



Planning, Development and Real Estate Committee

Board Action Item VI-B

April 9, 2009

**Priority Corridor Network
Policies and Standards**

Washington Metropolitan Area Transit Authority
Board Action/Information Summary

<input checked="" type="radio"/> Action <input type="radio"/> Information	MEAD Number: 100247	Resolution: <input checked="" type="radio"/> Yes <input type="radio"/> No
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TITLE:

Priority Corridor Network Policies and Standards

PURPOSE:

To follow-up on the Metrobus Priority Corridor Network Plan list of corridors and near-term planning schedule (accepted by Metro Board on October 16, 2008), by describing component features and reviewing service and performance standards, all submitted as support for adoption of the proposed Metrobus Priority Corridor Network Plan Design Factors, Service Thresholds, and Service Elements to guide near-term project planning and implementation.

DESCRIPTION:

The Metrobus Priority Corridor Network Plan reflects a strategy for improving bus service travel times, reliability, capacity, productivity, and system access; and it is consistent with the Regional Transportation Vision, Regional Bus Study, Core Capacity Study, and APTA Peer Review. The Plan's service improvements and capital projects would be implemented over six years and benefit 24 corridors across the region and half of all bus riders in the Metrobus system.

The comprehensive Corridor Plans provide for integrated service and capital investments, including new MetroExtra routes and improved performance for all routes in the corridors. Implementation will include investments in bus stops, runningway enhancements, street operations management, and safety and security strategies to reduce travel times and provide more reliable and safe service.

A focus on Priority Corridors will benefit the most riders in the shortest timeframe; improve Metrobus customer service, reliability, quality, and performance; build transit markets; and influence development patterns. A defined plan will also facilitate fleet acquisition and address garage capacity issues by establishing a timeframe for performance of necessary coordination.

The area served by the 24 corridors encompasses nearly 750,000 households with 1.8 million residents and 1.6 million jobs. By 2015, this market is anticipated to grow by 14%. The proposal includes 246 line miles of service and would provide capacity to serve an additional 10 million riders per year.

The Regional Bus Study evaluated corridors throughout the region and identified those with sufficient current or future potential to warrant runningway improvements to support faster and more reliable transit services. Corridors with daily transit ridership over 5,000 per day were considered as candidates. Out of 31 corridors studied, a sub-group of 16 were recommended for Rapid Bus (MetroExtra) treatment. Since the Regional Bus Study was completed, some of

the corridors on the final list have been consolidated while others have been separated to facilitate implementation. Changes in jurisdictional priorities and development patterns have also necessitated a revision of the list to the current recommended 24.

FUNDING IMPACT:

No impact on funding.

RECOMMENDATION:

Adopt the proposed Metrobus Priority Corridor Network Plan Design Factors, Service Thresholds, and Service Elements to guide near-term project planning and implementation.



Metrobus Priority Corridor Network Policies and Standards

Presented to the Board of Directors:

Planning, Development and Real Estate Committee

April 9, 2009





Purpose

Follow up on Metrobus Priority Corridor Network Plan list of corridors and near-term planning schedule accepted by Board on October 16, 2008:

