

Growth Policy Study: Draft Report  
Appendix E- Addendum to the 2008 Master Plan  
Implementation Status Report  
(Resolution 16-376 F11)

Lead Staff: Glenn Kreger

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#### Objective:

To assess the progress toward implementing the facilities recommended in each master/sector plan.

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#### Draft Report:

The addendum to the 2008 Master Plan Implementation Status Report contains the following information:

- Status Report for the December 2008 Twinbrook Sector Plan
- Shady Grove Sector Plan Implementation
- Clarksburg Staging and Buildout
- Policy Areas Map
- Status of Capital Facilities (matrices)

The report, in its entirety, can be found on the GrowingSmarter.Org website under *Resources*.

[http://www.montgomeryplanning.org/research/growth\\_policy/growth\\_policy09/agp\\_growing\\_smarter.shtm](http://www.montgomeryplanning.org/research/growth_policy/growth_policy09/agp_growing_smarter.shtm)

Growth Policy Study: Progress Report  
Appendix F – Biennial Highway Mobility Report  
(Resolution 16-376 F11)

Lead Staff: Justin Clarke

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Objective:

The purpose of the Highway Mobility Report (HMR) is to document the Department's annual analysis of constraints to mobility within Montgomery County. These transportation indicators are intended for use by the Planning Board and County Council to inform their commentary on this year's State Consolidated Transportation Program (CTP) project priorities. Recommendations and analysis provided with this report will be an update of work provided in the May, 2008 HMR.

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Progress Report:

Vehicle-based data collection is nearly complete for this project. All Global Positioning System (GPS)-based travel time samples have been collected and processed via Geographic Information Systems (GIS). Intersection traffic count collection continues and approximately  $\frac{3}{4}$  of the counts have been received by staff and entered into our agency intersection database. Staff time is currently focused on the generation of travel time maps and graphs comparing 2009 and previous year data as well as critical lane volume (CLV) analysis of intersection counts. Intersection rankings by raw CLV and also by CLV to Local Area Transportation Review (LATR) ratio are in development as intersection data is delivered by consultant teams.

Following the recent development of updated demographic inputs, the necessary TRAVEL/3 model run for year 2013 vehicular congestion analysis has been completed. Staff is currently reviewing the results of this effort.

Beyond vehicular data, staff has identified pedestrian, bus and Metro rail data sources. Work has begun testing various displays of this data. Where relevant, this transit and pedestrian information will be incorporated into the 2009 HMR report to illuminate mobility throughout the County, particularly with regard to comparisons among transportation modes.

A working outline of the 2009 report follows. Numerous graphics in the form of maps, tables and charts will be included in the report along with text sections.

## Working Report Outline:

### **I. EXECUTIVE SUMMARY**

- A. Recommendations from Staff
- B. Key Findings
- C. Highlights (One Page)
- D. Key Changes from 2008 HMR Report

### **II. MOBILITY ANALYSIS**

- A. Objectives
  - 1. Purpose
- B. Current Congestion Analysis
  - 1. Measures of Congestion (Description)
  - 2. Critical Lane Volume (CLV via Traffic Counts)
    - a) Description of data parameters
    - b) Comparison of CLV data with LATR standards
    - c) 10 Most Congested Intersections
    - e) Analysis of remaining congested intersections
    - f) Key Changes in CLV (Increase/Decrease of CLV by 15% or more/less)
    - h) Charts of variation with time (Historical Comparison)
    - i) Diurnal Analysis for AM/PM Peak Periods
  - 3. Arterial Travel Times and Speeds (GPS – Motion Maps Data)
    - a) Priority Analysis Corridors with Historical Comparisons
    - b) Mobility within Select Policy Areas of the AGP (I-270/North Areas)
  - 4. Congested Corridors (Synthesis of CLV and GPS data)
- C. Trends in Transportation Analysis
  - 1. Relationship Analysis Between MNCPPC Data and the Larger Transportation Picture
    - a) How have vehicle travel/transit ridership changed over the past year(s)?  
(re: changes in gas prices and recent economic downturn)
      - (1) National Trends - FHWA/DOT VMT Data
      - (2) State Trends VMT Trends- SHA
      - (3) County Trends
    - b) How do our Vehicle Counts relate to other modes – ped./bus/rail?
      - (1) Pedestrian Count Analysis
      - (2) Bus System Analysis

- (3) Metro Rail Analysis
    - (4) Comparison of auto vs. transit travel time (2005 and 2030 horizon years)
  - c) What is happening to resident Mode Share in Montgomery County?
    - (1) Montgomery County Census Update Data
- D. Future Congestion
  - 1. Model Inputs and Parameters
  - 2. Forecasted Volume to Capacity Ratios
  - 3. Relative Mobility
- E. Increasing Mobility
  - 1. Key Infrastructure Improvements (i.e. what improvements have been made to the system since the last report was completed in 2008?)
- F. Next Steps
  - 1. Forthcoming Analysis/Data (e.g. COG Arterial Congestion Monitoring Data)

### **III. METHODOLOGY**

- A. Report History
- B. Sample Calculations
- C. Data Sources and Reliability

### **IV. APPENDIX**

- A. Supplemental Graphs, Tables and Charts

Growth Policy Study: Progress Report  
Appendix G – Prioritization of Public Facilities  
(Resolution 16-376 F11)

Lead Staff: Lawrence Cole

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Objective:

To prioritize the facilities needed to realize the vision in approved master/sector plans

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Progress Report:

The following table was created as a tool to assist in the prioritization of projects for the County’s CIP. One assumption is that the projects already in the CIP would remain as priorities and would not be required to compete against new candidates. This tool would be used to determine which new projects should enter the CIP as planning, design, or construction projects.

