

Fools Rush in Where...



LATR, PAMR, and Transportation Studies
Presentation to the GSSC Implementation Advisory Committee
November 15, 2011



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Secretary: Solutions slim for area traffic boom

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Monday - 11/14/2011, 2:22pm ET

Adam Tuss, wtop.com

WASHINGTON - How long have you lived in the D.C. area? 10 years? 20 years? 30 years?

Go back in time just a few decades, and you may not recognize the place you now call home.

During a recent transportation event, Virginia Transportation Secretary Sean Connaughton summed up the situation with a look at the Tysons Corner area.

"I still remember in 1983, driving out to Tysons Mall ... I remember the person I was with, I said, 'This thing will never succeed. Who would ever come out to a mall way out here in the middle of nowhere?'" laughed Connaughton.

Anyone who lives, works or drives through Tysons Corner today -- an area that's being dubbed the future "second downtown" of the D.C. area -- knows it's now a much different story.

The immense change in development, job growth and congestion can all be attributed to a population boom the area has experienced. Even more people are expected to come to this region in the coming decades.



Metro extensions -- like the Silver Line to Dulles that runs through Tysons Corner -- come with a hefty price tag. (WTOP File)



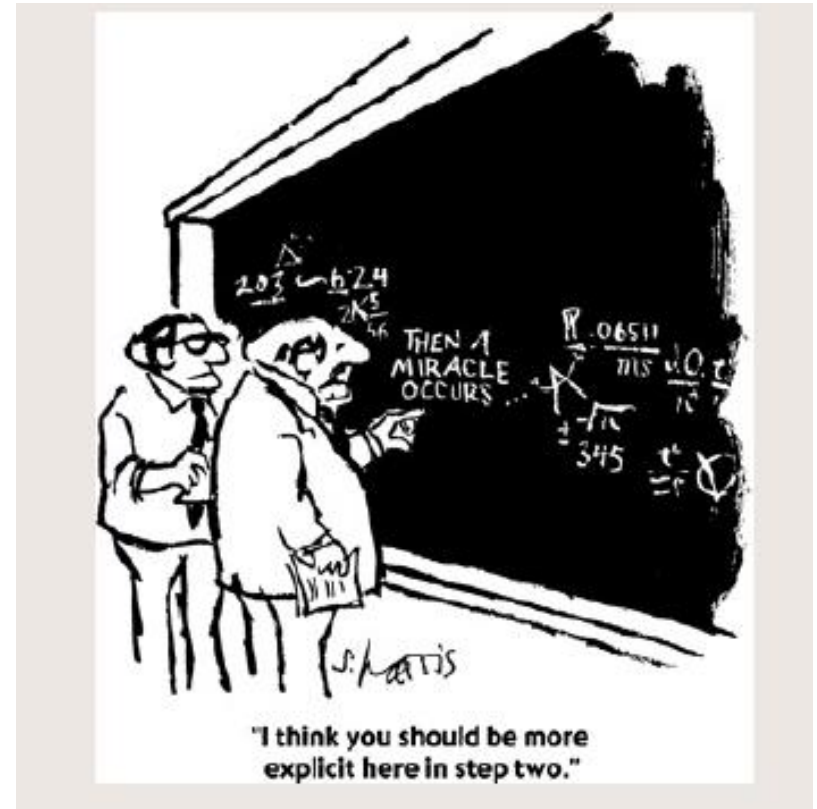
America's Wireless Companies

CTIA

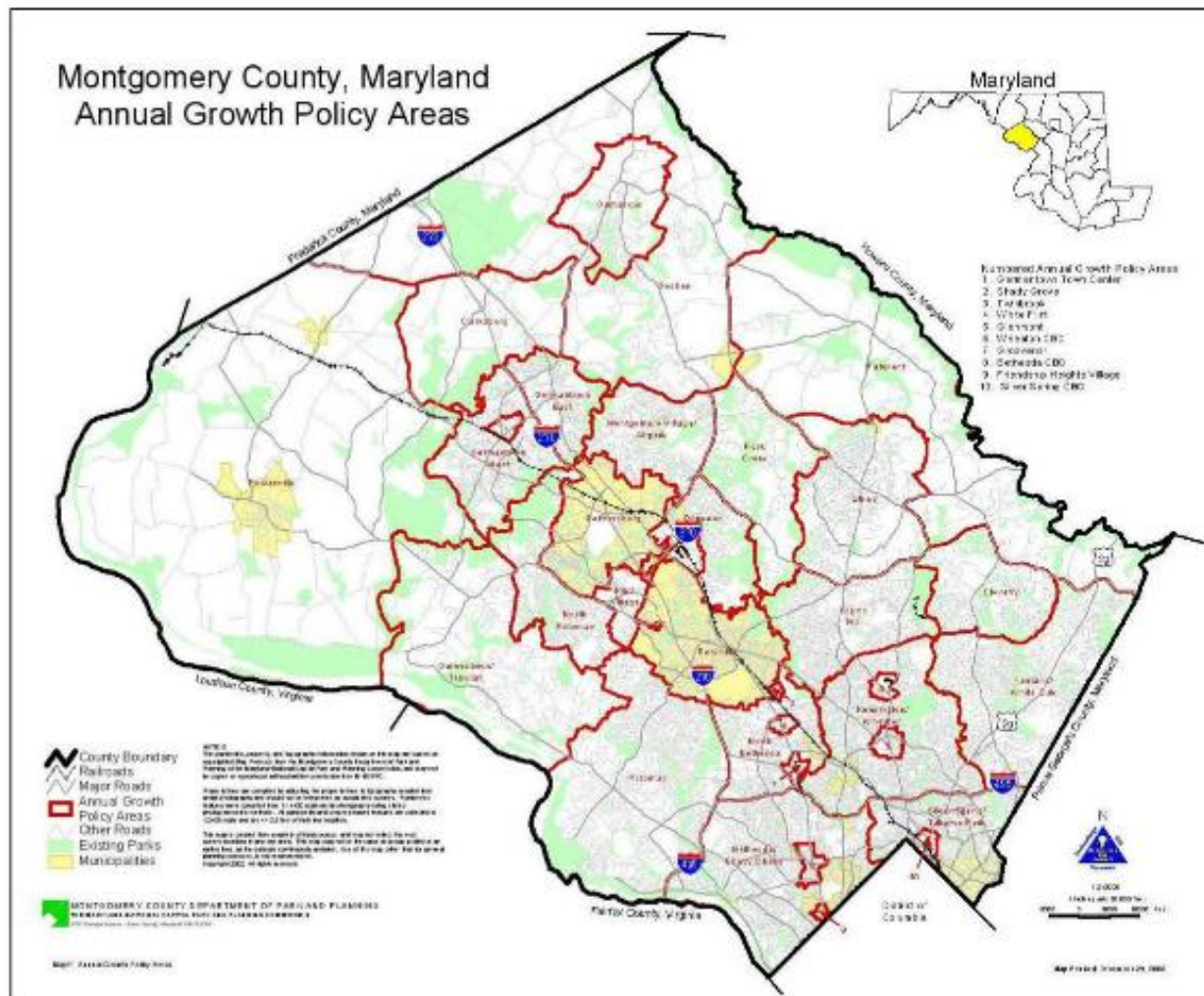
The Wireless Association

What do transportation forecasters really do?

