses

- Increasing the bus speed by **50%** results in:
 - **33%** reduction in operating costs and capital needs,
 - or
 - **33%** reduction in headway with same operating costs.

What Are The Opportunities For Priority

Bus Stops

<i>Cause of Delay</i>	<i>Primary Solution</i>	<i>Low-Investment Option</i>	<i>High-Investment Option</i>
Payment	Off-board payment	SmarTrip	Full-service curbside boarding stations
Use of front door only	Multi-door boarding	SmarTrip / trust	
Wheelchair lift operation	Level boarding	Low-floor buses	

Running-Way

<i>Cause of Delay</i>	<i>Primary Solution</i>	<i>Low-Investment Option</i>	<i>High-Investment Option</i>
Traffic Signals	Transit Priority	Active or Passive Transit Signal Priority	Graded Separated ROW
Traffic Queues	Remove Cars from Bus ROW	Bus Lanes and Queue Jumpers	
Delay caused by illegal traffic movements, parking, etc.	Education, Enforcement	Bus-mounted Enforcement Cameras	
Right turns blocked by pedestrians	Remove Cars from Bus ROW	Far-side bus stops	

Smart Stations

Roadside marker
(lights up at night)

Station name

Windscreens

Next bus arrival sign

Leaning rail (on both windscreens)



SWIFT, Snohomish WA

Rail at back of station
(at some stations only)

Information kiosk
(one on front, one on rear)

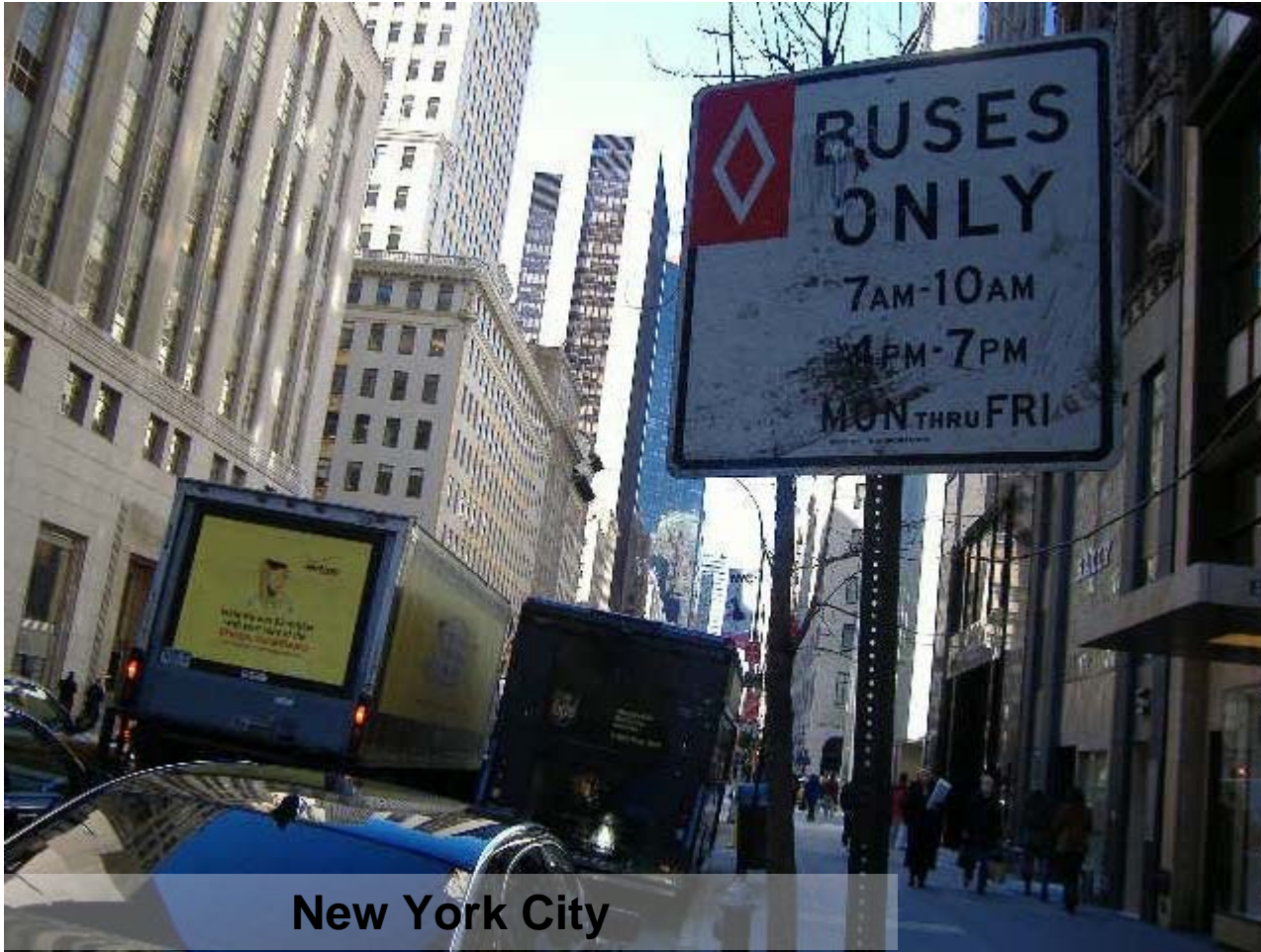
ORCA smart card readers
(one on each end of shelter)

