

*FINAL*

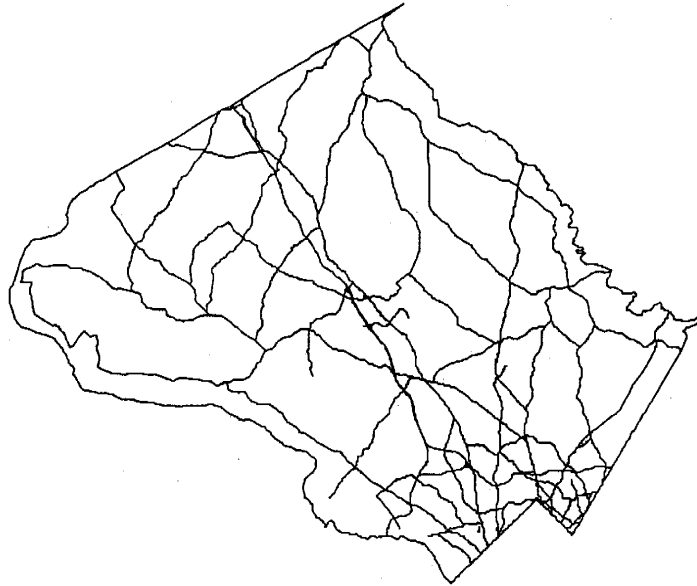
*STAFF*

*DRAFT*

5-28-04

# *Local Area Transportation Review Guidelines*

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



Published by



**THE MARYLAND-NATIONAL CAPITAL  
PARK AND PLANNING COMMISSION**

Montgomery County Department of Park and Planning  
8787 Georgia Avenue  
Silver Spring, MD 20910-3760



# TABLE OF CONTENTS

I.	<i>Introduction</i> .....	1
A.	Background .....	1
B.	Policy Areas .....	1
C.	Local Area Transportation Review .....	3
II.	<i>Criteria for Screening Cases for Local Area Transportation Review</i> .....	4
A.	Significantly Sized Project .....	7
B.	Congestion Standards .....	8
C.	Exceptions to the General Guidelines .....	9
III.	<i>Method and Preparation of Local Area Transportation Review</i> <i>Traffic Study</i> .....	10
A.	General Criteria and Analytical Techniques .....	10
B.	Scope of Traffic Study .....	12
IV.	<i>Findings for Inadequate Facilities</i> .....	15
A.	Transportation Solutions .....	15
B.	Degree of Local Congestion .....	16
C.	Unavoidable Congestion .....	16
D.	Transportation Demand Management (TDM) Strategies .....	17
E.	Project-Related Traffic .....	17
V.	<i>Procedures for Application in the Central Business District (CBD)</i> <i>and Metro Station Policy Areas</i> .....	17
A.	Adequacy of Traffic Flows .....	18
B.	Site Access and Pedestrian/Bicycle Safety .....	18
C.	Other Criteria .....	19
D.	Information Provided by Staff .....	20
E.	Traffic Mitigation Agreement .....	20
F.	Participation in Transportation Roadway Improvements .....	20
VI.	<i>Methods to Reduce Local Area Transportation Review Impact</i> ....	21
A.	Methods to Reduce Local Area Transportation Review Impact For Residential and Non-Residential Development .....	21
B.	Procedures for Application of Section VI - Trip Reduction Methods .....	27

VII. <i>Methods for Assigning Values to Factors Used in a Traffic Study</i>	27
A. Capital Improvements Program Definition .....	27
B. Trip Generation .....	28
C. Peak Hour .....	28
D. Trip Distribution .....	29
E. Directional Split .....	29
F. Trip Assignment .....	30
G. Critical Lane Volume Analysis .....	30
H. Traffic Data.....	30
I. Adequate Accommodation of Traffic.....	31
J. Critical Lane Volume Method.....	32
K. Items That Must Be Submitted as a Part of the Traffic Study to Satisfy Local Area Transportation Review.....	34
<i>Appendix A: Weekday Peak-Hour Trip-Generation Formulas and Rates         for Use in Local Area Transportation Review.....</i>	<i>37</i>
<i>Appendix B: Weekday Peak-Hour Trips Generated by Land Use for Use         in Local Area Transportation Review .....</i>	<i>43</i>
<i>Appendix C: Weekday Peak-Hour Trip-Generation Rates and Directional         Splits for the Bethesda, Friendship Heights, and Silver Spring         CBDs.....</i>	<i>49</i>
<i>Appendix D: The Annual Growth Policy’s Transportation Facilities         Adequacy Test .....</i>	<i>51</i>
<i>Appendix E: Trip Distribution and Traffic Assignment Guidelines .....</i>	<i>55</i>
<i>Appendix F: Prioritization Strategy, Planning Board Draft of the         Countywide Bikeways Functional Master Plan .....</i>	<i>67</i>

# LIST OF MAPS, FIGURES and TABLES

<i>Map 1: Policy Areas by Traffic Zones .....</i>	<i>2</i>
<i>Table 1: Local Area Transportation Review Intersection Congestion Standards by Policy Area.....</i>	<i>3</i>
<i>Figure 1: Check List for Determining the Completeness of Traffic Studies .....</i>	<i>6</i>
<i>Table2: Signalized Intersections from Site in Each Direction to Be Included in a Traffic Study .....</i>	<i>12</i>
<i>Table 3: Graduated and Maximum Trip Credits Related to Congestion Standards.</i>	<i>26</i>
<i>Table A-1: General Office .....</i>	<i>38</i>
<i>Table A-2: General Retail.....</i>	<i>38</i>
<i>Table A-3: Fast Food Restaurants .....</i>	<i>39</i>
<i>Table A-4: Residential.....</i>	<i>39</i>
<i>Table A-5: Private School (Weekday Morning Peak Period).....</i>	<i>40</i>
<i>Table A-6: Automobile Filling Station.....</i>	<i>41</i>
<i>Table A-7: Senior / Elderly Housing.....</i>	<i>42</i>
<i>Table A-8: Mini-Warehouse.....</i>	<i>42</i>
<i>Table A-9: Child Day-Care Center.....</i>	<i>42</i>
<i>Table B-1: Number of Weekday Peak-Hour Trips Generated by General Office .....</i>	<i>44</i>
<i>Table B-2: Number of Weekday Peak-Hour Trips Generated by General Retail.....</i>	<i>46</i>
<i>Table B-3: Number of Weekday Peak-Hour Trips Generated by Residential Units...</i>	<i>47</i>
<i>Table B-4: Number of Weekday Peak-Hour Trips Generated by a Child Day-Care Center.....</i>	<i>48</i>
<i>Table B-5: Number of Weekday Peak-Hour Trips Generated by a Private School.....</i>	<i>48</i>
<i>Table B-6: Number of Weekday Peak-Hour Trips Generated by an Automobile Filling Station .....</i>	<i>49</i>
<i>Table C-1: Weekday Morning and Evening Peak-Hour Trip-Generation Rates for the Bethesda and Friendship Heights CBDs.....</i>	<i>51</i>

<i>Table C-2: Weekday Morning and Evening Peak-Hour Trip-Generation Rates for the Silver Spring CBD</i> .....	51
<i>Figure E-1: Super Districts in Montgomery County</i> .....	59
<i>Figure E-2: Trip Distribution Converted to Traffic Assignment</i> .....	60
<i>Table E-1: Trip Distribution Report in Super District 1:</i> .....	62
<i>Bethesda / Chevy Chase</i> .....	62
<i>Table E-2: Trip Distribution Report in Super District 2:</i> .....	62
<i>Silver Spring / Takoma Park</i> .....	62
<i>Table E-3: Trip Distribution Report in Super District 3:</i>	
<i>Potomac / Darnestown / Travilah</i> .....	64
<i>Table E-4: Trip Distribution Report in Super District 4:</i> .....	64
<i>Rockville / North Bethesda</i> .....	64
<i>Table E-5: Trip Distribution Report in Super District 5:</i> .....	66
<i>Kensington / Wheaton</i> .....	66
<i>Table E-6: Trip Distribution Report in Super District 6:</i> .....	66
<i>White Oak / Fairland / Cloverly</i> .....	66
<i>Table E-7: Trip Distribution Report in Super District 7:</i> .....	68
<i>Gaithersburg / Shady Grove</i> .....	68
<i>Table E-8: Trip Distribution Report in Super District 8:</i> .....	68
<i>Aspen Hill / Olney</i> .....	68
<i>Table E-9: Trip Distribution Report in Super District 9: Germantown / Clarksburg</i>	70
<i>Table E-10: Trip Distribution Report in Super District 10:</i> .....	70
<i>Rural – West of I-270</i> .....	70
<i>Table E-11: Trip Distribution Report in Super District 11:</i> .....	71
<i>Rural – East of I-270</i> .....	71

# *I. Introduction*

## **A. Background**

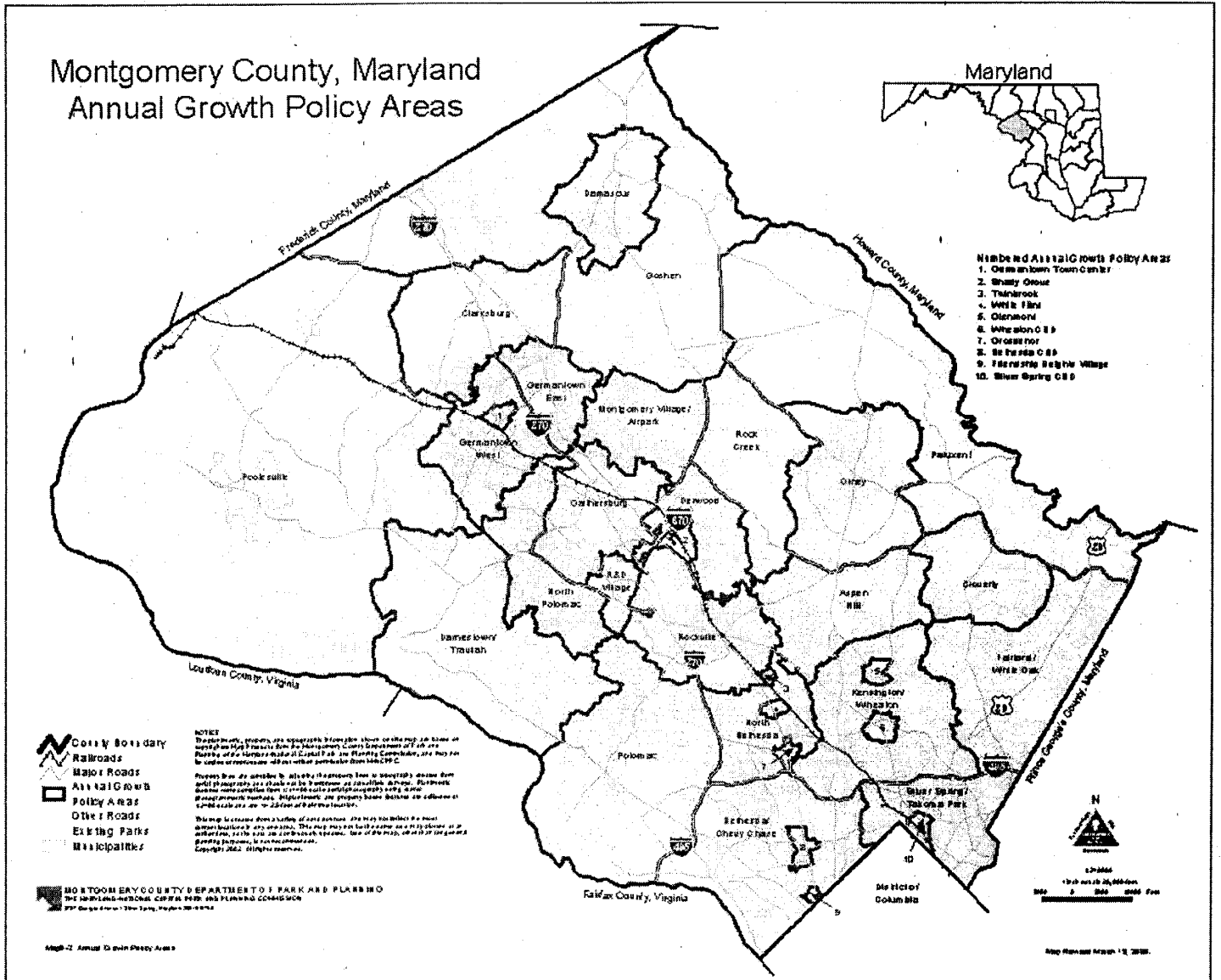
County Code Section 50-35(k) (the Adequate Public Facilities Ordinance or APFO) directs the Montgomery County Planning Board to approve preliminary plans of subdivision only after finding that public facilities will be adequate to serve the subdivision. This involves predicting future travel demand from private development and comparing it to the capacity of existing and programmed public transportation facilities.

In accordance with the FY 2003-05 Annual Growth Policy adopted by the County Council on October 28, 2003, subdivision applications ~~may be~~ are subject to ~~two different types of~~ only one transportation tests. ~~One is called the Policy Area Transportation Review (PATR). The other is called the Local Area Transportation Review (LATR).~~

## **B. Policy Areas ~~Transportation Review~~**

~~The Policy Area Transportation Review divides the county~~ County is divided into separate traffic zones, which are grouped into policy areas (Map 1). The congestion standards established by the County Council and adopted in these Guidelines are set by policy areas (see Table 1). These are geographic areas for which the adequacy of public facilities is addressed on an area-wide basis. With regard to transportation, a staging ceiling may be established for each policy area. The staging ceiling for a policy area is the maximum amount of land development, expressed as a jobs ceiling and a housing ceiling, that can be accommodated by the existing and programmed public transportation facilities serving the area, at an assigned congestion standard. However, in accordance with the adopted Annual Growth Policy for adequacy of public transportation facilities related to preliminary and project plan applications and all other regulatory actions (i.e., zoning, mandatory referral, and special exception) filed after July 1, 2004, the Planning Board will not be required to determine if sufficient residential or non-residential capacity exists within the policy area in which a property is located.

Map 1: Policy Areas by Traffic Zones





**Table 1: Local Area Transportation Review Intersection Congestion Standards by Policy Area**

(As of July 2002, 2004)

Congestion (Critical Lane Volume) Standards	Policy Area	
1450-1400	Rural Areas	
1500-1450	Clarksburg Damascus Gaithersburg City Germantown Town Center	Germantown West Germantown East Montgomery Village/Airpark
1525-1475	Cloverly Derwood North Potomac	Olney Potomac R&D Village
1550-1500	Aspen Hill Fairland/White Oak	Rockville City
1600-1550	North Bethesda	
1650-1600	Bethesda/Chevy Chase Kensington/Wheaton	Silver Spring/Takoma Park
1800	Bethesda CBD Friendship Heights CBD Glenmont Grosvenor Shady Grove	Silver Spring CBD Twinbrook Wheaton CBD White Flint

### C. Local Area Transportation Review

The *Local Area Transportation Review Guidelines* adopted by the Planning Board are to be used by applicants in the preparation of reports to the Planning Board to determine the requirement for and the scope of a traffic study or review prepared by an applicant for subdivision and mandatory referral cases brought before the Planning Board.

The LATR Guidelines are also recognized as the standard to be used by applicants in the preparation of reports to the Board of Appeals and the Hearing Examiner for special exception and zoning cases brought before these bodies.

The intent of the *Local Area Transportation Review Guidelines* is to establish criteria for determining if development can or cannot proceed. ~~whether staging ceiling is or is not available.~~ Pursuant to the adopted Annual Growth Policy, the Planning Board must not approve a subdivision if it finds that an unacceptable weekday peak-hour level of congestion will result after taking into account existing roads, programmed roads, available or programmed mass transportation and physical improvements or trip mitigation measures to be provided by the applicant.

If the subdivision will affect a nearby<sup>1</sup> intersection ~~or roadway links~~ for which congestion is already unacceptable, then the subdivision may only be approved if it does not make the situation worse.

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 Public Works and Transportation (DPWT) and/or the Maryland State Highway Administration (SHA), should use these procedures to develop recommendations for specific intersection ~~or roadway link improvements, or pedestrian, bicycle or transit improvements~~ enhancements that would mitigate the transportation impact of the development in these areas of local congestion so that the Planning Board or another elected or appointed body could consider granting approval. The procedures outlined in the LATR Guidelines ~~is~~ are intended to provide a near-term "snapshot in time" of estimated future traffic conditions ~~five to six years into the future~~ and to present a reasonable estimate of traffic conditions at the time of development.

~~The LATR Guidelines are also recognized as the standard to be used by applicants in the preparation of reports to the Board of Appeals and the Hearing Examiner for the County Council for special exception and zoning cases, respectively, brought before these bodies.~~

## *II. Criteria for Screening Cases for Local Area Transportation Review*

Applicants will be required in most instances to submit a traffic statement with the development application concerning the need for a Local Area Transportation Review (LATR). Transportation Planning staff will use the following criteria to determine whether and when the applicant needs to submit a traffic study.

~~In policy areas where there is an insufficient number of jobs and/or housing units; i.e., staging ceiling, available to support the application, the applicant will not be required to submit a traffic study with the development application until either staging ceiling capacity becomes available for that project or the applicant chooses to use the special procedures contained in the latest edition of the Annual Growth Policy (see Appendix D).~~

~~For purposes of establishing a queue date as required in the Annual Growth Policy in areas with insufficient ceiling capacity, the traffic statement shall serve as the traffic study until capacity becomes available. The applicant must update the traffic~~

---

<sup>1</sup> See Section III B1, page 12

~~statement to reflect changes in the development plan that may occur before capacity becomes available (i.e., specific proposed use or intensity of the use). When staging ceiling becomes available as a result of increased capacity from a programmed transportation improvement in the state's and/or county's capital program or some other adjustment in the policy area analysis, a traffic study must be submitted within six months.~~

~~In policy areas where there is sufficient staging ceiling capacity for the application and, In cases where an LATR is required (see II.A below), a traffic study must be filed as a part of the development submittal. Transportation Planning staff will review the traffic statement and/or traffic study, and notify the applicant within two weeks of receipt if the statement or traffic study is complete. If Transportation Planning staff determines, by reviewing the traffic statement, that a traffic study is necessary, but one was not submitted with the original filed application, the application will not be considered complete until a complete traffic study is submitted and found to be complete. Figure 1 is an example of a checklist used by staff for determining the completeness of a traffic study. Any modifications in the analysis identified by Transportation Planning staff's review are the responsibility of the applicant, after appropriate oral and/or written notice of the issues identified or change(s) required. As long as a traffic study is determined to be complete, staff will consider the date of receipt as the completion date. Once a traffic study has been found to be complete, staff will notify the applicant in writing within two weeks and, by copy of that letter, inform representatives of nearby community and/or business groups or associations.~~

Staff will determine the acceptability of the conclusions and recommendations of a traffic study in consultation with the applicant, DPWT, SHA, and community representatives as part of the review process in preparation for a public hearing.

Figure 1: Check List for Determining the Completeness of Traffic Studies

Development Name: _____	
Development Number: _____	
<input type="checkbox"/>	Stage of Development Approval: _____ (zoning, special exception, subdivision, mandatory referral)
<input type="checkbox"/>	Are the intersections counted for the traffic study acceptable?
<input type="checkbox"/>	Are the traffic counts current; i.e., within one year of date of study?
<input type="checkbox"/>	Were any traffic counts taken on or near holidays?
<input type="checkbox"/>	Are there any "bad" traffic counts? (Compare to other recent counts.)
<input type="checkbox"/>	Are peak hours and lane-use configurations on each intersection approach correct?
<input type="checkbox"/>	Is assumed background development correct?
<input type="checkbox"/>	Do the improvements associated with the development mitigate site traffic and are they feasible? (Applicant should check feasibility of improvements with DPWT and/or SHA staff. Applicant should check the availability of right-of-way if needed for the improvements.)
<input type="checkbox"/>	Are pending/concurrent plans that have been filed in accordance with the LATR Guidelines included in "background development"?
<input type="checkbox"/>	Is the amount of each background development used in the traffic study acceptable, based on the stage of development approval?
<input type="checkbox"/>	Are the trip generation rates used in the traffic study acceptable?
<input type="checkbox"/>	Are the assumptions for % new, % diverted, and % pass-by reasonable?
<input type="checkbox"/>	Is trip distribution/assignment assumed in the traffic study acceptable?
	Office _____ Residential _____
	Other _____ Retail _____
<input type="checkbox"/>	Were the correct lane use factors used?
<input type="checkbox"/>	Are the critical lane volumes calculated correctly?
<input type="checkbox"/>	Are the congestion standards identified correctly?
<input type="checkbox"/>	Is a complete Pedestrian Impact Statement included as part of the traffic study?
<input type="checkbox"/>	Were all traffic counts submitted in the accepted standard digital format?

## A. Significantly Sized Project

The proposed development must be of sufficient size to have a measurable traffic impact on a specific local area to be considered in a local area transportation review. Measurable traffic impact is defined as a development that generates ~~50~~ 30 or more total (i.e., existing, new, pass-by and diverted) weekday trips during the peak hour of the morning (6:30 a.m. to 9:30 a.m.) and/or evening (4:00 p.m. to 7:00 p.m.) peak period of adjacent roadway traffic.

The following criteria shall be used to determine if a proposed development will generate ~~50~~ 30 or more weekday peak-hour trips:

- 1a. For office or residential development, all peak-hour trips are to be counted even if, as part of the analysis, some of the trips will be classified as pass-by trips or trips diverted to the site from existing traffic.
- 1b. For retail development, pass-by trips need not be counted in determining the number of trips generated.
2. All land at one location within the County, including existing development on a parcel that is being modified or expanded or land available for development under common ownership or control by an applicant, including that land owned or controlled by separate corporations in which any stockholder (or family of the stockholder) owns ten percent or more of the stock, shall be included. Staff shall exercise their professional judgment in consultation with the applicant in determining the appropriate land area to consider.

For any subdivision that would generate 30-49 weekday peak-hour automobile vehicle trips, the Planning Board, after receiving a traffic study must require that either:

- all LATR requirements are met, or
- the applicant must make an additional payment equal to 50% of the applicable transportation impact tax before it receives any building permit in the subdivision.

In certain circumstances, Transportation Planning staff may, in consultation with the applicant, require analysis of traffic conditions during a different three-hour weekday peak period; e.g., 6:00 a.m. to 9:00 a.m. or 3:30 p.m. to 6:30 p.m., to reflect the location or trip-generation characteristics of the site, existing conditions or background development as generators of traffic.

The number of trips shall be calculated using the following sources:

1. For all land uses in the Silver Spring, Bethesda, or Friendship Heights CBD Policy Areas, use the trip generation rates in Appendix C, Tables C-1 or C-2.
2. For all other land uses in parts of the county not included in 1. above,
  - a. For general office, general retail, residential, fast food restaurant, private school, child day-care center, automobile filling station, senior/elderly housing, or mini-warehouse, use the formulas provided in Appendix A and the tables provided in Appendix B.
  - b. For other land uses, use the latest edition of the *Trip Generation Report* published by the Institute of Transportation Engineers (ITE).

For some land uses of a specialized nature, appropriate published trip-generation rates may not be available. In such cases, Transportation Planning staff may request that determination of rates for these land uses be a part of the traffic study. If special rates are to be used, Transportation Planning staff must approve them prior to submission of the traffic study.