- Throw out more numbers than the NYC phone book.
- Use equations that are as confusing to the layman as those used to calculate the trajectory needed to send a spaceship to Saturn.
- No one (except them) has absolutely any idea!

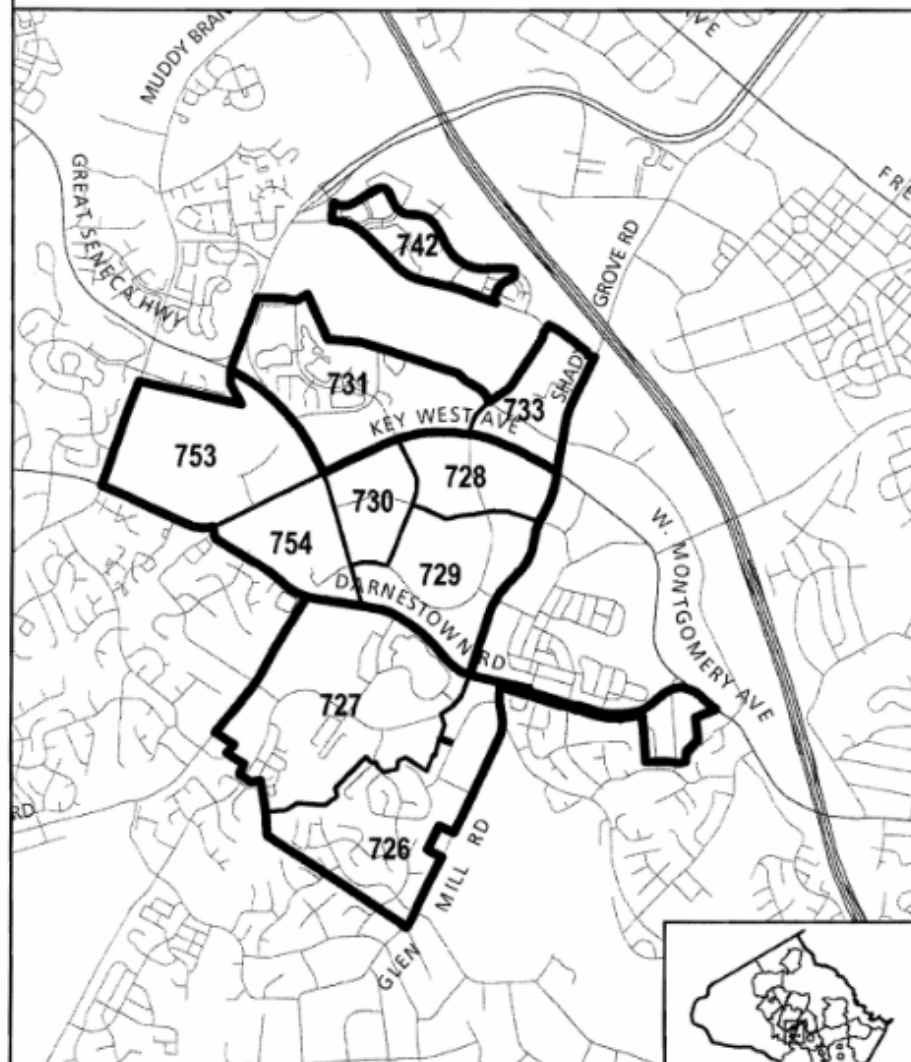


Map 1: Growth Policy Areas



**R and D Village Policy Area
with Traffic Zones**

MAP 23



Resolution No.:	16-1187
Introduced:	November 10, 2009
Adopted:	November 10, 2009
Reconsidered:	November 10, 2009
Readopted:	November 10, 2009

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: Council President at the Request of the Planning Board

SUBJECT: 2009-2011 Growth Policy

Background

1. County Code §33A-15 requires that no later than November 15 of each odd-numbered year, the County Council must adopt a Growth Policy to be effective until November 15 of the next odd-numbered year, to provide policy guidance to the agencies of government and the general public on matters concerning land use development, growth management and related environmental, economic and social issues.
2. On August 1, 2009, in accordance with §33A-15, the Planning Board transmitted to the County Council its recommendations on the 2009-2011 Growth Policy. The Final Draft Growth Policy as submitted by the Planning Board contained supporting and explanatory materials.
3. On September 22, 2009, the County Council held a public hearing on the Growth Policy.
4. On October 6, 19, and 20, 2009, the Council's Planning, Housing, and Economic Development Committee conducted worksessions on the recommended Growth Policy.
5. On October 27 and November 3, 2009, the Council conducted worksessions on the Growth Policy, at which careful consideration was given to the public hearing testimony, updated information, recommended revisions and comments of the County Executive and Planning Board, and the comments and concerns of other interested parties.

Guidelines of the Montgomery County Planning Board for the Administration of the Adequate Public Facilities Ordinance



July 2011

E. Relationship between Policy Area Mobility Review and Local Area Transportation Review

In most instances, applicants will be required to submit a traffic statement with their development application concerning the need for an LATR. Transportation planning staff will use the following criteria to determine whether and when the applicant needs to submit a traffic study.