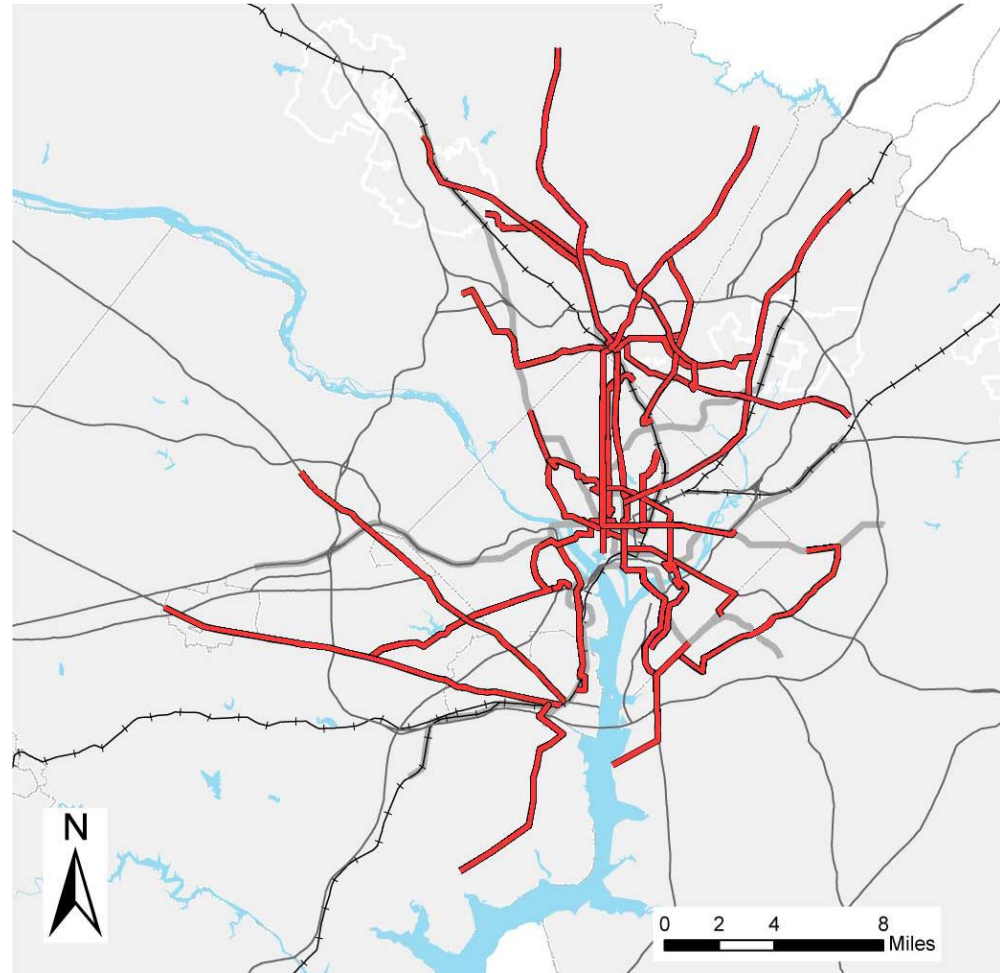
- Describe the component features of Priority Corridors
- Review service and performance standards for Priority Corridors
- Adopt the proposed Metrobus Priority Corridor Network Plan Service Thresholds, Design Factors, and Service Elements to guide near-term project planning and implementation





Metrobus Priority Corridor Network Plan

1. Columbia Pike (Pike Ride)
2. Richmond Highway Express (REX)
3. Georgia Ave./7th St.
4. Crystal City–Potomac Yard
5. Southern Ave. Metro – National Harbor
6. Wisconsin Ave./Pennsylvania Ave.
7. University Blvd./East-West Highway
8. Sixteenth St. (DC)
9. Leesburg Pike
10. Veirs Mill Rd.
11. New Hampshire Ave.
12. H St./Benning Rd.
13. Georgia Ave. (MD)
14. Greenbelt-Twinbrook
15. East-West Highway (Prince George's)
16. Anacostia-Congress Heights
17. Little River Tpke./Duke St.
18. Rhode Island Ave. Metro to Laurel
19. Mass Ave./U St./Florida Ave./8th St./MLK Ave.
20. Rhode Island Ave.
21. Eastover-Addison Road Metro
22. Colesville Rd./Columbia Pike - MD US 29
23. Fourteenth St. (DC)
24. North Capitol St.





Purpose/Benefits of a Priority Corridor

The Priority Corridor Network (along with the Metrorail system) provides the framework for regional transit mobility and represents the core of the Regional Metrobus system.