The first two columns reflect the type of project and location of the projects. These are not scored criteria, but are intended to give more general information to decision-makers to ensure that we’re not unknowingly choosing mostly one type of project or projects mostly in one area of the county.

The following criteria use a point system to reflect the important characteristics of a project:

**Sustainability:** The next two columns give higher priority to where our highest investments in transit are and where the greatest outcome can be achieved with County funds.

**Master/Sector Plan Goals and Objectives:** The goals and objectives in the Staging Requirements and Constrained Long Range Plan have already been codified as higher County priorities and are given greater weight in the table.

**Connectivity, Design Excellence, and Diversity:** The multiple factors in these categories are equally weighted and are intended to promote more holistic planning and design of projects, promoting accessible, multiple-use facilities that meet the needs of multiple users.

A sample listing of projects is provided, two from each team area, with a total point score to illustrate the potential outcome of the use of this table to determine the County’s priorities.

Project	Type	Master Plan area	Sustainability		Master/Sector Plan Goals and Objectives		Connectivity						Design Excellence				Diversity		Total
			Priority area 0-15 pts	Leveraged funds 5 pts	Staging requirement 10 pts	Constrained Long Range Plan 10 pts	HMR Top Ten 5 pts	Traffic Forecasts 5 pts	Emergency preparedness 5 pts	Coordination private/public development 5 pts	Linking jobs to housing 5 pts	Linking neighborhoods to services 5 pts	Safety 5 pts	Multi-purpose 5 pts	Neighborhood Conservation/Community Identity 5 pts	Env. protection 5 pts	HP 5 pts	Promotes Non-SOV Travel 5 pts	

Project types: Road, Pedestrian/Bicycle, Transit, Police, Fire and Rescue, School, Library, Parks and Recreation, or Other Community Facility.

Priority areas:

1. Urban areas as defined in Chapter 49 (Grosvenor, Shady Grove, Twinbrook, White Flint, Silver Spring, Wheaton, Bethesda, Friendship Heights, and Glenmont Metro Station Policy Areas; Germantown Town Center; Clarksburg Town Center; Damascus Town Center; Olney Town Center; Flower/Arliss /Piney Branch commercial area; Montgomery Hills Parking Lot District; North Bethesda Commercial/Mixed-Use area, and Silver Spring Parking Lot District.) – 15 points  
Areas within ½ mile of on-MSPA Metro Stations (Forest Glen, Medical Center, Takoma, and Shady Grove) – 10 pts
2. Areas within ½ mile of other existing or programmed transit stations – 5-8 points
3. MD Smart Growth Priority Funding Area other than the above – 3 points
4. Non- MD Smart Growth Priority Funding Area other than the above – 0 points

Growth Policy Study: Progress Report  
Appendix H – Changes to Policy Area Boundaries

Lead Staff: Wayne Koempel

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Objective:

To recommend changes to Policy Area boundaries

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Progress Report:

Examination of possible changes to Policy Area boundaries has begun. The following areas are being examined.

- The Gaithersburg City and Rockville city Policy Area boundaries are being adjusted to better match their municipal boundaries.
- Expansion of the Germantown Town Center Policy Area east from Crystal Rock Drive to I-270 north of Germantown Road (MD 118) as recommended in the new Germantown Master Plan.
- The R & D Village Policy Area should be adjusted to account for the City of Gaithersburg's annexation of the Crown Farm.
- Create a new Life Sciences Center Policy Area from part of the R & D Village Policy Area.
  - The Life Sciences Center Policy Area would be created from traffic zones 218, 219, and 220.
  - This proposal would result in the remaining R & D Village Policy Area being a non-contiguous grouping of traffic zones 166, 215 (less Crown Farm), and 216.
- Expand the White Flint Policy Area to conform to the White Flint Sector Plan boundaries.

In addition, investigation will continue to determine if other boundary changes need to be addressed.

Growth Policy Study: Progress Report  
Appendix I – Policy Area Mobility Review (PAMR)  
(Resolution 16-376 F11)

Lead Staff: Eric Graye

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### Objective:

To present the results of the annual Policy Area Mobility Review (PAMR) for Board approval

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### Progress Report:

Using the Department's Travel/3 transportation model in support of the application of the PAMR methodology, staff will evaluate the year 2013 relationship between the set of transportation projects fully-funded in the four-year capital program and the geographic pattern of existing and approved but un-built (i.e., "pipeline") jobs and housing units in the County. A key result of this analysis will be the determination of a revised set of required trip mitigation percentages by policy area. Staff will be requesting the Planning Board's acceptance these trip mitigation requirements for FY 10.

Staff has initiated coordination efforts with MCDOT and County Council staff to confirm the identification of the appropriate transportation projects to be assumed in the 2013 PAMR network. The development of the 2013 existing plus pipeline demographic scenario is underway. This demographic dataset will also include adjustments to account for Base Realignment and Closures (BRAC)- related employment in the County.

**Status:** Staff expects to deliver the 2013 PAMR test results to the Planning Board in May 2009.



Growth Policy Study: Progress Report  
Appendix J –School Capacity and Enrollment  
(Resolution 16-376 F11)

Lead Staff: Pam Dunn

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Objective: To present the results of the annual school test for Board approval.

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Progress Report:

Adequate school capacity is a calculation that compares projected enrollment numbers and existing and planned facility capacity based on program needs. The annual school test determines if residential subdivisions in any school clusters should be subject to either a school facilities payment or a moratorium.

The County Council approves the school test methodology in the Growth Policy Resolution. Once the Council approves the CIP, Montgomery County Public Schools (MCPS) recalculates the projected school capacity (based on final determination of funded capacity) and provides all data for the school test as required by the Adequate Public Facilities Ordinance.

