



Washington Metropolitan Area Transit Authority

Station Access Capacity Assessment



Presented to the Board of Directors:

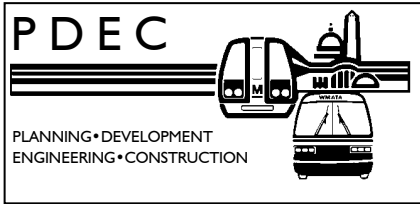
Planning & Development Committee

by

Department of Planning and
Information Technology

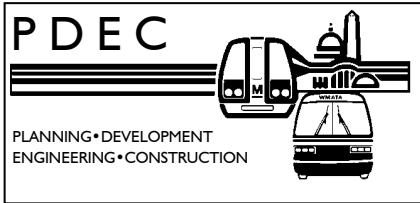
January 5, 2006





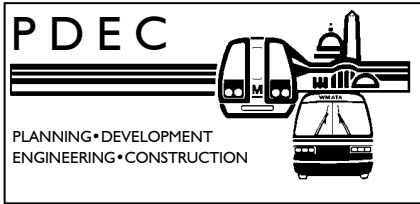
I. Purpose

- Brief the Planning and Development Committee on:
 - Ridership trends, existing development and related station access conditions
 - Go forward strategy and next steps for the Station Area Access Planning Program
- Seek Board guidance on criteria for making decisions on Station Improvements.



II. Background

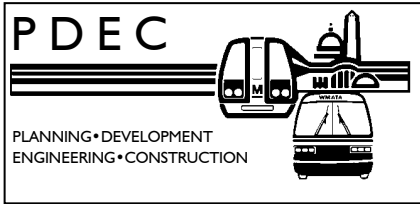
- Project Development Program
- 10-Year Capital Improvement Program
- Board June 6, 2005 decision to refocus project development program on:
 - Station Area Access Planning;
 - Joint Development Planning Support;
 - Systems Planning and Corridor Development
- Follow-up on the December 1, 2005 presentation to the P&D Committee with assessment of station ridership, parking, bus, pedestrian and bike access, and development conditions at Metrorail stations.



III. Station Access Capacity Assessment

Strategic Plan-related program goals include:

- Increase transit ridership
- Increase system efficiency and service quality
- Promote safety and security
- Generate additional revenues
- Support local development and quality of life
- Support planning for 30-year regional plans
- Collaborate with FTA on its Transit Oriented Development (TOD) Initiatives



III. Station Access Capacity Assessment

Station-level Ridership Growth Trends, '95 – '05

Growth Classifications

Green: Ridership growth exceeding 100%
(5 Stations)

Red: Ridership growth between 30-100%
(22 Stations)

Blue: Ridership growth less than 30%
(37 Stations)

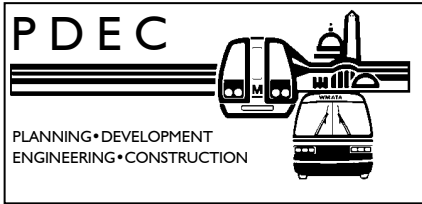
Brown: No ridership growth
(10 Stations)

Gray: No 10-year ridership data available
(12 Stations)

Analysis

- Ridership growth occurred at:
 - Stations with significant development
 - Transfer Stations





III. Station Access Capacity Assessment

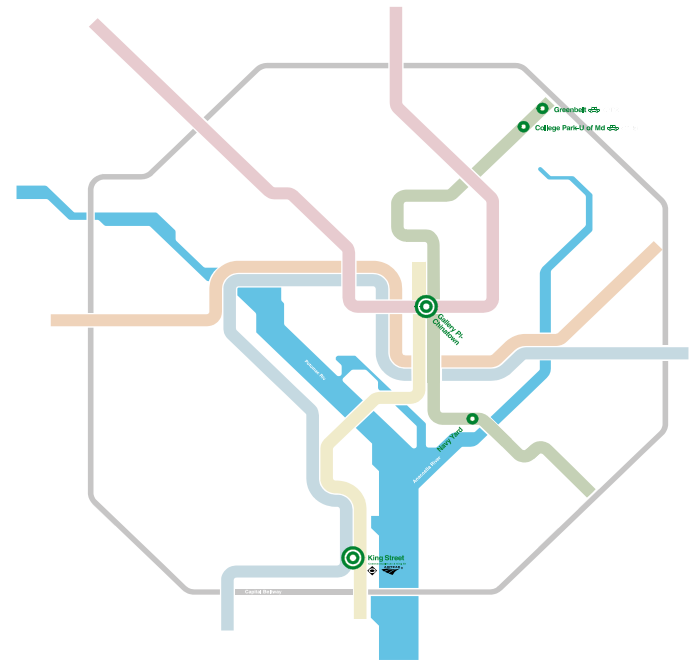
'95 – '05 Station Ridership Growth Exceeding 100%