A Priority Corridor increases/retains ridership (15%+) by improving all bus service in a corridor to:

1. Be more reliable
2. Reduce travel time
3. Improve customer convenience

A comprehensive planning/partnering/implementing process results in strategies to improve key service performance measures:

- Travel time Decrease 25%
- Customer Satisfaction Improve 15%
- Incidents Reduce 12%
- On-Time Performance Improve 15%



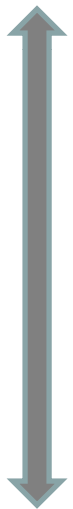
Summary of Guidelines for Priority Corridors

- The “Corridor Service Thresholds” table presents target thresholds for service types, spans of service, service frequency and route lengths
- The “Design Factors” table presents Priority Corridor bus services and their expected performance characteristics
- The “Service Elements” table describes what service features need to be in place to initiate priority corridor service, and what features are expected to be established in the near- and long-terms
- Productivity objectives represent targets consistent with the Regional Bus Study and Metro practice, and continual progress towards achieving the targets would need to be shown for projects to receive ongoing support as regional service



Priority Corridor Service Elements

Metro
Roles



Local
Roles

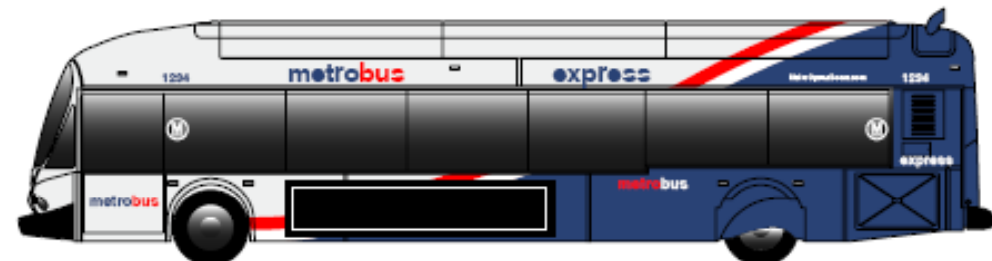
Element	Required	Near-Term (1 - 2 Years)
Service Type, Frequency, Span and Coverage	Provide Metrobus local and express services per recommended service plan.	Improve services and add features and routes per coordinated phased implementation plan.
Service Personnel and Operational Strategies	Dedicate supervision and provide staff training to ensure proactive management services.	Provide additional equipment and productivity enhancements to sustain good performance.
Customer Information Systems/Strategies	Promote new services and enhance customer information.	Sustain promotions, enhance customer information and expand cooperative advertising.
Vehicle Design, Features and Amenities	Provide and maintain quality, branded buses.	Phase in new Metrobus livery
Fare Payment Strategies	Promote the use of SmarTrip and encourage time-efficient boarding practices	Expand the network of off-board SmarTrip fare-loading opportunities
Safety, Security and Incident Response	Design for service, passenger and operator safety through engagement of police, safety offices and DOTs.	Develop formal plans for enhancing safety and encourage passengers to follow safe behaviors
Bus Stops and Customer Facilities	Replace bus stop furniture and provide additional features to improve customer information, comfort and convenience	Plan and implement physical improvements and enhancements to bus stops and transit centers with a focus on improving accessible pathways
Traffic Operations and Management Strategies	Improve movement of buses and reliability of street operations	Implement minor capital improvements to rights of way used by bus services
Local Commitment	Document local commitments to service plan	Institutionalize commitments and begin capital project planning



What is Special About **Metrobus** **express**?

Metrobus **express** service is distinguished by characteristics intended to provide a superior customer experience:

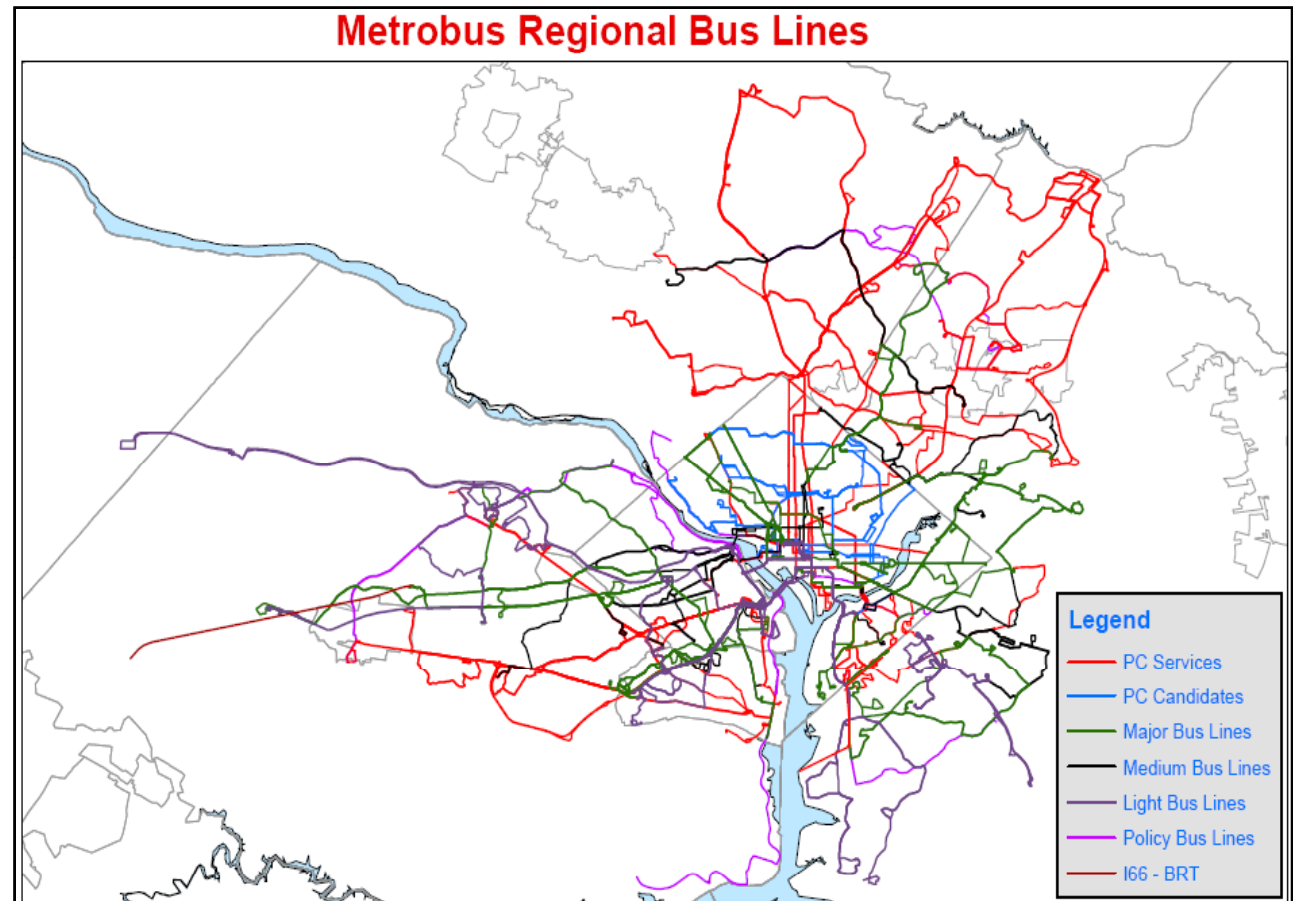
- Enhanced service/brand image
- Frequent and reliable service
- Faster travel with limited stops
- Runningway and signal priority
- Comprehensive customer information
- Improved stops and shelters
- Dedicated supervision and incident strategies





Next Steps

- Complete ongoing corridor studies
- Deploy new Metrobus **local** and **extra** buses
- Complete PCN Report
- Evaluate and optimize Regional bus network for report to Board





Recommendation

Adopt the proposed guidelines for Metrobus Priority Corridor Network Plan Design Factors, Service Thresholds, and Service Elements to guide near-term project planning and implementation.

1. Guidelines for Service Design Strategies
 - Priority Corridor Service Thresholds
 - Priority Corridor Design Factors
2. Guidelines for Service Implementation Strategies
 - Priority Corridor Service Elements

Note: Adoption of Metrobus Priority Corridor Network guidelines is for planning purposes only and does not obligate the Authority or Board to satisfy the plan's projected requirements; therefore, this action will have no funding impact. It is intended to guide future expenditures related to service implementation.