The FY2010 school enrollment and capacity information will be presented to the Planning Board either just prior to the staff draft of the 2009-2011 Growth Policy or as part of this document.

Growth Policy Study: Progress Report  
Appendix K – Allocating Development Rights  
(Resolution 16-376 F12c)

Lead Staff: Shahriar Etemadi and Cathy Conlon

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Objective:

To evaluate the possibility of establishing a system whereby development rights can be traded amongst developers

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The evaluation of trading development rights results from an interest to both streamline the provision of transportation capacity and, over time, reduce the unused backlog of pipeline capacity that requires new development entering the queue to reflect the growth of the assumed 30 million square feet of approved commercial development already in the queue ahead of them. There are two general issues to describe in this analysis:

- The geographic areas between which development capacity could be traded, and
- The administrative methods to exchange the capacity

**Geographic Areas**

Two general approaches are described below.

- **Development capacity trading within the same MSPA.**

Establish a development ceiling stage within the same MSPA and allow one or more applicants to trade development potential of their property within a candidate MSPA. This could be called MSPAs Transfer of Development Rights (MTDR). An example of this would be the application called Woodmont Central, currently pending at the Planning Department within the Woodmont Triangle Area. Two separate sites within the Woodmont Triangle area have submitted a request to exchange development density between the two sites in order to maximize the development potential of both sites. Without trading the development density, these two sites could not each contain the land uses proposed on each location.

Under the MDTR scenario, some of the design and planning regulations must be modified to accommodate this request. The existing zoning ordinance limits the ability of taking full advantage of this density transfer. All master plan recommendations relating to transportation design must be strictly enforced. This capacity trading will allow the flexibility to pace and locate developments within the area. It also maximizes the benefit of development potential transferred from one property to another closer to the Metrorail

station to take advantage of better use of transit. If the receiving parcel uses the full potential of sending parcel, this location (sending area) could be designated for public use such as a neighborhood park.

This incentive facilitates development of property that is otherwise limited by location or parcel size restrictions. Another advantage is in case a property is on a recorded lot and proposed a standard method of development with restriction on less than full density build out, the excess density can be transferred to a new development for higher density. Other development restrictions such as height could also be modified.

- **Development capacity trading from non-MSPAs into MSPAs**

A second scenario would be to allow an applicant or applicants that have extensive approved development in the pipeline in a location not well served by transit to transfer the development right to an area down-county where the market for development is more desirable or provides a better transportation system with higher levels of transit mobility. The transfer of development rights would be the same amount placed in a location allowing higher density. The primary concern with this method would be the equity of re-evaluating transportation system requirements that were conditions of the sending development (and may have already been built). This concern could be alleviated in part by limiting the distance of the allowed transfer, such as limiting sending areas to be only from policy areas that are adjacent to the receiving MSPA.

### **Administrative Mechanisms**

Four types of administrative mechanisms to address APF requirements for trading development rights are described below.

- **Status quo: Multiple applicants share one improvement**

Currently, transportation improvements required for LATR may be the responsibility of more than one applicant. Each applicant affecting a substandard transportation element, such as an over-congested intersection, is conditioned to make the same improvement but whoever proceeds first with implementation of their project is responsible for completing the total improvements to gain building permits. The applicant who is making the total improvements must be compensated by other applicants responsible for the same improvement based on a pro-rata-share of their impact. The definition of pro-rata share is agreed to by the applicants themselves.

- **Development capacity trading in zoning ordinance**

**Status:** Staff is looking into the possibility of changes in the zoning ordinance to implement the concept described in the Woodmont Triangle area in other areas of the County. If the zoning ordinance is modified to allow for transfer of rights to each other, the sites could be developed as a mixed use development in the MSPA. In addition, if the transfer of rights is allowed, additional floor area ratio (FAR) could be obtained for an optional method of development vs. standard method. The exchange of development rights achieves both mixed use objectives as well as facilitating planned development levels in the MSPAs.

- **Transportation improvement cap and trade**

This policy would allow an applicant who provides more than the transportation capacity necessary to mitigate its impact, to transfer the excess transportation capacity for use of a second development or offer it “for sale” to the second applicant within the same policy area. If this policy is adopted for all areas and is not limited only to MSPAs, it encourages the applicants to provide more than necessary capacity at earlier stage of development (which means it could be provided at a lower cost). For example, the Montgomery General Hospital will likely design and construct a transit station that provides for more than their required trip mitigation. In this case, the excess credit created by the applicant could be transferred to another applicant at a value to be agreed upon between the two applicants.

**Status:** At the time of review and implementation of the PAMR trip mitigation projects, the county would determine how much of that PAMR project counts for the mitigation requirement for the application being reviewed and how many additional trips were mitigated that can be applied to the applicant’s second development or be sold to a different applicant for their use of PAMR trip mitigation. This transfer of trip mitigation must be within the same policy area for two reasons:

1. To ensure that the trip mitigation created within a policy area benefits the same policy area in the future and;
2. The same mitigation measure (trip credit) in an area where is less expensive to implement is not equally transferred to an area where the same mitigation measure is more expensive resulting in loss of mitigation measure value for the public.

- **Transportation mitigation bank**

A transportation mitigation bank similar to the Forest Conservation Bank (with modifications tailored for addressing the transportation facilities issues) could be set up to

collect, spend, and keep track of all the resources to improve overall transportation in the county. In this model, the Montgomery General Hospital could theoretically collect a refund from the Transportation Mitigation Bank for the excess capacity being constructed. Any other applicant in the Olney Policy Area could then proceed by paying a deposit into the bank equivalent to the amount of capacity used.