Gallery Place – 7th and H Streets NW

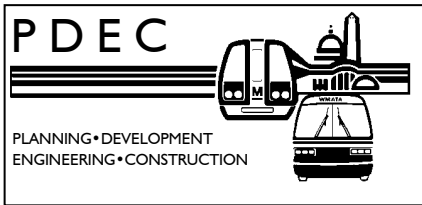


King Street – Metro Place



Station	METRORAIL PASSENGER BOARDINGS - WEEKDAY AVERAGE				
	1995	2000	2005	% Change	
				5 Years	10 Years
Gallery Place - Chinatown	7,462	10,563	19,474	84%	161%
King Street	4,038	5,232	8,242	58%	104%
Greenbelt	2,948	5,786	7,005	21%	138%
College Park - U of MD	1,504	2,709	3,635	34%	142%
Navy Yard	1,425	1,828	3,048	67%	114%

5 stations with ridership growth exceeding 100%



III. Station Access Capacity Assessment

'95 – '05 Station Ridership Growth Greater Than 30% - Less Than 100%



Grosvenor Strathmore Music Center



Mt. Vernon Square – Convention Center



METRO RAIL PASSENGER BOARDINGS - WEEKDAY AVERAGE					
Station	% Change				
	1995	2000	2005	5 Years	10 Years
Pentagon City	9,587	11,058	15,783	43%	65%
Shady Grove	9,014	9,767	13,360	37%	48%
Federal Triangle	7,870	9,302	11,166	20%	42%
Grosvenor	3,438	3,551	5,428	53%	58%
U Street - Cardozo	3,127	3,497	4,790	37%	53%
Mt. Vernon Square	1,861	1,635	3,358	105%	80%

6 of 22 stations with ridership growth between 30%-100%

III. Station Access Capacity Assessment

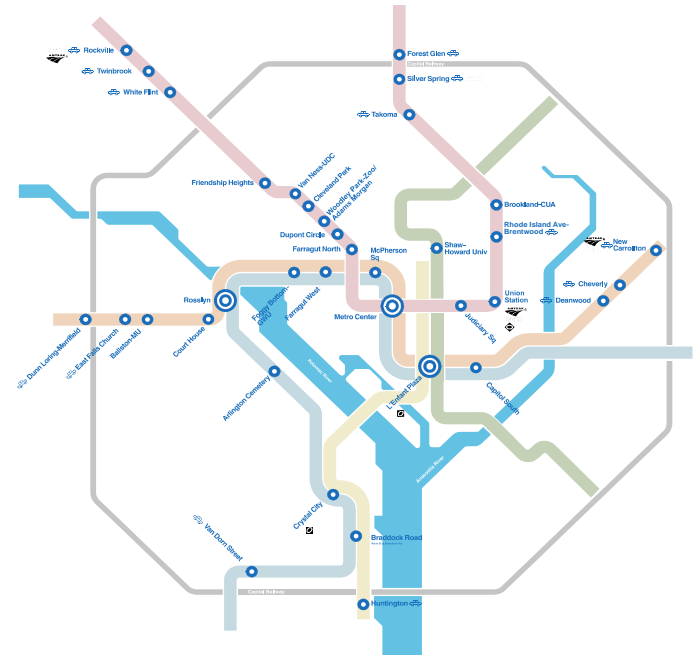
'95 – '05 Station Ridership Growth Less Than 30%