Application Types

PAMR and LATR are separate evaluation processes, but must be examined concurrently as part of a development application submission. Each applicant must satisfy both PAMR and LATR requirements. The requirements must be addressed in a single document, which may include a combination of traffic statements and traffic studies. There are four development review scenarios:

Type 1. Traffic statement describing exemption from both LATR and PAMR studies

A development case that requires neither an LATR study nor a PAMR study must submit a traffic statement describing the basis for the exemption. The traffic statement must identify the number of peak hour trips generated by the application during both weekday AM and PM peak periods, and the site's policy area and required mitigation percentage. Examples of Type 1 cases are:

- A site generating three or fewer new peak hour vehicle trips for both LATR and PAMR
- A site generating fewer than 30 total (i.e., existing, new, pass-by, and diverted) vehicle trips located in a policy area defined as Acceptable Without Mitigation for PAMR.

Type 2. Traffic study for LATR including statement regarding PAMR study exemption

A development case for a site that requires an LATR study, but only a PAMR statement, must include the PAMR statement within the LATR study. An example of a Type 2 case is a site generating 30 or more total peak hour vehicle trips located in a Policy Area defined as Acceptable without mitigation for PAMR.

Type 3. Traffic study for PAMR including statement regarding LATR study exemption

A development case for a site that requires a PAMR study, but only an LATR statement, must include the LATR statement within the PAMR study. An example of a Type 3 case is a site generating between three and 30 total peak hour vehicle trips located in a policy area defined as Acceptable with Partial Mitigation or Acceptable with Full Mitigation for PAMR.

Type 4. Traffic study for both LATR and PAMR

A development case for a site that requires both an LATR study and a PAMR study must include both studies in the same submittal. An example of a Type 4 case is a site generating more than 30 total peak hour vehicle trips located in a policy area defined as Acceptable with Partial Mitigation or Acceptable with Full Mitigation for PAMR.

Both PAMR and LATR use similar approaches to mitigating unacceptable impacts, including encouraging non-auto oriented solutions.

III. METHOD AND PREPARATION OF LOCAL AREA TRANSPORTATION REVIEW TRAFFIC STUDY

A. General Criteria and Analytical Techniques

The following general criteria and analytical techniques are to be used by applicants for subdivision, zoning, special exceptions, and mandatory referrals when submitting information to demonstrate the expected impact on public roadway intersections by the proposed development. The applicant's analysis should consider existing traffic, potential traffic that will be generated by their development, and nearby approved but unbuilt development (i.e., background).

The traffic study for a proposed development under consideration must include in background traffic all developments approved and not yet built and occupied prior to the submission of an application.

Transportation Planning staff may require that applications in the immediate vicinity of the subject application filed within the same time frame be included in background traffic, even if the Planning Board has not approved them. If an application is approved after a traffic study has been submitted for another project and both require improvements for the same intersection(s), then the traffic study for the pending application must be updated to account for the traffic and improvements from the approved application.

Staff has 15 working days to develop a study scope after receiving a written request and will supply the applicant with information on approved but unbuilt developments, (background development), nearby intersections for study, trip distribution and traffic assignment guidelines, and other required information.

The traffic study should be submitted along with the application, following the guidelines in the *Development Review Manual*. If a traffic study is submitted at the same time as the application, the applicant will be notified concerning the completeness of the traffic study within 15 working days of the Development Review Committee (DRC) meeting at which the application is to be discussed. If not submitted before the DRC meeting, Transportation staff has 15 working days after submittal to notify the applicant as to whether or not the traffic study is complete.

For a trip mitigation program or an intersection improvement to be considered for more than one application, the program or improvement must provide enough capacity to allow all the applications participating in the program or improvement to satisfy the conditions of LATR. An intersection improvement may be used by two or more developments to meet LATR even though construction of the improvement has not been completed and open to the public.

To be considered, the program or improvement must provide sufficient capacity to:

- result in a calculated CLV in the total traffic condition that is less than the congestion standard for that policy area, or

LATR

- Looks at intersections immediately around the development
- Metric is Critical Lane Volume (CLV)
- Traffic studies use traffic counts
- Congestion Standards for each Policy Area established in Subdivision Staging Policy (Growth Policy)

Table 4
Signalized Intersections to be Included in a Traffic Study

Weekday Peak Hour Site Trips	Minimum Number of Signalized Intersections in Each Direction
30 – 249	1
250 – 749	2
750 – 1,249	3
1,250 – 1,749	4
1,750 – 2,249	5
2,250 – 2,749	6
>2,750	7

The term “each direction” in the table above applies to every study intersection. For example, in a hypothetical grid, the first ring would include four intersections. The second ring would include not only the next four intersections along the streets serving the site, but also the four intersections among the cross streets encountered in the first ring. In this manner, as the number of intersections in each direction grows linearly from one to five, the number of total study area intersections grows at a greater rate.

Transportation Planning staff, in cooperation with the applicant, will use judgment and experience in deciding the significant intersections to be studied within Growth Policy parameters. Interchanges (future) will be afforded special considerations, including ramps/termini being treated as signalized intersections. The County’s urban areas, including CBDs and MSPAs, have more closely-spaced intersections, suggesting that the major intersections be studied. Site access driveways are not included in the first ring of intersections.

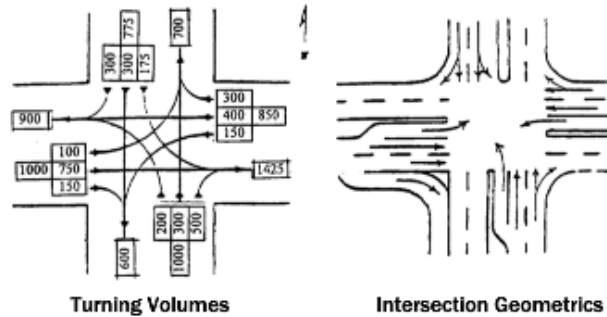
Transportation Planning staff will consider other factors regarding the number of intersections to be included in the traffic study, such as:

- geographic boundaries such as parks, interstate routes, railroads
- political boundaries, though intersections in jurisdictions for which the Planning Board does not have subdivision authority will not be included in the traffic study
- contiguous land under common ownership
- the type of trip generated, for example existing, new, diverted, or pass-by
- the functional classification of roadways, for example six-lane major highway
- An unsignalized intersection may be included in the definition of rings if the intersecting streets are both master planned roadways.

However, intersections distant enough so that fewer than five peak hour vehicle trips from the site will travel through the intersection need not be included in the traffic study, even if they would otherwise be identified as candidate locations. An applicant may develop a trip distribution and assignment pattern prior to the study scoping process and work with staff to determine which candidate locations would not require full study. This process will be documented in the study scoping correspondence.