Ticket vending machines
(two, side by side)



Viva, York ON

Regulation of Peak Period Curb-Lane Parking



New York City



San Francisco

Bus Lanes



New York City



7th St NW, DC



Boston

Enforcement



London



Singapore



London

Reversible Bus Lanes

Colesville Rd, Silver Spring



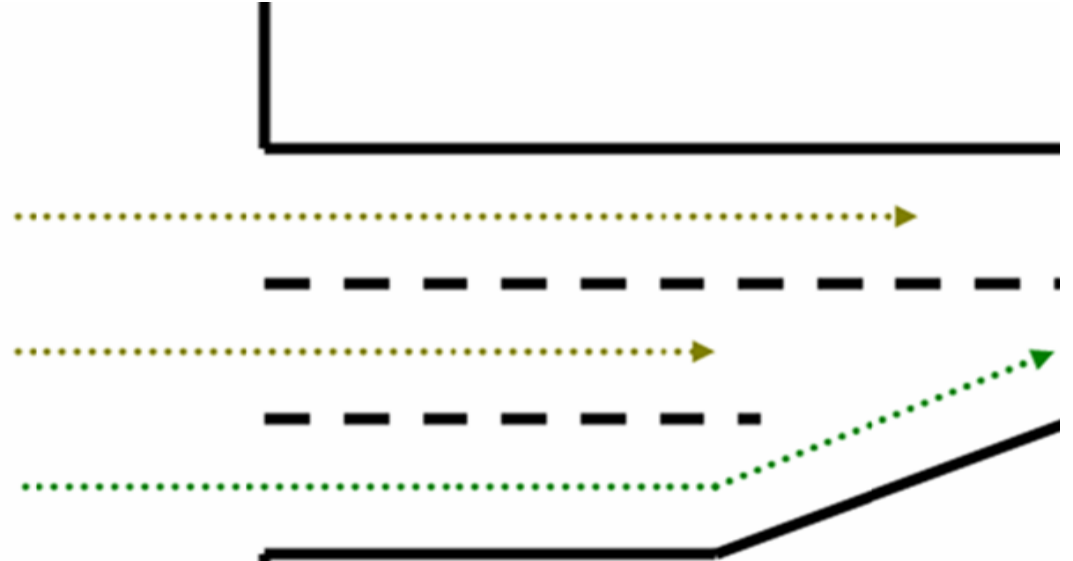
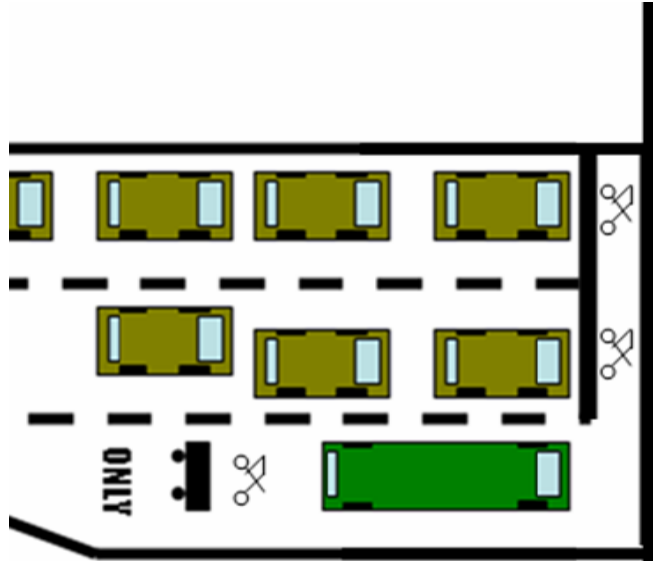
Connecticut Ave, NW DC