Metro Center Station

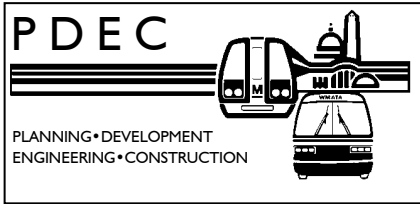


Rosslyn Station



METRORAIL PASSENGER BOARDINGS - WEEKDAY AVERAGE					
Station	% Change				
	1995	2000	2005	5 Years	10 Years
Union Station	25238	27330	31864	17%	26%
Metro Center	27643	27457	28983	6%	5%
DuPont Center	20586	21425	23196	8%	13%
L'Enfant Plaza	17320	18712	21878	17%	26%
Rosslyn	13831	14672	16224	11%	17%
New Carrollton	7670	8742	9091	4%	19%

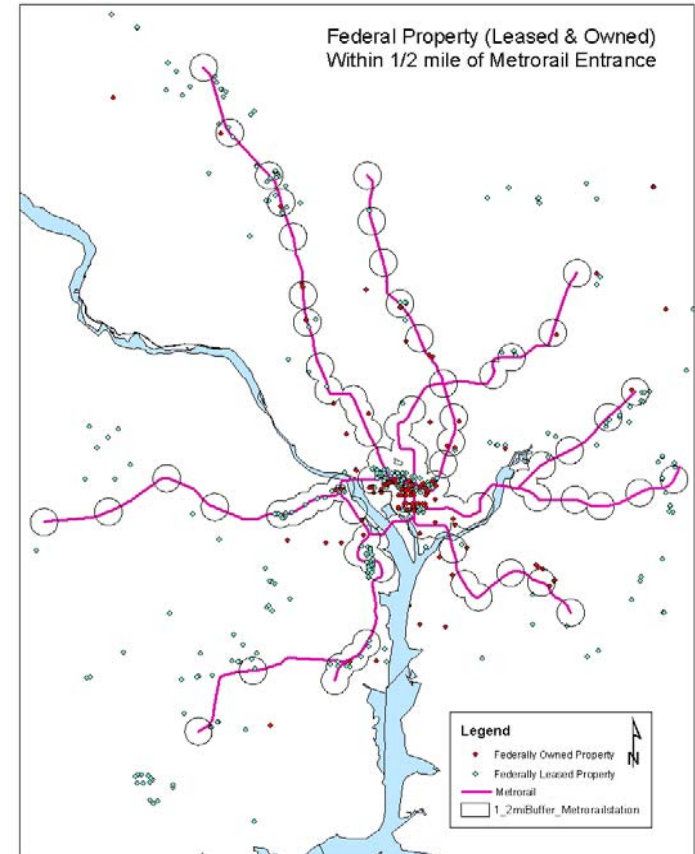
6 of 37 stations with ridership growth less than 30%

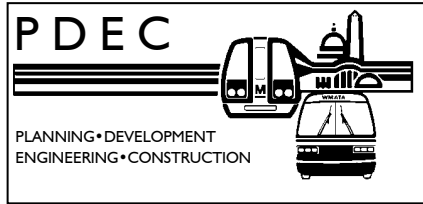


III. Station Access Capacity Assessment

Development Trends

- **Station Value Capture Study Findings:**
 - Approximately 271 million square feet of hotels, commercial and federal office space within ½ mile of Metro stations
 - Approximately 395 million square feet in areas broadly served by Metro
- **Development Related Ridership Survey (See Appendix 1)**
 - Average transit mode split by jurisdiction
 - 65% in the District of Columbia
 - 18% in Maryland
 - 17% in Virginia
 - Mode split ranges, by land use
 - Office: 8% - 76%
 - Residential: 32% - 67%
 - Retail: 19% - 57%
 - Hotel: 12% - 51%
 - Entertainment: 13% - 44%
 - At macro-level, distance from regional core significantly impacts mode share; at station-level, distance from station entrance also significantly impacts mode share
 - Mixed-use development promotes walking