- Step 4.** Select the maximum volume per lane in one direction (e.g., northbound) and add it to the opposing (e.g., southbound) left turn volume.
- Step 5.** Repeat Step 4 by selecting the maximum volume per lane in the opposite direction (e.g., southbound) and the opposing (e.g., northbound) left-turn volume.
- Step 6.** The higher total of Step 4 or Step 5 is the critical volume for phase one (e.g., north-south).
- Step 7.** Repeat Steps 4 through 6 for phase two (e.g., east-west).
- Step 8.** Sum the critical lane volumes for the two phases to determine the CLV for the intersection. (Note: At some intersections, two opposing flows may move on separate phases. For these cases, each phase becomes a part of the intersection's CLV. Check with Transportation Planning staff for clarification.)
- Step 9.** Compare the resultant CLV for the intersection with the congestion standards in Table 1.

Table 7
Critical Volume Calculations



Direction from the	Lane Approach Volume	Critical Lane-Use Factor	Approach Volume	Opposing Lefts	Lane Volume Per Approach
North	775 ¹	X 0.53 =	411	+ 200 =	611
South	800 ²	X 0.53 =	424	+ 175 =	599
Or South	500	X 1.00 =	500	+ 175 =	675 ³
East	700 ³	X 0.53 =	371	+ 100 =	471
West	750 ⁴	x 0.53 =	398	+ 150 =	548 ⁵

¹Approach volumes sum of through, right, and left turn movements in two lanes

²For a heavy right turn, evaluate worst of rights in one lane or through and rights in two lanes

³Approach volume sum of through and right turn movements in two lanes

⁴Approach volume is through only because of free right and separate left

⁵Intersection Critical Lane Volume = higher sum = 675 + 548 = 1,223

Table 1
LATR Intersection Congestion Standards by Policy Area
(established November 2007 and confirmed November 2009)

Congestion (Critical Lane Volume) Standards		Policy Area
1350	Rural East	Rural West
1400	Damascus	
1425	Clarksburg Germantown West Gaithersburg City	Germantown East Montgomery Village/Airpark
1450	Cloverly North Potomac Olney	Potomac R&D Village
1475	Aspen Hill Fairland/White Oak	Derwood
1500	Rockville City	
1550	North Bethesda	
1600	Bethesda/Chevy Chase Kensington/Wheaton	Silver Spring/Takoma Park Germantown Town Center
1800	Bethesda CBD Friendship Heights CBD Glenmont Grosvenor Shady Grove	Silver Spring CBD Twinbrook Wheaton CBD White Flint Rockville Town Center

In situations where an unacceptable peak hour level of congestion will exist, the applicant, in consultation with Transportation Planning staff, the Montgomery County Department of Transportation (MCDOT), and/or the Maryland State Highway Administration (SHA), should use these procedures to develop recommendations for trip reduction, specific intersection improvements, or pedestrian, bicycle or transit enhancements that would mitigate the transportation impact of development in these areas so that the Planning Board or another elected or appointed body could consider granting approval. The Guideline's procedures are

¹ See Section III B.1

VIII. POLICY AREA MOBILITY REVIEW

A. Background

There are two components to PAMR—Relative Arterial Mobility and Relative Transit Mobility for each policy area.

Relative Arterial Mobility measures congestion on the County's arterial roadway network. It is based on the urban street delay level of service in the 2000 *Highway Capacity Manual*, published by the TRB. Congestion is measured by comparing modeled (congested) speeds to free-flow speeds on arterial roadways and then assigning letter grades to the various levels of roadway congestion. A indicates the best level of service and F indicates the worst levels. For a trip along an urban street that has a free-flow speed (generally akin to posted speed) of 40 mph, LOS A conditions exist when the actual travel speed is at least 34 mph, including delays experienced at traffic signals. At the other end of the spectrum, LOS F conditions exist when the actual travel speed is below 10 mph.

Table 8
Relative Arterial Mobility and Arterial LOS

If the actual urban street travel speed is	PAMR Arterial LOS is
At least 85% of the free-flow speed	A
At least 70% of the highway speed	B
At least 55% of the highway speed	C
At least 40% of the highway speed	D
At least 25% of the highway speed	E
Less than 25% of the highway speed	F

Any policy area with an actual urban street travel speed equal to or less than 40 percent of the highway speed must be considered acceptable only with full mitigation for transportation.

The PAMR evaluates conditions only on the arterial roadway network. Freeway level of service is not directly measured because County development contributes a relatively modest proportion of freeway trips and because the County has limited influence over the design and operations of the freeway system. However, because arterial travel substitutes for some freeway travel, PAMR indirectly measures freeway congestion to the extent that travelers choose local roadways over congested freeways.

Relative Transit Mobility is based on the Transit/Auto Travel Time level of service concept in the 1999 *Transit Capacity and Quality of Service Manual* published by the TRB. It is defined as the relative speed by which journey to work trips can be made by transit as opposed to by auto. This concept assigns letter grades to various levels of transit service, so that LOS A conditions exist when a trip can be made more quickly by transit (including walk-access/drive-access and wait times) than by single-occupant auto. An LOS A condition exists in the Washington region for certain rail transit trips with short walk times at both ends of the trip and some bus trips in HOV

PAMR

- Looks at broader area (Policy Area)
- Metrics are Relative Arterial Mobility and Relative Transit Mobility
- Traffic studies reference modeling results
- Level of mitigation established in Subdivision Staging Policy

This ratio between auto and transit travel times can also be expressed in an inverse relationship, defined by modal speed. If a trip can be made in less time by transit than by auto, the effective transit speed is greater than the effective auto speed. Based on the typical roadway network speed during the morning peak period, the Planning Board established the following relationship between auto and transit trips:

Table 9
Relative Transit Mobility and Transit LOS

If the effective transit speed is	PAMR Transit LOS is
100% or more (e.g., faster) than the highway speed	A
At least 75% of the highway speed	B
At least 60% of the highway speed	C
At least 50% of the highway speed	D
At least 42.5% of the highway speed	E
Less than 42.5% of the highway speed	F

Any policy area with an effective transit speed equal to or less than 42.5 percent of the highway speed must be considered acceptable only with full mitigation for transportation.

The PAMR Arterial LOS and the PAMR Transit LOS standards are inversely related, reflecting the County's long-standing policy to encourage concentrations of development near high-quality transit. To accomplish this policy, greater levels of roadway congestion should be tolerated in areas where high-quality transit options are available with the equivalencies in Table 10.