Staff has three primary concerns with this process. First, unlike the Forest Conservation Bank, in which the exchange rate is always acres of forest, the multimodal and geographic aspect of transportation impacts and mitigation create a public acceptance challenge that all congested intersections or transit centers can be valued equally. Second, this complexity requires establishment of:

- exchange currency (dollars, square feet of different types of land uses, or trips/VMT),
- cash flow management (how to incorporate construction escalation costs and completion dates into the valuation process)
- effect on taxes, fees, and credits
- public concern that the approach from a theoretical perspective would be a return to the days of “pay-and-go”.

**Status:** Staff does not recommend further pursuit of this method at this time as the complexity outlined above would create administrative and legal complexities that outweigh the benefits, particularly considering that simpler alternatives exist as outlined above.

Growth Policy Study: Progress Report  
Appendix L - Report on Current Jobs/Housing Balance  
(Resolution 16-376 F12d)

Lead Staff: Eric Graye and Pam Dunn

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Objective:

To report on the current jobs/housing balance by policy area across the County evaluating implications for housing affordability and traffic congestion.

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Progress Report:

Jobs and housing units are considered to be “in balance” when there are roughly as many jobs as workers living in the County. On average, there are about 1.6 workers per household in Montgomery County, and roughly one household per housing unit. As a result, a ratio of 1.6 jobs per housing unit is considered “balanced”.

A balance of jobs and housing is intended to meet two main goals: to provide an adequate number of employment opportunities for County residents, and to minimize the distance a worker has to travel to his or her job.

These goals have important secondary affects: a balance of jobs and housing helps to minimize the impact of growth on the transportation network and helps improve housing affordability through reduced transportation costs.

The County’s current and forecast jobs/housing ratios are being calculated as part of the Round 7.2 forecast. These ratios will be evaluated in relationship to the new PAMR analysis. Evaluation of jobs/housing in relationship to PAMR by policy area can provide useful information on the significance of congestion thresholds or Master Plan Staging. For example, a policy area with PAMR mitigation over fifty percent and a jobs/housing balance below .5 could indicate the need for either increased transit (due to the high proportion of households and low proportion of jobs), or prioritization of planned road improvements, or exemption from all/part of PAMR mitigation for high job growth development.

In addition to evaluating jobs/housing in relationship to PAMR, jobs/housing balances will be evaluated against a housing/transportation affordability index developed as part of the 2007-2009 Growth Policy. The value of this comparison is to help target policy efforts aimed at retaining existing affordable housing.

Over the past decade, the County and the region have moved to the current 1.6 jobs-per-housing unit ratio. This ratio is used by the Metropolitan Washington Council of Governments (COG). The Metropolitan Washington Council of Governments is currently developing a Constrained Long Range Plan (CLRP) Aspirations Scenario using the 1.6 ratio as a regional goal.

Jobs/housing ratios will be calculated using the Round 7.2, 2030 forecast as well as a Round 7.2, 2030 “balanced” forecast. This “balanced” forecast is similar to the COG (CLRP) Aspirations Scenario.

**Status:** The Round 7.2 forecast and “balanced” forecast have recently been completed. Staff expects the PAMR analysis to be completed within the next couple of weeks.

Growth Policy Study: Progress Report  
Appendix M –Potential Changes to the APF Tests for  
Transportation and School Adequacy

Lead Staff: Shahriar Etemadi and Pam Dunn

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Objective:

To evaluate revisions to PAMR, LATR and school capacity. And, to evaluate revision to the derivation of the transportation impact and school impact taxes.

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Progress Report:

The retention of the Adequate Public Facilities review for transportation and school facilities remains an important element of the development approval process. Staff analyzed alternatives to LATR and PAMR in both the 2007 Growth Policy and the 2008 subsequent studies and did not find a better framework on which to build the APF process. Therefore, staff recommends the retention of the basic Local Area Transportation Review (LATR) and Policy Area Mobility Review (PAMR) tests as well as the school test.

However, staff will evaluate revisions to the current tests such as threshold changes for both transportation congestion and school capacity, development of a cordon-line method exemption and a parking cap method exemption from PAMR and LATR, and review of adequacy tests for other public facilities. In addition, impact tax calculations will be analyzed possibly changing the transportation impact tax calculation based on trips to one based on VMT. In the same vein, school impact taxes will be evaluated on a square foot basis compared to unit type. These changes would benefit development with lower carbon footprints.

Staff believes that the LATR and PAMR processes can be improved and propose to examine several policy options that will help incentivize high-quality, transit-oriented growth and streamline development review processes where appropriate. Staff has started to pursue some of these recommendations as part of the White Flint and Gaithersburg West master planning processes.