III. Station Access Capacity Assessment

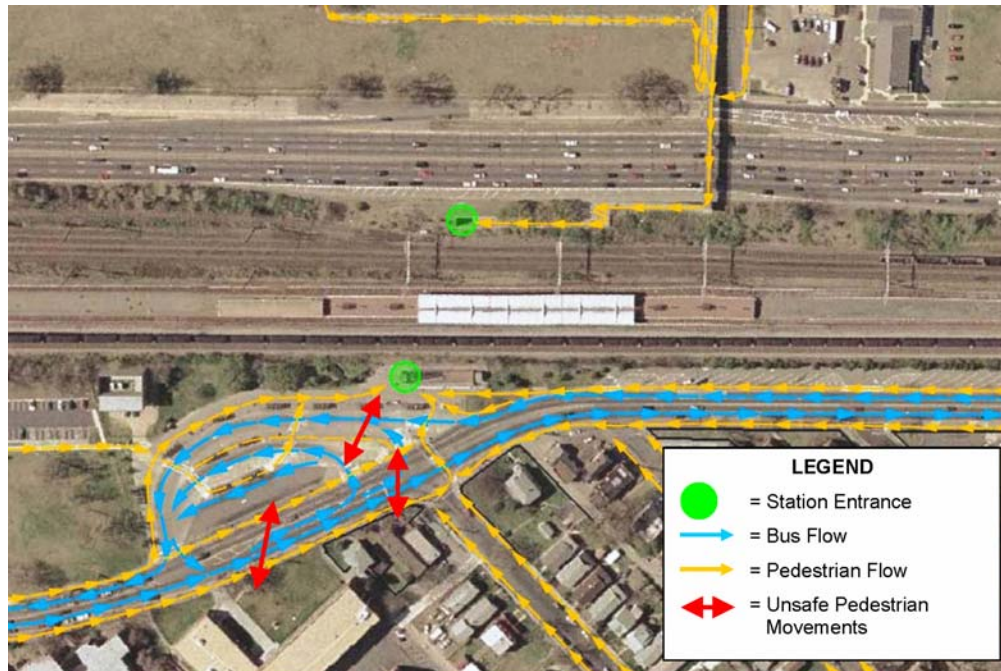
Challenges of Ridership Growth and Local Planning

- Forecasting ridership based on development and mode of arrival
- Working with jurisdictions to plan and focus development at and around Metrorail stations
- Coordinating with jurisdictions and the private sector on WMATA Joint Development projects
- Establishing capacity limits within the system (See Appendix 2)
 - New entries, fare gate arrays, mezzanines
 - Extended and enlarged mezzanines to enhance customer circulation
 - Additional bus bays, pedestrian connections, park and ride structures
 - Underground passenger connections between major stations
 - Additional rail cars
- Financing needed for capacity enhancements – Value Capture opportunity

III. Station Access Capacity Assessment

Station Access Challenges – Pedestrian and Bicycle

- Conflicts between priority bus access and pedestrian access
- Indirect and fragmented pedestrian crossings
- Inconvenient pick-up/drop-off space creates conflicts with traffic



Minnesota Avenue Station Access Improvement Study

III. Station Access Capacity Assessment

Station Access Challenges - Parking

- Parking at most stations is at or near capacity (See Appendix 3)
- 17 of 35 stations with parking facilities fill before 8 AM
- Identifying demand for new parking and the number of spaces feasible on existing land at high-growth stations