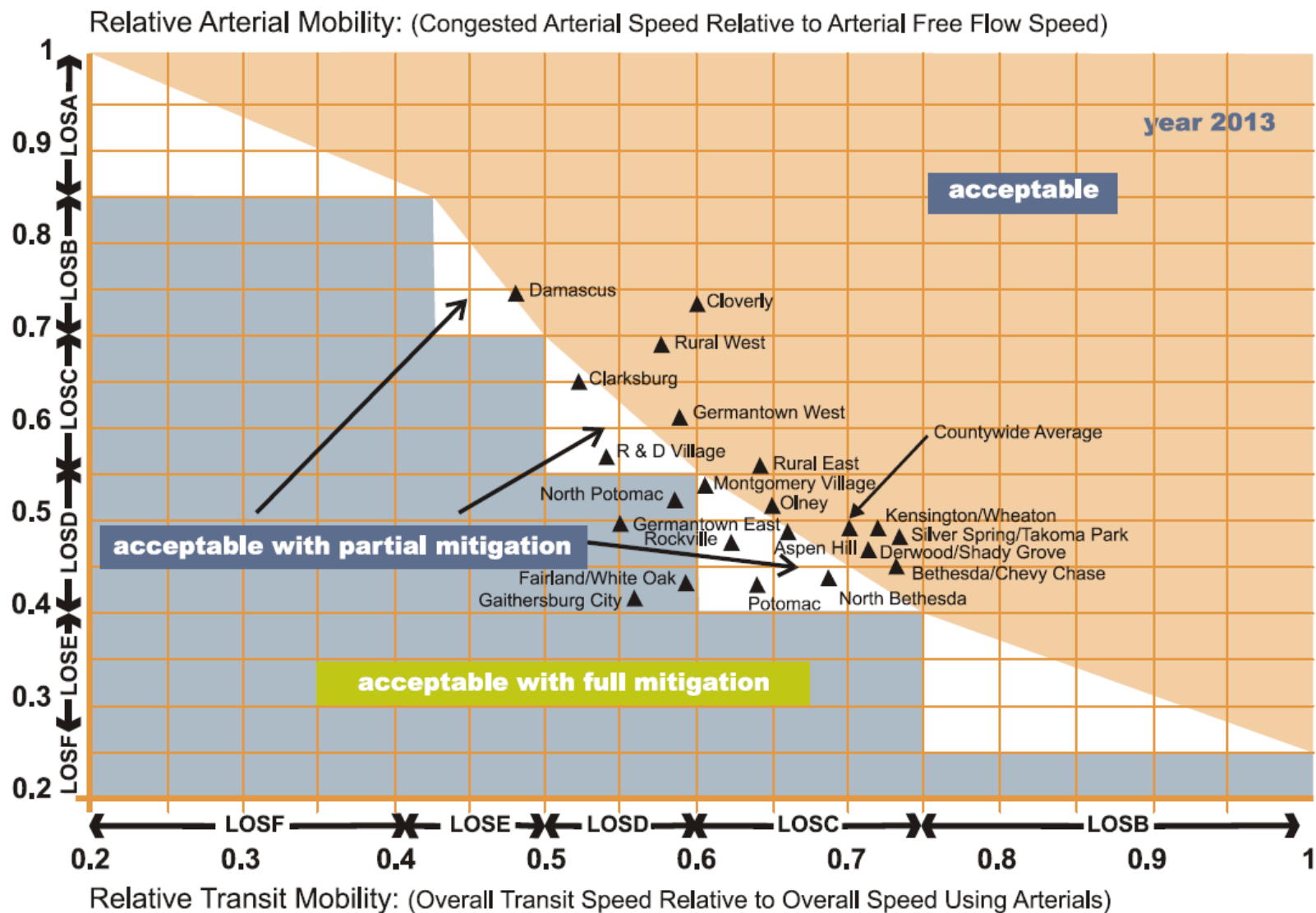
Table 10
Equivalency Between Transit LOS and Arterial LOS

If the forecasted PAMR Transit LOS is:	The minimum acceptable PAMR Arterial LOS standard is:
A	D*
B	D*
C	D
D	C
E	B
F	A

* This chart reflects the County Council's policy decision that the PAMR arterial LOS standard should not fall below D, even when the PAMR Transit LOS standard is A or B.

Using a transportation planning model, the staff has computed the relationship between a programmed set of transportation facilities and the geographic pattern of existing and approved