Appendix

- Regional/Non-Regional Designation
- Priority Corridor Network Plan
- Guidelines for Priority Corridor Service Thresholds
- Guidelines for Priority Corridor Design Factors
- Priority Corridor Service Elements
- Requested Emerging Corridors
- Near-Term Sequence of Corridors
- Implemented Corridors



Regional/Non-Regional Designation

A route is **REGIONAL** if it satisfies either of two principal criteria:

1. The nature of a route is **Inter-jurisdictional** because it:
 - Crosses a jurisdictional boundary; and
 - Penetrates by more than one-half mile in each; and
 - Operates open door in two or more jurisdictions; or,
2. Meets at least two of three criteria:
 - **Arterial Streets:** Operates on an arterial street with a substantial portion of riders using stops on the arterial street
 - **Regional Activity Center(s):** Serves a regional activity center(s)
 - **Cost Effectiveness:** Has annual boardings per platform hour greater than 30 in all jurisdictions

A route is **Non-REGIONAL** if it is a:

1. Grandfathered locally-operated/initiated route
2. Metrobus route not meeting the definition of **Regional**



Priority Corridor Network Plan

October 16, 2008

Line/Route Description	Status	Juris.	Study	Impl.	Ridership	Current	Future (2015)	Annual
			Year	Year	Prior to	Avg. Weekday	Avg. Weekday	Platform
			(FY)	(FY)	Implementation	Ridership	Ridership	Hours
16ABDEFJ 16GHKW 16L 16Y	I	VA	2002	2003	8,600	12,500	14,000	99,500
REX	I	VA	2003	2004	2,400	3,300	3,800	33,800
9A 9E 9S	I	VA	2005	2006	800	2,700	3,200	33,400
70 71 79	I	DC	2006	2007	14,200	15,400	17,500	99,500
NH-1	I	MD	2007	2008	<i>New service</i>	1,000	5,000	New
J1 J2 J3 J4	P	MD	2007	2009		7,700	8,900	68,000
31 32 34 36 37 39	I	DC	2008	2009	18,700	18,700	21,800	162,000
S1 S2 S4 S9	P/I	DC	2008	2009		14,600	16,600	111,900
28AB 28FG 28T	P/I	VA	2009	2009		6,200	7,400	52,500
Q2	P	MD	2009	2010		10,900	12,600	75,400
K6	P	MD	2010	2011		6,600	7,700	40,500
X2	P	DC	2010	2011		15,000	17,000	65,300
Y5 Y7 Y8 Y9	P	MD	2010	2011		7,600	9,100	57,600
C2 C4	P	MD	2011	2012		13,600	15,900	99,700
F4 F6	P	MD	2011	2012		7,800	9,200	52,000
A2 6 7 8 42 46 48	P	DC	2011	2012		11,200	12,700	77,500
29KN 29CEGHX	P	VA	2011	2012		3,200	3,900	40,800
81 82 83 86 87 88 89 89M	P	MD	2012	2013		5,400	6,300	57,500
90 92 93	P	DC	2012	2013		15,600	17,800	106,400
G8	P	DC	2012	2013		3,900	5,000	34,200
P12	P	MD	2013	2014		5,600	6,600	44,600
Z2 Z6 Z8 Z9 Z11 13	P	MD	2013	2014		9,800	11,700	97,100
52 53 54	P	DC	2013	2014		14,100	15,900	98,200
80	P	DC	2014	2015		8,500	9,800	60,800
PCN TOTALS						220,900	259,400	1,668,200