Queue Jumpers



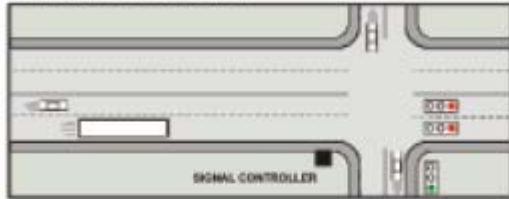
Charlotte Area Transit System (CATS)



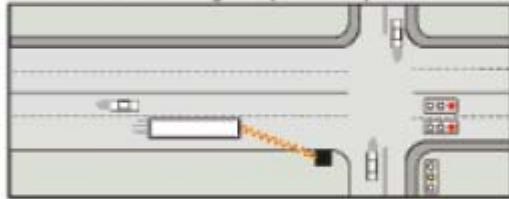
Transit Signal Priority

RED TRUNCATION

Bus approaches red signal



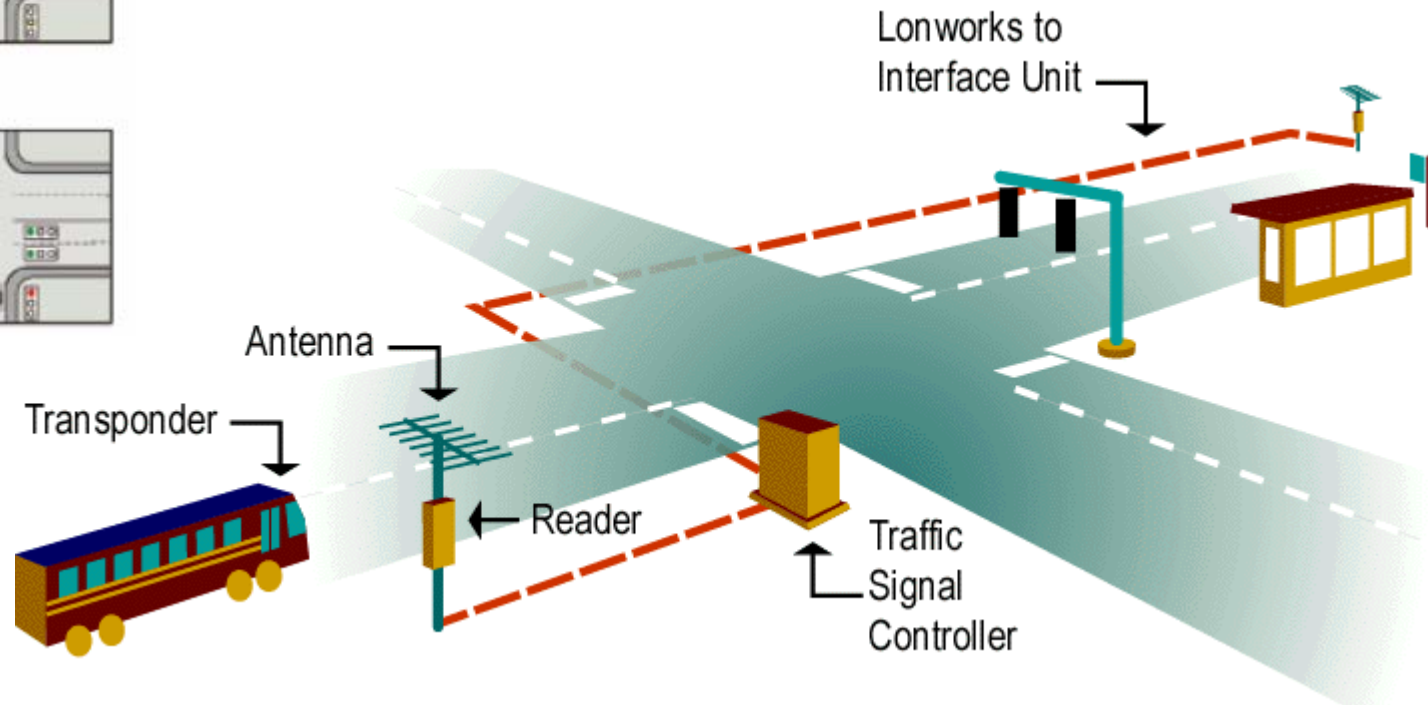
Signal controller detects bus;
terminates side street green phase early



Bus proceeds on green signal



Viva, York ON



Full Dedicated Right-of-Way



Seizing the TIGER Opportunity

The American Recovery and Reinvestment Act provides a **real regional opportunity**.