TRANSPORTATION ADEQUACY – POLICY AREA MOBILITY REVIEW

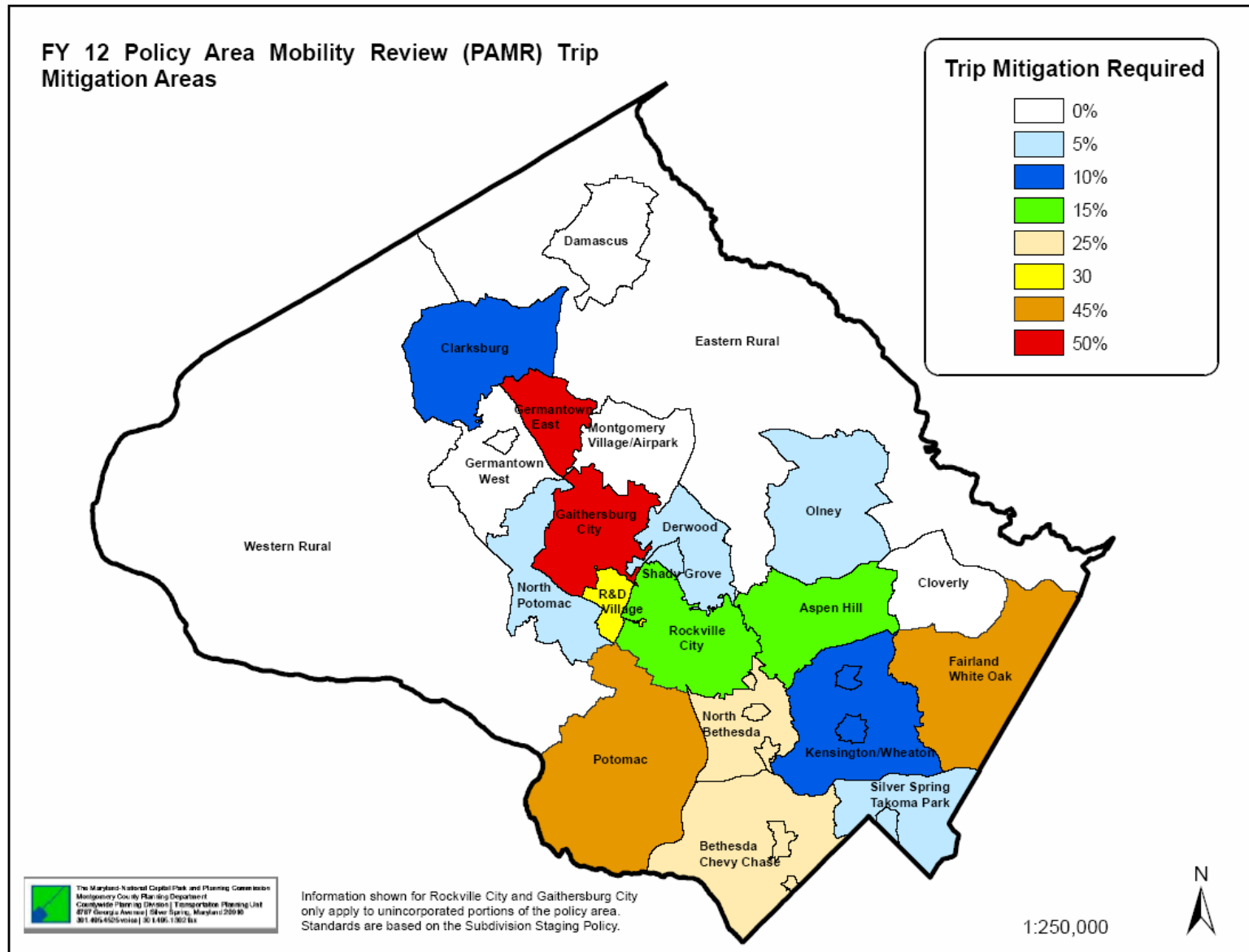


2017 PAMR Analysis & FY 12 Trip Mitigation Requirements

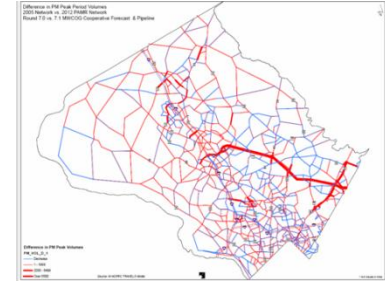
FY 12/FY 11 Trip Mitigation Requirements by Policy Area

Policy Area	FY 11 Trip Mitigation Required	FY 12 Trip Mitigation Required	Change, if any, from FY 11
Aspen Hill	15%	15%	0%
Bethesda/Chevy Chase	30%	25%	-5%
Clarksburg	0%	10%	+10%
Cloverly	0%	0%	0%
Damascus	0%	0%	0%
Derwood/Shady Grove	15%	5%	-10%
Fairland/White Oak	45%	45%	0%
Gaithersburg City	50%	50%	0%
Germantown East	50%	50%	0%
Germantown West	0%	0%	0%
Kensington/Wheaton	10%	10%	0%
Montgomery Village/Airpark	5%	0%	-5%
North Bethesda	30%	25%	-5%
North Potomac	10%	5%	-5%
Olney	10%	5%	-5%
Potomac	45%	45%	0%
R & D Village	35%	30%	-5%
Rockville	20%	15%	-5%
Silver Spring/Takoma Park	10%	5%	-5%

2017 PAMR Analysis & FY 12 Trip Mitigation Requirements



Background



- Annual mitigation changes established in Subdivision Staging Policy
- Changes are unrelated to the anticipated adoption of the TPAR process next year
- Applies to subdivision applications submitted after July 1, 2011
- PAMR based on:
 - Montgomery County development pipeline (as of Jan. 1, 2011)
 - 2017 regional growth and 6-year CIP/CTP transportation network

VI. METHODS TO REDUCE LOCAL AREA TRANSPORTATION REVIEW AND POLICY AREA MOBILITY REVIEW IMPACT

A. Methods to Reduce LATR or PAMR Impact for Residential and Non-Residential Development

1. Traffic Mitigation Agreement Measures

The applicant may be required to reduce LATR and PAMR impact by entering into a legally-binding agreement with the Planning Board and MCDOT to mitigate the impact of all or a part of their site-generated trips within the policy area where the site is located. Each traffic mitigation program will be required to operate for at least 12 years once trip reduction requirements are initially achieved and after use and occupancy permits are drawn. Many elements are designed to continue in perpetuity.

The following are examples of the measures that could be included in a TMAg:

- Subsidizing transit fares to increase ridership on existing or other transit bus routes
- Constructing a new park-and-ride facility and maintaining it over time
- Providing funds to increase use of an existing park-and-ride facility
- Funding a private shuttle service, for example, to and from the site to a nearby Metrorail station or to a park-and-ride facility
- Constructing queue-jumper lanes, providing traffic signal priority treatment for transit devices and other techniques to improve bus travel times. (Only results shown to improve travel times are to be considered.)
- Parking management activities
- Establishing live-near-work, flex-time, or telecommuting programs

Other measures may be suggested by applicants, Transportation Planning staff, or MCDOT. Creative approaches to reducing traffic impacts are encouraged.

TMAgs require monitoring to ensure compliance with the conditions of the contract. Monitoring will be done on a quarterly basis, at minimum, at the applicant's expense by DWPT staff or a consultant selected by the Planning Board. If the goals are not being met, MCDOT staff or the consultant shall monitor the TMAg on a monthly basis until the goals are met for three consecutive months. Transportation Planning staff and MCDOT shall work with the applicant to seek additional measures to ensure compliance during periods when the goals are not being met.

2. Non-Automobile Transportation Facilities

To maintain an approximately equivalent transportation local level of service for both auto and non-auto modes of travel, the Planning Board may permit a reduction in the amount of roadway improvements or traffic mitigation in exchange for the installation or construction of non-automobile transportation facilities that will enhance pedestrian safety or encourage non-automobile mode choices, including sidewalks, bike paths, curb extensions, countdown pedestrian signals, Super Shelters, bus shelters and benches, bike lockers, and static or real time transit information signs.