Guidelines for Priority Corridor Service Thresholds

Service	Weekday	Saturday	Sunday
Service Type/Days (minimum)			
Local (arterial, all-stops)	X	X	X
Express (premium, arterial, limited-stop)	X	--	--
Community circulator (neighborhood, all-stops)	X	--	--
Span of Service (minimum)			
Local-First AM arrival not later than	6:00	6:00	7:00
Local-Last PM departure not earlier than	24:00	24:00	24:00
Express	Rush Period	--	--
Community circulator	Rush Period	--	--
Combined Frequency of Service			
Peak (maximum minutes between buses)	10	15	20
Off-peak (maximum minutes between buses)	15	30	30
Productivity Target (combined local & express)			
Boardings per vehicle revenue hour - Peak	40		
Boardings per vehicle revenue hour - Off-Peak	25		
Boardings per vehicle revenue hour - All Day	30	25	20
Service Design			
Route patterns	Consistent and understandable		
One-way travel times	60 minutes each direction; 15 minute lay-by separation		
Schedules and transfers	Coordinated with major bus and rail lines		
Transit centers	Utilized for transfers, layovers, supervision		

Target based on Regional Bus Study findings



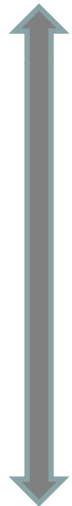
Guidelines for Priority Corridor Design Factors

Corridor Features	Priority Corridor Network		Long Distance	<i>Metrobus BRT</i>
	Local	Express	Express	<i>(Future)</i>
<i>Stops</i>	<ul style="list-style-type: none"> • All Stops • Basic features 	<ul style="list-style-type: none"> • Limited-stop • Full featured 	<ul style="list-style-type: none"> • Designated • Basic features 	<ul style="list-style-type: none"> • <i>Limited-stop</i> • <i>Full feature +</i> • <i>Designed</i>
<i>Spacing</i>	≤5 per mile	≤ 3 per mile	>2 miles closed-door	<i>2 per mile</i>
<i>Paint Scheme</i>	Red bus	Blue bus	Red bus	<i>TBD</i>
<i>ROW</i>	Shared	Shared/ Prioritized	Shared/ Exclusive	<i>Greater than 50% Exclusive</i>
<i>Fare</i>	Base (\$1.25)	Base (\$1.25)	Express (\$3.00)	<i>TBD</i>
<i>Frequency</i>	Load-based	Policy-based	Demand-based	<i>Policy-based</i>
<i>Time between buses</i>	3 to 20 minutes	6 to 20 minutes	6 to 30 minutes	<i>4 to 15 minutes</i>
<i>Load Factor (Peak/Base)</i>	1.2/1.0	1.0/1.0	1.0	<i>TBD</i>
<i>On-Time Performance</i>	+15% of actual	+10% of local	System Average	<i>TBD</i>
<i>Travel Time</i>	≤ pre-existing	-25% of local	> -25% of local	<i>TBD</i>