Although \$50 billion in transportation funding is mostly formula funding, **\$1.5 billion is in competitive grants for capital projects that:**

- Provide long-term economic benefit, livability, sustainability, safety, and state of good repair
- Can to be completed by 2012
- Request between \$20m-\$300m in total grant size
- Have significant impact on the Nation, metropolitan area, or region
- Maximize job creation and short-term economic benefit

A 1st step toward a full regional priority bus network

Timeline for Grant Application

July 15

TPB approval of TIGER Grant package components

August 1

Deadline for project data submission and determination final package

September 4

Review and approval of TIGER grant application by TPB Steering Committee

September 15

Grant submission deadline

Regional Package of Projects

Multimodal menu of services and infrastructure improvements that allow for a more convenient **door-to-door trip**, by increasing mobility through priority bus transit and improving intermodal and non-motorized access to transit

1. K Street Transitway
2. A collection of priority bus corridors and services
3. A bike-sharing system
4. Improvements to two Metrorail stations and the creation of one new transit center
5. Existing and planned managed (HOV/HOT) lanes
6. Additional bus priority treatments across two Potomac River crossings and along three arterials

K Street Transitway



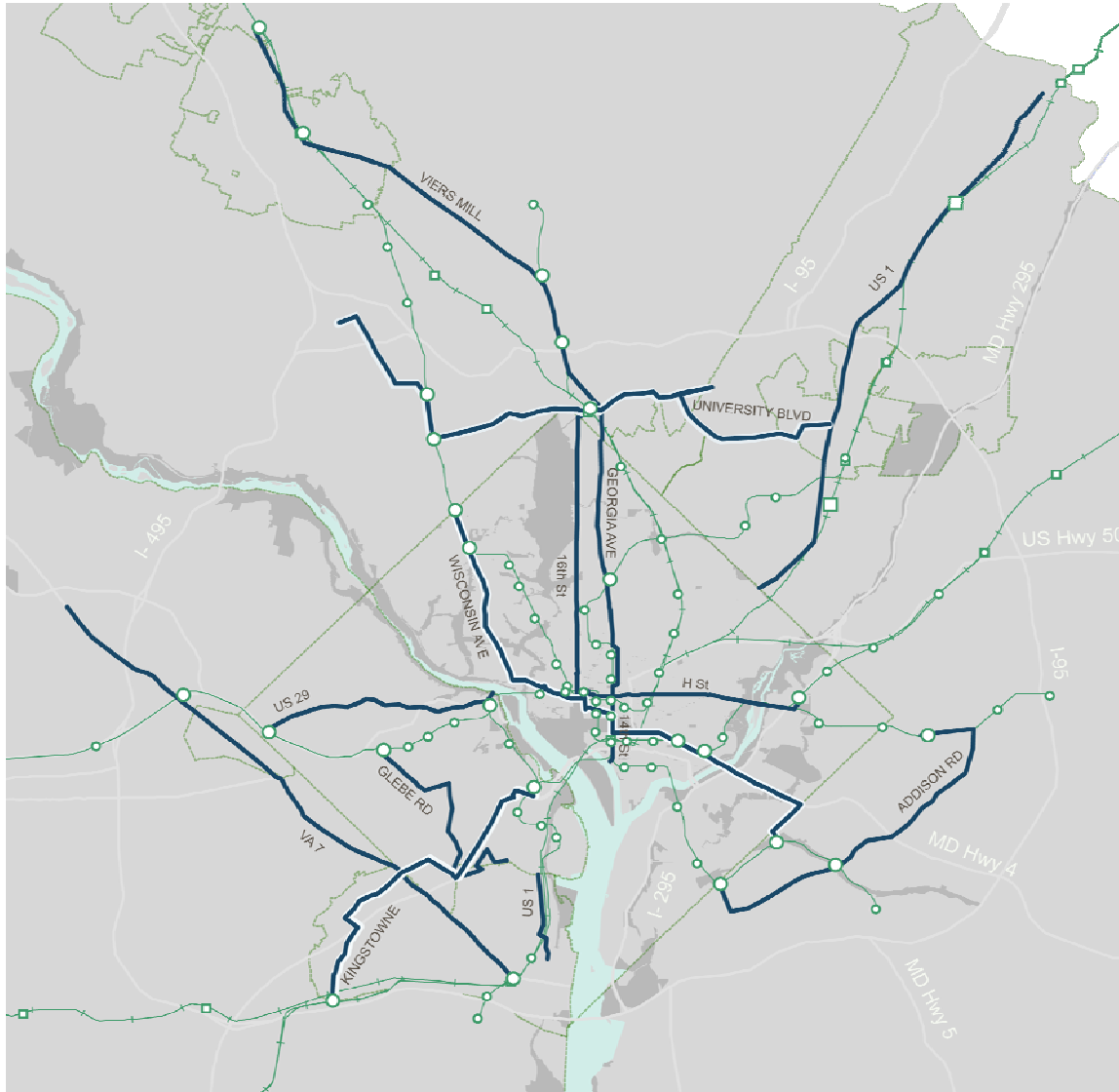
What 2 lanes with passing option, 1.3-mile transitway, from 9th-23rd St NW