~~For developments that generate fewer than 50 weekday peak-hour trips, it is assumed that the traffic impact is included in the policy-area-wide aggregate review that constitutes the staging ceiling. In such cases, a traffic study is not required.~~

An applicant shall not avoid the intent of this requirement by submitting piecemeal applications or approval requests for zoning, subdivision, special exception, mandatory referral, plats, preliminary or site development plans, or building permits. However, an applicant may submit a preliminary plan of subdivision for approval for less than 50 30 peak-hour trips at any one time provided the applicant agrees in writing that, upon the filing of future applications, the applicant will comply with the requirements of the LATR Guidelines when the total number of site-generated peak-hour vehicle trips at one location has reached 50 30 or more. Then, a traffic study will be required to evaluate the impact of the total number of site-generated trips in accordance with the LATR Guidelines.

Transportation Planning staff may elect to waive these criteria if the development results in no net increase in weekday peak-hour trips.

## **B. Congestion Standards**

Critical lane volume (CLV) standards for intersections that ~~are~~ were adopted for each policy area in the most-recently adopted Annual Growth Policy are shown in Table 1. Transportation Planning staff maintains an inventory of intersection traffic data based upon traffic counts collected by the Montgomery County Department of Public Works and Transportation (DPWT), the Maryland State Highway

Administration (SHA), and private traffic consultants for purposes of providing applicants with a preliminary assessment of conditions in the vicinity of the proposed development.

Table 2 presents maximum link volumes for various roadway types considered by Transportation Planning staff when reviewing LATR projected link volumes. Transportation Planning staff may request analysis of link volume capacity as part of a traffic study. Acceptable level of service for a roadway link is related directly to the congestion standard for the relevant policy area.

*Table 2: Maximum Link Volume/Hour/Lane vs. Policy Area Congestion Standard*

Roadway Classification	Congestion Standard (CLV)			
	1400-1450	1475-1550	1600	1800
Major	1,125	1,175	1,275	n/a
Arterial	975	1,025	1,125	n/a

### C. Exceptions to the General Guidelines

There are several policy areas where there are exceptions or additions to the general Local Area Transportation Review process:

1. In the Potomac Policy Area, only developments that Transportation Planning staff consider will impact any of the following intersections will be subject to Local Area Transportation Review: a) Montrose Road at and Seven Locks Road, b) Democracy Boulevard at and Seven Locks Road, c) Tuckerman Lane at and Seven Locks Road, d) Bradley Boulevard at and Seven Locks Road, e) Democracy Boulevard at and Westlake Drive, f) Westlake Drive at and Westlake Terrace, and g) Westlake Drive at and Tuckerman Lane, h) River Road and Bradley Boulevard, i) River Road and Piney Meetinghouse Road, and j) River Road and Seven Locks Road. No other intersections are to be studied.

- 2a. The following policy areas have been designated Metro Station Policy Areas in the most-recently adopted AGP: Bethesda CBD, Friendship Heights CBD, Glenmont, Grosvenor, Shady Grove, Silver Spring CBD, Twinbrook, Wheaton CBD, and White Flint. This designation means that the congestion standard equals a critical lane volume of 1800 (see Table 1) and that development within the area is eligible for the AGP's Alternative Review Procedure for Metro Station Policy Areas (see Appendix D). if a (TMO) exists. This procedure allows a developer to meet LATR requirements by 1) agreeing in a contract with the Planning Board and the County Department of Public Works and Transportation to making make a payment as designated in the AGP, 2) joining-participate in and

~~supporting support~~ a Transportation Management Organization-(TMO) ~~if and when one exists and~~ 3) ~~mitigating mitigate~~ 50% of their total weekday morning and evening peak-hour trips, and 4) conduct a traffic study to identify intersection improvements and/or trip mitigation measures that would have been required. Both residential and non-residential projects are eligible for the procedure.

2b. ~~Development in the Bethesda CBD, Friendship Heights CBD, Glenmont, Grosvenor, Shady Grove, Silver Spring CBD, Twinbrook, Wheaton CBD and White Flint Policy Areas~~ above-mentioned Metro Station Policy Areas will be reviewed in accordance with Section V of these guidelines. These procedures provide specifics criteria to satisfy the general guidelines included in the adopted Annual Growth Policy (AGP).

3. Area-specific trip-generation rates have been developed for the Bethesda, Friendship Heights, and Silver Spring CBDs. (See Appendix C.)

### *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 in submitting information and data to demonstrate the expected impact on public intersections or links of public and roadways by the vehicle trips generated by the proposed development. In addition to the consideration of existing traffic associated with current development, applicants shall include in the analysis potential traffic that will be generated by their development and other nearby approved but unbuilt development (i.e., background). ~~to be included in the analysis.~~

The traffic study for ~~the~~ a proposed development under consideration by the Planning Board or other public body; e.g., the Board of Appeals, the cities of Rockville or Gaithersburg, must include in background traffic all developments approved and not yet built and occupied by the Planning Board or other public body (i.e., the Board of Appeals, the cities of Rockville or Gaithersburg) prior to the submission of an preliminary plan application or complete traffic study, whichever is later.

Transportation Planning staff may require that applications in the immediate vicinity of the subject application submitted in accordance with the LATR Guidelines and filed simultaneously or within the same time frame be included in



background traffic, even if the Planning Board has not approved them. If ~~preliminary plan~~ an application is approved after a traffic study has been submitted for another project and both require improvements for the same intersection(s) or link(s), then the traffic study for the pending ~~preliminary plan~~ application must be updated to account for the traffic and improvements from the approved ~~preliminary plan~~ application.

Information and data on approved but unbuilt developments, i.e., background development, nearby intersections for study, trip distribution and traffic assignment guidelines, and other required information will be supplied to the applicant by Transportation Planning staff within 15 working days of receipt of a written request.

The traffic study should be submitted along with the application or within 15 working days prior to or after the application's submission date. 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 meeting at which the ~~preliminary plan~~ application is to be discussed. If not submitted before the Development Review Committee 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 ~~preliminary plan~~ application, the program or improvement must provide enough capacity to allow all the ~~preliminary plans~~ applications participating in the program or improvement to satisfy the conditions of LATR. An intersection improvement may be used by two or more developments if construction of the improvement has not been completed and open to the public. In order to be considered, the program or improvement must provide sufficient capacity to:

1. result in a calculated CLV in the total traffic condition that is less than the congestion standard for that policy area, or
2. mitigate the traffic impact if the calculated CLV in the total traffic condition exceeds the intersection congestion standard for the applicable policy area. Mitigation is achieved when the CLV in the total traffic condition that includes traffic from each contributing development *with* the improvement is equal to or less than the CLV in the background traffic condition without the improvement.

When development is conditioned upon improvements, those improvements must be bonded, under construction, or under contract for construction prior to the issuance of building permits for new development. Construction of an improvement by one applicant does not relieve other applicants who have been conditioned to make the

same improvement of their responsibility to participate in the cost of that improvement.

~~As indicated in the ACP, in policy areas where staging ceiling capacity is available, the applicant has six months from the date of acceptance of his application to obtain preliminary plan approval unless the applicant is granted an extension. If the Planning Board grants an extension to an approved preliminary plan, Transportation Planning staff will determine if the traffic study needs to be updated based on the APF validity period, usually three years, originally approved by the Planning Board.~~

## B. Scope of Traffic Study

At a meeting or in written correspondence with Transportation Planning staff, the following aspects of the traffic study will be proposed by the applicant and/or provided by staff and agreed upon:

1. intersections ~~and roadway links~~ that are to be included in the traffic study. The number of intersections to be included will be based upon the trips generated by the proposed development under consideration (see Section II.A. for specific criteria regarding "land at one location"). As a general guideline, Table 3-2 indicates the number of significant signalized intersections from the site in each direction to be included in the traffic study, based on the maximum number of weekday peak-hour trips generated by the site, unless Transportation Planning staff finds that special circumstances warrant a more limited study. For large projects, i.e., greater than 750 peak-hour site trips, the number of intersections shall reflect likely future signalized intersections as determined by staff and the applicant.

*Table-32: Signalized Intersections from Site in Each Direction to Be Included in a Traffic Study*

<b>Maximum Weekday Peak-Hour Site Trips</b>	<b>Maximum Number of Signalized Intersections in Each Direction</b>
<del>50-30</del> – 250	1
250 – <del>750</del> 749	2
750 – 1,249	3
1,250 – 1,750	4
>1,750	5

Transportation Planning staff, in cooperation with the applicant, will use judgment and experience in deciding the significant intersections and links to be studied. Interchanges (future) will be afforded special considerations, including ramps/termini being treated as signalized intersections and links. The urban areas of the county, including Central Business Districts and Metrorail Station policy areas, have more closely-spaced intersections, suggesting that the major intersections be studied. Roadway links are more likely to only be studied in areas where signalized intersections are not closely spaced (i.e., more than one mile apart.)

Other factors, including geographic boundaries (e.g., parks, interstate routes, railroads) contiguous land under common ownership, the type of trip generated (i.e., new, diverted or by-pass), and the functional classification of roadways, will be considered by Transportation Planning staff in reaching a decision on the number of intersections to be included in the traffic study.

- 2a. approved but unbuilt (i.e., background) development to be included in the traffic study. As a general guideline, background development to be included in the traffic study will be in the same geographic area as the intersections to be studied, as discussed in 1) above. Staging of large background developments beyond the typical time period for a traffic study will be considered on a case-by-case basis.
- 2b. active trip mitigation programs, or physical improvements not completed, that have been required of other developments included in background traffic.
3. the adequacy of existing turning movement counts and need for additional data. Generally, traffic counts less than one year old when the traffic study is submitted are acceptable. Traffic counts should not be conducted on a Monday or a Friday, during summer months when public schools are not in session, on federal and/or state and/or county holidays, on the day before or after federal holidays, during the last two weeks of December and the first week of January, or when weather or other conditions have disrupted normal daily traffic.
4. factors, e.g., diurnal distribution the specific trip pattern of development, to be used to compute the trip generation of the proposed development and developments included as background
5. the directional distribution and assignment of trips generated by the proposed development and developments included as background, in accordance with the latest publication of "Trip Distribution and Traffic

Assignment Guidelines” by Transportation Planning staff (see Appendix E)

6. mode split assumptions, if the traffic study is to include reductions in trips generated using vehicle-based trip factors
7. transportation projects fully funded for construction within ~~five~~four years in the County’s Capital Improvement Program (CIP), ~~or the State’s Consolidated Transportation Program (CTP), or any municipal capital improvements program~~ that are to be included in the analysis, along with techniques for estimating traffic diversion to major new programmed facilities.
8. traffic circulation and/or safety concerns related to site access (generally applied to public or private facilities with 800 or more seats or which can otherwise accommodate 800 or more people during an event)
9. a feasible range of types of traffic engineering improvements or trip mitigation measures associated with implementing the development
10. the number, size, and use of buildings or types of ~~dwelling~~residential units on the site
11. queuing analysis, if required (see Section V)
12. a pedestrian and bicycle impact statement to assure safe and efficient pedestrian and bicycle access and circulation to and within the site, including:
  - a. pedestrian and/or bicycle counts at intersections
  - b. existing and/or proposed sidewalks and/or bikeways adjacent to the site and/or off-site of sufficient width, offset from the curb per county standards
  - c. lead-in sidewalks to the site and connectivity to the local area
  - d. existing and/or proposed bus stops, shelters and benches, including real time transit information
  - e. pedestrian and bicycle accommodations at nearby intersections; e.g. crosswalks, pedestrian signals, push buttons, median refuges, ADA-compoatible ramps
  - f. sufficient bicycle racks and/or lockers on site
  - g. recognition of peak pedestrian and/or bicycle activity periods; e.g., evenings related to restaurants.

For a zoning case, Transportation Planning staff may initiate a meeting with the applicant, the Hearing Examiner and interested groups or individuals to establish the scope of the traffic analysis.

## *IV. Findings for Inadequate Facilities*

The Transportation Planning staff report to the Planning Board will present findings for each of the categories identified below and make recommendations relating to the adequacy of the transportation facilities. The Planning Board will use these findings and recommendations, as well as comments and recommendations from the public, the Montgomery County Department of Public Works and Transportation, the Maryland State Highway Administration, and/or incorporated cities/towns within the County as appropriate, to make its overall findings as to adequacy of public facilities for the proposed development.

### **A. Transportation Solutions**

If the applicant's traffic study identifies a local area condition that exceeds the congestion standard for that policy area, Transportation Planning staff will notify the applicant, ~~the Division of Traffic and Parking Services of the Montgomery County Department of Public Works and Transportation (DPWT) and/or the Maryland State Highway Administration (SHA)~~ of the condition so that they can work together to develop a feasible solution to mitigate the impact. The Planning Board may select either trip mitigation agreements, non-automobile transportation amenities, or physical road improvements (or a combination thereof) as the required means to relieve local congestion. Priority will be given to non-physical improvements in Metro Station and CBD policy areas. (See Section VI.)

If physical improvements are to be considered in Metro Station and Central Business District (CBD) policy areas, priority consideration will be given to improving the most congested intersections in that policy area, even though they may not be in the specific local area included in a given traffic study. Efforts will be made to combine the resources of two or more developers to improve the most congested intersections; provide appropriate transportation improvements, be they physical intersection improvements or traffic mitigation measures.

Once the applicant, Transportation staff, and staff of DPWT and/or SHA have identified and agreed that there are feasible transportation solutions to obtain adequate local transportation capacity, these solutions will be incorporated as conditions of approval in the Transportation Planning staff report. These solutions could include additional traffic engineering or operations changes beyond those currently programmed, or non-programmed transit or ridesharing activities that would make the overall transportation system adequate.

If an applicant is participating in a traffic mitigation program and/or one or more intersection improvements to satisfy Local Area Transportation Review requirements, that applicant shall be considered to have met Local Area Transportation Review for any other intersection where the volume of trips generated by the site under consideration is less than five Critical Lane Movements.

In the case of developments that elect to use one of the special procedures in the Annual Growth Policy (AGP) described in Appendix D, the solutions must be identified and agreed to as above but will not be made conditions of approval. (See Appendix D)

## **B. Degree of Local Congestion**

Transportation Planning staff will identify the degree of intersection congestion calculated for the peak hour of both weekday morning and evening weekday peak periods using the Critical Lane Volume method and the congestion standards by policy area listed in Table 1. For intersections that straddle policy area boundaries, the higher congestion standard shall be used.

In establishing the LATR congestion standards, an approximately equivalent transportation level of service that balances transit availability with roadway congestion in all policy areas of the County is assumed. In areas where greater transit accessibility and use exist, greater traffic congestion is permitted. Table 1, which shows the Critical Lane Volume congestion standard adopted by the County Council for each policy area, is based on this concept.

Intersections typically are the constraint in urbanized areas, but links between intersections may be come the constraint under some circumstances (see Table 2).

Transportation Planning staff will present findings comparing the calculated CLVs with the congestion standard(s) of the nearby intersections. If the congestion standard is exceeded under background conditions, an applicant may be required to provide a traffic mitigation program or construct intersection improvements that would result in equal or improved operating conditions (as measured by CLV) than those that would occur without the applicant's projectdevelopment. Under these conditions, local congestion will be considered less severe even though the calculated CLV may still exceed the congestion standard for the policy area in which the development is located.

## **C. Unavoidable Congestion**

Transportation Planning staff will identify the degree to which alternate routes to serve the trips associated with the proposed development can be considered. (See

Section VII. F. Trip Assignment.) If there are no appropriate alternate routes for the traffic to use to avoid the congestion, then it must be assumed that trips from the proposed development will increase the local area congestion. It is not appropriate to anticipate that the trips associated with the development would use local streets other than for site access unless such streets have been functionally classified as being suitable for handling background and site-generated trips, e.g., arterial, business district, or higher classifications.

#### **D. Transportation Demand Management (TDM) Strategies**

Transportation Planning staff, in coordination with staff from DPWT, will identify the degree to which transit (i.e., bus service, proximity to a Metrorail station), ridesharing or other TDM activities can be considered to mitigate vehicle trips generated by the proposed development. If there is sufficient potential for serving the proposed development and/or immediate area with transit or ridesharing services, then ~~it is possible that priority will be given to developing a transit alternative or trip mitigation program could be developed for modifying to mitigate the demand contributing to the development's local traffic congestion impact.~~ If it is physically or fiscally ineffective for the public agencies to provide transit or ridesharing services, then it must be assumed that trips from the proposed development will increase the local area congestion.

#### **E. Project-Related Traffic**

Transportation Planning staff will identify the degree to which local traffic congestion is directly attributable to the proposed development. Traffic from three sources will be measured: 1) existing traffic, 2) trips generated by the sum total of all nearby approved but unbuilt developments (i.e., background development), and 3) total trips generated by the proposed development. ~~The more that trips from the proposed development contributes to local traffic congestion, the greater the assumed severity of the local impact.~~

### *V. Procedures for Application in the Central Business District (CBD) and Metro Station Policy Areas*

Except where noted, the technical definitions and procedures applied in Central Business District (CBD) and Metro Station Policy Areas will be consistent with those defined elsewhere in these guidelines. ~~In reviewing the adequacy of traffic flows, the following criteria will be applied. The conditions will be applied to total traffic volumes (i.e., existing plus background plus site traffic) in the peak hour of~~

both the morning and evening weekday peak periods. In reviewing CBD and Metro Station Policy Area applications, the following criteria will be used:

### **A. Adequacy of Traffic Flows**

1. Any intersection with a CLV of 1,800 or less will, in most cases, be considered acceptable with no further analysis required. However, Transportation Planning staff may require the queuing analysis noted in 2 below if they believe that abnormally long queuing might be present due to unusual conditions even at intersections with a CLV below 1,800. Transportation Planning staff shall define those intersections for which special analysis is required in writing to the applicant as early in the review process as possible, and no later than official written notification of a complete traffic study. The CLV will be calculated in accordance with the procedures defined in these guidelines.
2. If the CLV is over 1,800, a queuing analysis shall be performed. Existing queues shall be measured by the applicant and total traffic (i.e., existing, background and site) and planned roadway and circulation changes shall be taken into account. The average queue length in the weekday peak hour should not extend more than 80 percent of the distance to an adjacent signalized intersection, provided the adjacent signalized intersections are greater than 300 feet apart. The 80 percent standard provides a margin of safety for peaking. If adjacent signalized intersections are closer together than 300 feet, the average queue length in the weekday peak hour should not extend more than 90 percent of the distance to the adjacent signalized intersection. The signal timing assumed for this analysis must be consistent with the crossing time required for pedestrians in paragraph V.~~DB~~.2.b. of ~~these guidelines~~this section.

If ~~these adequate~~ conditions cannot be achieved, and no mitigating measures are programmed that would result in an acceptable CLV, the transportation system in the CBD or Metro Station Policy Area may not be deemed adequate to support the development.

### **B. Site Access and Pedestrian/Bicycle Safety**

In addition to the traffic flow analysis, applicants must demonstrate that the following guidelines are not violated by their site development:

1. Vehicle access points for site parking and loading must be located so that their use will not interfere with traffic flows on the adjacent streets or



with access points to neighboring buildings or transit terminal areas. Access directly onto the major roads should be avoided, but if proposed it will be considered in the context of the application.

2. Pedestrian and bicycle safety shall be assessed based on the following characteristics:
  - a) Conflicts between pedestrians, bicycles, and vehicles of all types accessing the site shall be minimized. Actions shall be taken to ensure pedestrian and bicycle safety on and adjacent to the site.
  - b) The applicant must provide evidence from the DPWT that the pedestrian phase of the traffic signal cycle for each approach at the adjacent and critical intersections will provide at all times at least enough time for pedestrians to completely cross the street walking at a speed of 3.0 feet per second. Where possible, enough time should be provided to completely cross while walking at 2.5 feet per second. The intent of this requirement is to provide enough time for people who tend to walk slower to be able to cross at 3.0 feet per second if they leave the curb the moment the walk indication for that movement is displayed. People who are able to walk at 4.0 feet per second or faster will be able to start crossing any time the walk indication appears and complete the crossing during the flashing don't walk pedestrian clearance period.

These aspects must be documented in the traffic study submitted as part of the development application. In the analysis, all pedestrian and bicycle movements are assumed to be made at the street level.

### C. Other Criteria

1. Total traffic is defined as the existing traffic, plus trips from approved but unbuilt developments, plus the trips from the proposed development during the peak hour of the weekday morning and evening peak periods.
2. Critical intersections are those within the CBD or Metro Station Policy Area, defined by Transportation Planning staff, generally adjacent to the site, or allowing site traffic to enter an arterial or major road. In some cases, where site volumes are large, additional intersections within or contiguous to the CBD or Metro Station Policy Area may be identified by Transportation Planning staff for inclusion in the traffic study.
3. Vehicles can be assigned to parking garages encountered on their trip into the CBD or Metro Station Policy Area. The capacity of parking garages

must be accounted for based on guidance from the Transportation Planning staff and consultation with DPWT staff.

4. Trip generation rates for background and site development traffic are contained in Appendices A, B, and C.

#### **D. Information Provided by Staff**

The following information will be gathered— provided to the applicant by Transportation Planning and DPWT staffs for use in the traffic study.

1. Existing traffic counts at selected locations. The applicant shall be required to update these data if the application is submitted more than one year after the data were initially gathered.
2. Trip generation rates
3. Directional distribution(s) (See Appendix E.)
4. Parking garage capacity information and locations of future public parking garages
5. A listing of background developments.

#### **E. Traffic Mitigation Agreement**

Each applicant ~~should~~ must have a proposed traffic mitigation agreement outlining a participation plan for trip reduction measures and other strategies for participating in efforts to achieve the mode share goals for that area. This plan should be prepared in conjunction with the area's Transportation Management District, if applicable, DPWT, and Transportation Planning staff.

#### **F. Participation in Transportation ~~Roadway~~Improvements**

Applicants may be required by the Planning Board to participate in some of the transportation roadway—improvements included in a capital program. This participation, which will be proportional to the development impact on the improvement, will be determined by the staffs of Transportation Planning, DPWT and the Maryland State ~~Highway Administration~~Department of Transportation. If the traffic study identifies changes to roadway or other transportation-related activities that are required to mitigate the impact of the proposed development on or adjacent to the development site, these changes will be the responsibility of the

applicant as part of satisfying Local Area Transportation Review (LATR) procedures.

## *VI. Methods to Reduce Local Area Transportation Review Impact*

### **A. Methods to Reduce Local Area Transportation Review Impact For Residential and Non-Residential Development**

#### **1. Traffic Mitigation Agreement Measures**

The applicant may choose be required to reduce LATR impact by entering into a legally-binding agreement (or contract) with the Planning Board and the Department of Public Works and Transportation (DPWT) 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 a trip reduction requirements have been met, but no longer than 15 years at the discretion of the Planning Board.