Priority Corridor Service Elements

Metro
Roles



Local
Roles

Element	Required	Near-Term (1 - 2 Years)	Long-Term (2+ Years)
Service Type, Frequency, Span and Coverage	Metrobus local Metrobus express Apply corridor design factors Service threshold compliance	Neighborhood circulator service Service change evaluation	Phased service improvements Funding to maintain service thresholds
Service Personnel and Operational Strategies	Dedicated service operations managers Service management playbook Driver training module Sustained driver familiarity training Monthly report Seats and aisles policed at end of each trip	Scout cars Lap-top computers for monitoring Line specialist at Bus Operations Control Standardized detours and notification	Service notification system
Customer Information Systems/Strategies	Sustained promotion plan/materials Service time-table brochures Metro website information Customer service agent information Customer comment monitoring Programmed telephone information Bus service disruption notices	Cooperative advertising Bus stop notices On-board audio announcements	Dynamic service information On-board video displays
Vehicle Design, Features and Amenities	Metrobus express livery buses Multi-colored destination signs (4 sides) Next-stop annunciators/displays Low-floor bus with ramp access High standard for bus condition Consistent dispatch of correct buses	New Metrobus local livery buses phase-in	
Fare Payment Strategies	Promote use of SmarTrip and Passes Promote passenger quick-boarding behaviors	Provide off-board SmarTrip stations	
Safety, Security and Incident Response	Conduct a service safety audit Enforce no-parking at bus stops Plan for routine MTPD patrols Implement "nuisance" passenger strategies Facilitate routine MTPD-Operator dialogue	Develop a Service Safety Program Plan Prepare incident response plans Engage local police in service dialogue Prepare EMA strategies Include rider safety messages in promotions	Monitor safety compliance
Bus Stops and Customer Facilities	New posts, flags, info cases Shelters at all express stops System maps at all shelters Legible schedule, fare & rider info Front door landing pad-all stops Trash cans at all express stops Daily stop monitoring and servicing	Key-stop accessible pathways Standard lighting Service notice cases Trash cans at key stops Vendor box controls Low-use stop consolidation Trail blazer signs	Next-arrival display signs at express stops Rear door landing pads at all stops Development of transit centers Bus stop access safety enhancement Lay-by construction (as needed) Bus bulb construction Development-related enhancements
Traffic Operations and Management Strategies	Parking enforcement Traffic hazzard mitigation Terminal stands and stop relocations Problem resolution contacts Bus stop siting/safety	HOV/signal warrant studies Traffic signal adjustments Traffic control officers Standardized detours Pavement maintenance/repair	Dedicated ROW Transit signal priority
Local Commitment	Letter of commitment from jurisdiction(s) regarding local obligations for near-term improvements	Inclusion of improvements in jurisdictional and Metro budget requests	Inclusion of capital improvements in jurisdictional and Metro CIPs

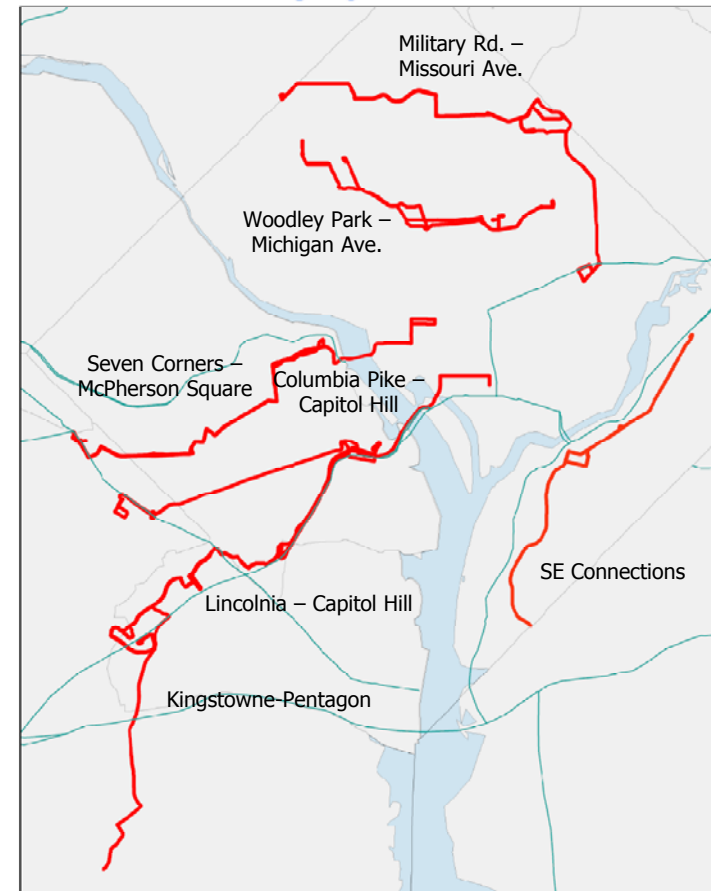


Requested Emerging Corridors

- Corridors for future consideration as Priority Corridor Network candidates
- Local concept development studies are to be conducted to refine proposals for future consideration before implementation as part of Metro plan

Emerging Corridors	Juris.	Study Year (FY)
Mn. Ave./Congress Heights/MLK Ave./Southern Ave.	DC	2009
Woodley Park/Irving St./Michigan Ave.	DC	2010
Military Rd./Missouri Ave.	DC	2012
Kingstowne-Pentagon	VA	2009
Lincolnia/Shirlington/Capitol Hill	VA	2010
Seven Corners - McPherson Square	VA	2011
Columbia Pike/Capitol Hill	VA	2012