Why Increase multi-modal efficiency of a regionally significant corridor

Grant Request
\$95m

K St has been in the CLRP for nearly a decade

WMATA Priority Corridors and other Arterials

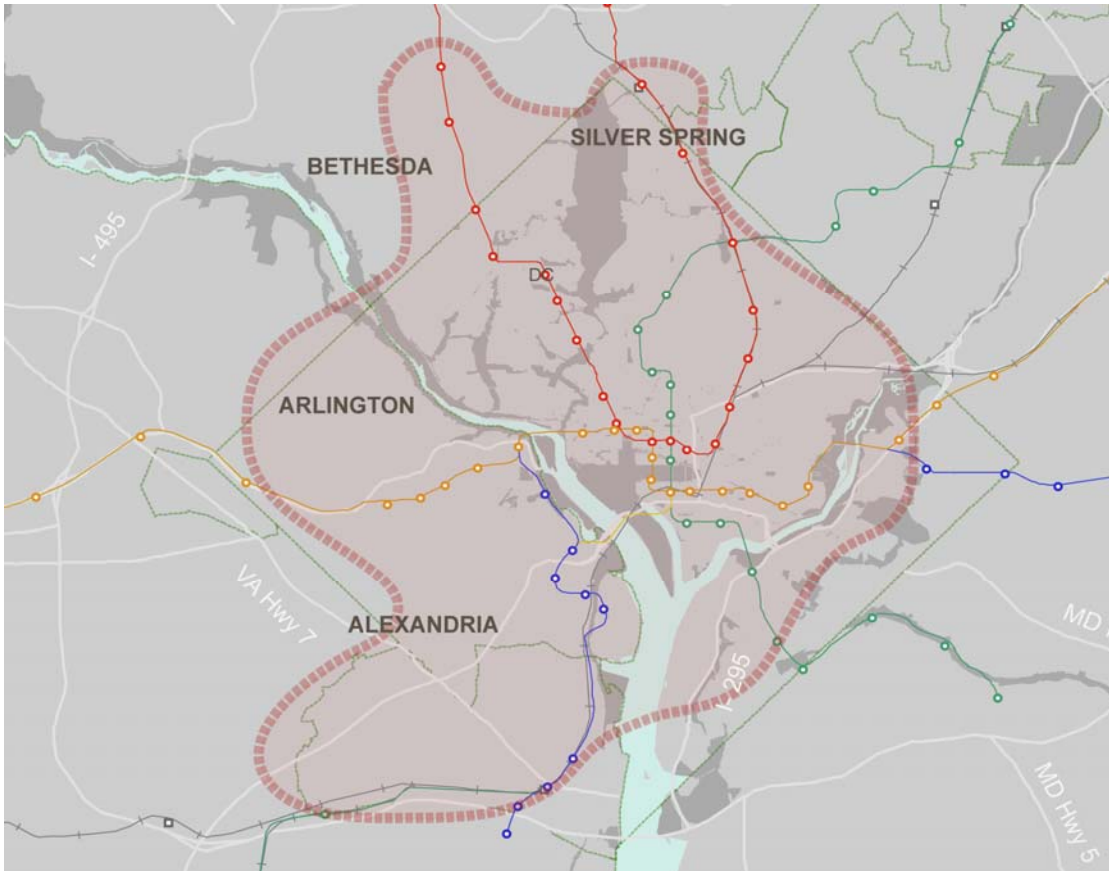


What Enhanced bus transit service along 12 existing bus corridors, including, for example, dedicated bus lanes, TSP, skip stop service, enhancing pedestrian access, real-time passenger information, and enhanced bus stops

Why Improve routes with highest regional ridership, and increase ridership and reliability