**1. Definition of Adequacy**

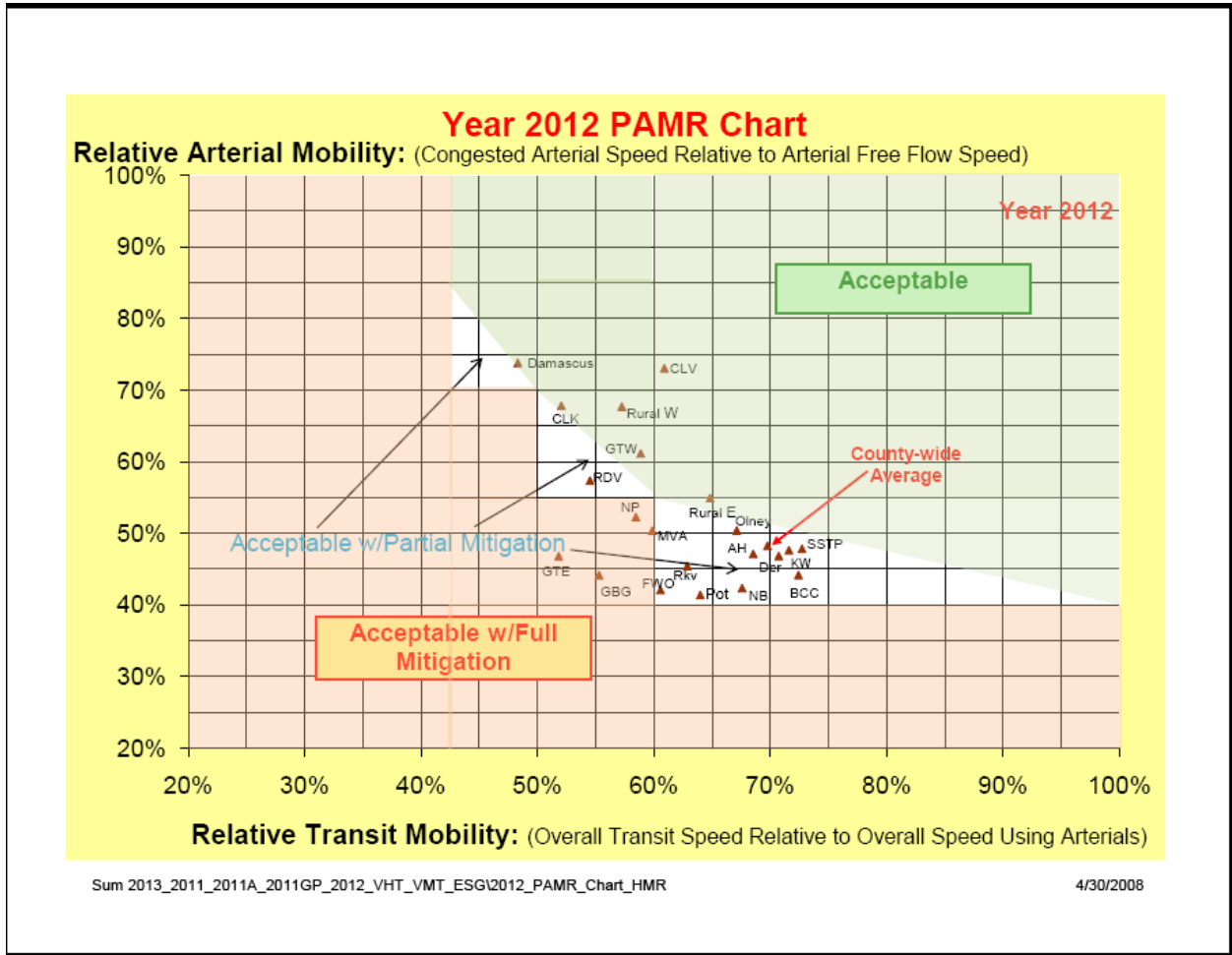
**Transportation:**

The Planning Board recommended in 2007 that the relationship between Transit Level of Service (LOS) and Arterial Level of Service in the PAMR process be symmetrical so that the areas with LOS B transit service could support LOS E arterial service. Staff will revisit these recommendations through our outreach process. We will also consider the



effect of altering or removing the partial mitigation requirements. Figure 1 shows the current PAMR “chart” identifying Policy Areas requiring both full mitigation and partial mitigation.

Figure 1



Changes to certain Policy Area boundaries to better define transit station services areas are recommended in the draft White Flint, Germantown, and Gaithersburg West master plans. These changes would revise LATR congestion standards at intersections within the expanded boundaries.

**Schools:**

The Planning Board recommended in 2007 a capacity threshold of 110% for payment of a school facility fee and a threshold of 130% for moratorium. The County Council approved a capacity threshold for payment of the school facility fee of 105% and the threshold for moratorium of 120%. Staff will revisit this recommendation.

**Status:** For PAMR, staff proposes the following changes:

- The PAMR congestion standards be revised to return to the Planning Board’s May 2007 equivalency of Relative Arterial Mobility and Relative Transit Mobility, as this equivalency provides more consistent equity between the arterial and transit mobility axes as described in 2007 and during the White Flint Sector Plan worksessions. This proposal places another “stairstep” in the lower right corner of the PAMR chart.
- The partial mitigation areas be retained (but would be adjusted to reflect the new shape of the stairsteps).

## **2. Definition of De-Minimis Thresholds**

### **Transportation:**

The 2007 Growth Policy established a de-minimis threshold of 3 vehicle trips to trigger PAMR mitigation. The staff and private sector efforts required to define mitigation measures for small (< 30 vehicle trip) applications was not practical, with public sector review costs often exceeding the value of the mitigating action. The Planning Board determined in July 2008 that payment-in-lieu of \$11,000 per vehicle trips for applicants generating between 3 and fewer than 30 vehicle trips is an appropriate solution. Staff will consider whether de-minimis thresholds should be adjusted for either LATR or PAMR.

**Status:** Staff proposes at this time that no change be made to the De-Minimis PAMR threshold, based on the potential for alternative means to mitigate the PAMR requirements described elsewhere in Appendix M and in the smart growth criteria in Appendix N.

### **Schools:**

The 2007 Growth Policy established a de-minimis threshold of greater than 3 units to apply the cluster capacity tests. A large proportion of the County’s future housing growth is expected to be in multi-family units. Given this assertion, increasing the de-minimus for application of the school test may be relevant. Staff will re-evaluate this recommendation.

## **3. Adjustments to Acceptable Peak Hour Vehicle Trip Rates**

The LATR/PAMR Guidelines contain vehicle trip generation rates appropriate for developments in Montgomery County. Separate rates are included for the Silver Spring, Bethesda, and Friendship Heights CBDs and a discounting factor is available for offices near Metrorail stations to reflect the higher transit mode share at those locations. The LATR/PAMR Guidelines also note that staff may consider case-by-case adjustments from the approved trip generation rates if the adjustment can be documented from reliable sources.