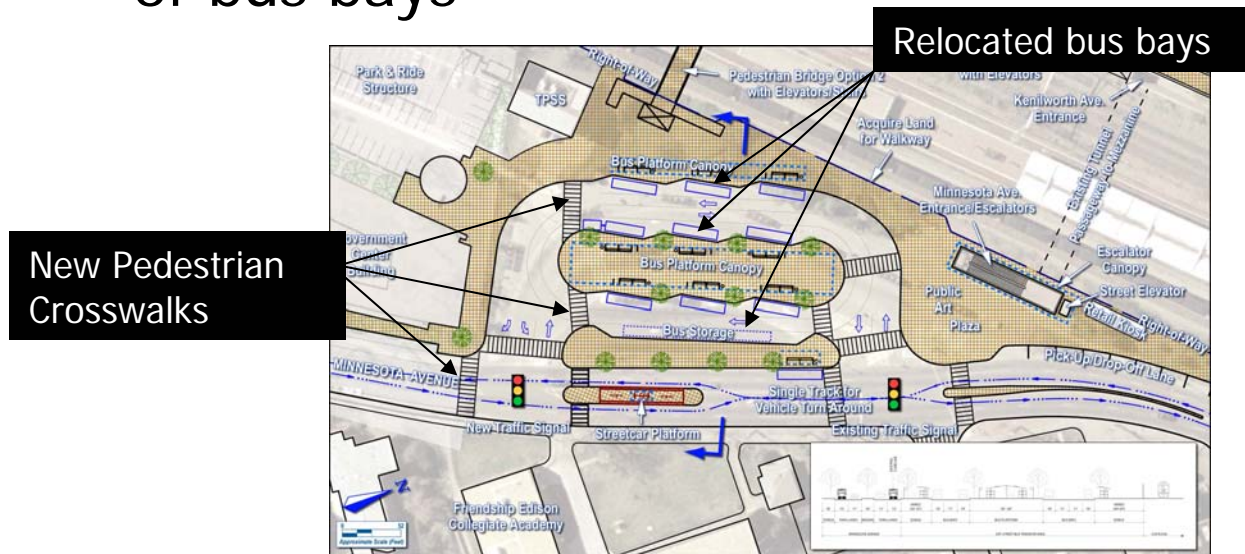


Shady Grove Station
Proposed Parking Structure
6 Levels
1,820 Spaces

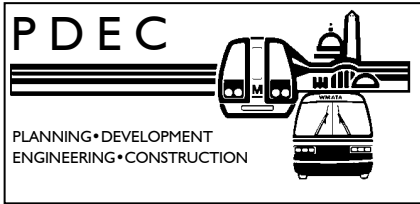
III. Station Access Capacity Assessment

Station Access Challenges - Bus

- Providing for bus circulation and access within the context of a multi-modal environment
- Providing sufficient space for the required number of bus bays



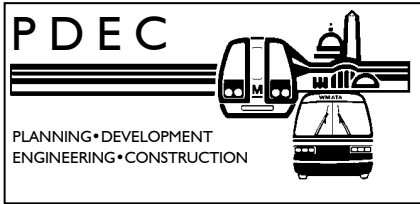
Minnesota Station Access Improvement Study – Concept showing pedestrian and bus access improvements that enhance the pedestrian environment while meeting future bus demands



IV. Looking Forward

What We Know Now

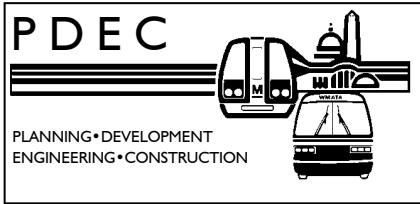
- WMATA is maintaining or growing market share in areas served by Metrorail. Ridership drivers within the Authority's *control* include:
 - Bus, parking, bike & pedestrian access
 - Joint development-generated ridership
 - Fare policy
- Ridership drivers within Authority's *influence*:
 - Access to stations from surrounding land
 - Type and amount of development on surrounding land
- Each station studied has its own access needs—prioritization is key
- Improving the pedestrian experience attracts customers to transit
- Stakeholders want a more integrated, context-sensitive approach to station area and access planning and improvements
- WMATA can potentially play a catalytic and facilitative role to support its ridership and access goals



IV. Looking Forward

Lessons Learned

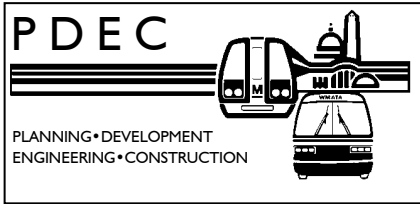
- Addressing access enhancement opportunities on WMATA property alone limits the number of solutions possible...including surrounding landowners and agencies in the problem-solving effort can expand the solution set.
- Bringing together multiple internal and external stakeholders in a problem-solving atmosphere can yield both time savings and breakthrough solutions.
- There are significant opportunities to tap into new revenue sources...and these will be maximized if the benefits of Metro access enhancements radiate to surrounding land.
- Different station-area developments affect system costs and operations differently.
- Transit continues to be a highly competitive mode in areas served by transit. You can create areas served by transit by adding transit...and also by growing the transit-friendly environment.