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

- Subsidizing transit fares to increase ridership on existing or other transit bus routes
- Providing the capital and operating costs to add a new bus/transit route, extend an existing bus/transit route, or improve service (frequency or span) on an existing route
- Constructing a new park-and-ride facility
- Providing funds to increase use of an existing park-and-ride facility
- Funding a private shuttle service; e.g., to and from the site to a nearby Metrorail station or to a park-and-ride facility
- Constructing queue-jumper lanes, providing traffic signal pre-emption devices and other techniques to improve bus travel times
- Parking management activities
- Live-near-your-work programs

Other measures may be suggested by applicants, Transportation Planning staff, or DPWT; creative approaches to reducing traffic impacts are encouraged

TMA's may require monitoring, as appropriate for each project. If monitoring is required, it shall be done on a quarterly basis at the applicant's expense by DWPT staff or a consultant selected by the Planning Board to ensure compliance with the conditions of the contract. If the goals are not being met, DPWT staff or the

consultant shall monitor the TMA on a monthly basis until such time as the goals are met for three consecutive months. Transportation Planning staff and DPWT staff 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 Amenities**

To maintain an approximately equivalent transportation level of service at the local level considering both auto and non-auto modes of travel, the Planning Board may permit a reduction in the amount of roadway improvements or traffic mitigation needed to satisfy the conditions of Local Area Transportation Review in exchange for the installation or construction of non-automobile transportation amenities that will enhance pedestrian safety or encourage non-automobile mode choices, such as 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 amenities must be implemented so as to offset the local area impact at the specific intersection(s) where the congestion standard has been exceeded 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. Monitoring shall not be required of non-automobile transportation amenities.

### **a. Construction of Sidewalks, Bike Paths, Curb Extensions, Accessible (for the blind community) or Countdown Pedestrian Signals and Handicap Ramps**

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

- 1) Transit stations or stops (rail or bus)
- 2) Public facilities (e.g., school, library, park, or post office)
- 3) Recreation centers
- 4) Retail centers that employ 20 or more persons at any time
- 5) Housing projects
- 6) Office centers that employ 100 or more persons

- 7) Existing sidewalks or bike paths
- 8) Adjacent development(s) or private amenity space; e.g., sitting area, theater, community center

Curb extensions may be considered along streets on which on-street parking already exists, provided they do not reduce traffic capacity and operations at the proposed intersection(s). Accessible pedestrian signals (for the blind community), retrofitting existing traffic signals with countdown lights, and reconstructing existing sub-standard handicap ramps (to current ADA guidelines) should be allowed as optional amenities.

These uses must be within one-quarter mile of the edge of the proposed or an existing 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.

An excellent resource for considering new segments of bikeways is the Countywide Bikeway Functional Master Plan. A prioritization strategy from the document contains lists of bikeways categorized by activity centers; e.g., Metrorail, central business districts, major county park trails (see Appendix F).

#### **b. Provision of “Super Shelters”, Bus Shelters and Benches**

An applicant may also ~~choose~~ 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. There are two types of shelters that can be provided: “standard” bus shelters and “Super Shelters.”

- The County recently reached agreement with Clear Channel Communications (CCC) to provide a minimum of 500 standard bus shelters in the County. CCC 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 CCC chooses not to provide shelters. CCC must be offered first right of refusal for any new sites if the placement of a shelter is accepted by us as a proposal by the developer. To do otherwise would be to relieve CCC of their obligations, not the County.
- “Super Shelters” include heating and lighting, are larger in capacity, have four walls (except for openings to enter and exit the shelter) and provide a higher level of design than standard shelters. An example of one such shelter is the one to be located on Rockville Pike near Marinelli Road (as part of an agreement with Target/Home Depot).

Provision of these shelters should be incorporated as part of development planning and will need to be coordinated with existing and planned locations for standard shelters.

The bus shelter must be within one-quarter mile of the edge of the proposed or an existing development and 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 4, pedestrians and bicyclists should be able to safely cross any roadway to reach their destination. The applicant may provide improvements that Transportation Planning and DPWT staff agree would increase the safety of the crossing.

**c. Provision of Bike Lockers**

An applicant may also ~~choose~~ 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 Static and Real-Time Transit Information, Signs and Information Kiosks**

An applicant may also ~~choose~~ 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 that indicate scheduled or real-time transit information, e.g., 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 CCC-provided standard bus shelters, since provision of this type of information at those shelters is part of that agreement. For static transit information provided at office buildings, retail centers, etc., the applicant should include provision for changing this information three times per year.

**e. Graduated and Maximum Trip Reduction Credits**

Related to the construction or provision of the above (a through d), the maximum trip reduction credit for any development is related to the congestion standard for that policy area. In policy areas with higher congestion standards, the maximum reduction in trips is higher in recognition of the desire to enhance pedestrian safety and/or encourage transit and bike use in these areas. (See Table 4 3.)

The size of the development is a factor in determining the reduction in the number of trips that will be allowed for the construction of a sidewalk or bike path. The applicant may get a credit of one trip for each 130-foot section of sidewalk or bike path for 100 new employees or dwelling units within one-eighth mile of the off-site sidewalk or bike path being constructed. For example, if there are 100 new housing units within one-eighth mile of an off-site sidewalk or bike path being constructed, and the length of the off-site sidewalk or bike path is 1,300 feet, then the applicant may get credit for ten trips. For bus shelter construction or real-time transit information sign installation, a residential applicant may get a credit of one trip reduction for every 25 new dwelling units to be constructed within one-quarter mile of the new shelter or sign, with a maximum of 10 trips per bus shelter or sign.

Table 4.3 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, as shown in Table 4.3

*Table 4: Trip Reduction for Residential and Non-Residential Development*

Construction of:	Off-Site Sidewalks, Bike Paths Pedestrian	Bus Shelters	Bike Lockers (eight-locker facility)	Static Real-Time Transit Information Signs
<b>Reduction in Trips during the Peak Hour</b>	1 trip per 130 linear feet, with a minimum of 100 DUs or employees within 1/8 mile either side of the new sidewalk	1 per 25 DUs or employees within 1/4 mile of the shelter	1 trip per locker set	1 per 25 DUs or employees within 1/4 mile of sign
<b>Maximum Trip Reduction</b>	40 trips per sidewalk or bike path link	40 trips per shelter	1 trip per locker set	40 trips per sign

Table 3: Graduated and Maximum Trip Credits Related to Congestion Standards

<u>Non-Automobile Transportation Amenity</u>	<u>Trip Credit vs Congestion Standard</u>		
	<u>1400-1500</u>	<u>1550-1600</u>	<u>1800</u>
<u>100 linear feet of five-foot sidewalk</u>	<u>0.5</u>	<u>0.75</u>	<u>1.0</u>
<u>100 linear feet of eight-foot bike path</u>	<u>0.5</u>	<u>0.75</u>	<u>1.0</u>
<u>Curb Extension/ Pedestrian Refuge Island</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>
<u>LED Traffic Signals/ Intersection</u>	<u>4.5</u>	<u>6.75</u>	<u>9.0</u>
<u>Countdown Pedestrian Signals/ Intersection</u>	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>
<u>Bus Shelter</u>	<u>5.0</u>	<u>7.5</u>	<u>10.0</u>
<u>“Super” Bus Shelter</u>	<u>10.0</u>	<u>15.0</u>	<u>20.0</u>
<u>Bus Bench with Pad</u>	<u>0.5</u>	<u>0.75</u>	<u>1.0</u>
<u>Information Kiosk</u>	<u>1.5</u>	<u>3.0</u>	<u>4.5</u>
<u>Bike Locker (set of eight)</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>
<u>Real-Time Transit Information Sign</u>	<u>10.0</u>	<u>15.0</u>	<u>20.0</u>
<u>Static Transit Information Sign</u>	<u>0.25</u>	<u>0.4</u>	<u>0.5</u>
<u>Maximum Trip Credits: 10% of weekday morning or evening peak-hour site trips, up to a maximum of:</u>	<u>60</u>	<u>90</u>	<u>120</u>



*Table 5: Maximum Trip Reduction per Development*

<u>Congestion Standard</u>	<u>Trips</u>
1450-1600	60
1650-1800	90
	120

## **B. Procedures for Application of 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 ~~50-30~~ total weekday peak-hour trips, a traffic study would be required. If an applicant proposes a ~~trip-traffic reduction-mitigation program~~ agreement or non-automobile transportation amenities, the reduction could be accounted for in the traffic study. At the request of Transportation Planning staff, an applicant proposing these alternatives to physical improvements will be required to gather data on current bus stop-patronage or pedestrian/bicycle activity within the local area to aid in evaluating effectiveness.

The applicant may only apply a trip reduction method after the total number of peak-hour trips is determined using standard trip rates. Trip reduction derived from this section may not be applied in policy areas where the Annual Growth Policy does not allow the application of the special procedure for limited residential development. ~~Trip reductions derived from this section may not be applied to staging ceilings.~~

## *VII. Methods for Assigning Values to Factors Used in a Traffic Study*

### **A. Capital Improvements Program Definition**

If the applicant finds it necessary or appropriate in the preparation of the traffic study to incorporate programmed transportation improvements, they must rely upon the County's Capital Improvement Program (CIP) or the State's Consolidated Transportation Program (CTP). For a project to qualify to be used in an LATRA traffic study, the project must be fully funded for construction within five four years in the CIP or CTP as of the date of submission of the traffic study.

However, under certain circumstances, staff may recommend to the Planning Board that a decision on making physical intersection improvements be delayed until building permit; i.e., when a County or State capital project has some funding for right-of-way and/or construction. The Planning Board condition would require the developer to consult with the County or State when building permit applications are filed. If the County or State agree in writing that the capital project will be constructed within four years, then the developer will contribute an amount equivalent to the cost of the LATR improvements at that time.

## **B. Trip Generation**

Trip generation equations and rates are shown in Appendix A for nine general land uses: general office, retail, residential, fast food restaurants, child day-care centers, private schools/ educational institutions, senior/elderly housing, mini-warehouse, and automobile filling stations with or without ancillary uses for car washes, convenience stores, and garages. Equations for calculating trips from other land uses or zoning classifications can be obtained from the latest edition of the *Trip Generation* Report published by ITE. Assistance with the calculation of trips can be obtained from Transportation Planning staff and/or use of the trip tables in Appendix B. In the Silver Spring, Bethesda, and Friendship Heights CBDs, different rates reflecting higher transit use are used as shown in Appendix C.

The rate for a retail site over 200,000 square feet GLA will be set after discussion with Transportation Planning staff and analysis by the applicant of one or more similar-sized retail sites within Montgomery County. In lieu of data collection, a retail rate set at two times the latest edition of ITE's *Trip Generation* Report rate may be used.

Transportation Planning staff is authorized to make minor technical changes to Appendices A, B, and C as needed, to reflect new information or to correct errors. Therefore, the user should check with the Transportation Planning staff to ensure the latest version is being applied. Transportation Planning staff will have copies of the latest version available for distribution upon request.

In some cases, adjustment of the trips from the equations may be appropriate. Examples include the effect of pass-by trips for retail, including fast food restaurants, child day-care centers, and automobile filling stations, and the total trips from mixed uses such as office and retail. These will be considered on a case-by-case basis, using the best available information concerning each site situation. There may also be instances where a site will have special considerations that make it appropriate to deviate from the rates shown in the referenced sources. These proposed deviations in trip rates could be determined by ground counts of comparable facilities, preferably in Montgomery County, and will be considered by Transportation Planning staff and used with their concurrence.

### **C. Peak Hour**

The traffic study shall be based on the highest one-hour period that occurs during the typical weekday morning (6:30 a.m.-9:30 a.m.) and/or evening (4:00 p.m.-7:00 p.m.) peak periods, i.e., the street peak, or the time period established and agreed to in Section II.A. This one-hour period shall be determined from the highest sum of the existing traffic entering all approaches to each intersection during four consecutive 15-minute intervals.

### **D. Trip Distribution**

The directional distribution of the office and residential generated trips for both background and site traffic shall be provided to the applicant by Transportation Planning staff, per the latest edition of the "*Trip Distribution and Traffic Assignment Guidelines*" (see Appendix E). The distribution of trips entering and leaving the proposed development and all background development via all access points must be justified by the relative locations of other traffic generators (i.e., employment centers, commercial centers, regional or area shopping centers, transportation terminals, or the trip table information provided by Transportation Planning staff). For land uses, i.e., retail, not covered by the guidelines, distribution should be developed in consultation with Transportation Planning staff.

### **E. Directional Split**

The directional split is the percentage of the generated trips entering or leaving the site during the peak hour. Refer to ~~Table 5~~ the tables in Appendix A to obtain the directional split for general office, retail, residential, child day-care center, auto filling station with convenience store, and fast food restaurant uses. See Appendix C for directional split assumptions for the Bethesda, Friendship Heights, and Silver Spring CBDs. For all other uses, refer to "directional distribution" as noted in the latest edition of ITE's *Trip Generation Report*. If data are not available, Transportation Planning staff, along with the applicant, will determine an appropriate in/out directional split.

Table 5: In/Out Directional Split

Land Use	AM		PM	
	Enter	Exit	Enter	Exit
General Office	87%	13%	17%	83%
Retail	52%	48%	52%	48%
Residential:				
Single Family	25%	75%	64%	36%
Townhouse	17%	83%	67%	33%
Garden Apartments	20%	80%	66%	34%
High Rise	25%	75%	61%	39%
Fast Food	53%	47%	53%	47%
Child Day Care	54%	46%	47%	53%
Auto Filling Station w/ Convenience Store	52%	48%	51%	49%

Other Uses: See latest edition of ITE's *Trip Generation Report*

## F. Trip Assignment

The distribution factors furnished by Transportation Planning staff shall be applied to the generated trips, and the resulting traffic volumes shall be assigned to the road network providing access to the proposed development. These trips will be added to existing traffic as well as the trips generated by background development to determine the impact on the adequacy of the transportation facilities. The assignment is to be extended to the nearest major intersection, or intersections, as determined by Transportation Planning staff (see Table 32).

It should be noted that this is an estimate of the impact of future traffic on the nearby road network. Trip distribution and assignment are less accurate the further one goes from the trip origin/destination.

Once an intersection under assignment conditions of existing plus background traffic or existing plus background plus site-generated traffic exceeds a CLV of 2,000, diversions to alternate routes may be considered if there are feasible alternatives, as discussed in paragraph IV.C. Unavoidable Congestion. Appropriate balancing of assignments to reflect impacts of the site on both the primary and alternate routes is necessary. Impacts on the primary and alternate intersections must be identified and mitigated if appropriate in accordance with the congestion standards of these guidelines. Such situations should be discussed with Transportation Planning, SHA and DPWT staff and resolved on a case-by-case basis before presentation to the Planning Board.

## G. Critical Lane Volume Analysis

At the intersections identified by Transportation Planning staff, the existing, background, and site-generated traffic is to be related to the adequacy of the intersection by using the critical lane volume method. (See Section J.) The methodology and assumptions shall be updated to maintain consistency with revisions to the Highway Capacity Manual published by the Transportation Research Board of the National Research Council. The analysis should be carried out for the peak hour of both the weekday morning and evening peak periods and should use traffic data for non-holiday weekdays.

## H. Traffic Data

1. Current existing traffic volume data ~~are~~ may be available from either Transportation Planning's traffic count database, SHA or DPWT.
2. New traffic counts should be ~~made~~ conducted by the applicant if, in the opinion of Transportation Planning staff, traffic volumes have increased due to some change in the traffic pattern, such as the completion of a development project after the count was made.
3. If turning movement data are older than one year when the traffic study is submitted or, if there are locations for which data are non-existent, data must be acquired by the applicant using his/her own resources. This is in accordance with the ordinance and part of the applicant's submission of sufficient information and data, consistent with the decisions reached by the Development Review Committee and Transportation Planning staff.
4. Intersection traffic counts obtained from public agencies or conducted by the applicant must be manual turning movement counts of vehicles and pedestrian/bicycle crossing volumes covering the typical weekday peak periods, i.e., 6:30 a.m. - 9:30 a.m. and 4:00 p.m.-7:00 p.m., or the time period established and agreed to in Section II.A. The data must be collected in 15-minute intervals so as to allow selection of the peak hour within the nearest 15 minutes (e.g., 4:00-5:00, 4:15-5:15, 4:30-5:30, 4:45-5:45, 5:00-6:00, 5:15-6:15, 5:30-6:30, 5:45-6:45, or 6:00-7:00 p.m.) as described in Section VII.C. All weekday peak-period (6:30 a.m.-9:30 a.m. and 4:00 p.m.- 7:00 p.m.) turning movement data are required to be included with and submitted as part of the applicant's traffic study. All intersection traffic counts must be submitted in a digital format provided by Transportation Planning staff. The subsequent digital database being created by Transportation Planning staff will be available upon request to developers, consultants, and others.

5. For applicants resubmitting all or portions of their development plans for the Planning Board's approval under the expired Expedited Development Approval (EDA) legislation that require LATR, the traffic study must be updated if the traffic counts were collected over one year from the date of resubmittal and must reflect the updated background developments.

## **I. Adequate Accommodation of Traffic**

The ability of a highway system to carry traffic is expressed in terms of level of congestion at the critical locations (usually an intersection). CLV congestion standards for intersections ~~and roadway links~~ in each policy area have been established as shown in Table 1 ~~and 2~~. These congestion standards were derived based on achieving approximately equivalent total transportation levels of service in all areas of the County. Greater vehicular traffic congestion is permitted in policy areas with greater transit accessibility and use.

## **J. Critical Lane Volume Method**

~~A technical description of the critical lane volume method was introduced in the January 1971 issue of *Traffic Engineering*.~~

The Critical Lane Volume method of calculating the level of congestion at a signalized or unsignalized intersection is generally accepted by most public agencies in Maryland, including the Maryland State Highway Administration, the Montgomery County Department of Public Works and Transportation, the Cities of Rockville, Gaithersburg, and Takoma Park and Transportation Planning staff at M-NCPPC. The methodology will fit most intersection configurations and can be varied easily for special situations and unusual conditions.

Whereas some assumptions (e.g., lane use factors) may vary from jurisdiction to jurisdiction, the general CLV methodology is consistent. An excellent reference source is SHA's web site:

[www.sha.state.md.us/businesswithsha/permits/ohd/impact\\_appendix/asp](http://www.sha.state.md.us/businesswithsha/permits/ohd/impact_appendix/asp)

The following step-by-step procedure should be sufficiently descriptive to enable the applicant to utilize the method at signalized or unsignalized intersections. For the latter, a two-phase operation should be assumed. The traffic volumes used in the analysis are those approaching the intersection as determined in each step of the traffic study (i.e., existing, existing plus background, and existing plus background plus site).

The following is a step-by-step description of how to determine the congestion level of an intersection with a simple two-phase signal operation.

- Step 1. Determine the signal phasing, number of lanes and the total volume on each entering approach to an intersection, and the traffic movement permitted in each lane.
- Step 2. Subtract from the total approach volume any right-turn volume that operates continuously throughout the signal cycle, (i.e., a free-flow right-turn by-pass). Also, subtract the left-turn volume if it is provided with an exclusive lane.
- Step 3. Determine the maximum volume per lane for each approach by multiplying the volume calculated in Step 2 by the appropriate lane-use factor selected from the following table. (Note: Do not count lanes established for exclusive use such as right- or left-turn storage lanes -- the lane use factor for a single exclusive use lane is 1.00. Consult with Transportation Planning and/or DPWT staff regarding any overlap signal phasing).

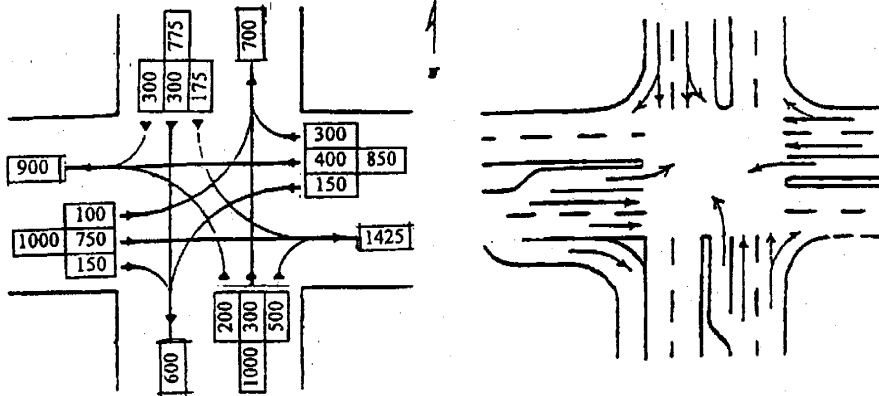
Number of Approach Lanes	Lane Use Factor*
1	1.00
2	0.53
3	0.37
4	0.30
5	0.25

\* Based on local observed data and the 2000 Edition of the Highway Capacity Manual

- 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 critical lane volume 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 critical lane volume for the intersection. Check with Transportation Planning staff for clarification.)

Step 9. Compare the resultant critical lane volume for the intersection with the congestion standards in Table 1.



**Turning Volumes**

**Intersection Geometries**

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

<sup>1</sup> Approach volumes sum of throughs, rights, and lefts in two lanes

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

<sup>3</sup> Approach volume sum of throughs and rights in two lanes

<sup>4</sup> Approach volume is through only because of free right and separate left

<sup>5</sup> Intersection Critical Lane Volume = higher sum = 675 + 548 = 1,223

## K. Items That Must Be Submitted as a Part of the Traffic Study to Satisfy Local Area Transportation Review

Two copies of the traffic study must be submitted with the development application. Once Transportation Planning staff confirms that the traffic study is complete, ten copies must be submitted within five working days of notification.



In an effort to standardize the information that is to be included with a traffic study, the following items must be submitted before the ~~preliminary plan~~ application is considered complete.

1. A site or area map showing existing roads that serve the site.
2. The location on the site map of programmed ~~highway transportation~~ improvements, if any, in the County's Capital Improvements Program (CIP) or the State's Consolidated Transportation Program (CTP), that affect traffic at the critical intersection(s) to be studied.
3. Existing weekday morning and evening peak period vehicle and pedestrian/bicycle traffic count summaries for the critical intersections identified by Transportation Planning staff for analysis.
4. Nearby approved but unbuilt developments and associated improvements that would affect traffic at the critical intersection(s) or link(s), with their location shown on the area map. (This information is provided by Transportation Planning staff and included as part of the report.)
5. A table showing the weekday morning and evening peak-hour trips generated by each of the nearby approved but unbuilt developments, including the source of the generation rates/equations for each type of development.
6. The trip distribution patterns, in percent, for the nearby approved but unbuilt developments during the weekday morning and evening peak hours, with the pattern being shown on an area map.
7. Weekday morning and evening peak-hour trips entering and leaving the site, generated by the proposed development, including the site driveways.
8. The trip distribution patterns, in percent, for the proposed development during the weekday morning and evening peak hours, with the pattern being shown on an area map.
9. Maps that show separately and in combination:
  - a. Existing weekday morning and evening peak-hour traffic volumes using the affected highway system, including turning movements at the critical intersections.

- b. Projected weekday morning and evening peak-hour trips assigned to the affected highway system for all nearby approved developments, included as part of the background.
  - c. The traffic volumes derived by adding trips from approved development to existing traffic.
  - d. Projected weekday morning and evening peak-hour trips assigned to the affected highway system for the proposed development.
  - e. The traffic volumes derived by adding site trips to the sum of existing plus background traffic.
10. Any study performed to help determine how to assign recorded or proposed development trips, such as a license plate study or special turning movement counts.
  11. Copies of all critical lane volume analyses, showing calculations for each approach.
  12. A listing of all transportation improvements, if any, that the applicant agrees to provide and a scaled drawing of each improvement showing available or needed right-of-way, proposed roadway widening, and area available for sidewalks, bike path, landscaping, as required.
  13. Electronic copies of all vehicle, pedestrian and bicycle traffic counts in digital format on a 3-½-inch disk as stipulated by Transportation Planning staff.