Such facilities must be implemented to offset the local area impact at the intersections that exceed the congestion standard and the need for an improvement has been identified. Thus, trip distribution and assignment assumptions are a key factor in determining local area intersection impacts and the level of trip mitigation required.

In determining the adequacy of such improvements in mitigating local area congestion, the Planning Board must balance the environmental and community impacts of reducing congestion at an intersection against the safe and efficient accommodation of pedestrians, bike riders, and bus patrons. Periodic monitoring shall not be required of non-automobile transportation facilities.

a. Construction of Sidewalks, Bike Paths, Curb Extensions, Pedestrian Refuge Islands, Accessible or Countdown Pedestrian Signals, and Handicap Ramps

An applicant may propose to reduce LATR impact by constructing off-site sidewalks and/or bike paths, curb extensions, pedestrian refuge islands, accessible or countdown pedestrian signals and handicap ramps that provide safe access from proposed or existing development to any of the following uses:

- Transit stations or stops (rail or bus)
- Public facilities (school, library, park, post office, etc.)
- Recreation centers
- Retail centers that employ 20 or more persons at any time
- Housing projects
- Office centers that employ 100 or more persons
- Existing sidewalks or bike paths
- Adjacent development or private amenity space (sitting area, theater, community center).

Curb extensions may be considered along streets where on-street parking already exists, provided the extensions don't reduce traffic capacity and operations at the proposed intersections. Accessible pedestrian signals (for the visually-impaired community), retrofitting existing traffic signals with countdown lights, and reconstructing existing sub-standard handicap ramps (to current ADA guidelines) should be allowed as optional facilities.

These uses must be within one-quarter mile of the proposed development. For transit stations or stops, the frequency of transit service must be at intervals of 20 minutes or less during the weekday morning and evening peak periods.

New bikeway segments can be identified from the *Countywide Bikeway Functional Master Plan*. The Plan's prioritization strategy lists bikeways categorized by activity center for example, Metro stations, CBDs, park trails, etc.

b. Provision of Super Shelters, Bus Shelters, and Benches

An applicant may propose to reduce LATR impact by constructing a "Super Shelter," bus shelter or bench, including a concrete pad, to encourage bus use, which reduces weekday peak-hour vehicle trips by diverting some person-trips to buses. Two types of shelters can be provided: standard bus shelters and Super Shelters.

- The County has an agreement with Clear Channel Outdoor, Inc. (CCO) to provide a minimum of 500 standard bus shelters in the County. CCO has first choice of locations for these shelters, a number of which will carry advertising. Standard bus shelters to be provided under LATR must be located in areas where CCO chooses not to provide shelters. CCO must be offered right of first refusal for any new sites before shelter placement is accepted from the developer.
- "Super Shelters" include heating and lighting, have larger capacity, four walls (with openings to enter and exit), and a higher level of design than standard shelters. A Super Shelter is located on Rockville Pike near Marinelli Road (as part of an agreement with Target/Home Depot). These shelters may be provided only at locations where CCO has chosen not to provide shelters. If agreed to by MCDOT and the developer, Super Shelters should be incorporated as part of development planning and will need to be coordinated with existing and planned locations for standard shelters.

All bus shelters must be on a bus route, at an existing stop, within one-quarter mile of the edge of the proposed development. The frequency of the transit service must be at intervals of 20 minutes or less during the weekday morning and evening peak periods.

For any off-site improvement shown in Table 5, pedestrians and bicyclists should be able to safely cross any roadway to reach their destination. The applicant may provide improvements that Transportation Planning and MCDOT staffs agree would increase the safety of the crossing.

c. Provision of Bike Lockers

An applicant may propose to reduce LATR impact by providing bike lockers for a minimum of eight bikes at an activity center located within a one-mile radius of the edge of the development.

d. Provision of Transit Information Signs and Kiosks

An applicant may propose to reduce LATR impact by providing static or electronic signs, and/or information kiosks at bus shelters, large office buildings, retail centers, transit centers, or residential complexes. They should communicate scheduled or real-time transit information, for example, the scheduled or estimated arrival of the next bus on a given route.

Static transit information signs may be provided only at locations other than CCO-provided standard bus shelters, since the CCO agreement already provides for type of information. For static transit information provided at office buildings, retail centers, etc., the applicant should provide for changing this information three times a year.

e. Provision of Other Non-Auto Facilities

An applicant may reduce LATR impact by providing other non-auto facilities, including but not limited to bus layover spaces, crosswalks or pedestrian bridges, on-road bicycle lanes, park-and-ride lots, park trails, transit stations, streetlights, transitways, and busways. For FY12, the Planning Board may accept construction of non-auto facilities with construction and right-of-way costs at a value of \$11,700 for each new peak hour vehicle trip. The Board must index the minimum payment according to construction costs in each following fiscal year.

f. Graduated and Maximum Trip Reduction Credits

In policy areas with higher congestion standards, the maximum reduction in trips is higher, recognizing the desire to enhance pedestrian safety and encourage bike use in these areas (see Table 5).

Table 5 identifies trip reduction options. Any or all of the options may be used for a given application. The maximum trip reduction per development is a function of the policy area congestion standard for the development site.

Table 5
Graduated and Maximum Trip Credits Related to Congestion Standards

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
Other non-automobile facilities	\$11,700 per vehicle trip		
Maximum trip credits	60	90	120

B. Procedures for Applying Section VI – Trip Reduction Methods

The determination of the total number of trips generated by a proposed development will be made prior to any reduction. If a proposed development generated more than 30 total weekday peak-hour trips, a traffic study would be required. If an applicant proposes a traffic mitigation agreement or non-automobile transportation facilities, the reduction will be accounted for in the traffic study. An applicant proposing these trip reduction strategies may be required to gather

- The Bethesda/Chevy Chase Policy Area includes the Bethesda CBD and Friendship Heights CBD Policy Areas
- The Derwood Policy Area includes the Shady Grove Policy Area
- The Kensington/Wheaton Policy Area includes the Glenmont and Wheaton CBD Policy Areas
- The North Bethesda Policy Area includes the Grosvenor, Twinbrook, and White Flint Policy Areas
- The Silver Spring/Takoma Park Policy Area includes the Silver Spring CBD Policy Area.

An applicant for a preliminary plan of subdivision need not take any mitigating action under PAMR if the Planning Board finds that the proposed development will generate three or fewer peak hour trips. For retail uses, mitigation applies to primary trips, but not pass-by or diverted trips.

