



Washington Metropolitan Area Transit Authority

Increase Rail Service to the Mid City Green Line Stations



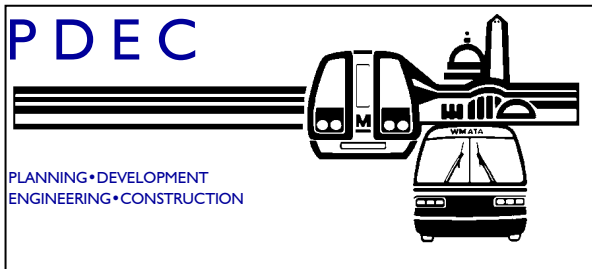
Presented to the Board of Directors:

Planning and Development Committee

by

Planning, Development, Engineering & Construction

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I. Purpose

To update the Planning and Development Committee on the studies staff performed to determine the feasibility of increasing rail service to the Mid City Green Line Stations.



II. Background

- Councilmember Graham, a WMATA Board member; Scott Pomeroy, representing the Mid-City business association; and ANC 1B have proposed extending the Yellow Line to their neighborhood;
- At the November 9th WMATA Town Hall Meeting the following statements were made by the public concerning increased service to the Mid-City Green Line stations:
 - Green Line train service during the mid-day, late night, and weekend periods is not frequent enough,
 - The Columbia Heights, U Street, and Petworth neighborhoods are all experiencing rapid development and Metrorail capacity should be expanded to keep pace with development,
 - Metrorail service should be frequent enough to support transit-dependent, urban lifestyles, not just commuting.
- In response, WMATA staff studied the feasibility of increasing rail service to the U St., Columbia Heights and Georgia Ave. neighborhoods at the Mid-City Green Line stations.



III. Current Green Line Ridership

- Scheduled headways for the Yellow and Green Lines are as follows:
 - Weekday Peak Hours (6-9:30am & 3:30-7pm) have 6 minute headways (10 trains per hour)
 - Weekday Mid-day and Evening have 12 minute headways (5 trains per hour)
 - Saturday has a 12 minute headway mid-day and a 15 minute evening headway (5 & 4 trains per hour, respectively)
 - Sunday has a 15 minute headway (4 trains per hour)
 - Late Night (all days after 9:30 pm) has a 20 minute headway (3 trains per hour)
- Where two lines serve a station (i.e. Mt. Vernon Square/Convention Center) the headways are halved and the number of trains per hour is doubled.

Average Ridership Profile for November, 2005

Station	Avg. Peak Weekday	Avg. Off-Peak Weekday	Total Weekday	Avg. Saturday	Avg. Sunday
Shaw/Howard	4,800	3,100	7,900	4,900	2,600
U St.	6,100	4,000	10,100	8,000	4,200
Columbia Heights	8,900	5,000	13,900	10,000	7,200
Ga. Ave.	5,600	3,000	8,600	5,600	3,400
Ft. Totten	9,000	3,900	12,900	6,700	4,000
Total (Shaw – Ft. Totten)	34,400	19,000	53,400	35,200	21,400



IV. Service Improvement Concepts Off-Peak Periods

- Increasing service during the peak periods would require a significant capital investment as discussed later in this presentation;
- Meanwhile, there are four concepts that offer additional service to the U St., Columbia Heights and Ga. Ave. neighborhoods during the off-peak periods only.

Service Concepts

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| I. Increase Green Line Service Levels | Increase off peak service to 6 minute headways (i.e. 10 trains/hour). |
| II. Extend Yellow Line Service to Greenbelt | Extend Yellow Line service north of Mt. Vernon Square to Greenbelt during non-peak periods & weekends. |
| III. Extend Yellow Line Service to Ft. Totten | Extend Yellow Line service north of Mt. Vernon Square to Fort Totten during non-peak periods & weekends. |
| IV. Extend Yellow Line Service to Ga. Ave./Petworth | Extend Yellow Line service north of Mt. Vernon Square to Ga. Ave./Petworth during non-peak periods & weekends. |



IV. Service Improvement Concepts Analysis, Off-Peak

	Service Concepts	Capital Cost (millions)	Annual Operating Cost (millions)	Benefits in addition to more service to the Mid-City Green Line Stations	Operational Risks
I.	Increase Green Line Service Levels	\$0.00	\$10	Increased service to the northern and southern ends of the Green Line as well as the Anacostia waterfront	None
II.	Extend Yellow Line Service to Greenbelt	\$1.00	\$5	Increased service to the northern end of the Green Line and additional Yellow Line connectivity to the Red Line	None
III.	Extend Yellow Line Service to Ft. Totten	\$1.25	\$3	Additional Yellow Line connectivity to the Red Line	Mitigated with the capital investment
IV.	Extend Yellow Line Service to Ga. Ave./Petworth	\$2.40	\$2	None	Mitigated with the capital investment

- The above capital costs are Rough Order of Magnitude (ROM) engineering estimates based on conceptual design; the Operations and Maintenance costs similarly are ROM estimates based on a limited operations planning analysis.