IV. Looking Forward

Outstanding Policy Issues

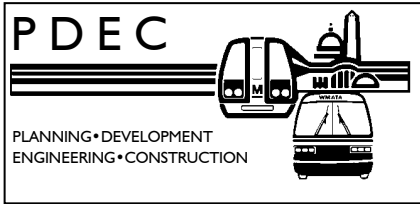
- Several questions to address
 - TOD represents “highest and best use” for transit. However, what’s the relationship of TOD with local government plans and community vision?
 - What’s the right hierarchy of access needs?
 - How should design standards for different access modes be balanced when they come in conflict with one another?
- How should system sustainability considerations be incorporated into station-area development opportunities?
- Ongoing station access and vision plans aim to provide information to help the Board address these questions
- Board guidance needed in identifying decision criteria.



IV. Looking Forward

Next Steps

- Define and prioritize specific station access needs in advance of budgeting and funding opportunities
- Leverage already-funded projects to create biggest access bang possible
- Fund access enhancements through joint development partnerships
- Use station-area vision plan and access improvements studies to create early consensus with communities (See Appendix 4)

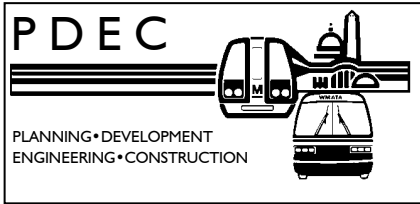


V. Appendix - 1

Development-Related Ridership: Station-Area Mode Splits

	Rail	Bus	Bike/Ped	Auto
Office	25%	9%	6%	62%
Residential	41%	4%	13%	43%
Hotel	27%	4%	31%	38%
Retail	29%	8%	27%	36%
Entertainment	26%	6%	11%	57%

Note: Average mode shares for land uses in 13 station areas studied

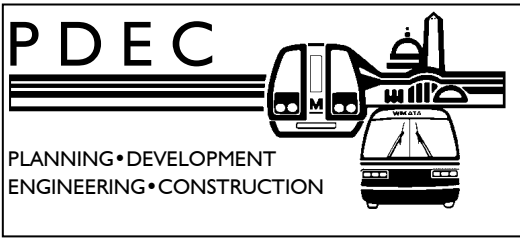


V. Appendix - 2

Completed Station Access Studies

- Station Access Improvement Studies (FY05 and Prior)
 - Farragut North and West Underground Passageway
 - Gallery Place to Metro Center Pedestrian Passageway
 - Forest Glen
 - Minnesota Avenue
 - Stadium Armory
 - Braddock Road
 - Rockville
 - Pentagon City
 - Vienna (Near Term)
 - Court House 2nd Entrance

- Deliverables
 - Community involvement report
 - Evaluation of existing conditions
 - Ridership analysis and forecasts
 - Development and evaluation of station access improvement concept designs
 - Evaluation of joint development options
 - Station capacity improvements
 - Capital cost estimates



V. Appendix - 3

Parking Demand Analysis

Rank	Station	Existing Capacity	Existing Demand (Total)	Existing Unmet Demand (Net)	2015 Additional Demand	2015 Total Additional Demand (Unmet+Future)
1	Franconia/Springfield	5,069	7,450	2,381	1,200	3,581
2	Branch Avenue *	3,072	4,515	1,443	1,570	3,013
3	Glenmont **	1,781	2,935	1,154	800	1,954
4	Vienna/Fairfax-GMU	5,849	7,235	1,386	650	2,036
5	Suitland	1,890	2,780	890	725	1,615
6	Shady Grove	5,467	6,015	548	1,250	1,798
7	Greenbelt ***	3,399	4,080	681	1,925	2,606
8	Largo Town Center	2,200	2,398	198	1,250	1,448
9	New Carrollton ****	1,772	2,925	653	650	1,303
10	Cheverly	500	825	325	670	995
11	East Falls Church	422	620	198	500	698
12	Southern Avenue	1,980	2,376	396	200	596
13	Naylor Road	368	465	97	600	697
14	Rockville	524	948	424	350	774
15	Forest Glen	596	876	280	400	680
16	Capitol Heights	372	614	242	535	777
17	Van Dorn Street	361	575	214	286	500
	Sub-Totals	35,622	47,632	11,510	13,561	25,071