*Appendix A: Weekday Peak-Hour Trip-Generation  
Formulas and Rates for Use in Local Area  
Transportation Review*

*Table A-1: General Office*

Applicable Size	Formula/Rate	Directional Distribution			
		AM		PM	
		Enter	Exit	Enter	Exit
Under 25,000 sf GFA	AM: $T = 1.38(A)$ PM: $T = 2.24(A)$				
25,000 sf GFA and over	AM: $T = 1.70(A) - 8$ PM: $T = 1.44(A) + 20$	87%	13%	17%	83%
Over 300,000 sf GFA with special characteristics (See Table B-1)	AM: $T = 1.70(A) + 115$ PM: $T = 1.44(A) + 127$				
Within 1,000-foot radius of Metrorail station and outside the Beltway (D)	AM: Deduct P = 50% total trips from "T" PM: Deduct P = $4(1000-D)/100$ from "T"				

T = weekday peak-hour vehicle trips      A = gross floor area (GFA) of building in 1,000 sf  
P = percentage reduction in trips (P/100)      D = straight line distance (in feet) from the main entrance to station

*Table A-2: General Retail*

Applicable Size	Formula/Rate	Directional Distribution			
		AM		PM	
		Enter	Exit	Enter	Exit
All sizes except convenience retail	AM: Use 25% of the weekday evening peak-hour trips				
Under 50,000 sf GLA	PM: $T = 12.36(A)$	52%	48%	52%	48%
From 50,000 sf up to 200,000 sf GLA	PM: $T = 7.43(A) + 247$				
Over 200,000 sf GLA	Special analysis required by applicant or use two times applicable ITE rate				
Convenience retail not part of a shopping center or groups of stores	AM and PM: Use applicable ITE <u>formula/rate</u>				

T = weekday peak-hour vehicle trips      A = gross leasable area (GLA) of building in 1,000 sf  
Deduct adjustment (P) for no major food chain store:  $P = 0.05 + 0.002(200-A)$

**Table A-3: Fast Food Restaurants**

	Formula/Rate	Directional Distribution			
		AM		PM	
		Enter	Exit	Enter	Exit
Weekday peak-hour trip-generation rates of fast food restaurants vary based on their type of menu selection (e.g., hamburgers vs. tacos vs. chicken) and their location relative to traffic volume on the adjacent roadway.	Develop trip-generation rates based on driveway counts from existing similar fast food restaurants at similar locations (e.g., McDonald's Restaurant on major highways) if data are available or can be obtained from previous studies.  Otherwise, use ITE trip-generation data.	53%	47%	53%	47%

**Table A-4: Residential**

Applicable Size	Formula/Rate		Directional Distribution			
			AM		PM	
Single-Family Detached	<u>Under 75 units</u>	<u>75 units or over</u>	Enter	Exit	Enter	Exit
	AM: T = 0.95 (U) PM: T = 1.11 (U)	AM: T = 0.62 (U) + 25 PM: T = 0.82 (U) + 21	25%	75%	64%	36%
Townhouses	<u>Under 100 units</u>	<u>100 units and over</u>	Enter	Exit	Enter	Exit
	AM: T = 0.48 (U) PM: T = 0.83 (U)	AM: T = 0.53 (U) - 5 PM: T = 0.48 (U) + 35	17%	83%	67%	33%
Garden and Mid-Rise Apartments (one to nine stories)	<u>Under 75 units</u>	<u>75 units and over</u>	Enter	Exit	Enter	Exit
	AM: T = 0.44 (U) PM: T = 0.48 (U)	AM: T = 0.40 (U) + 3 PM: T = 0.47 (U) + 1	20%	80%	66%	34%
High-Rise Apartments (ten or more stories)	<u>Under 100 units</u>	<u>100 units and over</u>	Enter	Exit	Enter	Exit
	AM: T = 0.40 (U) PM: T = 0.46 (U)	AM: T = 0.29 (U) + 11 PM: T = 0.34 (U) + 12	25%	75%	61%	39%

T = weekday peak-hour vehicle trips      U = housing units

**Table A-5: Private School (Weekday Morning Peak Period)**

Applicable Size	Formula/Rate	Comments
K-8	AM: $T = N \times 0.92$	For the weekday morning peak period, a special study is required to determine the trip-generation rate for private schools with over 400 students.
K-12	AM: $T = N \times 0.78$	For the evening peak period, the applicant may be required to provide more data on site-generated traffic if it is anticipated that there will be major school-sponsored events during the evening peak period that would generate 50 or more weekday peak-hour trips.
Private schools predominately grades 10-12	Use the rates in the Institute of Transportation Engineer's <i>Trip Generation Report</i> for high schools (Land Use Code 530)	Trip-generation formulas or rates for private schools were developed based on the number of students during only the weekday morning peak period. Since classes for private schools end before the weekday evening peak period, a trip-generation rate during the weekday evening peak period was not developed.

Grade	Trip Purpose			Directional Distribution	
	New	Pass-by	Diverted	Enter	Exit
K-8	53%	15%	32%	54%	46%
K-12	65%	6%	29%	59%	41%

T = weekday peak-hour vehicle trips

N = number of students

**Table A-6: Automobile Filling Station**

Applicable Size		Formula/Rate					
For stations with/without car washes, convenience stores, and garages  T = N x (trip rate)		Trip Rates per Pumping Station <sup>1</sup> :		PM			
		Station with fuel sales and:		AM	Upcounty <sup>2</sup>	Downcounty <sup>2</sup>	
		1) no other facilities		11.31	14.96	14.96	
		2) garage		11.00	16.67	11.09	
		3) convenience store <sup>3</sup>		12.28	21.75	12.32	
		4) car wash and convenience store	17.33	21.75	15.08		
Percentage by Trip Purpose				Directional Distribution			
Weekday Peak Period	New	Pass-by	Diverted	AM		PM	
				Enter	Exit	Enter	Exit
AM	15%	60%	25%	53%	47%	51%	49%
PM	15%	50%	35%				

T = weekday peak-hour vehicle trips

N = number of pumping stations (or positions)

<sup>1</sup>A pumping station is defined as the area at which any one vehicle can stop and pump fuel at any one time. A pumping station could also be referred to as a fueling position in front of a single nozzle dispenser or a multi-produce dispenser

<sup>2</sup>Downcounty locations are considered the urbanized areas with a congestion standard of 1,500 or higher (See Table 1). All other locations are considered upcounty.

<sup>3</sup>Note that a convenience store as an accessory use to an automobile filling station must have less than 1,650 square feet of patron area. Otherwise, such land uses are considered to be a "convenience store with gasoline pumps" with trip-generation rates available in the ITE *Trip Generation Report* as Land Use Code 853.

**Table A-7: Senior/Elderly Housing**

Type of Facility	Formula/Rate
Retirement Community with active seniors and minimal support services	Use ITE Land Use Code 250
	<u>Formula</u>
Independent-Living Facilities with some support services plus minimal assisted-living and nursing home facilities	Up to 150 units: AM: T = 0.05 (U) PM: T = 0.04 (U)
	Over 150* units: AM: T = 0.08 (U) PM: T = 0.11 (U)
Assisted-Living Facilities	AM: T = 0.03 (U)
	PM: T = 0.06 (U)
Nursing Homes	As a land use requiring a special exception, site-generated traffic can be determined based on the statement of operations rather than using ITE's trip-generation data. Except for the administrative staff, employees usually arrive before the weekday morning peak period to prepare and serve breakfast. They usually stay through the weekday evening peak period to prepare and serve dinner.

T = weekday peak-hour vehicle trips      U = detached, attached apartment unit and/or room  
 \*Usually large facilities with different levels of support services; may be considered "life cycle" care

**Table A-8: Mini-Warehouse**

Type of Facility	Formula/Rate	Comments
On-Site Vehicle Rental		
No	AM: T = 0.01 (N)    PM: T = 0.01 (N)	Based on ITE Land Use Code 151 supplemented with more current local data
Yes	AM: T = 0.015 (N)    PM: T = 0.02 (N)	

T = weekday peak-hour vehicle trips      N = number of storage units

**Table A-9: Child Day-Care Center**

Applicable Size				Formula/Rate			
For 6 to 25 staff				AM: T = 1.75N + 17			
				PM: T = 2.06N + 16			
Peak Period	Trip Purpose			Directional Distribution			
	New	Pass-by	Diverted	AM		PM	
				Enter	Exit	Enter	Exit
AM	32%	27%	41%	53%	47%	49%	51%
PM	27%	12%	61%				

T = weekday peak-hour vehicle trips      N = number of staff



*Appendix B: Weekday Peak-Hour Trips Generated  
by Land Use for Use in Local Area Transportation  
Review*

*Table B-1: Number of Weekday Peak-Hour Trips Generated by General Office*

**General**

Bldg Size (SF of GFA)	Weekday Peak-Hour Trips	
	AM	PM
5,000	7	11
10,000	14	22
15,000	21	34
20,000	28	45
25,000	35	56
30,000	43	63
40,000	60	78
50,000	77	92
60,000	94	106
70,000	111	121
80,000	128	135
90,000	145	150
100,000	162	164
110,000	179	178
120,000	196	193
130,000	213	207
140,000	230	222
150,000	247	236
160,000	264	250
170,000	281	265
180,000	298	279
190,000	315	294
200,000	332	308
220,000	366	337
240,000	400	366
260,000	434	394
280,000	468	423
300,000	502	452
320,000	536	481
340,000	570	510
360,000	604	538
380,000	638	567
400,000	672	596
420,000	706	625
440,000	740	654
460,000	774	682
480,000	808	711
500,000	842	740

**Equations Used**

AM peak-hour trips = 1.38(GFA/1000)  
 PM peak-hour trips = 2.24(GFA/1000)

25,000 sf and over

AM peak-hour trips = 1.70 (GFA/1000) – 8  
 PM peak-hour trips = 1.44(GFA/1000) + 20

**Special Cases**

If a building is within 1,000 feet of a Metrorail station and outside the Beltway, reduce weekday peak-hour trips from chart at left.

Straight Line Distance to Station (in feet)	Percent Reduction in Trips	
	AM	PM
0	50%	40%
50	50%	38%
100	50%	36%
150	50%	34%
200	50%	32%
250	50%	30%
300	50%	28%
350	50%	26%
400	50%	24%
450	50%	22%
500	50%	20%
550	50%	18%
600	50%	16%
650	50%	14%
700	50%	12%
750	50%	10%
800	50%	8%
850	50%	6%
900	50%	4%
950	50%	2%
1,000	50%	0%

If a building is over 300,000 sf with a single employer and NOT part of an activity center with different land uses

Building Size (SF of GFA)	Weekday Peak-Hour Trips	
	AM	PM
300,001	625	559
320,000	659	588
340,000	693	617
360,000	727	645
380,000	761	674
400,000	795	703
420,000	829	732
440,000	863	761
460,000	897	789
480,000	931	818
500,000	965	847

**Equations Used**

AM peak-hour trips = 1.70(GFA/1000) + 115  
 PM peak-hour trips = 1.44(GFA/1000) + 127

Please note: Trip generation rates are calculated using the size of individual buildings, not the combined size of a group.

Table B-2: Number of Weekday Peak-Hour Trips Generated by General Retail

With Major Food Chain Store			Without Major Food Chain Store		
Bldg Size (SF of GLA)	Peak-Hour Trips		Bldg Size (SF of GLA)	Peak-Hour Trips	
	AM	PM		AM	PM
50,000	155	619	5,000	9	35
55,000	164	656	10,000	18	70
60,000	173	693	15,000	27	108
65,000	182	730	20,000	36	146
70,000	192	767	25,000	46	185
75,000	201	804	30,000	57	226
80,000	210	841	35,000	67	268
85,000	220	879	40,000	78	311
90,000	229	916	45,000	89	356
95,000	238	953	50,000	101	402
100,000	248	990	55,000	108	433
105,000	257	1027	60,000	116	464
110,000	266	1064	65,000	124	496
115,000	275	1101	70,000	132	529
120,000	285	1139	75,000	141	563
125,000	294	1176	80,000	149	597
130,000	303	1213	85,000	158	633
135,000	313	1250	90,000	167	668
140,000	322	1287	95,000	176	705
145,000	331	1324	100,000	186	743
150,000	340	1362	105,000	195	781
155,000	350	1399	110,000	205	820
160,000	359	1436	115,000	215	859
165,000	368	1473	120,000	225	899
170,000	378	1510	125,000	235	941
175,000	387	1547	130,000	246	982
180,000	396	1584	135,000	256	1025
185,000	405	1622	140,000	267	1068
190,000	415	1659	145,000	278	1112
195,000	424	1696	150,000	289	1157
200,000	433	1733	155,000	301	1203
			160,000	312	1249
			165,000	324	1296
			170,000	336	1344
			175,000	348	1393
			180,000	360	1442
			185,000	373	1492
			190,000	386	1543
			195,000	399	1594
			200,000	412	1646

**Equations Used**

50,000 to 200,000 sf

AM peak-hour trips =  $0.25 [7.43 (GLA/1000) + 247]$   
 PM peak-hour trips =  $7.43 (GLA/1000) + 247$

Adjustment Factor for No Major Food Chain Store

$P = 0.05 + 0.002 [200 - (GLA/1000)]$

Please note:  
Under 50,000 sf  
 No equations, since major food chain store is typically at least 50,000 sf

**Equations Used**

Under 50,000 sf

AM peak-hour trips =  $0.25 [12.36(GLA/1000)](1-P)$   
 PM peak-hour trips =  $[12.36 (GLA/1000)](1-P)$

50,000 to 200,000 sf

AM peak-hour trips =  $0.25 [7.43(GLA/1000) + 247](1-P)$   
 PM peak-hour trips =  $[7.43(GLA/1000) + 247](1-P)$

*Table B-3: Number of Weekday Peak-Hour Trips Generated by Residential Units*

No. of Units	Single-Family		Townhouse		Garden Apartment		High-Rise Apartments	
	AM	PM	AM	PM	AM	PM	AM	PM
1	1	1	0	1	0	0	0	0
5	5	6	2	4	2	2	2	2
10	10	11	5	8	4	5	4	5
15	14	17	7	12	7	7	6	7
20	19	22	10	17	9	10	8	9
25	24	28	12	21	11	12	10	12
30	29	33	14	25	13	14	12	14
35	33	39	17	29	15	17	14	16
40	38	44	19	33	18	19	16	18
45	43	50	22	37	20	22	18	21
50	48	56	24	42	22	24	20	23
55	52	61	26	46	24	26	22	25
60	57	67	29	50	26	29	24	28
65	62	72	31	54	29	31	26	30
70	67	78	34	58	31	34	28	32
75	72	83	36	62	33	36	30	35
80	75	87	38	66	35	39	32	37
85	78	91	41	71	37	41	34	39
90	81	95	43	75	39	43	36	41
95	84	99	46	79	41	46	39	44
100	87	103	48	83	43	46	40	46
110	93	111	53	88	47	53	43	49
120	99	119	59	93	51	57	46	53
130	106	128	64	97	55	62	49	56
140	112	136	69	102	59	67	52	60
150	118	144	75	107	64	72	55	63
160	124	152	80	112	67	76	57	66
170	130	160	85	117	71	81	60	70
180	137	169	90	121	75	86	63	73
190	143	177	96	126	79	90	66	77
200	149	185	101	131	83	95	69	80
210	155	193	106	136	87	100	72	83
220	161	201	112	141	91	104	75	87
230	168	210	117	145	95	109	78	90
240	174	218	122	150	99	114	81	94
250	180	226	128	155	103	119	84	97
275	196	247	141	167	113	130	91	106
300	211	267	154	179	123	142	98	114
325	227	288	167	191	133	154	105	123
350	242	308	181	203	143	166	113	131
375	258	329	194	215	153	177	120	140
400	273	349	207	227	164	189	127	148
425	289	370	220	239	173	201	134	157
450	304	390	234	251	183	213	142	165
475	320	411	247	263	193	224	149	174
500	320	431	260	275	203	236	156	182
550	366	472	287	299	223	260	171	199
600	397	513	313	323	243	283	185	216

**Equations Used**

**SINGLE-FAMILY DETACHED**

Under 75 Units

AM peak-hour trips = 0.95(# of units)  
 PM peak-hour trips = 1.11(# of units)

75 Units and Over

AM peak-hour trips = 0.62(# of units) + 25  
 PM peak-hour trips = 0.82(# of units) + 21

**TOWNHOUSES OR SINGLE-FAMILY ATTACHED**

Under 100 Units

AM peak-hour trips = 0.48(# of units)  
 PM peak-hour trips = 0.83(# of units)

100 Units and Over

AM peak-hour trips = 0.53(# of units) - 5  
 PM peak-hour trips = 0.48(# of units) + 35

**GARDEN & MID-RISE APARTMENTS**  
 (one to nine stories)

Under 75 Units

AM peak-hour trips = 0.44(# of units)  
 PM peak-hour trips = 0.48(# of units)

75 Units and Over

AM peak-hour trips = 0.40(# of units) + 3  
 PM peak-hour trips = 0.47(# of units) + 1

**HIGH-RISE APARTMENTS**  
 (ten or more stories)

Under 100 Units

AM peak-hour trips = 0.40(# of units)  
 PM peak-hour trips = 0.46(# of units)

100 Units and Over

AM peak-hour trips = 0.29(# of units) + 11  
 PM peak-hour trips = 0.34(# of units) + 12

*Table B-4: Number of Weekday Peak-Hour Trips Generated by a Child Day-Care Center*

Number of Staff	Total AM Trips	Total PM Trips
6	28	28
7	29	30
8	31	32
9	33	35
10	35	37
11	36	39
12	38	41
13	40	43
14	42	45
15	43	47
16	45	49
17	47	51
18	49	53
19	50	55
20	52	57
21	54	59
22	56	61
23	57	63
24	59	65
25	61	68

Peak Period	Directional Distribution		Trip Purpose		
	Entering	Exiting	New	Pass-by	Diverted
AM	53%	47%	32%	27%	41%
PM	49%	51%	27%	12%	61%

~~For child day care centers with staffing fewer than five persons, the traffic impact is considered to have a De minimis impact (i.e., five or fewer new weekday peak-hour trips during either the morning or evening peak period) unless~~

For six or fewer staff, there is no need for a traffic study to satisfy LATR. The applicant ~~must~~ may proffer a specific schedule of the arrival and departure of those staff arriving during weekday peak periods specified in the special exception statement of operation.

*Table B-5: Number of Weekday Peak-Hour Trips Generated by a Private School*

Number of Students Enrolled	School Program for Kindergarten to:	
	12 <sup>th</sup> Grade	8 <sup>th</sup> Grade
25	20	23
50	38	46
75	59	69
100	78	92
125	98	115
150	117	138
175	137	161
200	156	184
225	176	207
250	195	230
275	215	253
300	234	276
325	254	299
350	273	322
375	293	345
400	312	368

Please note: For over 400 students, a special study is required to determine the trip-generation rate.

*Table B-6: Number of Weekday Peak-Hour Trips Generated by an Automobile Filling Station*

No. of Pumping Stations	With Fuel Only		With Fuel and Garage Only				With Fuel and Convenience Store Only				With Fuel, Car Washes, and Convenience Store			
	All Areas		Upcounty		Downcounty		Upcounty		Downcounty		Upcounty		Downcounty	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	11	15	11	17	11	11	12	22	12	12	17	22	17	15
2	23	30	22	33	22	22	25	44	25	25	35	44	35	30
3	34	45	33	50	33	33	37	65	37	37	52	65	52	45
4	45	60	44	67	44	44	49	87	49	49	69	87	69	60
5	57	75	55	83	55	55	61	109	61	62	87	109	87	75
6	68	90	66	100	66	67	74	131	74	74	104	131	104	90
7	79	105	77	117	77	78	86	152	86	86	121	152	121	106
8	90	120	88	133	88	89	98	174	98	99	139	174	139	121
9	102	135	99	150	99	100	111	196	111	111	156	196	156	136
10	113	150	110	167	110	111	123	218	123	123	173	218	173	151
11	124	165	121	183	121	122	135	239	135	136	191	239	191	166
12	136	180	132	200	132	133	147	261	147	148	208	261	208	181
13	147	194	143	217	143	144	160	283	160	160	225	283	225	196
14	158	209	154	233	154	155	172	305	172	172	243	305	243	211
15	170	224	165	250	165	166	184	326	184	185	260	326	260	226
16	181	239	176	267	176	177	196	348	196	197	277	348	277	241
17	192	254	187	283	187	189	209	370	209	209	295	370	295	256
18	204	269	198	300	198	200	221	392	221	222	312	392	312	271
19	215	284	209	317	209	211	233	413	233	234	329	413	329	287
20	226	299	220	333	220	222	246	435	246	246	347	435	347	302
Rate per Pumping Station	11.31	14.96	11.00	16.67	11.00	11.09	12.28	21.75	12.28	12.32	17.33	21.75	17.33	15.08

*Appendix C: Weekday Peak-Hour Trip-Generation Rates and Directional Splits for the Bethesda, Friendship Heights, and Silver Spring CBDs*

*Table C-1: Weekday Morning and Evening Peak-Hour Trip-Generation Rates for the Bethesda and Friendship Heights CBDs*

Land Use Per Trip Rate Unit	Rate			Rate		
	AM Peak-Hour Vehicle Trips per Unit of Development	% In	% Out	PM Peak-Hour Vehicle Trips per Unit of Development	% In	% Out
<b>Office</b> (1,000 sf)	1.50	85	15	1.50	25	75
<b>Retail</b> (1,000 sf)	0.65	50	50	2.60	50	50
<b>Grocery Store</b> (1,000 sf)	1.22	70	30	6.20	50	50
<b>Residential High Rise</b> (dwelling unit)	0.30	20	80	0.30	67	33
<b>Residential Garden Apt.</b> (dwelling unit)	0.45	20	80	0.45	67	33
<b>Residential Townhouse</b> (dwelling unit)	0.45	20	80	0.45	67	33
<b>Residential Single-Family</b> (dwelling unit)	0.80	25	75	0.80	67	33
<b>Hotel</b> (room)	0.22	60	40	0.22	55	45
<b>Miscellaneous Service</b> (1,000 sf)	1.30	50	50	1.30	50	50
<b>Hospital</b> (employee)	0.33	70	30	0.29	30	70
<b>Industrial</b> (1,000 sf)	1.10	85	15	1.10	15	85

*Table C-2: Weekday Morning and Evening Peak-Hour Trip-Generation Rates for the Silver Spring CBD*

Land Use	Morning			Evening		
	Rate	% In	% Out	Rate	% In	% Out
<b>Office</b> (existing vacant/1,000 sf)	1.60	85	15	1.60	15	85
<b>Office</b> (pending + future/1,000 sf)	1.40	85	15	1.40	15	85
<b>Industrial</b> (1,000 sf)	1.00	85	15	1.00	15	85
<b>Retail</b> (1,000 sf)	0.50	50	50	2.00	50	50
<b>Residential</b> (high rise)	0.30	20	80	0.30	70	30
<b>Residential</b> (townhouse)	0.45	20	80	0.45	67	33
<b>Hotel</b> (room)	0.20	60	40	0.20	55	45



# *Appendix D: The Annual Growth Policy's Transportation Facilities Adequacy Test*

## The Annual Growth Policy's Transportation Facilities Adequacy Test

The Annual Growth Policy's transportation test is administered on a local area basis. Previously (prior to July 1, 2004), the AGP also administered a transportation adequacy test on a policy area basis. The AGP's transportation test is called Local Area Transportation Review (LATR). Since the mid 1970s, the Planning Board has used LATR to determine if a proposed preliminary plan of subdivision will cause unacceptable local traffic congestion at nearby critical intersections. Local Area Transportation Review is required only for subdivisions that generate 30 or more weekday peak hour automobile trips.