In fall 2008, the Transportation Research Board released Transit Cooperative Research Project (TRCP) Report 128, Effects of TOD on Housing, Parking, and Travel. This

research report contains data collected at transit-oriented developments nationwide, including sites in Montgomery County, and derives certain trip generation relationships that are similar to those already incorporated in our LATR/PAMR Guidelines. Staff will evaluate TCRP 128 to determine if another category of pre-approved trip generation rates for TOD are suitable for incorporation in the LATR/PAMR Guidelines.

**Status:** Staff is in the process of reviewing and evaluating TRCP Report 128 and other resources.

#### **4. Value of Trip Mitigation Actions**

##### **Transportation:**

The value of providing transit services needs to be reviewed. The PAMR process introduced the concept of buying a transit vehicle for Ride-On to operate as a mitigating measure. The value (one vehicle plus 12 years of operating costs equals 30 peak hour vehicle trips) reflected our estimates of costs and benefits but was not found to be a practical option by any applicants. Table 5 in the LATR Guidelines for Non-Automobile Transportation Facilities, shown in Figure 2, will be updated to reflect staff's recommendations in the July 15, 2008 memorandum to the Planning Board.

Figure 2

Non-Automobile Transportation Facility	Trip Credit vs Congestion Standard		
	1350-1500	1550-1600	1800
100 linear feet of five-foot wide sidewalk	0.5	0.75	1.0
100 linear feet of eight-foot wide bike path	0.5	0.75	1.0
Curb Extension/Pedestrian Refuge Island/Handicap Ramp	2.0	3.0	4.0
Accessible or Countdown Pedestrian Signals/ Intersection	1.0	2.0	3.0
Bus Shelter	5.0	7.5	10.0
“Super” Bus Shelter	10.0	15.0	20.0
Bus Bench with Pad	0.5	0.75	1.0
Information Kiosk	1.5	3.0	4.5
Bike Locker (set of eight)	2.0	3.0	4.0
Real-Time Transit Information Sign	10.0	15.0	20.0
Static Transit Information Sign	0.25	0.4	0.5
Maximum Trip Credits	60	90	120

**Status:** Staff recommends the following changes:

- Elimination of the following facilities that are either not well defined or are generally well below the \$11,000 per vehicle trip value established by the Planning Board:
  - Curb Extension/Pedestrian Refuge Island/Handicap Ramp
  - Information Kiosk
- Acceptance of additional proposals from applicants for other types of facilities, to be agreed upon at the time of application using the \$11,000 per vehicle trip value:
  - Bus layover space (within transit centers)
  - Crosswalks
  - On-road bicycle lanes
  - Park-and-ride lots
  - Park trial
  - Pedestrian overpasses/underpasses

- Streetlights
- Transit “queue jumper” construction
- Transitway/busway construction
- Utilities undergrounding in urban areas
- Real time bus information signs at selected locations
- Sidewalk/bike path construction to complete missing links
- Pedestrian safety improvements including handicapped ramps.

Staff also recommends retaining the \$11,000 per vehicle trip value. The staff intent in summer 2008 was to update the value annually based on the Construction Cost Index. While the Engineering News Record CCI rose 5.1% from April 2008 to April 2009 (higher than the general rate of inflation), staff recommends no increase to the \$11,000 value at this time based on our observation of County efforts to avoid actions that might dampen economic stimulus activities.

## **5. Alternative Review Procedures for Metro Station Policy Areas (MSPAs)**

### **Transportation:**

This Growth Policy should examine additional methods to incentivize development in our Metro station areas, where our transit investment and potential for non-auto commuting is greatest. Allocating development capacity to Metro Station Policy Areas (MSPAs) has been a part of the Growth Policy in Montgomery County for more than a decade. Over the years, the Planning Board has evaluated different ways to optimize the balance between the allocated development and adequacy of transportation capacity to accommodate that land use. Currently, the LATR/PAMR Guidelines allow development to be exempted from the LATR/PAMR requirements if applicants agree to pay additional impact taxes and commit through a binding Traffic Mitigation Agreement to reduce 50% of their vehicle trips. The Alternative Review Procedure has been in place for over eight years and has not yet been tested (only the LCOR North Bethesda Project has entered into an agreement). Our understanding is that the risk of non-performance in the Traffic Mitigation Agreement process creates a level of risk that reduces the attractiveness of this Alternative Review Procedure.

Other Alternative Review procedures could allow for development to occur without the test for adequacy of transportation facilities. The options listed below would create incentives to channel development into the MSPAs.

- **Waive the LATR / PAMR tests in MSPAs, alone or in combination with replacement adequacy definitions per concepts outlined in the following bullets**

This alternative would suggest that there is no mobility adequacy requirement for development in MSPAs. However, even if traffic congestion in the MSPAs is determined to be not a concern from a policy perspective, development within the MSPAs also increases traffic on major highways, arterials and primary residential streets connecting to the MSPAs.

- **Establish congested operating speed requirements for arterials serving MSPAs**

Arterials serving MSPAs could be provided with a set of adequacy standards such as requiring traffic to be maintained at 40% of the design speed or free flow speed of traffic on the roadways within a secondary boundary of the MSPAs. This would restrict development within MSPAs with possible improvement mitigation may be more feasible outside the core area.