* FY06 Joint Development Solicitation Site

** Phase I Parking Expansion Site

*** Joint Development Agreement Pending

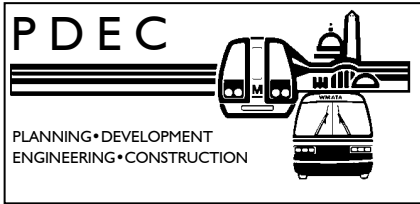
**** New Carrollton Station existing capacity does not include new parking structure, surface parking to be displaced by future Joint Development



V. Appendix – 3 (cont'd)

Parking Demand Analysis

Rank	Station	Existing Capacity	Existing Demand (Total)	Existing Unmet Demand (Net)	2015 Additional Demand	2015 Total Additional Demand (Unmet+Future)
18	Grosvenor-Strathmore	1,894	2,064	170	320	490
19	White Flint	1,168	328	(840)	530	(310)
20	Twinbrook	1,097	1,196	99	220	319
21	Wheaton	977	1,065	88	340	428
22	Landover	1,866	1,413	(453)	730	277
23	Addison Road	1,268	1,160	(108)	375	267
24	College Park-U of Md	1,870	1,109	(761)	1,035	274
25	Prince George's Plaza	1,068	872	(196)	255	59
26	West Hyattsville	453	465	12	175	187
27	Morgan Boulevard	608	500	(108)	500	392
28	Deanwood	194	285	91	100	191
29	Minnesota Avenue	422	620	198	75	273
30	Fort Totten	1,980	2,376	396	145	541
31	Rhode Island	368	465	97	55	152
32	Anacostia	524	712	188	310	498
33	Huntington	3,090	4,542	1,452	250	1,702
34	West Falls Church	2,009	1,509	(500)	500	-
35	Dunn Loring-Merrifield	1,319	1,939	620	435	1,055
	Sub-Total	22,175	22,620	445	6,350	6,795
	Sub-Total (17 Stations)	35,622	47,588	11,510	13,425	24,891
	TOTALS	57,797	70,208	11,955	19,775	31,686



V. Appendix - 4

FY 06 Station Area and Access Planning Work Program

- Station Access Improvement Studies
 - Brookland-CUA
 - Deanwood
 - New York Avenue
 - Rosslyn
 - Virginia Square-GMU
 - Ballston-MU
 - Eisenhower Avenue
 - Pentagon City
- Joint Development Support
 - Branch Avenue
 - Forest Glen
 - Western Bus Garage
 - Northern Bus Garage
 - Congress Heights
 - Shaw Howard
 - Backlick Road
- Ridership Forecasts
- Deliverables
 - Community Involvement (Visual Preference Surveys, Community Charettes etc.)
 - Evaluation of existing conditions
 - Ridership analysis and forecasts
 - Development and evaluation of station access improvement options
 - Evaluation of joint development options
 - Station capacity improvement proposals
- Station Vision Plans
 - Benning Road
 - Branch Avenue
 - Cheverly
 - East Falls Church
 - Fort Totten
 - Franconia-Springfield
 - Friendship Heights
 - Glenmont
 - Largo Town Center
 - Shady Grove
 - West Falls Church
 - Western Bus Garage
 - Vienna/Fairfax-GMU (Long Term)

V. Appendix - 5

'95 – '05 Station with No Ridership Growth

- Factors Affecting No Growth
 - System Expansion
 - Ridership declines associated with rail line extensions at:
 - Addison Road
 - Wheaton
 - Potomac Avenue
 - Waterfront
 - Metrobus Service Changes
 - Crime
 - Primarily related to auto theft



10 Stations with ridership growth with no growth