In administering LATR, the Planning Board must not approve a subdivision if it finds that an unacceptable peak hour level of congestion will result after taking into account existing and programmed roads and transit. If a proposed subdivision causes conditions at a nearby intersection or roadway link to be worse than the standard, the applicant may make intersection or roadway link improvements or provide trip reduction measures to bring the intersection or roadway link back to the standard and gain preliminary plan approval. If the subdivision will affect an intersection or roadway link for which congestion is already unacceptable, then the Planning Board may approve the subdivision only if it does not make the situation worse.

Landowners may form development districts to finance the transportation improvements needed to pass AGP transportation tests.

The *Alternative Review Procedure for Metro Station Policy Areas* allows development in designated areas ~~atop most within~~ Metro Stations Policy Areas to meet LATR test obligations by submitting a traffic study, mitigating 50 percent of their trips, making a payment toward transportation improvements, participating in the area's transportation management organization, and submitting a traffic study to identify intersection or roadway link improvements that may be built with public funds.

The *Alternative Review Procedure for Golf Course Communities* is available to any planned unit development in the Fairland/White Oak policy area that includes a golf course or other major amenity that is developed on a public/private partnership basis. Such development need not take any action under Local Area Transportation Review if the applicant pays to the County a Development Approval Payment and submits a traffic study.

The *Alternative Review Procedure for Corporate Headquarters Facilities* is available to certain non-residential development projects that are an expansion of an existing

corporate headquarters facility. Qualifying projects can meet LATR requirements by paying the Development Approval Payment, meeting mode share goals set by the Planning Board, submitting a traffic study, and other conditions.

The *Alternative Review Procedure for Strategic Economic Development Projects* is available to certain non-residential development projects that have been designated “Strategic Economic Development Projects” by the County Council. Qualifying projects can meet LATR requirements by paying double the applicable transportation impact tax and submitting a traffic study.



# *Appendix E: Trip Distribution and Traffic Assignment Guidelines*

## **Introduction**

This document provides trip distribution guidance to be used in all traffic studies prepared for development sites in Montgomery County. Vehicle trip distribution and trip assignment are described in Sections VII-D and VII-F, respectively, of the *Local Area Transportation Review Guidelines*. For most development sites, the process described in the LATR Guidelines is a combination of trip distribution and traffic assignment.

## **Definitions**

**Trip distribution** specifies the location where trips, which originate at a development site, are destined to and the origin of trips, which are destined to a development site.

**Traffic assignment** specifies the individual local area ~~roadways and~~ intersections used to access (enter and leave) a development site.

## **Discussion**

The tables in this document provide generalized assumptions for trip distribution for both background development(s) and the development site. For the purpose of reviewing trip distribution, Transportation Planning staff divided the region into 16 geographic areas, called **super-districts**. Eleven of these super-districts are in Montgomery County, as shown in Figure E-1. The remaining five super-districts represent neighboring jurisdictions.

The trip distribution assumptions are contained in Tables E-1 through E-11 for developments within each of the eleven super-districts in Montgomery County. For each super-district, the assumed distribution of trips for general office development and for residential development is listed. For instance, 18.1% of trips generated by a general office development in Germantown (see Table E-9) would be expected to travel to or from Frederick County. However, only 2.0% of trips generated by a residential development in Germantown would be expected to travel to or from Frederick County.

The trip distribution assumptions in these tables are based on 1990 census journey-to-work information, updated to reflect regional housing and employment totals as of 1998. The distribution for residential development in each super-district is based on the reported workplace locations for 1990 census respondents who lived in that super-district. Similarly, the distribution for office development for each super-district is based on the distribution of all census households nationwide that reported a workplace in that super-district. Trip distribution for other land uses will

be decided based on consultation with staff and the applicant prior to submission of the traffic study.

The application of the trip distribution information in Tables E-1 through E-11 is straightforward in cases where a traffic study has a limited number of alternate routes. In other cases, judgment is required to convert the trip distribution information into traffic assignment information useful for conducting the Local Area Transportation Review.

Figure E-2 provides an example of how the trip distribution information can be converted to traffic assignment information for a hypothetical case in the Rockville/North Bethesda super-district with both office and residential components.

The leftmost column of data shows the trip distribution by super-district as found in Table E-4 (used for development in the Rockville/North Bethesda super-district). The information located in the center of the table (inside the boxes) describes the assumed route, or assignment, taken for trips between the site and each super-district. *The data inside the boxes must be developed using judgment and confirmed by Transportation Planning staff.* The rightmost portion of the table multiplies the percent of trips distributed to each super-district by the percent of trips from that super-district assigned to each route to calculate the percent of total site-generated trips using each combination of distribution and assignment. The assignment data is then summed to develop an aggregate trip assignment for the trips generated by the office and residential components of the site, respectively.

Figure E-1: Super Districts in Montgomery County

Montgomery County Department of Park and Planning  
Travel/2 Super Districts

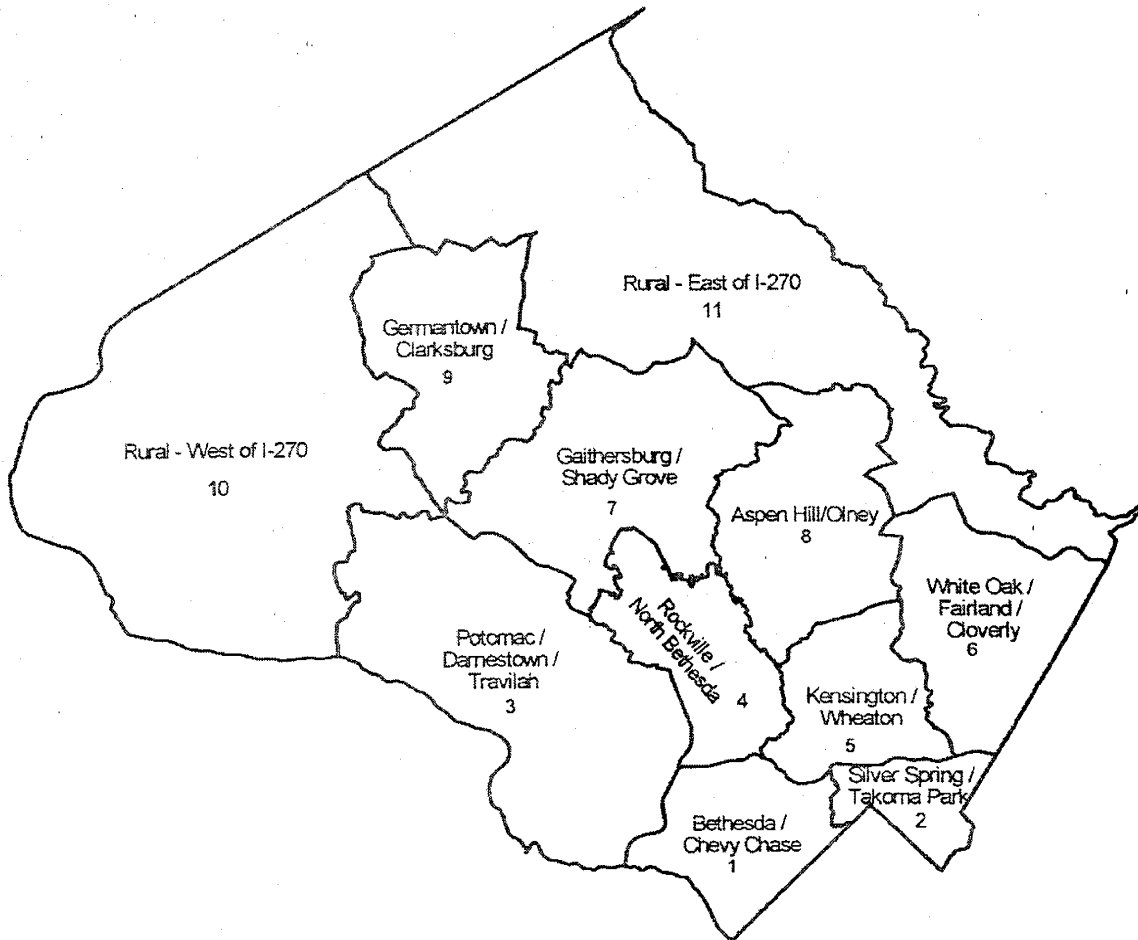


Figure 1

□ Super District Borders





Figure E-2: Trip Distribution Converted to Traffic Assignment

**Trip Distribution - Assignment Matrix**  
**Hypothetical Case in North Bethesda with both Office and Residential Components**

Part 1. Office Component	Trip distribution by super-district	Trip assignment for origin by super-district					TOTAL	Trip assignment for development case					TOTAL
		Montrose west	MD 355 north	Randolph east	MD 355 south	MD 187 south		Montrose west	MD 355 north	Randolph east	MD 355 south	MD 187 south	
Bethesda	3.5%				50%	50%	100%	0.0%	0.0%	0.0%	1.8%	1.8%	3.5%
Silver Spring	2.2%				100%	100%	100%	0.0%	0.0%	0.0%	2.2%	2.2%	2.2%
Potomac	8.0%	80%				20%	100%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%
Rockville	12.8%	25%	75%				100%	3.2%	9.6%	0.0%	0.0%	0.0%	12.8%
Kensington	7.2%			80%		20%	100%	0.0%	0.0%	5.8%	0.0%	0.0%	7.2%
Fairland	4.1%			80%		20%	100%	0.0%	0.0%	3.3%	0.0%	0.0%	4.1%
Gaithersburg	14.4%	75%	25%				100%	10.8%	3.6%	0.0%	0.0%	0.0%	14.4%
Olney	8.5%	20%	50%	30%			100%	1.7%	4.3%	2.6%	0.0%	0.0%	8.5%
Germanstown	6.5%	90%	10%				100%	5.9%	0.7%	0.0%	0.0%	0.0%	6.5%
Agricultural Area (West)	0.9%	100%					100%	0.9%	0.0%	0.0%	0.0%	0.0%	0.9%
Agricultural Area (East)	4.2%	40%	40%	20%			100%	1.7%	1.7%	0.8%	0.0%	0.0%	4.2%
Washington, DC	3.6%	70%			30%		100%	2.5%	0.0%	0.0%	1.1%	0.0%	3.6%
Prince George's County	8.8%				100%		100%	0.0%	0.0%	0.0%	8.8%	8.8%	8.8%
Virginia	7.8%	80%	10%			10%	100%	4.6%	0.0%	0.0%	0.0%	0.0%	7.8%
Frederick County	4.6%	100%	10%			80%	100%	0.0%	0.3%	0.3%	2.3%	2.3%	4.6%
Howard County	2.9%						100%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%
<b>TOTAL</b>	<b>100.0%</b>						<b>100.0%</b>	<b>43.9%</b>	<b>20.1%</b>	<b>13.5%</b>	<b>18.4%</b>	<b>4.1%</b>	<b>100.0%</b>

Part 2. Residential Component	Trip distribution by super-district	Trip assignment for origin by super-district					TOTAL	Trip assignment for development case					TOTAL
		Montrose west	MD 355 north	Randolph east	MD 355 south	MD 187 south		Montrose west	MD 355 north	Randolph east	MD 355 south	MD 187 south	
Bethesda	15.6%				50%	50%	100%	0.0%	0.0%	0.0%	7.8%	7.8%	15.6%
Silver Spring	2.4%				100%	100%	100%	0.0%	0.0%	0.0%	2.4%	2.4%	2.4%
Potomac	3.3%	80%				20%	100%	2.6%	0.0%	0.0%	0.0%	0.0%	3.3%
Rockville	31.0%	25%	75%				100%	7.8%	23.3%	0.0%	0.0%	0.0%	31.0%
Kensington	2.6%			80%		20%	100%	0.0%	0.0%	2.1%	0.0%	0.0%	2.6%
Fairland	0.7%			80%		20%	100%	0.0%	0.0%	0.5%	0.0%	0.0%	0.7%
Gaithersburg	10.6%	75%	25%				100%	8.0%	2.7%	0.0%	0.0%	0.0%	10.6%
Olney	1.7%	20%	50%	30%			100%	0.3%	0.9%	0.5%	0.0%	0.0%	1.7%
Germanstown	1.0%	90%	10%				100%	0.9%	0.1%	0.0%	0.0%	0.0%	1.0%
Agricultural Area (West)	0.0%	100%					100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Agricultural Area (East)	0.2%	40%	40%	20%			100%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%
Washington, DC	13.9%	70%			30%		100%	9.7%	0.0%	0.0%	4.2%	0.0%	13.9%
Prince George's County	6.1%				100%		100%	0.0%	0.0%	0.0%	6.1%	6.1%	6.1%
Virginia	9.7%	80%	10%			10%	100%	7.8%	0.0%	1.0%	0.0%	0.0%	9.7%
Frederick County	0.5%	100%	10%			80%	100%	0.5%	0.0%	0.0%	0.0%	0.0%	0.5%
Howard County	0.7%						100%	0.0%	0.1%	0.1%	0.6%	0.6%	0.7%
<b>TOTAL</b>	<b>100.0%</b>						<b>100.0%</b>	<b>37.7%</b>	<b>27.0%</b>	<b>4.2%</b>	<b>21.7%</b>	<b>9.4%</b>	<b>100.0%</b>

*Table E-1: Trip Distribution Report in Super District 1:  
Bethesda / Chevy Chase*

Auto-Driver Trip Distribution for Development in Super District 1:  
Bethesda/Chevy Chase

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	11.7%	22.8%
2. Silver Spring/Takoma Park	3.8%	2.1%
3. Potomac/Darnestown/Travilah	7.3%	1.8%
4. Rockville/North Bethesda	9.4%	9.8%
5. Kensington/Wheaton	8.7%	1.6%
6. White Oak/Fairland/Cloverly	4.3%	0.7%
7. Gaithersburg/Shady Grove	7.5%	4.0%
8. Aspen Hill/Olney	5.1%	0.4%
9. Germantown/Clarksburg	3.3%	0.2%
10. Rural: West of I-270	0.6%	0.0%
11. Rural: East of I-270	2.0%	0.15%
12. Washington, DC	7.4%	39.5%
13. Prince George's County	12.4%	4.6%
14. Virginia	12.2%	11.7%
15. Frederick County	2.1%	0.2%
16. Howard County	2.2%	0.5%

*Table E-2: Trip Distribution Report in Super District 2:  
Silver Spring / Takoma Park*

Auto-Driver Trip Distribution for Development in Super District 2:  
Silver Spring/Takoma Park

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	2.2%	9.1%
2. Silver Spring/Takoma Park	11.5%	13.3%
3. Potomac/Darnestown/Travilah	2.2%	0.9%
4. Rockville/North Bethesda	3.0%	7.7%
5. Kensington/Wheaton	10.0%	4.6%
6. White Oak/Fairland/Cloverly	11.9%	2.7%
7. Gaithersburg/Shady Grove	3.9%	4.2%
8. Aspen Hill/Olney	6.3%	0.8%
9. Germantown/Clarksburg	1.3%	0.6%
10. Rural: West of I-270	0.1%	0.6%
11. Rural: East of I-270	2.8%	0.2%
12. Washington, DC	7.2%	32.5%
13. Prince George's County	24.5%	12.8%
14. Virginia	6.4%	8.9%
15. Frederick County	1.1%	0.2%
16. Howard County	5.6%	1.4%

*Table E-3: Trip Distribution Report in Super District 3:  
Potomac/Darnestown/Travilah*

Auto-Driver Trip Distribution for Development in Super District 3:  
Potomac/Darnestown/ Travilah

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	5.7%	13.05
2. Silver Spring/Takoma Park	2.4%	1.9%
3. Potomac/Darnestown/Travilah	21.0%	6.2%
4. Rockville/North Bethesda	12.1%	20.5%
5. Kensington/Wheaton	6.8%	1.4%
6. White Oak/Fairland/Cloverly	2.3%	0.7%
7. Gaithersburg/Shady Grove	11.1%	13.3%
8. Aspen Hill/Olney	5.1%	0.6%
9. Germantown/Clarksburg	4.5%	1.7%
10. Rural: West of I-270	1.1%	0.1%
11. Rural: East of I-270	2.2%	0.2%
12. Washington, DC	3.8%	22.1%
13. Prince George's County	7.2%	5.1%
14. Virginia	10.4%	12.4%
15. Frederick County	2.8%	0.4%
16. Howard County	1.5%	0.4%

*Table E-4: Trip Distribution Report in Super District 4:  
Rockville/North Bethesda*

Auto-Driver Trip Distribution for Development in Super District 4:  
Rockville/North Bethesda

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	3.5%	15.6%
2. Silver Spring/Takoma Park	2.2%	2.4%
3. Potomac/Darnestown/Travilah	8.0%	3.3%
4. Rockville/North Bethesda	12.8%	31.0%
5. Kensington/Wheaton	7.2%	2.6%
6. White Oak/Fairland/Cloverly	4.1%	0.7%
7. Gaithersburg/Shady Grove	14.4%	10.6%
8. Aspen Hill/Olney	8.5%	1.7%
9. Germantown/Clarksburg	6.5%	1.0%
10. Rural: West of I-270	0.9%	0.0%
11. Rural: East of I-270	4.2%	0.2%
12. Washington, DC	3.6%	13.9%
13. Prince George's County	8.8%	6.1%
14. Virginia	7.8%	9.7%
15. Frederick County	4.6%	0.5%
16. Howard County	2.9%	0.7%

*Table E-5: Trip Distribution Report in Super District 5:  
Kensington / Wheaton*

Auto-Driver Trip Distribution for Development in Super District 5:  
Kensington/Wheaton

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	2.7%	12.3%
2. Silver Spring/Takoma Park	6.2%	6.9%
3. Potomac/Darnestown/Travilah	2.6%	1.6%
4. Rockville/North Bethesda	5.1%	14.8%
5. Kensington/Wheaton	26.0%	11.1%
6. White Oak/Fairland/Cloverly	10.6%	2.2%
7. Gaithersburg/Shady Grove	5.5%	6.0%
8. Aspen Hill/Olney	10.3%	2.0%
9. Germantown/Clarksburg	2.1%	0.6%
10. Rural: West of I-270	0.2%	0.0%
11. Rural: East of I-270	4.3%	0.4%
12. Washington, DC	3.7%	22.6%
13. Prince George's County	11.9%	9.5%
14. Virginia	4.1%	8.2%
15. Frederick County	1.5%	0.2%
16. Howard County	3.2%	1.5%

*Table E-6: Trip Distribution Report in Super District 6:  
White Oak / Fairland / Cloverly*

Auto-Driver Trip Distribution for Development in Super District 6:  
White Oak/Fairland/ Cloverly

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	1.3%	6.8%
2. Silver Spring/Takoma Park	4.5%	9.0%
3. Potomac/Darnestown/Travilah	1.7%	0.6%
4. Rockville/North Bethesda	1.7%	9.3%
5. Kensington/Wheaton	6.1%	5.0%
6. White Oak/Fairland/Cloverly	23.5%	9.3%
7. Gaithersburg/Shady Grove	3.2%	3.8%
8. Aspen Hill/Olney	6.2%	1.4%
9. Germantown/Clarksburg	0.4%	0.4%
10. Rural: West of I-270	0.1%	0.0%
11. Rural: East of I-270	2.8%	1.1%
12. Washington, DC	3.7%	23.4%
13. Prince George's County	26.4%	20.1%
14. Virginia	3.4%	7.1%
15. Frederick County	1.6%	0.0%
16. Howard County	13.4%	2.7%

*Table E-7: Trip Distribution Report in Super District 7:  
Gaithersburg/Shady Grove*

Auto-Driver Trip Distribution for Development in Super District 7:  
Gaithersburg/Shady Grove

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	1.8%	8.5%
2. Silver Spring/Takoma Park	1.5%	2.2%
3. Potomac/Darnestown/Travilah	6.6%	2.1%
4. Rockville/North Bethesda	5.6%	23.7%
5. Kensington/Wheaton	3.7%	1.95
6. White Oak/Fairland/Cloverly	2.2%	0.9%
7. Gaithersburg/Shady Grove	25.2%	32.4%
8. Aspen Hill/Olney	5.3%	1.8%
9. Germantown/Clarksburg	10.9%	3.4%
10. Rural: West of I-270	1.6%	0.1%
11. Rural: East of I-270	7.1%	0.8%
12. Washington, DC	2.5%	8.4%
13. Prince George's County	6.7%	4.0%
14. Virginia	4.6%	7.9%
15. Frederick County	12.1%	1.3%
16. Howard County	2.6%	0.6%

*Table E-8: Trip Distribution Report in Super District 8:  
Aspen Hill/Olney*

Auto-Driver Trip Distribution for Development in Super District 8:  
Aspen Hill/Olney

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	1.2%	9.3%
2. Silver Spring/Takoma Park	1.9%	5.5%
3. Potomac/Darnestown/Travilah	1.9%	1.5%
4. Rockville/North Bethesda	6.1%	22.5%
5. Kensington/Wheaton	8.6%	5.7%
6. White Oak/Fairland/Cloverly	5.5%	2.8%
7. Gaithersburg/Shady Grove	9.4%	11.0%
8. Aspen Hill/Olney	26.0%	8.1%
9. Germantown/Clarksburg	3.1%	0.8%
10. Rural: West of I-270	0.1%	0.1%
11. Rural: East of I-270	14.1%	1.3%
12. Washington, DC	2.2%	15.2%
13. Prince George's County	6.4%	7.7%
14. Virginia	3.1%	6.2%
15. Frederick County	4.7%	0.4%
16. Howard County	5.7%	1.9%

*Table E-9: Trip Distribution Report in Super District 9:  
Germantown / Clarksburg*

Auto-Driver Trip Distribution for Development in Super District 9:  
Germantown/ Clarksburg

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	0.6%	8.1%
2. Silver Spring/Takoma Park	1.4%	1.6%
3. Potomac/Darnestown/Travilah	5.5%	1.8%
4. Rockville/North Bethesda	3.5%	22.9%
5. Kensington/Wheaton	2.3%	1.6%
6. White Oak/Fairland/Cloverly	1.6%	0.2%
7. Gaithersburg/Shady Grove	17.2%	30.2%
8. Aspen Hill/Olney	2.5%	1.3%
9. Germantown/Clarksburg	25.2%	10.5%
10. Rural: West of I-270	2.6%	0.1%
11. Rural: East of I-270	8.0%	1.0%
12. Washington, DC	0.7%	7.0%
13. Prince George's County	5.8%	3.8%
14. Virginia	3.0%	7.4%
15. Frederick County	18.1%	2.0%
16. Howard County	2.1%	0.5%

*Table E-10: Trip Distribution Report in Super District 10:  
Rural – West of I-270*

Auto-Driver Trip Distribution for Development in Super District 10:  
Rural – West of I-270

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	0.8%	9.7%
2. Silver Spring/Takoma Park	2.7%	0.7%
3. Potomac/Darnestown/Travilah	4.3%	2.9%
4. Rockville/North Bethesda	2.1%	20.1%
5. Kensington/Wheaton	0.8%	1.2%
6. White Oak/Fairland/Cloverly	0.0%	0.4%
7. Gaithersburg/Shady Grove	7.0%	30.0%
8. Aspen Hill/Olney	3.0%	0.4%
9. Germantown/Clarksburg	4.1%	7.1%
10. Rural: West of I-270	47.7%	9.1%
11. Rural: East of I-270	1.7%	0.5%
12. Washington, DC	0.0%	7.4%
13. Prince George's County	2.1%	1.7%
14. Virginia	4.8%	4.5%
15. Frederick County	18.9%	3.8%
16. Howard County	0.0%	0.5%

*Table E-11: Trip Distribution Report in Super District 11:  
Rural – East of I-270*

Auto-Driver Trip Distribution for Development in Super District 11:  
Rural – East of I-270

<b>Trip Distribution to Super District for</b>	<b>Office Development</b>	<b>Residential Development</b>
1. Bethesda/Chevy Chase	0.4%	5.9%
2. Silver Spring/Takoma Park	0.8%	3.9%
3. Potomac/Darnestown/Travilah	1.3%	1.0%
4. Rockville/North Bethesda	1.3%	17.7%
5. Kensington/Wheaton	3.4%	3.8%
6. White Oak/Fairland/Cloverly	8.8%	2.1%
7. Gaithersburg/Shady Grove	9.0%	23.5%
8. Aspen Hill/Olney	8.8%	6.9%
9. Germantown/Clarksburg	4.9%	4.1%
10. Rural: West of I-270	0.4%	0.1%
11. Rural: East of I-270	27.5%	6.7%
12. Washington, DC	0.5%	7.35
13. Prince George's County	9.8%	7.0%
14. Virginia	0.5%	5.2%
15. Frederick County	10.5%	2.0%
16. Howard County	12.1%	2.85





*Appendix F: Prioritization Strategy, Planning Board Draft of the Countywide Bikeways Functional Master Plan (as of April 2004)*

In April 2004, the Montgomery County Planning Board approved the Planning Board (Final) Draft of the Countywide Bikeways Functional Master Plan, the County's first comprehensive, countywide plan update for bicycle transportation in 25 years. The plan establishes a vision of an extensive network of bikeways of many types throughout the County, to meet the needs of different cycling groups and encourage bicycle use for work and other trips. Under the prioritization strategy for the bikeways plan, any bikeway providing a direct connection, or serving as part of a vital connection, to a countywide destination or activity center is considered a high priority.