**Status:** Staff proposes to pursue the following elements for this exemption process:

- The traffic speed to be maintained at 40% of the free flow speed of traffic on the roadways crossing the MSPAs reaching the next policy area boundary
  - This standard will be applied to any application that will add more than 5 peak hour trips per lane at the MSPA boundary (mirroring the 5 CLV de-minimis policy already in the Growth Policy) in the peak direction.
  - Both the peak hour in the AM and PM peak periods and in both directions will be analyzed (with removal of off-peak direction analysis considered at discretion of staff).
  - A minimum of three runs must be made between 9 PM and midnight to establish the free flow speed.
  - Sufficient runs need to be made during the peak hour to establish a 95% confidence level within +/- 3 MPH.
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- **Establish cordon line caps (vehicles or seats) and/or long-term parking space caps to limit in-commuting to MSPAs to a maximum amount supported by the adjacent network**

A cordon line limit of traffic volume for all major highways, arterials and primary residential streets at the boundary of the MSPAs must be maintained. As long as this limit is maintained, development can continue in the MSPAs. The limit could be set by allowing adjacent policy areas to “sink” to the lowest allowable levels of mobility as defined by PAMR.

A screen line limit of traffic volume will be established only at specific locations where the aim is to protect residential neighborhoods from increasing traffic as the consequence of increased traffic in the MSPAs.

Limit the number of parking spaces in the MSPAs to limit traffic increase in the MSPAs. Periodical Parking study is necessary to ensure that the demand does not exceed supply. For example, when the usage of parking supply reaches a limit, the development must stop or additional reduction in trips results in reduced demand for parking within the established limit.

**Status:** Establish a cordon line analysis of traffic entering the MSPAs on the designated major roads and arterials connecting to the MSPAs. For example, in the Silver Spring MSPA, the Growth Policy establishes 17,500 vehicles leaving the policy area during the evening peak hour as a maximum.

- **Establish a multimodal cordon line analysis**

Combine the capacity of transit and highway systems to arrive at a “seats per hour” capacity ceiling for development within the MSPA. This will be accomplished by establishing a multi modal cordon line limit of transportation capacity around the MSPAs. For example, suppose the average traffic volume to capacity ratio of all roadways leaving an MSPA is 95%. A parallel measure of the volume to capacity ratio of all transit modes could be calculated by counting the ratio of occupied seats in each transit mode to the total number of available seats. Suppose in the same MSPA, this ratio is 75%. The average transportation capacity of all modes in this area could be estimated to be 85% (the average of the two). With this policy, development can occur until the established limit of combined transportation capacity for the area is reached even if one of the two systems is operating above its congestion standard. Cordon line capacity could also then be increased by adding transit service.

**Status:** Staff does not recommend this method at this time due to the need for extensive data collection and analysis needed to set standards. This concept should be pursued as part of the implementation of the White Flint Sector Plan and could therefore be a subject of the next biennial Growth Policy Study.

- **Establish an implementation authority and funding structure**

Establish a transportation capacity ceiling for development within the MSPA, a defined set of end-state transportation improvements, and a staging and implementing mechanism to manage the funding, staging, and construction of the improvements. This is the approach proposed in the Public Hearing Draft of the White Flint Sector Plan. Staff does not propose expanding this method for any other MSPAs until the White Flint proposal has been vetted.

## **6. Expansion of MSPA Alternative Review Procedures to additional urban areas**

The entire North Bethesda Transportation Management District could be allowed to use Alternative Review Procedure (ARP) as a permitted procedure for APF testing. This area contains three MSPAs with permitted ARP testing for APF and the remaining area of North Bethesda surrounding these MSPAs could be permitted for use of ARP under the umbrella of the TMD to monitor traffic mitigation.

**Status:** Staff recommends allowing all Urban Areas of the county as defined by the County Council in 2007 as part of the Road Code to be able to be tested for APF by the Alternative Review Procedure.

## **7. Proposed Revision to the Transportation and School Impact Tax**

### **Transportation:**

Transportation impact taxes could shift basis of calculation from vehicle trips to vehicle miles traveled (VMT). In addition, a greater degree of disaggregation of areas could be incorporated in the analysis to reflect trip-length ranges for transportation impact fees. For example, a single family detached home in Damascus would have a higher trip length on average than a single family detached home in Fairland based on VMT.

Separate transit infrastructure needs could be identified, and a higher proportion of the transportation impact tax could be appropriated for strategic locations.

### **Schools:**

School impact taxes could shift basis of calculation from dwelling unit type to square footage. In addition, the amount of the school facility payment and school impact tax could be recalculated based on updated school construction cost figures.

**Status:** Several jurisdictions nationwide have used square footage of new construction as the basis for assessing impact fees. During the 2007-2009 Growth Policy, staff investigated the calculation of school impact taxes on dwelling unit size rather than type.

GIS was used to link parcel file data (which contains housing unit size) with data on household demographic characteristics. Student generation rates were calculated for single-family dwelling units by size and type. These student generation rates were multiplied by the per seat cost of school construction in order to calculate school construction cost impact by unit size and type.

Data limitations did not allow for a calculation of the school construction cost per square foot for multi-family dwelling units. In addition, linking the parcel file and demographic data yielded results that encouraged further investigation of the process.

Once work on the 2008 Census Update Survey is complete, staff will re-examine the reliability on relevance of calculating school impact fees based on dwelling unit size.



Growth Policy Study: Progress Report  
Appendix N – Smart Growth Criteria and Exemption

Lead Staff: Pam Dunn, Mark Pfefferle, and Cathy Conlon

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Objective:

To explore the option of creating an exemption from certain requirements of the adequate public facilities ordinance (APFO) test for the Growth Policy in exchange for development that meets specific standards and criteria for Smart Growth.

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Progress Report:

The current adequate public facilities ordinance focuses on transportation tests, school tests and impact taxes that are designed to ensure that necessary facilities are provided as development occurs. This approach limits the locations where development can occur and in doing so, potentially limits the ability to create the types of sustainable, well-designed and strategic development that is desired.