V. Service Improvement Concepts, Peak Periods

- Four concepts offer additional service to the U St., Columbia Heights and Ga. Ave. neighborhoods during peak periods only.

Service Concepts

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| I. Increase Green Line Service Levels | Convert Green Line service to 3 minute headways during the peak periods (comparable to Red Line service). |
| II. Extend Yellow Line Service to Greenbelt | Extend Yellow Line peak period service north of Mt. Vernon Square to Greenbelt. |
| III. Extend Yellow Line Service to Ft. Totten | Extend Yellow Line peak period service north of Mt. Vernon Square to Fort Totten. |
| IV. Extend Yellow Line Service to Ga. Ave./Petworth | Extend Yellow Line peak period service north of Mt. Vernon Square to Ga. Ave./Petworth. |



V. Service Improvement Concepts Analysis, Peak Periods

	Service Concepts	Capital Cost (millions)	Annual Operating Cost (millions)	Benefits in addition to more service to the Mid-City Green Line Stations	Operational Risks
I.	Increase Green Line Service Levels	\$350	\$10	Increased service to the northern and southern ends of the Green Line as well as the Anacostia waterfront	None
II.	Extend Yellow Line Service to Greenbelt	\$200	\$5	Increased service to the northern end of the Green Line and additional Yellow Line connectivity to the Red Line	None
III.	Extend Yellow Line Service to Ft. Totten	\$150	\$3	Additional Yellow Line connectivity to the Red Line	Mitigated with the capital investment
IV.	Extend Yellow Line Service to Ga. Ave./Petworth	\$375	\$2	None	Mitigated with the capital investment

- The above capital costs are Rough Order of Magnitude (ROM) engineering estimates based on conceptual design; the Operations and Maintenance costs similarly are ROM estimates based on a limited operations planning analysis.



VI. Service Improvement Concepts Capital Investments

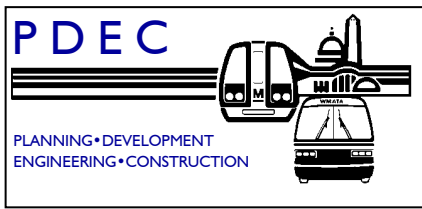
	Service Concepts	Capital Investments Off Peak	Capital Investments Peak
I.	Increase Green Line Service Levels	None	Purchase 120 Rail cars Upgrades to rail yard(s)
II.	Extend Yellow Line Service to Greenbelt	New signage and maps	Purchase 60 Rail cars Upgrades to rail yard(s) New signage and maps
III.	Extend Yellow Line Service to Ft. Totten	Revise wayside signals New signage and maps	Purchase 30 Rail cars Upgrades to rail yard(s) Cut & Cover Turnback tunnel New signage and maps
IV.	Extend Yellow Line Service to Ga. Ave./Petworth	Overhaul wayside signals New signage and maps	Purchase 20 Rail cars Mined Turnback tunnel New signage and maps

- Increases in operating costs are driven by an increase in the number of operator hours, increased electricity usage and increased maintenance of rail vehicles.



VII. Additional Option

- In addition to the above concepts for increased peak service, the Board has been briefed on a concept for a revision to the operation of the Blue Line
- The revised operation would divert 5 Blue Line trains per peak hour of operation to Greenbelt increasing service to the Mid City Green line stations by 50%
- This revised operating plan improves Orange and Blue operation because the Rosslyn portal is currently exceeding design train throughput



VIII. Summary

- WMATA was requested to assess to possibility of extending Yellow Line Service to the Mid City Green Line Stations
- There are a range of concepts that achieve the desired service improvements
- Feedback received at two community meetings was positive and endorsed extending the Yellow Line to Ft. Totten in the off peak periods



Next Steps

- Obtain Budget Committee and Board approval to include the yellow line extension as a DC Reimbursable Project in the FY07 approved budget.
- Upon approval of the Board complete all preparation work for the demonstration project from July 1 thru December 2006
- Start passenger service by January 2007 for six months.



WMATA - METRORAIL SYSTEM MAP
CONCEPT II - YELLOW LINE SERVICE TO GREENBELT



WMATA - METRORAIL SYSTEM MAP
CONCEPT III - YELLOW LINE SERVICE TO FORT TOTTEN



♿ Metro Is Accessible

♣ Metro Extension



WMATA - METRORAIL SYSTEM MAP

CONCEPT I - BLUE LINE SERVICE TO GREENBELT

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