Following are lists of bikeways categorized by activity center in order to inform the public, decision makers and developers on which bikeways are higher priorities in the context of this plan. This list is borrowed from pages 74 through 79 of the plan. Also included at the end of this appendix is Table 2-2 from the plan that lists all countywide bikeways organized by community planning area. Including the table in this appendix allows for a quick reference to full descriptions of the countywide bikeway priorities listed below.

Major activity centers and countywide destinations, as defined in Chapter 2, include:

- Transit Stations (Metrorail, MARC and Corridor Cities Transitway)
- Municipalities, Central Business Districts (CBDs) and Town Centers
- Major employment centers located outside municipalities and CBDs
- Hard surface park trail corridors

## Bikeways Connecting to Transit

### **Metrorail**

The following bikeways provide direct or near direct connections to Metrorail stations.

#### Bethesda

- Woodmont Avenue (BL-6), Elm Street (BL-7), Edgemoor Lane (SR-8), Norfolk Avenue (p/o SR-11), Bethesda Avenue (SR-9)

#### Forest Glen

- Forest Glen Road (SP-13, SR-22, SR-23), Georgia Avenue (SR-19), Georgia Avenue alternative (SR-20), Forest Glen-Silver Spring connector (SR-52)

#### Friendship Heights

- Western Avenue (SP-7), Willard Avenue (BL-8, SR-12), Wisconsin Avenue path (SP-8), River Road (DB-2), other bikeways in the D.C. bicycle master plan that connect or lead to the Metro station.

#### Glenmont

- Georgia Avenue (SP-29), Layhill Road (BL-18), Randolph Road (SP-26), Glenallen Road (SP-24)

### Grosvenor

- Tuckerman Lane (BL-23, SP-42), Beach Drive (SR-16), Grosvenor Lane (SR-36), Strathmore Avenue (SR-18), Strathmore Avenue - Grosvenor Metro connector (SP-11), Garrett Park - Grosvenor Metro connector (SR-57)

### Medical Center - NIH

- Wisconsin Avenue/Woodmont Avenue (SP-62), West Cedar Lane (SP-4), Jones Bridge Road (SR-3), Fernwood Road/Greentree Road (BL-4), Cedar Lane/Summit Avenue (SR-54), Beach Drive (SR-16)

### Rockville

- Norbeck Road (SP-52, SR-38), Falls Road (DB-19), Gude Drive (SP-51), Darnestown Road - south (SP-59), multiple bikeways in the City of Rockville Bikeway Master Plan

### Shady Grove

- Redland Road (BL-29), Needwood Road (DB-14), Shady Grove Road-East (BL-30), Shady Grove Road - West (DB-15), Crabbs Branch Way (SP-53), Frederick Road (SP-64), Corridor Cities Transitway bike path (SP-66), Bowie Mill Road (BL-20), Muncaster Mill Road (BL-35), numerous bikeways in the City of Rockville bikeway master plan that pass through or adjacent to the King Farm community

### Silver Spring

- Interim Capital Crescent Trail (SR-63), Georgetown Branch Trail (SP-6), Metropolitan Branch Trail (SP-12), Wayne Avenue Green Trail (SP-10), Sligo Creek Parkway (SR-14), Sligo Creek Trail-Silver Spring Metro connector (SR-15), Colesville Road/MD 384 connector to Silver Spring Metro Station (DB-6), East-West Highway (SP-9), Columbia Pike/ US 29 - south (SR-31), Forest Glen-Silver Spring CBD Connector (SR-52)

### Takoma Park (D.C.)

- Metropolitan Branch Trail (SP-12), Carroll Avenue (BL-10), Piney Branch Road (SR-49), Sligo Creek Parkway (SR-14), Sligo Creek-Takoma Metrorail Connector (SR-51)

### Twinbrook

- North Bethesda Trail (SP-41), Rockville Pike (SP-49), Twinbrook Parkway (BL-28), Nicholson Lane/Parklawn Drive (BL-27), Montrose Parkway (SP-50), Randolph Road (BL-15), Nebel Street extended (SP-47)

### Wheaton

- Veirs Mill Road alternative (SR-21), Plyers Mill Road (SR-24), Georgia Avenue (SR-19), Georgia Avenue alternative (SR-20), University Boulevard (DB-5)

### White Flint

- North Bethesda Trail (SP-41), Tilden Lane (BL-24), East Jefferson Street (DB-22), Executive Boulevard (BL-25), Nicholson Lane (SR-37), Marinelli Road (SP-45), Nicholson Lane/Parklawn Drive (BL-27), Nebel Street-south (DB-13), Nebel Street-north (BL-26), Old Georgetown Road (SP-46), Montrose Parkway (SP-50), Randolph Road (BL-15)

## **MARC**

The following bikeways provide direct or near direct connections to MARC stations.

### Silver Spring

- Same as Metro Station

### Kensington

- Strathmore Avenue (SR-18), Connecticut Avenue corridor (SR-17), Players Mill Road (SR-24)

### Garrett Park

- Strathmore Avenue (SR-18), Beach Drive (SR-16), Beach Drive-Grosvenor Metrorail Connector (SR-57), Strathmore-Grosvenor Metrorail Connector Path (SP-11)

### Rockville

- Same as Metro Station

### Washington Grove

- City of Gaithersburg bike plan

### Gaithersburg

- City of Gaithersburg bike plan

### Metropolitan Grove

- Corridor Cities Transitway bike path (SP-66), Long Draft Road (SP-60), Clopper Road (DB-17), Quince Orchard Road (SP-58), local bikeways in the City of Gaithersburg bike plan

### Germantown

- Germantown Road (DB-25), Father Hurley Boulevard (SP-68), Middlebrook Road (SP-71), Observation Drive (SP-69)

### Boyd's

- Clarksburg Road (DB-18), Barnesville Road (SR-40), Clopper Road (DB-17)

### Barnesville

- Beallsville Road (SR-47)

### Dickerson

- Dickerson Road (SR-42)

## Corridor Cities Transitway

Actual stops for this new transitway have yet to be determined, therefore this list comprises those bikeways that would intersect with the currently proposed route (south to north)

- Frederick Road (SP-64), Shady Grove Road-west (DB-15), Great Seneca Highway (SP-63), Muddy Branch Road (DB-24), Quince Orchard Road (SP-58), Clopper Road (DB-17), Middlebrook Road (SP-71), Germantown Road (DB-25), Observation Drive (SP-69), Father Hurley Boulevard (SP-68), Old Baltimore Road/Newcut Road (DB-26),

## Bikeways Connecting to Municipalities, Central Business Districts and Town Centers

### District of Columbia

- MacArthur Boulevard (DB-1), Massachusetts Avenue (SR-50), River Road (DB-2), Brookville Road (SR-4), Beach Drive (SR-16), Jones Mill Road (SR-28), Colesville Road (DB-6), Metropolitan Branch Trail (SP-12) Piney Branch Road (SR-49), Carroll Avenue (BL-10), New Hampshire Avenue (DB-7)

### City of Rockville

- Darnestown Road (DB-16), Travilah Road (SP-57), Piney Meetinghouse Road (SP-56), Shady Grove Road-west (DB-15), Shady Grove Road-east (BL-30), Falls Road (SP-1), Gude Drive (SP-51), Darnestown Road-south (SP-59), Seven Locks Road (DB-3), multiple bikeways in the City of Rockville Bikeway Master Plan

### City of Gaithersburg

- Great Seneca Highway (SP-63), Longdraft Road (SP-60), Clopper Road (DB-17), Corridor Cities Transitway Bike Path (SP-66), Darnestown Road (DB-16), Quince Orchard Road (SP-58), Dufief Mill Road (BL-32), Riffleford Road (BL-34), Muddy Branch Road (DB-24), Frederick Avenue (SP-72), MidCounty Highway (SP-70), Watkins Mill Road (SP-74), Goshen Road (DB-29), Shady Grove Road-east (BL-30), Shady Grove Road -west (DB-15)

### City of Takoma Park

- Metropolitan Branch Trail (SP-12), Carroll Avenue (BL-10), Piney Branch Road (SR-49), New Hampshire Avenue (DB-7), University Boulevard (DB-5), Sligo Creek-Takoma Metrorail Connector (SR-51)

### Town of Poolesville

- Whites Ferry -Poolesville connector (SR-46), Whites Ferry Road (SR-45), Beallsville Road (SR-47)

### Town of Laytonsville

- Olney-Laytonsville Road (SP-36), Laytonsville Road (SR-43), Sundown/Brink Road (SR-62)

### Town of Barnesville

- Beallsville Road (SR-47), Barnesville Road (SR-40)

#### Town of Kensington

- Connecticut Avenue alternative (SR-17), Plyers Mill Road (SR-24), Strathmore Avenue (SR-18), Cedar Lane/Summit Avenue (SR-54)

#### Bethesda CBD

- Georgetown Branch Trail (SP-6), Bradley Boulevard (DB-4), Bradley Lane (SR-1), Wisconsin Avenue/Woodmont Avenue (SP-62), Wilson Lane (BL-2, SR-2), Goldboro Road (BL-1), Jones Bridge Road (SR-3)

#### Silver Spring CBD

- Interim Capital Crescent Trail (SR-63), Georgetown Branch Trail/Future Capital Crescent Trail (SP-6), Metropolitan Branch Trail (SP-12), MD 384 connector to Silver Spring Metro Station (DB-6), Sligo Creek Trail - Silver Spring Metro connector (SR-15), US 29/Columbia Pike - south (SR-31), East West Highway (SP-9), Forest Glen-Silver Spring CBD Connector (SR-52), Wayne Avenue Green Trail (SP-10)

#### Wheaton CBD

- Plyers Mill Road (SR-24), Westfield Shopping Town connector (SR-25), Westfield Shopping Town Mall Ring Road (SR-26), Veirs Mill Road alternative (SR-21), Reddie Drive (SR-27), Amherst Avenue/Sligo Creek Trail connector (SP-77), University Boulevard (DB-5), Georgia Avenue (SR-19), Georgia Road alternative (SR-20)

#### Germantown Town Center

- Great Seneca Highway (SP-63), Corridor Cities Transitway Bike Path (SP-66), Germantown Road (DB-25), Father Hurley Boulevard/Ridge Road (SP-68), Middlebrook Road (SP-71)

#### Olney Town Center

- Olney-Laytonsville Road-Olney West (SP-34), Olney-Sandy Spring Road-Olney East (SP-35), Olney-Sandy Spring Road-Ashton (SP-37), Georgia Avenue - North (SP-39), Georgia Avenue-Upcounty (BL-22), Bowie Mill Road (BL-20), Hines Road - North Branch connector (SP-33), Hines Road (BL-19), Norwood Road (SP-38)

#### Clarksburg Town Center

- Corridor Cities Transitway Bike Path (SP-66), Frederick Road - upcounty (SP-71), Clarksburg Road (DB-18), Old Baltimore Road-New Cut Road (DB-26), MidCounty Highway (SP-70)

#### Damascus Town Center

- Ridge Road (SR-39), Woodfield Road (DB-19, SR-61), Damascus Road (SR-44), Kemptown Road (SR-48)

## **Bikeways Connecting to Other Employment Centers**

### US 29 Corridor

- ICC bike path (SP-40), Old Columbia Pike (BL-12), Columbia Pike (DB-9), MD 198 (SP-20, SP-21), Greencastle Road (SP-23), Robey Road (SP-22), Briggs Chaney Road (BL-14), Fairland Road (BL-13), East Randolph Road/Cherry Hill Road (SP-16), New Hampshire Avenue (DB-7), Lockwood Drive (DB-10), Columbia Pike-south (SR-31)

### North Bethesda/White Flint

- North Bethesda Trail (SP-41), Tilden Lane (BL-24), Executive Boulevard (BL-25), East Jefferson Street (DB-22), Marinelli Road (SP-45), Old Georgetown Road (SP-46), Nebel Street-south (DB-13), Nebel Street-north (BL-26), Nebel Street extended (SP-47), Nicholson Lane (SR-37), Nicholson Lane/Parklawn Drive (BL-27)

### Rock Spring Office Park

- Rock Springs connector (SP-48), Fernwood Road/Greentree Road (BL-4), Tuckerman Lane (SP-42, BL-23), Democracy Boulevard (SP-2), Grosvenor Lane (SR-36), Old Georgetown Road - Wildwood Shopping Center Path (SP-1)

### Medical Center/NIH

- Same as Medical Center/NIH Metro Station

## **Bikeways Connecting to Major County Park Trails**

### Rock Creek Trail/Beach Drive

- Woodbine Street (SR-5), East West Highway (SP-9), Georgetown Branch Trail (SP-6), Jones Mill Road (SR-28), Jones Bridge Road (SR-3), Kensington Parkway (SR-29), Rock Creek Trail - Forest Glen Metro Station connector (SP-14), West Cedar Lane (DB-21), Cedar Lane/Summit Avenue (SR-54), Grosvenor Lane (SR-36), Tuckerman Lane (SP-42), Strathmore Avenue (SR-18), Randolph Road (BL-15), Montrose Parkway (SP-50), Veirs Mill Road (BL-16), Aspen Hill Road (SR-32), Baltimore Road (Rockville plan), Norbeck Road (SR-38), Southlawn Drive (Rockville plan), Needwood Road (DB-14), ICC bike path (SP-40), Muncaster Mill Road (BL-35), Hines Road-Rock Creek connector (SP-33), Bowie Mill Road (BL-20), Olney-Laytonville Road (SP-36)

### Sligo Creek Trail/Sligo Creek Parkway

- New Hampshire Avenue (DB-7), Carroll Avenue (BL-10), Piney Branch Road (SR-49), Wayne Avenue Green Trail (SP-10), Franklin Avenue (SR-13), Sligo Creek Trail - Silver Spring Metro Station connector (SR-15), Columbia Pike-south (SR-31), Forest Glen Road (SP-13, SR-23), Plyers Mill Road - Sligo Creek Trail connector (SR-55), University Boulevard (DB-5), Amherst Avenue-Sligo Creek Trail connector (SP-77)

### Capital Crescent Trail/Georgetown Branch Trail

- MacArthur Boulevard (DB-1), Massachusetts Avenue (SR-50), River Road (DB-2), Bradley Boulevard (DB-4), Jones Bridge Road (SR-3), Jones Mill Road (SR-28), NIH-Georgetown Branch Connector (SR-11), NIH-CCT connector alternative (SR-10), East-West Highway (SP-9), Metropolitan Branch Trail (SP-12)

### Matthew Henson Trail

- Montrose Parkway (SP-50), Veirs Mill Road alternative (SR-21), Connecticut Avenue corridor (SR-17), Connecticut Avenue -Aspen Hill (SP-27), Georgia Avenue - North (SP-29), Layhill Road (BL-18), ICC bike path (SP-40)

## **Shared Use Paths Providing Significant Pedestrian Benefits**

The following shared use paths (or dual bikeways that include a shared use path) currently serve as important direct pedestrian connections to a countywide or local destination or have the potential in the future to serve as an important pedestrian connection. Therefore, these paths should be considered higher priority than other shared use paths.

- MacArthur Boulevard (DB-1); River Road (DB-2); Falls Road (DB-19); Democracy Boulevard (SP-2; DB-20); North Bethesda Trail - NIH connector (SP-3); Cedar Lane (SP-4); Wisconsin Avenue/Woodmont Avenue (SP-62); Georgetown Branch Trail/Future Capital Crescent Trail (SP-6); Western Avenue (SP-7); Wisconsin Avenue (SP-8); East-West Highway (SP-9); Silver Spring Green Trail (SP-10); University Boulevard (DB-5); MD384 connector to Silver Spring Metrorail station (DB-6); Forest Glen Road-central (SP-13); Rock Creek Trail-Forest Glen Metro connector (SP-14); New Hampshire Avenue - Hillendale/Takoma Park (DB-7); New Hampshire Avenue - Ashton (SP-15); Lockwood Drive (DB-10); Fairland Road - east (SP-18); Spencerville Road (SP-20); Randolph Road (SP-25, SP-26); Connecticut Avenue - Aspen Hill (SP-27); Georgia Avenue - north (SP-29); Bel Pre Road - east (SP-30); Olney-Laytonsville Road - Olney West (SP-34); Olney-Sandy Spring Road - Olney East (SP-35); Olney-Sandy Spring Road - Ashton (SP-37); Georgia Avenue - Brookeville (SP-39); North Bethesda Trail (SP-41); Old Georgetown Road - Wildwood Shopping Center Path (SP-1); Tuckerman Lane (SP-42); Grosvenor Connector (SP-43); Strathmore-Grosvenor Metrorail Station connector path (SP-11); East Jefferson Street (DB-22); Marinelli Road (SP-45); Old Georgetown Road (SP-46); Nebel Road (DB-13); Nebel Street Extended (SP-47); Rock Spring Connector (SP-48); Westlake Drive - south (SP-44); Montrose Road/Parkway (SP-50); Gude Drive - east (SP-51); Crabbs Branch Way (SP-53); Needwood Road (DB-14); Redland Road - west (SP-54); Shady Grove Road - west (DB-15); Clopper Road/Diamond Avenue (DB-17); Muddy Branch Road (DB-24); Great Seneca Highway (SP-63); Frederick Road (SP-64; SP-72); Corridor Cities Transitway bike path (SP-66); Germantown Road (DB-25); Father Hurley Boulevard (SP-68); Observation Drive (SP-69); MidCounty Highway (SP-70); Middlebrook Road (SP-71); Clarksburg Road (DB-18); Old Baltimore Road/Newcut Road (DB-26); Watkins Mill Road (DB-27); Woodfield Road - north (DB-30); Woodfield Road - south (DB-28).