Emerging Corridors





Near-Term Sequence of Corridors

Corridor	Schedule		
	2009	2010	2011
Sixteenth St. (DC)	Plan/ Implement		
Veirs Mill Rd.	Plan	Implement	
Leesburg Pike	Plan	Implement	
New Hampshire Ave.		Plan	Implement
H St./Benning Rd.		Plan	Implement
Georgia Ave. (MD)		Plan	Implement
Little River Tpke./Duke St.			Plan
East-West Highway (Prince George's)			Plan
Greenbelt-Twinbrook			Plan
Anacostia-Congress Heights			Plan



Implemented Corridors

Columbia Pike (Pike Ride)

Implemented 2003

Local and Limited-stop; 2.5-minute trunk headways
Transit Signal Prioritization at key intersections
Enhanced bus stops and improved amenities

13,300 weekday ridership

Year 1 (9/03 - 9/04): 17% ridership increase
To-date (9/03 - present): 38% ridership increase

5-minute (10%) average time savings per trip

Richmond Highway Express (REX)

Implemented 2004

Limited-stop service; 12-minute headways
Transit Signal Prioritization at key intersections
Branded bus stops and improved amenities

3,700 weekday ridership

Year 1 (10/04 - 10/05): 3% ridership increase
To-date (10/04 - present): 41% ridership increase

10-minute (21%) average time savings per trip

Georgia Avenue / 7th Street

Implemented 2007

Limited-stop; 10-minute headways
Transit Signal Prioritization and bus lanes
Branded bus stops and improved amenities

18,400 weekday ridership

Year 1 (3/07 - 3/08): 6% ridership increase
To-date (3/07 - present): 12% ridership increase

10.5-minute (20%) average time savings per trip
over runtime of complimentary local service

Wisconsin Avenue / Pennsylvania Avenue

Implemented 2009

Local and Limited-stop; 5-minute trunk headways
Signal adjustments and peak hour traffic control
Branded bus stops and improved amenities (spring '09)

20,700 weekday ridership

Year 1 (6/08 - 10/08): 2% ridership increase
To-date (6/08 - present): *Data not yet available*

24% savings projected for Wisconsin Av NW
19% savings projected for Pennsylvania Av SE

SUBJECT: METROBUS PRIORITY CORRIDOR NETWORK POLICIES AND STANDARDS

PROPOSED
RESOLUTION
OF THE
BOARD OF DIRECTORS
OF THE
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

WHEREAS, The Metrobus Priority Corridor Network Plan represents a comprehensive strategy for improving customer experiences, bus service quality, safety, travel times, reliability, capacity, productivity and system access throughout the region structured around high-ridership corridors throughout the region; and

WHEREAS, The Board of Directors accepted the Metrobus Priority Corridor Network Plan list of corridors and schedule for near-term planning and implementation dated October 16, 2008, for planning purposes only; and

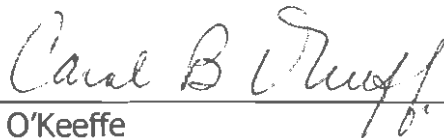
WHEREAS, The Board of Directors directed staff to further specify the associated infrastructure improvements (e.g., distinct color scheme for rolling stock, improvements to surface rights of way and common bus stop elements) to be implemented by both Metro and the jurisdictions in connection with each Priority Corridor; and

WHEREAS, The Metrobus Priority Corridor Network Policies and Standards, dated March 12, 2009, specify guidelines for project performance, design and implementation; now, therefore be it

RESOLVED, That the Board of Directors adopt the proposed guidelines for Metrobus Priority Corridor Network Policies and Standards, dated March 12, 2009, including guidelines for Service Thresholds, Design Factors, and Service Elements to guide near-term project planning and implementation; and be it finally

RESOLVED, That this Resolution shall be effective immediately.

Reviewed as to form and legal sufficiency,



Carol B. O'Keeffe
General Counsel