Grant Request \$36m

Regional Bike-Sharing



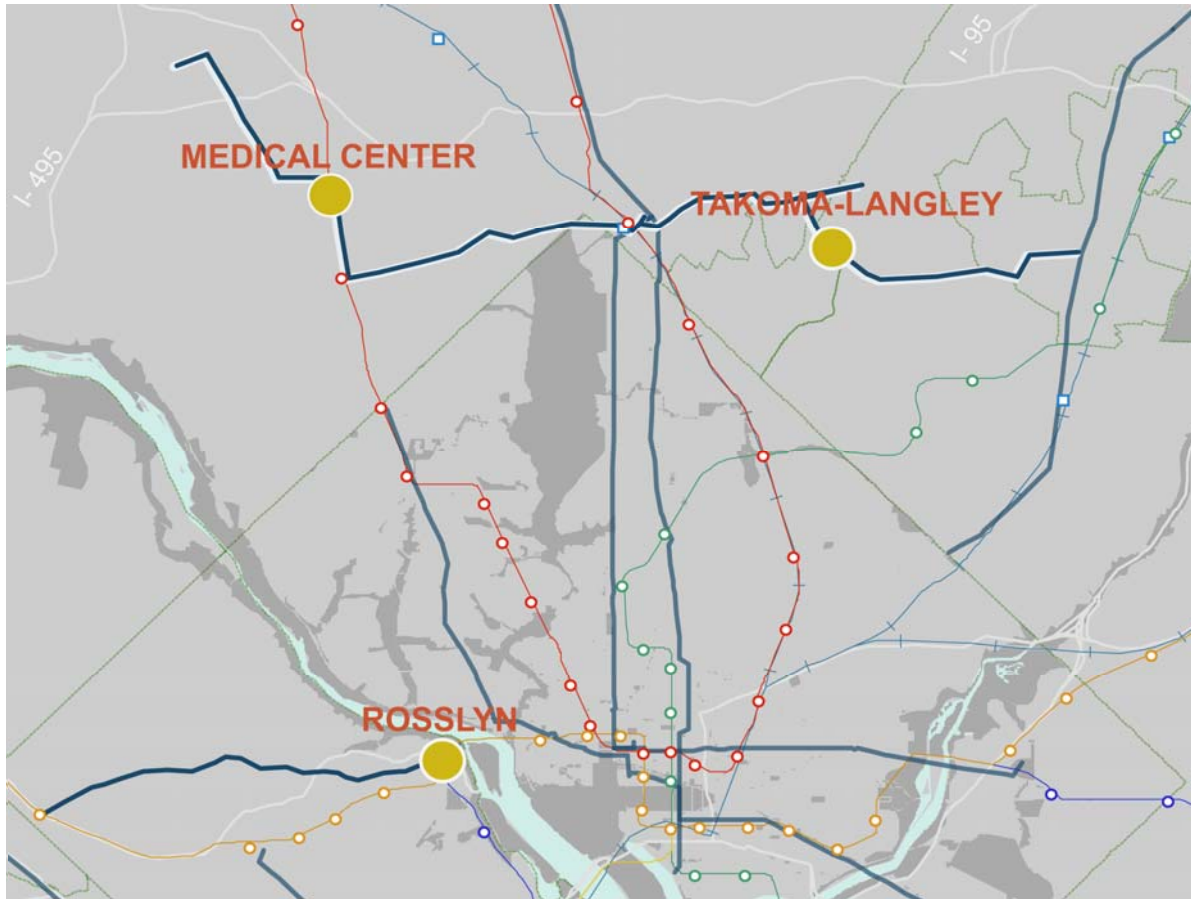
What Initial expansion of 1,600 bicycles at 160 bike stations in areas of DC, Alexandria, Arlington, Silver Spring and Bethesda, and potential other locations.

Why To extend the reach of public transit by providing a low-cost, convenient, door-to-door travel option

With DC's bike-sharing success, the time is right to expand regionally

Grant Request \$10m

Regional Transit Centers



Transit centers provide regional, intermodal connectivity

What (1) A new pedestrian tunnel at Medical Center station, (2) 3 high-speed elevators, a mezzanine, and emergency stairs at Rosslyn station, (3) Creation of the Takoma/ Langley Transit Center

Why To greatly improve safety and intermodal access to priority bus corridors

Grant Request \$52.3m
 Rosslyn=\$10m
 Takoma/Langley=\$12.3m
 Medical Center=\$30m