Based on a review of best practices in the area of Smart Growth, great potential exists for development of an exemption process similar to California's SB375 legislation. In addition, LEED ND and LEED for New Construction and Major Renovation are well-known certification programs designed to encourage Smart Growth. Elements of these programs provide reliable standards for the assessment of sustainable development.

Under the realm of Growth Policy an exemption from an APFO finding (for transportation) should be based on design elements that improve transportation efficiency. Staff believes these elements should include the following prerequisites that lead to reduced auto travel:

- *Connectivity* – Projects located in areas with the highest transit service
- *Diversity* – Projects that provide a mix of residential and commercial uses as well as a mix of housing types
- *Design* – Projects built with compact design taking advantage of the maximum zoning density

Below is a draft *Smart Growth Criteria* whereby projects meeting the criteria are eligible for a reduction in PAMR mitigation. The framework is designed to encourage development in areas that are well-served by transit or areas that are well-served by other services. In addition, these projects must provide a mix of residential and commercial uses; they must contribute to diversity in housing affordability; and they must make efficient use of resources through compact design and increased energy efficiency or production.

## Montgomery County - Smart Growth Criteria

**All projects must meet the following criteria to be considered for an exemption:**

- Project must be mixed-use with a minimum 50% residential use (*SB375*) and
- Project must seek to achieve the maximum density of the site using 75% or more of the maximum density allowed in the zone (including all applicable bonuses) subject to limits in the Master or Sector Plan (*based on SB375*) and
- Building(s) exceeds energy efficiency standards by 17.5% for new buildings or by 10.5% for existing building renovation. Or, building(s) has on-site energy production such that 2.5% of the annual building energy cost is off-set by the renewable production system (*LEED New Construction/Major Renovation*)
- And, the project must provide either one of the following above and beyond that required for plan approval:
  - 1 workforce housing unit (whu) for  $x$  vehicle trips such that  $x = [1/2(\text{total number of trips requiring mitigation}) / (\text{relative value of 1 whu to the cost of mitigating 1 trip})]$  rounded to the nearest whole number (*based on SB375*) or
  - 1 moderately-priced dwelling unit (mpdu) for  $y$  trips such that  $y = [1/2(\text{total number of trips requiring mitigation}) / (\text{relative value of 1 mpdu to the cost of mitigating 1 trip})]$  rounded to the nearest whole number (*based on SB375*)

**Mixed-Use Transit Proximity**

**Projects that meet the following criteria are eligible for 100% PAMR Exemption:**

- Project must be located within 1/2 mile of an existing or planned major transit stop or high-quality transit corridor. A high-quality transit corridor means a corridor with fixed route bus service where service intervals are no longer than 15 minute during peak commute hours. A project shall be considered to be within one-half mile of a major transit stop if all parcels within the project have no more than 25% of their area farther than one-half mile from a transit stop or corridor and if not more than 10% of the residential units in the project are farther than one-half mile from the stop or corridor. A planned transit stop or corridor is one that is funded for construction within the first four years of the Consolidated Transportation Program and/or the Capital Improvement Program (*SB375*)

**Mixed-Use Urban with Proximity to Basic Services**

**Projects that meet the following criteria are eligible for 50% PAMR Exemption:**

- Project must be located within a *Road Code Urban Area* and be located within 1/2 mile of at least 10 *Basic Services* ;
- Basic Services* include but are not limited to: bank, place of worship, convenience grocery, day care, cleaners, fire station, beauty, hardware, laundry, library, medical/dental, senior care facility, park, pharmacy, post office, restaurant, school, supermarket, theater, community center, fitness center or museum, (*based on LEED for New Construction/Major Renovation*)

There are other options for incentives that staff did not include in the above framework yet may continue to explore over the next couple of months. These include:

- Opportunities for public participation/subsidies
- Tax breaks
- Reduced fees (all types)
  - Project/Subdivision/Site Plan
  - Zoning
  - Building permits
  - Inspection
  - Infrastructure review (roads, water/sewer, utilities)
- Eliminate/reduce LATR requirements
  - Permit lower required LOS at tested intersections
  - Permit increased CLV thresholds
- Expedited Plan Review
- Reduce/modify regulatory requirements
  - Waive road right-of-way, cross-section and access requirements that inhibit desirable project design
  - Expand parking lot districts or otherwise find additional ways to lower parking requirements
  - Permit stream buffer encroachment or elimination
  - Wetland preservation (follow MDE requirements but no more stringent)
  - Eliminate minimum onsite forest requirements in optional method zones and look at other places where our ordinance is more stringent than the state law

Several of the above incentives would require coordination with other County agencies and/or changes in regulations that do not fall within the jurisdiction of Growth Policy.

Growth Policy Study: Progress Report  
Appendix O – Carbon Trading/Offsets at the Local Level

Lead Staff: Mark Pfefferle

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Objective:

To explore the possibility of using carbon trades/offsets or other programs to equate to vehicle trips generated and carbon emissions generated as a direct result of development.

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Progress Report:

Planning Staff is working with George Washington University students in a Capstone project to analyze potential carbon offsets at the local level. The students are conducting research by assessing various policy instruments (taxes, regulations, trading, and offsets) and have found four local governments that are currently addressing carbon emissions. They are assessing their existing programs that provide incentives to developers for implementing the reduction practices. The students will continue to evaluate the pros and cons of the various systems and determine one that is best for Montgomery County. The results of the Capstone project will be presented to the Planning Board on May 7, 2009.

Upon completion of the Capstone project staff will need to continue the study by determining carbon reductions from various building elements including green roofs; solar, wind power, and geothermal energy; and energy efficiency measures. Once the reductions are determined, a carbon equivalency will need to be established.

Staff will be requesting the Planning Board's acceptance of researching, developing and incorporating carbon offsets into future growth policies.