The Planning Board, after considering recommendations of the County Executive, may approve a preliminary plan application in a policy area found by PAMR to be Acceptable with Full Mitigation or Acceptable with Partial Mitigation, as provided in this section. In approving plans in Acceptable with Full Mitigation policy areas, the Board should ensure that the average level of service for the relevant policy area is not adversely affected. Except as otherwise expressly stated in the Development District Participation section of the Growth Policy, the same level of service criteria must be used in evaluating an application under this section.

B. PAMR Trip Reduction/Mitigation

The following options to mitigate the traffic impacts of development approved in a preliminary plan may be used individually or in combination. Applicants must include a list of all agreed upon transportation improvements with scaled drawings of each showing available or needed right-of-way, proposed roadway widening, and area available for sidewalks, bike paths, and landscaping, as required. Applicants must also demonstrate coordination with MCDOT and SHA.

Trip Mitigation

An applicant may sign a binding Traffic Mitigation Agreement (TMAG) removing up to 50 percent of the projected peak hour vehicle trips from the roadway using Transportation Demand Management techniques to reduce trips generated by the applicant's development or by other sites. It would allow an applicant to generate a certain number of trips if the mitigation program removes half that number of trips from other sites in the same policy area. TMAGs apply to both LATR and PAMR.

Trip Reduction by Providing Non-Auto Facilities

An applicant may mitigate roadway congestion impacts to a limited extent by providing non-auto transportation facilities that will enhance pedestrian safety or increase the attractiveness of alternative modes of travel. The allowable facilities and their corresponding vehicle trip credits are shown in Table 5. These facilities can be provided in exchange for vehicle trip credits; both the credit value and maximum potential trip reduction credit (from 60 to 120 peak hour vehicle trips) will depend on the congestion standard for the policy area.

An applicant may mitigate a limited number of trips by providing non-auto facilities that will make transit, walking, and bicycling safer and more attractive. The allowable actions and number of trips associated with them, as well as the maximum number of trip credits allowable with these actions are shown in Table 5.

Adding Roadway Capacity

An applicant may mitigate trips by building link-based roadway network capacity. The conversion rate between vehicle trips and lane miles of roadway is shown in Table 12. The values in that table are derived from regional estimates of vehicle trip length by trip purposes and uniform per-lane capacities for roadway functional classes that should be applied county wide. Several conditions apply:

- The number of lane miles in Table 12 reflects total capacity provided, so that if an applicant widens a roadway by one lane in each direction, the total minimum project length would be half the length listed in the table.
- The roadway construction or widening must have logical termini, for instance connecting two intersections.
- The roadway construction must occur in the same policy area as the proposed development.
- The roadway construction must be recommended in a master plan.

Adding Transit Capacity

An applicant may mitigate inadequate PAMR conditions by buying 40-foot long hybrid electric fleet vehicles for the Ride On system, and guaranteeing 12 years of operations funding, at the rate of 30 peak hour vehicle-trips per fleet vehicle. To qualify as mitigation, any bus must be an addition to the size of the Ride On fleet and not a replacement for a bus taken out of service.

Payment Instead of Construction

The Planning Board may accept a payment to the County commensurate with the cost of a required improvement if the applicant has made a good faith effort to implement an acceptable improvement, and the Board finds that it cannot feasibly be implemented by the applicant but that the same improvement or an acceptable alternative can be implemented by a public agency within six years after subdivision approval.

The Planning Board may also accept a payment to the County instead of identification or construction of any specific improvement for any preliminary plan application that requires PAMR mitigation for fewer than 30 peak hour vehicle trips. In or after FY11, the payment must not be less than \$11,300 per new peak hour vehicle trip. The Board must index the minimum payment according to construction costs in each following fiscal year.

For development applications that require PAMR mitigation of fewer than 30 peak hour vehicle trips, the Planning Board may accept payment to the County in lieu of identification or construction of any specific improvement. For FY11, the payment was established at \$11,300 per new peak hour vehicle trip.

In general, each mitigation measure or combination of measures must be scheduled for completion or otherwise be operational at the same time or before the proposed development is scheduled to be completed, and prior to use and occupancy permits being released. The nature, design, and scale of any additional facility or program must receive prior approval from any government agency that would construct or maintain the facility or program, and the applicant and the public agency must execute an appropriate public works agreement before the Board approves a record plat. The application must also be approved under LATR. Applicants required to make intersection improvements to satisfy LATR may apply the capital cost of that improvement toward any PAMR mitigation obligation.

Both the subdivision plan and all necessary mitigation measures must be consistent with an adopted master plan or other relevant land use policy statement. For the Planning Board to accept a roadway capacity improvement as a mitigation measure, the applicant must show that alternative non-auto mitigation measures are not feasible or desirable. In evaluating mitigation measures proposed by an applicant, the Board must place a high priority on design excellence to create a safe, comfortable, and attractive public realm for all users, with particular focus on high-quality pedestrian and transit access to schools, libraries, recreation centers, and other neighborhood facilities.

Table 12

PAMR Mitigation Options for Providing Roadway Capacity

(minimum length of roadway construction in lane miles of widening or new construction per 100 vehicle trips generated)

Land Use Type	Facility Type			
	Freeway	Major Highway	Arterial	Primary Residential
Office	0.38	0.51	0.77	1.54
Retail	0.24	0.31	0.47	0.94
Other Commercial	0.31	0.41	0.62	1.23
Residential	0.31	0.41	0.62	1.24

Special Mitigation Standards

An applicant for a preliminary plan of subdivision located entirely in a Metro Station Policy Area or entirely in the Germantown Town Center Policy Area, Kensington, White Oak, Rock Spring Park, or the North Bethesda Road Code Urban Area as defined in the Growth Policy resolution # 16-1187 may satisfy their PAMR trip mitigation requirements if the proposed development meets all of the following conditions.

- At least 50 percent of the floor area must be used for residences.
- The development must be built to at least 75 percent of the achievable density allowed under Chapter 59, subject to any lower limit in a master or sector plan.
- New development must achieve at least a 17.5 percent energy cost savings, using applicable LEED standards. Renovation projects must achieve 10.5 percent savings. Alternatively, new development and renovation must offset at least 2.5 percent of annual building energy costs on site, using applicable LEED standards.

If these requirements are met, the applicant must pay 75 percent (rather than 100 percent) of the required trip mitigation payment to the County Department of Transportation.