**Table 2-2 from the Countywide Bikeways Functional Master Plan, Planning Board Draft, May 2004**

SP = Shared Use Path (Class I); BL = Bike Lanes (Class II); SR = Signed Shared Roadway (Class III);  
 DB = Dual Bikeway \*BLOC = bicycle level of comfort score for state highways

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
<b>Bethesda/Chevy Chase/Friendship Heights/Potomac</b>									
DB-1	E-10	MacArthur Boulevard	DUAL BIKEWAY; shared use path and bike lanes	D.C. line	Falls Road (MD189)	1978 MPB; Potomac Subregion	Existing 6-foot path on west side of road; some gaps		Major connection to D.C. and Capital Crescent Trail; facility planning initiated in 2002 to study bikeway needs. Need to identify local connector to CCT; Potomac Subregion Master Plan recommends only a shared use path; bike lanes are new proposal
DB-2	P23-A, P23-B, E-5	River Road (MD190)	DUAL BIKEWAY; shared use path and signed shared roadway	DC line	Seneca Road (MD112)	1978 MPB; Potomac Subregion	Shared use path exists in segments, other segments proposed; shared use roadway is new proposal	F	Major route currently used by bicycle commuters and recreational cyclists; provides major connection to D.C. from Potomac, North Potomac, Travilah and Darnestown; adequate shoulder space exists for signed shared roadway along majority of road. Short segments of shared use path have been constructed by developers on north side, west of I-495; Potomac Subregion Master Plan recommended a shared use path between I-495 and Seneca Road. New proposals include shared use path between DC line and I-495, and signed shared roadway from DC line to Seneca Road
DB-19	E-26, S-40	Falls Road (MD189)	DUAL BIKEWAY; shared use path and signed shared roadway	MacArthur Boulevard	Woolton Parkway	1978 MPB; Potomac Subregion	Existing 8' path alternates between north and south side of road, some gaps	E, F	Major connection between Rockville, Rockville Metro and MARC, and C&O Canal Towpath; facility planning initiated in 2002 to complete missing segment of bike path. Connects to Rockville's Millennium Trail, popular on-road bicycling route
DB-3	S18-A, S-18-B, P-54	Seven Locks Road	DUAL BIKEWAY; shared use path and signed shared roadway or bike lanes	Woolton Parkway	MacArthur Boulevard	1978 MPB; Potomac Subregion	Existing 5' path on west side south of Bradley Lane; existing 8' sidewalk on west side between Woolton Parkway and Montrose Road; existing wide shoulder between Montrose Road and Bradley Lane, some gaps; wide outside lane between Woolton Parkway and Montrose Road; other segments proposed		Major connection from Rockville, Rockville Metro and MARC, to C&O Canal Towpath; segments of path along west side need to be upgraded to 8'; ample shoulder space for signed shared roadway or bike lanes between Woolton Parkway and Bradley Lane; Potomac Subregion Master Plan recommends only a shared use path; on-road bikeway is new proposal; actual bikeway type to be determined during facility planning
SP-2	P-58	Democracy Boulevard - East	Shared use path	Gainsborough Road	Old Georgetown Road	1978 MPB; Potomac Subregion	Proposed, 8' sidewalk exists in segments		Connects to Montgomery Mall and Rock Springs Office Park; also connects to Falls Road path and Seven Locks Road path
DB-20	P-58	Democracy Boulevard - West	DUAL BIKEWAY; shared use path and signed shared roadway	Falls Road (MD189)	Gainsborough Road	1978 MPB; Potomac Subregion	Proposed, wide shoulder exists on both sides,		Connects to Montgomery Mall and Rock Springs Office Park; also connects to Falls Road path and Seven Locks Road path, sufficient right of way exists for dual bikeway along this road segment

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
DB-4	P-18	Bradley Boulevard (MD191)	DUAL BIKEWAY; shared use path and signed shared roadway	Persimmon Tree Road (MD355)	Wisconsin Avenue (MD355)	1978 MPB, Potomac Subregion; Bethesda-Chevy Chase	Proposed	E	Major connection to Bethesda CBD, Bethesda Metrorail station, and Capital Crescent Trail; more than ample ROW exists; bikeable shoulders exist for most of road between Persimmon Tree Road and Goldsboro Road; wide outside lanes proposed between Goldsboro Road and Wisconsin Avenue
SR-1		Bradley Lane	Signed shared roadway	Wisconsin Avenue (MD355)	Brookville Road (MD186)	Bethesda-Chevy Chase	Modified proposal		Part of important on-road connection from Rock Creek Trail/Beach Drive and downtown Bethesda; previous plans recommended bike lanes which are unlikely due to inadequate pavement width and ROW; road should be widened slightly to allow for wider travel lanes (preferably 14')
BL-1	P-16	Goldsboro Road (MD614)	Bike lanes	MacArthur Boulevard (MD191)	Bradley Boulevard (MD191)	Bethesda-Chevy Chase	Proposed; wide shoulder exists nearly entire length	No score	Significant connection to Bradley Boulevard, Bethesda CBD and Metrorail. Could be implemented when road is repaved and/or restriped; some gaps in shoulders
SR-50		Massachusetts Avenue (MD 396)	Signed shared roadway	Goldsboro Road	District of Columbia		New proposal	No score	Important connection to District of Columbia and to the Capital Crescent Trail. The road is currently suitable for on-road bicycling; bike lanes are preferable if and when road is widened or rebuilt
BL-2	P-44	Wilson Lane (MD188) - west	Bike lanes	MacArthur Boulevard	Elmore Lane	Bethesda-Chevy Chase	Proposed	E	Part of important connection to downtown Bethesda and to the C&O Canal. Could be implemented when road is repaved and/or restriped
SR-2	P-44, E-23	Wilson Lane (MD188) - central	Signed shared roadway	Elmore Lane	Aberdeen Road	Bethesda-Chevy Chase	Proposed	E	Part of important connection to downtown Bethesda and to the C&O Canal. Requires only signage
BL-3	P-44, E-23	Wilson Lane (MD188) - east	Bike lanes	Aberdeen Road	Old Georgetown Road	Bethesda-Chevy Chase	Proposed	E	Part of important connection to downtown Bethesda and to the C&O Canal. Could be implemented when road is repaved and/or restriped
BL-4	S-59	Westlake Terrace/Fernwood Road/Green Tree Road	Bike lanes/signed shared roadway	Westlake Drive	Old Georgetown Road	Bethesda-Chevy Chase; North Bethesda-Garrett Park	Modified proposal		Provides important connection between NIH/Medical Center Metro station and Rock Spring Industrial Park. Also part of connection to Montgomery Mall; adequate shoulder space exists for most of road to accommodate on-road bikeway; actual type to be determined during facility planning; on-street parking would need to be studied
SP-3		North Bethesda Trail-NIH connector	Shared use path	Battery Lane	Cedar Lane	Bethesda CBD	Substandard path exists near Battery Lane; other segments proposed		Provides part of critical link between North Bethesda Trail and the Capital Crescent Trail; NIH fence project leaving space for county to build the trail; path should avoid rare forest fragment on NIH property
SP-4		Cedar Lane	Shared use path	Wisconsin Avenue (MD355)	Beach Drive	Bethesda-Chevy Chase	Substandard path exists east of MD355; path through parkland exists; segment under I-495 proposed		Provides part of critical link from Rock Creek Trail and Beach Drive to NIH/Medical Center Metrorail station as well as to North Bethesda Trail via West Cedar Lane.
DB-21		West Cedar Lane	DUAL BIKEWAY - shared use path and signed shared roadway	Old Georgetown Road	Wisconsin Avenue (MD355)	Bethesda-Chevy Chase	proposed		Forms part of connection between North Bethesda Trail and Rock Creek Trail, as well as between North Bethesda Trail and NIH/Medical Center Metrorail station; NIH fence project leaving space for county to build the trail
SP-62		Wisconsin Avenue (MD355)/Woodmont Avenue	Shared use path	Battery Lane	Cedar Lane	Bethesda-Chevy Chase	existing	No score	Forms part of connection to the NIH/Medical Center campuses ad Metrorail station as well as to downtown Bethesda
SP-5		Oaklyn Drive/Persimmon Tree Road	Shared use path	MacArthur Boulevard	Falls Road (MD189)	Potomac Subregion	Oaklyn Drive is existing; Persimmon Tree Road is proposed		Likely will require additional ROW, tree removal

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SR-3	E-21	Jones Bridge Road	Signed shared roadway	Wisconsin Avenue (MD355)	Jones Mill Road/Capital Crescent Trail		New proposal		Major connection between Capital Crescent Trail/Rock Creek Trail and NIH/Medical Center Metro Station; currently signed as a bike route between MD355 and MD185; May be implemented as part of Jones Bridge Road busway (part of Bi-County Transitway)
SR-4		Brookville Road (MD186)	Signed shared roadway	DC line	Woodbine Street		New proposal	No score	Part of important on-road connection to Rock Creek Trail from Villages of Chevy Chase and Friendship Heights; will connect to proposed bikeway along Western Avenue in D.C.; Requires only signage improvements
SP-6		Georgetown Branch Interim Trail (Future Capital Crescent Trail)	Shared use path	Bethesda CBD	Silver Spring Metrorail station	Bethesda-Chevy Chase, North and West Silver Spring	Existing between Woodmont Avenue and Stewart Avenue, but surface is temporary crushed stone		Major connection between Bethesda and Silver Spring; to be implemented as part of Bi-County Transitway
SR-63		Interim Capital Crescent Trail	Signed shared roadway	Stewart Avenue	Second Avenue	Facility Plan for the Capital Crescent Trail (2001)			Interim on-road route to get trail users to/from downtown Silver Spring until such time the permanent trail is built as part of the Bi-County Transitway; Interim on-road road is as follows: Stewart Avenue to Michigan Avenue to Talbot Avenue to Grace Church Road to Laytonsville Road to 16th Street to Bridge Street (3rd Avenue) to Fenwick Lane.
SR-5		Woodbine Street	Signed shared roadway	Brookville Drive (MD186)	Beach Drive		New proposal		Part of important on-road connection to Rock Creek Trail from Villages of Chevy Chase and Friendship Heights; Requires only signage improvements
BL-6	S-50, S-55	Woodmont Avenue	Bike lanes	Bethesda Avenue	Battery Lane		New proposal		Provides important connections to Bethesda CBD and Metrorail, NIH, Medical Center, Metrorail, and Capital Crescent Trail; also forms part of important connection between North Bethesda Trail and Capital Crescent Trail; improvements may prove difficult due to traffic issues
SR-6		Battery Lane	Signed shared roadway	Old Georgetown Road	Battery Lane Urban Park		New proposal		Part of important alternative connection from NIH campus and North Bethesda Trail to Capital Crescent Trail.
SR-7		Exeter Road/Glenbrook Road	Signed shared roadway	Bethesda Avenue	Norfolk Avenue	Bethesda CBD	Proposed		Part of important alternative connection from NIH campus and North Bethesda Trail to Capital Crescent Trail; Requires only signage improvements
SR-8		Edgemoor Lane	signed shared roadway/bike lanes	Exeter Road	Metro station	Bethesda CBD	Proposed		Provides direct connection to Bethesda Metrorail station; bike lanes from Arlington Road to Metrorail station, shared roadway between Arlington Road and Exeter Road
BL-7		Elm Street	Bike lanes	Exeter Road	Wisconsin Avenue (MD355)	Bethesda CBD	Proposed		Provides direct connection to Bethesda Metrorail station
SR-9		Bethesda Avenue	Signed shared roadway	Exeter Road	Woodmont Avenue	Bethesda CBD	Proposed		Important connection to Capital Crescent Trail and part of important connect to Bethesda Metrorail station; Requires only signage improvements
SR-10		NIH-CCT connector alternative	Signed shared roadway	Capital Crescent Trail	NIH Campus		new proposal		Part of alternative connection from NIH and North Bethesda Trail to Capital Crescent Trail to bypass Bethesda CBD; Battery Lane Urban Park to Battery Lane to Glenbrook Road to Little Falls Parkway
SR-11		NIH-Georgetown Branch Trail connector	Signed shared roadway/bike lanes	Georgetown Branch Trail	Battery Lane Urban Park	Bethesda CBD	Proposed		Part of connection between NIH campus and Georgetown Branch Trail, as well as to B-CC High School; Battery Lane Urban Park to Norfolk Avenue to Cheltenham Drive to Tilbury Street to Sleaford Road to Pearl Street; mostly signed shared roadway, but portions of route may be bike lanes per Bethesda CBD sector plan

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-7		Western Avenue	Shared use path	River Road	Chey Chase Circle	Friendship Heights CBD	Proposed		Provides direct connection to Friendship Heights Metrorail station, may be widened sidewalk
BL-8		Willard Avenue - bike lanes	Bike lanes	Willard Avenue Park	Wisconsin Avenue (MD355)	Friendship Heights CBD	proposed		Provides near direct connection to Friendship Heights Metrorail station
SR-12		Willard Avenue/Saratoga Avenue	Signed shared roadway	River Road	Park Avenue		new proposal		Provides on-road connection between River Road bikeway and Willard Avenue bike lanes; Requires only signage improvements
SP-8		Wisconsin Avenue (MD355)	Shared use path	Bradley Lane	Oliver Lane	Friendship Heights CBD	proposed	F	Major connection between Bethesda and Friendship Heights CBDs.
SR-16		Beach Drive	Signed shared roadway	D.C. line	Garrett Park Road	1993 Parks, Recreation and Open Space (PROS) plan, CIP project 968741	Proposed		Beach Drive consists of two segments: 1) D.C. line to East-West Highway, and 2) Stoneybrook Drive to Garrett Park Road. The road is owned and maintained by M-NCPPC. It serves as both an important commuter route on weekdays as well as recreational route on weekends. It is among the most popular bicycling routes in the county. Provides good connection to Grosvenor Metrorail station as well as Medical Center Metrorail station and Bethesda CBD (via Cedar Lane); at least 4' shoulders should be provided along entire length of road to improve safety of both cyclists and motorists; Implementation by M-NCPPC
SR-28		Jones Mill Road	Signed shared roadway	East-West Highway (MD410)	Stoneybrook Drive	Bethesda-Chevy Chase	Proposed		Important connection between two segments of Beach Drive; provides connection to Capital Crescent Trail, Rock Creek Trail and to bikeway along Jones Bridge Road; a popular route for bicyclists. Adequate right of way exists for bikeable shoulders when road is widened or reconstructed.
SP-76		American Legion Bridge path	Shared use path	MacArthur Boulevard	Fairfax County line		new proposal		Provides rare connection across the Potomac River; to be provided by SHA if/when bridge gets a new deck; connection to Fairfax County bikeway system requires further study
<b>Silver Spring/Takoma Park</b>									
SP-9	P-15	East West Highway (MD410)	Shared use path	Rock Creek	Colesville Road (MD384)	North and West Silver Spring	Existing	F	Provides important connection to downtown Silver Spring and to the Silver Spring Metro and MARC stations
SP-10		Wayne Avenue Green Trail/2nd Avenue	Shared use path	Spring Street	Sligo Creek Trail	East Silver Spring, Silver Spring CBD	Proposed 8' path with adjoining 5' sidewalk		Serves as a significant connection to Sligo Creek Trail, MBT, Silver Spring CBD and Silver Spring Metrorail and MARC stations; capital project underway in 2003
SR-49	P-1	Piney Branch Road (MD320)	Signed shared roadway	D.C. line	New Hampshire Avenue (MD650)	Takoma Park	Modified proposal	F	Significant connections to Sligo Creek Trail, Metropolitan Branch Trail and Takoma Metrorail station; Takoma Park plan recommended shared use path which is unlikely due to space constraints. Adequate pavement width exists for shared roadway only for most of road; City requests SHA "bicycle areas" (see page 24 of plan)
BL-10	P-48	Carroll Avenue (MD195)	Bike lanes	D.C. line	Piney Branch Road (MD320)	Takoma Park	Modified proposal	No Score	Major connections to downtown Takoma Park, Metropolitan Branch Trail and Sligo Creek Trail; Takoma Park Master Plan recommends a shared use path, which is unlikely due to space constraints. Also connects to proposed bike lanes in District

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SR-51		Sligo Creek-Takoma Metrorail Connector	Signed shared roadway	Sligo Creek Trail	Takoma Metrorail Station/D.C. line	Takoma Park	Proposed		Framework route in Takoma Park Master Plan. Provides important connection between a regional trail and the Metrorail system. Also connects the Sligo Creek Trail with the Metropolitan Branch Trail. Route travels along Maple Avenue and Cedar Avenue
SR-13	E-19, P-50	Franklin Avenue	Signed shared roadway	Sligo Creek Trail	Northwest Branch Park boundary	East Silver Spring	Proposed		Provides connection between two Countywide Park trails; Requires only signage improvements
DB-5		University Boulevard (MD193)	DUAL BIKEWAY; shared use path and signed shared roadway	Georgia Avenue (MD97)	P.G. County line	East Silver Spring	Proposed	E	Shared use path both sides from P.G. line to I-495, shared use path west side I-495 to MD97, shared roadway entire length; shared use path to be implemented as part of streetscape improvements; SHA will restripe the road to provide informal "bicycle areas" on both sides
SR-14		Sligo Creek Parkway	Signed shared roadway	New Hampshire Avenue (MD650)	University Boulevard (MD193)		Proposed		Portions of Sligo Parkway already feature a shoulder on one side. At least 4' shoulders should be provided on both sides of entire length of road to improve safety of both cyclists and motorists. Implementation by M-NCPPC
SR-52		Forest Glen-Silver Spring CBD connector	Signed shared roadway	Forest Glen Road	Spring Street	North and West Silver Spring	Proposed		Same as Bike route 12 in North and West Silver Spring Master Plan. Provides important connection to/from Forest Glen Metrorail Station south of I-495. Also provides a connection between Forest Glen Metrorail Station and downtown Silver Spring. Connection relies on completion of Forest Glen Pedestrian Bridge project
SR-15		Sligo Creek Trail-Silver Spring Metrorail connector	Signed shared roadway	Silver Spring Metrorail Station	Sligo Creek Trail	N/A	New proposal		Same as Bikes routes 11 and 14 in North and West Silver Spring Master Plan. Route travels along Columbia Boulevard and Woodland Drive
DB-6		MD384/Colesville Road connector to Silver Spring Metro Station	DUAL BIKEWAY; signed shared roadway and shared use path	16th Street	East-West Highway (MD410)	Silver Spring CBD	Shared Use Path proposed in Silver Spring CBD plan; signed shared roadway is new proposal	No Score	Provides important connection to Silver Spring Metro Station from Rock Creek Park via proposed signed shared roadway along North Portal Drive in D.C.; signed shared roadway could be implemented by simply installing signs
SP-12		Metropolitan Branch Trail	Shared use path	D.C. line	Silver Spring Metrorail station	Silver Spring CBD; North and West Silver Spring; East Silver Spring; Takoma Park	Proposed; portions in City of Takoma Park and Montgomery College campus are complete		Forms part of major connection between Silver Spring and Takoma Park and south into the District to Union Station.
<b>Kensington/Wheaton</b>									
SR-17	E-17, P-64	Connecticut Avenue (MD185) corridor	Signed shared roadway and wide sidewalks	Kensington Parkway	Matthew Henson Trail		New proposal	F	Matthew Henson Trail to Brightview Street along MD185 service roads; provide wide sidewalk along north side of MD185 to Adams; cross MD185 to Mapleview Drive to Newport Mill Road to Lexington to Dupont to Nash to Plyers Mill Road to wide sidewalk along east side of MD185 over CSX to Howard Avenue to Kensington Parkway
SR-18	P-46	Knowles/ Strathmore Avenue (MD547)	Signed shared roadway	Wisconsin Avenue (MD355)	Connecticut Avenue (MD185)	North Bethesda-Garrett Park	Proposed	E	Provides important connection to Grosvenor Metrorail station and Beach Drive/Rock Creek Trail; part of route may be along neighborhood streets in Town of Garrett Park; Requires only signage improvements
SR-54		Cedar Lane/Summit Avenue	Signed shared roadway	Beach Drive	Plyers Mill Road	Kensington-Wheaton	Proposed		Serves as an important on-road connection from Town of Kensington to NIH and Bethesda.

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SR-19		Georgia Avenue (MD97)	Signed shared roadway	Forest Glen Road	Wheaton Metro station		New proposal	F	This segment is a major missing gap in the countywide bikeway network. may be candidate for "bicycle areas", a new SHA policy (see Appendix D). 1978 MPB recommended route along neighborhood streets via Amherst Avenue (SR-20 in this plan)
SR-20	P-61	Georgia Avenue alternate	Signed shared roadway	Randolph Road	Forest Glen Road	Forest Glen Sector Plan; Kensington/Wheaton	Proposed		Connects three Metrorail stations and the Wheaton CBD. Randolph to Reede Drive via Grandview Avenue; cross MD97 via Reede Drive; Reede Drive to Forest Glen Road via Amherst; Avenue to Dennis Avenue to Medical Park Drive to Woodland Drive (through Getty Park) to Forest Glen; Mostly just requires some signage improvements
SP-77		Amherst Avenue/Sligo Creek Trail connector	Shared use path/signed shared roadway	Amherst Avenue	Sligo Creek Trail		Shared use path is existing; signed shared roadway is proposed		Provides important connection between Sligo Creek Trail and downtown Wheaton; route uses part of Blueridge Avenue
SR-21		Vairs Mill Road (MD586) alternate	Signed shared roadway	Matthew Henson Trail	Georgia Avenue (MD97)		New proposal	E,F	Need to provide continuous connection from Rockville to Wheaton CBD; Twinbrook Parkway to MHT on shoulder or bike lanes; MHT to Sampson Road via Selfridge Road; Sampson Road to Newport Mill Road via existing sidewalk along MD586 to Gail Street to College View Drive. Cross MD586 at Newport Mill Road. Newport to Grandview Avenue via Dawson Avenue to Galt Avenue to Fenimore Road to Kensington Boulevard; requires coordination with Bus Rapid Transit proposal for MD 586.
SP-13	P-6	Forest Glen Road - central	Shared use path	Belvedere Place	Sligo Creek Trail	Forest Glen Sector Plan	Proposed for shared use path along south side between Sligo Creek Trail and MD97; and on north side from MD97 to Belvedere Place		Important connection to Forest Glen Metrorail station; will require removal of on-street parking on south side
SR-22	P-6	Forest Glen Road (MD192) - west	Signed shared roadway	Seminary Road	Belvedere Place	Forest Glen Sector Plan	Proposed	D	Forms part of important connection from Rock Creek Trail to Forest Glen Metrorail station; Requires only signage improvements
SR-23	P-6	Forest Glen Road - east	Signed shared roadway	Sligo Parkway	Brunett Avenue	N/A	New proposal		Part of important connection to Forest Glen Metrorail station from the US 29 corridor; Requires only signage improvements
SP-14		Rock Creek Trail-Forest Glen Metro connector	Shared use path	Stoneybrook Road	Seminary Road	Forest Glen Sector Plan	Proposed		Forms part of important connection from Rock Creek Trail to Forest Glen Metrorail station; Path may prove difficult to implement due to steep slopes and possible forest impacts, needs further study
SR-24		Plyers Mill Road	Signed shared roadway	Rock Creek Park/Trail	Georgia Avenue (MD97)		New proposal		Part of connection from Kensington to Wheaton CBD and Metrorail as well as between Rock Creek Park/Trail and Kensington MARC. Requires bicycle and pedestrian safety improvements at Connecticut Avenue. A connection to Kensington MARC would be provided via Saint Paul Street and the redevelopment of the cement plant property along Metropolitan Avenue
SR-55		Plyers Mill Road - Sligo Creek connector	Signed shared roadway	Plyers Mill Road	University Boulevard	Kensington-Wheaton	New proposal		Identifies Brunswick Avenue and Dennis Avenue as signed shared roadways. Serves as important connection between Sligo Creek Trail and the Town of Kensington and points west.