Rapid Buses on Managed Lanes



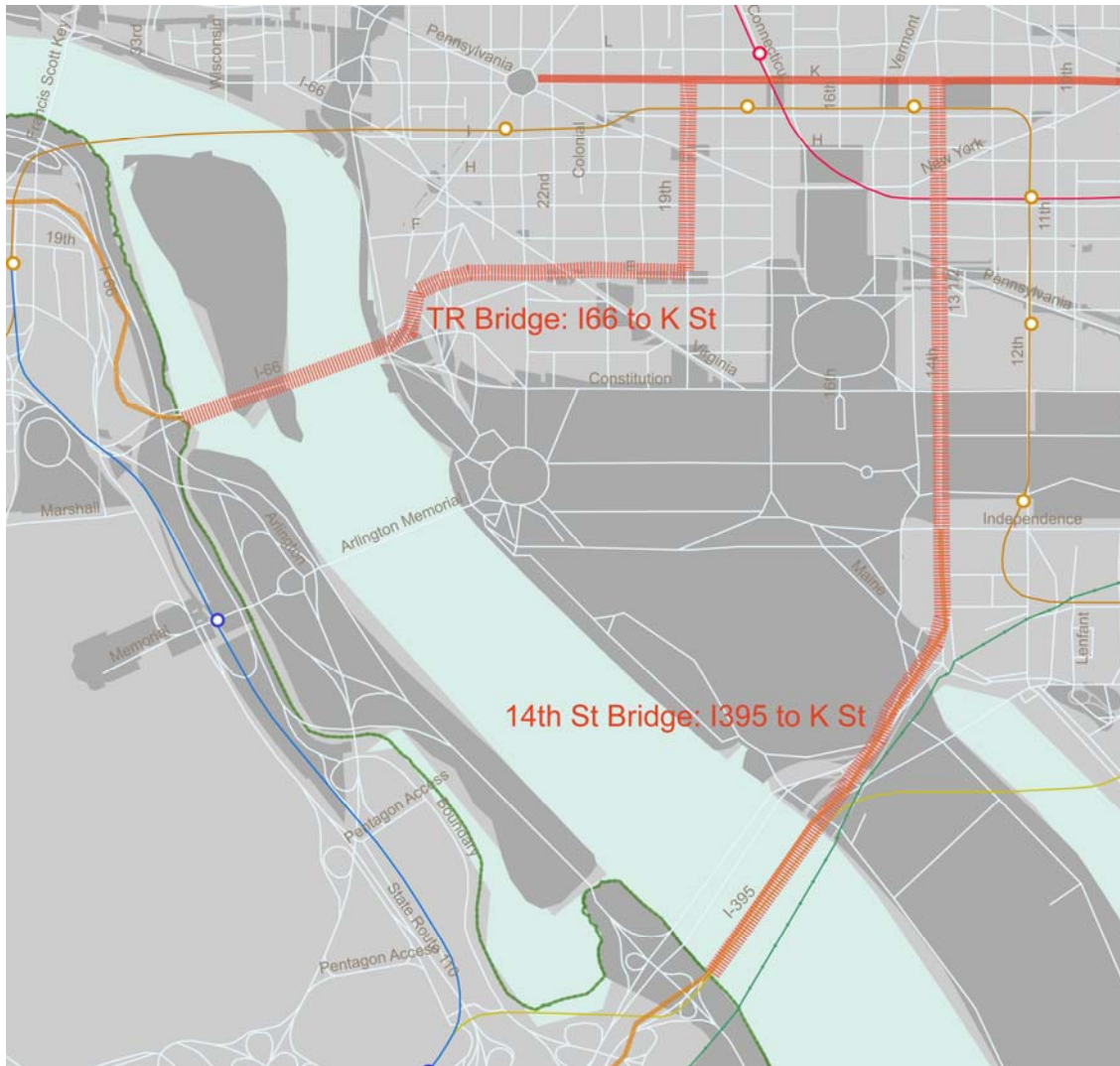
What A variety of facilities to enable priority bus transit along I-95/395 and I-66 managed lanes.

Why To provide high quality transit options for commuters and relieve pressure on the Metrorail system

Grant Request \$78m

Managed lanes can provide virtual right-of-way for transit vehicles

Connections to K Street



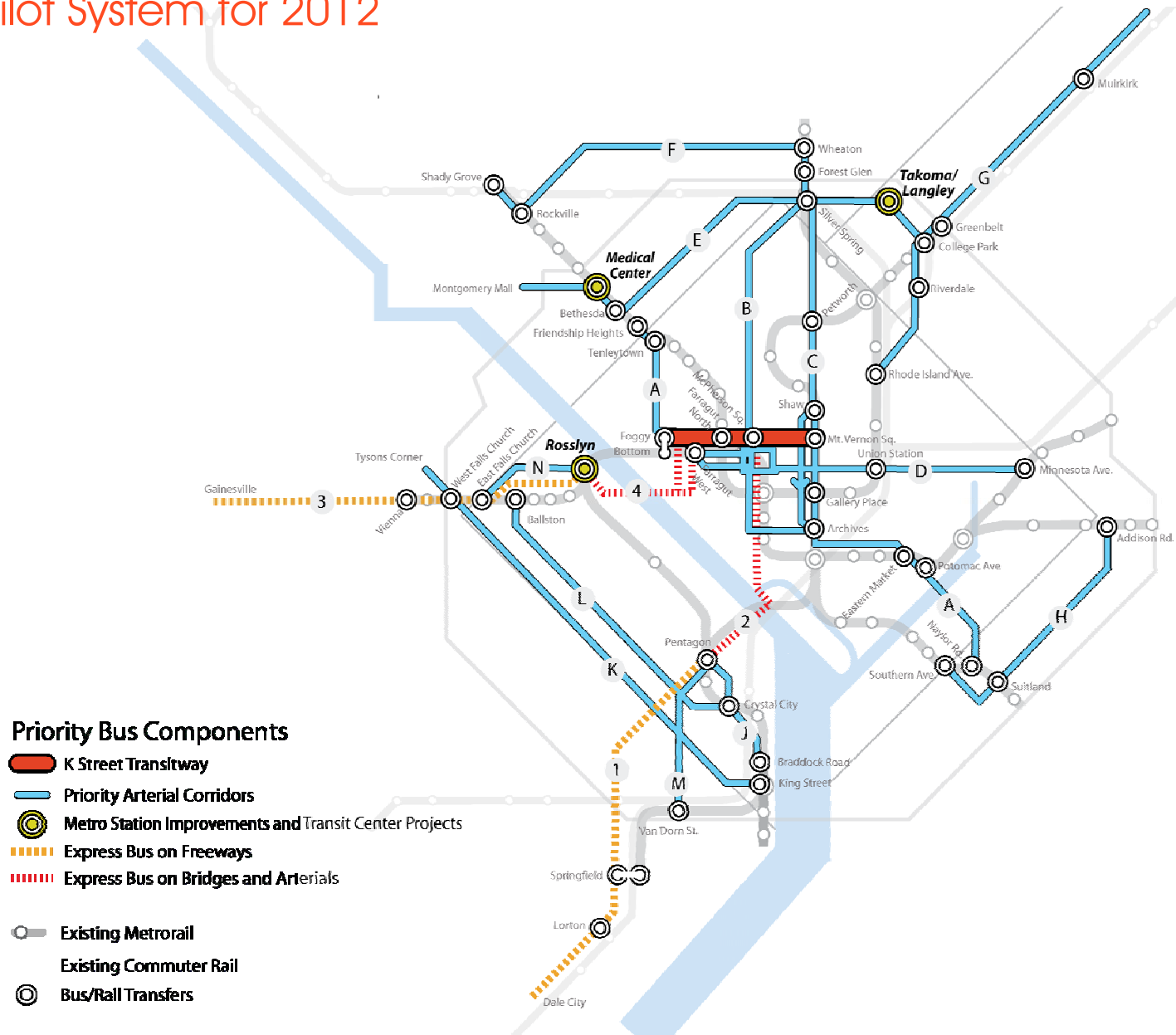
What Priority bus treatments connecting managed lanes on I-95/395 & I-66 to the K Street Transitway

Why To allow seamless transit connections between suburban and downtown employment centers

Grant Request \$7m

A Regional Multimodal System

A Pilot System for 2012



Working toward a Regional BRT Network

Proposal to use stimulus funding to develop a pilot BRT project – a step towards demonstrating that BRT on a larger regional scale can really happen in the region.



Summary of Projects

Financial Summary

Current package total: \$276 million

Additional funds being leveraged: \$401 million, from local, state and federal sources

Percentage of TIGER funding for projects: 41%

(some project components will be further reduced or removed by August 1)

Facilities Summary

26 new dedicated transit lane miles in the region

92 new or improved bus stops/stations

99 intersections with new transit signal priority

2,100 new parking spaces at park-and-ride lots

11 dedicated bus/HOV ramps

Regional Partners