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SR-25	P-5	Westfield Shopping Town connector	Signed shared roadway	Plyers Mill Road	Mall Ring Road	Wheaton CBD	Proposed		Plyers Mill Road to Brunswick Avenue to Kimberly Street to Torrance Street to Mall Ring Road; part of connection from Kensington to Wheaton CBD and Metrorail; Requires only signage improvements
SR-26		Westfield Shopping Town Mall Ring Road	Signed shared roadway	Torrance Street	Reedie Drive	Wheaton CBD	Proposed		Part of connection from Kensington to Wheaton CBD and Metrorail; will require agreement with Westfield Corporation; may ultimately become a shared use path/wide sidewalk as part of mall redevelopment
SR-27		Reedie Drive	Signed shared roadway	Mall Ring Road	MDS7	Wheaton CBD	Proposed		Part of connection from Kensington to Wheaton CBD and Metrorail; Requires only signage improvements
SR-29	P-13	Kensington Parkway	Signed shared roadway	Jones Bridge Road	Howard Avenue		New proposal		Important connection to Rock Creek Trail and Beach Drive from Town of Kensington; provides a good alternative route to Connecticut Avenue; connects to bikeway on Jones Bridge Road; Requires only signage improvements; connection to Georgetown Branch Trail via Jones Bridge Road
<b>Eastern County</b>									
DB-7	P-7	New Hampshire Avenue (MD650) - Hillendale/Takoma Park	DUAL BIKEWAY; shared use path and shared roadway	D.C. line	Lockwood Drive	East Silver Spring, White Oak	Modified proposal	F	Implementation north of I-495 will require land acquisition or easements for shared use path and redesign of roadway (restriping to make outer lane wider) to accommodate shared roadway; White Oak Master Plan recommends path or shared roadway; this plan recommends both; portion south of I-495 provides access to mostly local destinations, but connects to Sligo Creek Trail, to bikeway along Piney Branch Road and to a proposed shared use path in the District of Columbia; to be implemented as part of streetscape improvements by developers; gaps to be completed by county; SHA also should consider re-striping the road to provide informal "bicycle areas" on both sides (See Appendix D)
SR-30		New Hampshire Avenue (MD650) - White Oak	Signed shared roadway	Lockwood Drive	Randolph Road	White Oak	Proposed	F	Candidate road for SHA "bicycle areas" (see appendix D); to be implemented when road is restriped or repaved
BL-11		New Hampshire Avenue (MD650) - Colesville	Bike lanes	Randolph Road	Spencerville Road (MD198)	White Oak/Cloverly	Existing from Randolph Road to Cape May Road; otherwise proposed	E	Connects numerous countywide bikeways, forms part of link along length of MD650
DB-8		New Hampshire Avenue (MD650) - Ednor	DUAL BIKEWAY; shared use path and bike lanes	Spencerville Road (MD198)	Ednor Road	Cloverly	Shared use path is existing; bike lanes are proposed	E	Bike lanes to be implemented with future road improvements
SP-15		New Hampshire Avenue (MD650) - Ashton	Shared use path	Ednor Road	Oiney-Sandy Spring Road (MD108)	Sandy Spring/Ashton	Proposed	E	Shared use path to be implemented with future road improvements
DB-9		Columbia Pike (US29) - North	DUAL BIKEWAY; shared use path and shared roadway	New Hampshire Avenue/ Lockwood Drive	Spencerville Road (MD198)	Fairland/White Oak	Proposed	No score	US29 Commuter Bikeway, signed shared roadway entire length on US29 (Shoulder) and signed shared roadways along local streets and shared use paths as alternative connection; signed shared roadway extends to Howard County line along shoulder of the new US29 alignment

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
DB-10		Lockwood Drive	DUAL BIKEWAY; shared use path and signed shared roadway	Columbia Pike (US29)	New Hampshire Avenue (MD650)	White Oak	Proposed		Forms part of the US29 Commuter Bikeway, connection to Silver Spring; White Oak Master Plan recommends either a shared use path or bike lanes
SR-31	P-5	Columbia Pike (US29) - South	Signed shared roadway	Lockwood Drive	Wayne Avenue	N/A	New proposal		Critical connection for eastern part of county, one of few crossings of Northwest Branch. Route is US29 to Eastwood Avenue along 6-8' sidewalk on west side to be provided with US29 improvements. Eastwood Drive shared roadway to Southwood Avenue shared roadway. Through North Four Corners Park along shared path. Cross University Boulevard to Brunnett Avenue shared roadway. Brunnett Avenue shared roadway to Sligo Creek Trail; Sligo Creek Trail to Wayne Avenue Green Trail via Ellsworth Drive and Cedar Street. Mostly just requires signage improvements; Segment in North Four Corners Park should remain on the upstream side of the existing road/driveway
BL-12	E-6	Old Columbia Pike	Bike lanes	Tech Road	Spencerville Road (MD198)	Fairland	Existing, but needs improvements		Connects to major employment area; facility planning underway in 2003 to improve bike lanes
SP-16	E-8	East Randolph Road - Cherry Hill Road	Shared use path	Paint Branch Trail	Prince George's County line	Fairland	Existing path or wide sidewalk, may be some gaps		Connects Prince George's County bikeway network with Montgomery County's
SP-17	E-8	Randolph Road - Colesville	Shared use path	Kemp Mill Road	Fairland Road	White Oak	Existing in segments, mostly wide sidewalks		Provides connection to Paint Branch Trail
BL-13		Fairland Road - west	Bike lanes	Randolph Road	Columbia Pike (US29)	Fairland/White Oak	Existing wide shoulders, not marked or signed		Good connections to other-bikeways, but not to transit or activity centers
SP-18		Fairland Road - east	Shared use path	Columbia Pike (US29)	Prince George's County line	Fairland/White Oak	Proposed		Good connections to other bikeways, but not to transit or activity centers; Connects Prince George's County bikeway network with Montgomery County's
BL-14	E-11	Briggs Chaney Road - west	Bike lanes	New Hampshire Avenue	Old Columbia Pike	Fairland/Cloverly	Existing wide shoulder, not marked or signed		Segments of shared use paths near MD660 and Old Columbia Pike as well
SP-19		Briggs Chaney Road - east	Shared use path	Old Columbia Pike	Prince George's County line	Fairland/Cloverly	Proposed		Connects Prince George's County bikeway network with Montgomery County's
SR-56		Good Hope Road	Signed shared roadway	New Hampshire Avenue (MD 650)	Briggs Chaney Road	Cloverly	Proposed		Provides an important link between two major countywide bikeways
SP-20		Spencerville Road (MD198) - Fairland	Shared use path	Old Columbia Pike	Prince George's County line	Fairland	Proposed	No score	Part of major east-west connection, but does not directly connect to any major destination
SP-21	P-39	MD198/MD28 shared use path	Shared use path	Layhill Road	Old Columbia Pike	Cloverly/Fairland	Existing from Layhill Road to New Hampshire Avenue; otherwise proposed	E	Major east-west connection in northeast part of county, but does not directly connect to any major destination
SP-22		Robey Road	Shared use path	Briggs Chaney Road	Greencastle Road	Fairland	Existing		Forms part of important connection to Fairland Regional Park



Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-23		Greencastle Road - east	Shared use path	Robey Road	Prince George's County line	Fairland	Proposed		Connects to proposed shared use path along Prince George's County portion of the road
DB-11		Greencastle Road - west	DUAL BIKEWAY; shared use path and bike lanes	Columbia Pike (US29)	Robey Road	Fairland	Existing		Provides connection from US29 Commuter Bikeway to Fairland Regional Park
<b>Midcounty</b>									
SP-24		Glenallen Avenue	Shared use path	Randolph Road	Kemp Mill Road		New proposal		Provides important connection from Northwest Branch and Wheaton Regional Park to Glenmont Metrorail station; will be difficult to implement due to steep terrain and drainage issues.; MNCPPC owns most of the land required for the path.
SP-25	E-8	Randolph Road - west	Shared use path	Rockville Pike (MD355)	Parklawn Drive	Kensington-Wheaton; North Bethesda-Garrett Park	Existing, but in poor condition		Part of one of only a few east-west cross-county connectors
BL-15	P-55	Randolph Road - central	Bike lanes	Parklawn Drive	Veirs Mill Road (MD586)	Kensington-Wheaton; North Bethesda-Garrett Park	Proposed		Part of one of only a few east-west cross-county connectors; to be implemented as part of future roadway or streetscape improvements
SP-26	P-55	Randolph Road - east	Shared use path	Veirs Mill Road (MD586)	Kemp Mill Road/ Northwest Branch Trail	Kensington-Wheaton	Modified proposal		Part of one of only a few east-west cross-county connectors
SR-32		Aspen Hill Road	Signed shared roadway	Veirs Mill Road (MD586)	Connecticut Road Avenue (MD185)		New proposal		Provides good connection to Rock Creek Trail; Requires only signage improvements
BL-16		Veirs Mill Road (MD586) - west	Bike lanes	Twinbrook Parkway	Mathew Henson Trail	Aspen Hill	Proposed; extra wide shoulder currently exists	No score	Provides good connection to Rock Creek Trail and Mathew Henson Trail
SP-27	E-17	Connecticut Avenue (MD185) - Aspen Hill	Shared use path	Bel Pre Road	Mathew Henson Trail	Aspen Hill	Partly existing, mostly proposed	F	Provides connection to Mathew Henson Trail
DB-12	S-46	Norbeck Road (MD28)	DUAL BIKEWAY; shared use path and signed shared roadway (wide curb lanes)	Georgia Avenue (MD97)	Layhill Road	Oney; Cloverly	Proposed	No score	Part of important cross-county connection between Rockville and Burtonsville; intersects with numerous countywide bikeways and local bikeways; will be provided as part of planned roadway improvements
BL-35		Muncaster Mill Road (MD115)/ Norbeck Road (MD28)	Bike lanes	Woodfield Road	Georgia Avenue (MD97)	Upper Rock Creek/Oney	Proposed	E	Important cross-county connection; To be implemented as part of future roadway improvements by SHA. Route includes short segment of MD28 near MD97.
SP-29		Georgia Avenue (MD97) - North	Shared use path	Oney-Laytonsville Road (MD108)	Glenmont Metrorail station	Aspen Hill	New proposal, part of Georgia Avenue Busway Study	F	Will be constructed as part of Georgia Avenue Busway
SR-33	S-11	Bel Pre Road - west	Signed shared roadway	Norbeck Road (MD28)	Georgia Avenue (MD97)	Aspen Hill	Proposed		Provides good access to midcounty from east county; including connections to numerous Countywide Bikeways; requires only signage improvements

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-30	S-11	Bel Pre Road - east	Shared use path	Georgia Avenue (MD97)	Layhill Road (MD182)	Aspen Hill	Existing, but in poor condition in places		Provides good access to midcounty from east county, including connections to numerous Countywide Bikeways.
BL-17	S-12	Bonifant Road	Bike lanes	Layhill Road (MD182)	Good Hope Road	Aspen Hill; Cloverly	Existing, but needs signs		Connects MD650 bike lanes with Bel Pre shared use path and Layhill Road bike lanes; requires only signage improvements
BL-18	S-38	Layhill Road (MD182)	Bike lanes	Georgia Avenue (MD97)	Norbeck Road (MD28)	Aspen Hill	Existing between Wintergate Drive and MD97; proposed between MD28 and Wintergate Drive	E, F	Major connection to Glenmont Metrorail station; connections to several Countywide Bikeways
SP-31		Ednor Road/Layhill Road (MD 182)	Shared use path	Norbeck Road (MD28)	New Hampshire Avenue (MD650)	Aspen Hill; Olney, Cloverly	Exists along Hampshire Greens property only	E	Provides connection to several Countywide Bikeways; will be implemented as part of future roadway improvements, by developers and/or as independent CIP project
SR-34		Parkland Drive/ Chesterfield Road	Signed shared roadway	Veirs Mill Road (MD586)	Bel Pre Road	Aspen Hill	Proposed		Part of alternative route along Connecticut Avenue; provides connection to Rock Creek Trail; Requires only signage improvements
SR-35		Bauer Drive/ Heathfield Road	Signed shared roadway	Norbeck Road (MD28)	Georgia Avenue (MD97)	Aspen Hill	Proposed		Important connection between MD28 and MD97; Requires only signage improvements
SP-32		Emory Lane	Shared use path	Muncaster Mill Road (MD115)	Georgia Avenue (MD97)	Olney	Existing, except for missing 800' gap connecting to MD115		Gap to be completed when Emory Road is realigned; forms part of alternative park trail route to avoid sensitive environmental resources in the Rock Creek North Branch
BL-19		Hines Road	Bike lanes	Cashell Road	Georgia Avenue (MD97)	Olney	Existing		Provides neighborhood connection to MD97
SP-33		Hines Road-North Branch connector	Shared use path	Rock Creek's North Branch Trail	Cashell Road	Olney	Proposed		Important park trail connector; will be required if/when Norbeck Country Club is redeveloped
BL-20		Bowie Mill Road	Bike lanes	Muncaster Mill Road (MD115)	Olney-Laytonsville Road (MD108)	Upper Rock Creek/Olney	Proposed		Part of important connection from Olney to Shady Grove Metro Station (via Needwood Road); shoulders already exist in segments
SP-34	S-68	Olney-Laytonsville Road (MD108) - Olney West	Shared use path	Olney Mill Road	Georgia Avenue (MD97)	Olney	Existing, both sides	F	Important local connector to Olney Town Center
SP-35		Olney-Sandy Spring Road (MD108) - Olney East	Shared use path	Georgia Avenue (MD97)	Doctor Bird Road	Olney	Existing, both sides	F	Important local connector to Olney Town Center
SP-36		Olney-Laytonsville Road (MD108) - Laytonsville	Shared use path	Laytonsville Town boundary	Olney Mill Road	Olney	Proposed	F	Provides connection to Rock Creek Trail system as well as to Olney town center via existing shared use path; Will be implemented incrementally as part of future roadway improvements, by developers and/or as independent CIP project

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-37		Olney-Sandy Spring Road (MD108) - Ashton	Shared use path	Layhill Road (MD182)	Howard County line	Sandy Spring/Ashton	Shared use path exists in segments, mostly proposed	F	Part of connection to Olney and Ashton town centers; Will be implemented incrementally as part of future roadway improvements, by developers and/or as independent CIP project
SP-38		Doctor Bird Road/Norwood Road (MD182)	Shared use path	Layhill Road (MD182)	Olney-Sandy Spring Road (MD108)	Olney	Existing path between MD108 and Norwood Road, other segments proposed	No score	Connects Olney communities with communities in eastern county, will be implemented incrementally as part of future roadway improvements, by developers and/or as independent CIP project
BL-21		Norwood Road	Bike lanes	Layhill Road (MD182)	New Hampshire Avenue (MD650)	Cloverly	Existing path between MD108 and Norwood Road; proposed path from Norwood Road to MD182; proposed bike lanes from MD182 to MD650		Connects Olney communities with communities in eastern county, will be implemented as part of future roadway improvements
SP-39		Georgia Avenue (MD97)-Brookville	Shared use path	Olney-Sandy Spring Road (MD108)	Brookville Road	Olney	Proposed, existing in short segments	No score	Provides good connection from Brookville to Olney
BL-22		Georgia Avenue (MD97) - Upcounty	Bike lanes	Brookville Bypass	Howard County line	Olney	New proposal	E	Will be implemented as part of any future roadway improvements
SP-40		ICC bike path	Shared use path	I-370 terminus	Prince George's County line	1998 Countywide Park Trails Plan	Proposed		Will be built if/when ICC is built
<b>Rockville and Gaithersburg Vicinity</b>									
SP-41	P-20	North Bethesda Trail	shared use path; signed shared roadway/bike lanes	Cedar Lane	Twinbrook Metrorail station	North Bethesda-Garrett Park; Bethesda-Chevy Chase	10' path exists between Marinelli Road and Grosvenor Lane, bridges over I-495 and I-270 complete; other segments also exist		Major connection between Rockville and Bethesda; capital project underway in 2003 to complete most segments, but some gaps will still remain, trail continues north via Woodglan Avenue shared roadway, Marinelli Road shared use path, MD355 shared use path, Bou Avenue shared use path and Chapman Avenue bike lanes to Twinbrook Metrorail; NBT also includes Fleming Avenue signed shared roadway and segments of shared use path along Beech Avenue, Old Georgetown Road
SR-36		Grosvenor Lane/Cheshire Lane	Signed shared roadway	Old Georgetown Road	Rockville Pike (MD355)	North Bethesda/Garrett Park	Proposed		Provides important connection to both the North Bethesda Trail and Grosvenor Metrorail station; could be implemented quickly by simply installing signs
SP-1		Old Georgetown Road-Wildwood Shopping Center Path	Shared use path	Cheshire Lane	Democracy Boulevard		New proposal		Fills in a significant gap in countywide bikeway network. Path to be provided when shopping center is redeveloped.
BL-23	S72-A, S-72-B	Tuckerman Lane	Bike lanes or shared roadway	Falls Road	Old Georgetown Road	Polomac Subregion; North Bethesda-Chevy Chase	Good shoulder exists for most of road		Part of major connection to Grosvenor Metrorail Station; connects to many other countywide bikeways, including Fernwood and Seven Locks; signed shared roadway could be implemented quickly with only signage
SP-42	S72-A, S-72-B	Tuckerman Lane	Shared use path	Old Georgetown Road	Rockville Pike (MD355)	North Bethesda-Chevy Chase	8' sidewalk on north side mostly complete, some gaps		Major connection to Grosvenor Metrorail station; connects to North Bethesda Trail; candidate road for "road diet" to accommodate bike lanes or wide outside lane (see page 28 for explanation)

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-43	P-14	Grosvenor Connector	Shared use path	Beach Drive	Metro station	North Bethesda-Garrett Park	Proposed		Shared use path or wide sidewalk from Beach Drive to Grosvenor Metro station via MD355 jughandle at Grosvenor Lane and east side of MD355 up to Tuckerman Lane
SP-11		Strathmore-Grosvenor Metrorail Station connector path	Shared use path	Strathmore Avenue	Tuckerman Lane	North Bethesda-Garrett Park	Existing		Provides only connection to the Metrorail Station from the north
SR-57		Beach Drive-Grosvenor Metrorail connector	Signed shared roadway	Beach Drive	Tuckerman Lane		New proposal		Connection to Grosvenor Metrorail Station from Kensington via Parkside community, Weymouth Street to Montrose Avenue to Tuckerman Lane. Utilizes pedestrian connection between Town of Garrett Park and Parkside community.
BL-24		Tilden Lane	Bike lanes	Hounds Way	Nicholson Lane	North Bethesda-Garrett Park	Proposed		Provides connection to White Flint Metrorail Station and North Bethesda Trail; adequate road space exists for both bike lanes and on-street parking
BL-25		Executive Boulevard	Bike lanes	Woodglen Road/North Bethesda Trail	Montrose Road	North Bethesda-Garrett Park	Proposed		Provides important connection to both the North Bethesda Trail and White Flint Metrorail station; can be implemented when road is repaved and/or restriped
DB-22		East Jefferson Street	DUAL BIKEWAY - shared use path and signed shared roadway	Montrose Road	Rollins Avenue	North Bethesda-Garrett Park	Proposed		Provides important connection to both the North Bethesda Trail and White Flint Metrorail station; also provides connection to Rockville bikeway system from the south
SP-45		Marinelli Road	Shared use path	Executive Boulevard	Nebel Street	North Bethesda-Garrett Park	Existing		Important connection to White Flint Metrorail station and the future "North Bethesda Town Center"
SP-46		Old Georgetown Road	Shared use path	Rockville Pike (MD355)	Nebel Street	North Bethesda-Garrett Park	Existing		
DB-13		Nebel Street - south	DUAL BIKEWAY, bike lanes and shared use path	Nicholson Lane	Old Georgetown Road	North Bethesda-Garrett Park	Existing shared use path bike lanes are proposed		Part of important connection to White Flint Metrorail Station and the future "North Bethesda Town Center"
BL-26		Nebel Street - north	Bike lanes	Old Georgetown Road	Randolph Road	North Bethesda-Garrett Park	Proposed		Part of important connection to White Flint Metrorail Station and the future "North Bethesda Town Center"
SP-47		Nebel Street extended	Shared use path	Randolph Road	Chapman Avenue	N/A	Proposed		To be built as part of CIP project # 500005
SR-37		Nicholson Lane	Signed shared roadway	Old Georgetown Road	Nebel Street	North Bethesda-Garrett Park	Proposed		Requires wider outside travel lane that will be provided when road is widened
BL-27		Nicholson Lane/Parklawn Drive	Bike lanes	Nebel Street	Twinbrook Parkway	North Bethesda-Garrett Park	Proposed		Provides part of connections to both White Flint and Twinbrook Metrorail stations. Requires reduced lane widths or wider road to accommodate the bike lanes.
SR-58		Luxmanor Lane/Road	Signed shared roadway	Democracy Boulevard	Tilden Lane	North Bethesda-Garrett Park	Proposed		Forms part of a connection between North Bethesda and Rock Spring Industrial Park

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score	Discussion
				From	To				
SP-48		Rock Spring Connector	Shared use path	Rock Spring Drive	Tuckerman Lane		New proposal; exists in segments		Important off-road connection to Rock Spring Industrial Park. Sidewalk along Old Georgetown Road, 1-270, Rockledge Drive
SR-59		Rock Spring Drive	Signed shared roadway	Fernwood Road	Old Georgetown Road		New proposal		Provides on-road connectivity to major employers in Rock Spring Industrial Park. Outside Lanes should be widened. On-street parking should continue to be discouraged.
SR-60		Rockledge Drive	Signed shared roadway	Fernwood Road	Democracy Boulevard		New proposal		Provides on-road connectivity to major employers in Rock Spring Industrial Park. Outside Lanes should be widened. On-street parking should continue to be discouraged. Rockledge also includes a portion of the Rock Spring connector (SP-48)
BL-5		Westlake Drive-north	Bike lanes	Westlake Terrace	Tuckerman Lane		Existing		Provides connections to Rock Springs Office Park, Montgomery Mall, Cabin-John Regional Park
SP-44		Westlake Drive-south	Shared use path	Democracy Boulevard	Westlake Terrace		New proposal; eight-foot sidewalks /concrete paths exist on both sides		Vital link connecting Democracy Boulevard with Rock Spring Industrial Park and Cabin John Regional Park
SP-49		Rockville Pike (MD355) - north	Shared use path	Halpine Road	Veirs Mill Road (MD586)/ Norbeck Road (MD28)	City of Rockville		No score	Provides important connection to destinations along Rockville Pike, including Twinbrook and Rockville Metrorail stations
BL-28		Twinbrook Parkway	Bike lanes	Frederick Road (MD355)	Veirs Mill Road (MD586)	North Bethesda-Garrett Park	Proposed		Important connection to Twinbrook Metrorail station. Road is very narrow, adequate ROW may not exist; signed shared roadway (wide outside lane) should be provided at a minimum
SP-50	P-12	Montrose Road/Parkway	Shared use path	Falls Road	Veirs Mill Road (MD586)	North Bethesda-Garrett Park; Potomac Subregion	Proposed		Major connection to North Bethesda, retail along MD355 and Rock Creek Trail; to be built as part of Montrose Parkway project
SP-51		Gude Drive - east	Shared use path	Frederick Road (MD355)	Norbeck Road (MD28)	City of Rockville, Upper Rock Creek	Existing		Part of Millennium Trail; segment between MD355 and Southlawn should be re-built by City in 2003
SP-52	S-46	Norbeck Road (MD28) - west	Shared use path	Gude Drive	Avery Road	Upper Rock Creek	Existing	F	Provides good connection to Rockville's Millennium Trail
SR-38	S-46	Norbeck Road (MD28) - east	Signed shared roadway	Avery Road	Georgia Avenue (MD97)	Aspen Hill	Existing service road on north side from Bauer Drive to Nadine Drive, and south side from Nadine Drive to Georgia Avenue	F	Provides good connection to Rock Creek Trail and Rockville's Millennium Trail. Major gap between Nadine Drive and Avery Road
SP-53		Crabbs Branch Way	Shared use path	Gude Drive	Shady Grove Road	Shady Grove Sector Plan (currently underway)	New proposal		Widen west side sidewalk to 8'. Forms part of direct connection to Shady Grove Metro Station from Gude Drive shared use path
DB-14	P-27	Needwood Road	DUAL BIKEWAY; shared use path and bike lanes	Redland Road	Muncaster Mill Road (MD115)	Upper Rock Creek, Shady Grove Sector (currently underway)	Proposed		Forms part of important connection to Shady Grove Metrorail station
BL-29	P-27	Redland Road - east	Bike lanes	Needwood Road	Muncaster Mill Road (MD115)	new	Proposed		Provides direct connection to Shady Grove Metrorail station

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-54	P-27	Redland Road - west	Shared use path	Shady Grove Metrorail station	Needwood Road	new	Proposed		Provides direct connection to Shady Grove Metrorail station (proposed signed shared roadway from Metrorail station to MD355 as part of future redevelopment)
BL-30		Shady Grove Road - east	Bike lanes	Frederick Road (MD355)	Muncaster Mill Road (MD1115)	Shady Grove Sector Plan	Proposed		Part of a direct route to Shady Grove Metrorail station; segment between MD115 and Crabbs Branch Way under construction in spring 2003
DB-15		Shady Grove Road - west	DUAL BIKEWAY; shared use path and bike lanes	Darnestown Road	Frederick Road (MD355)	Gaithersburg and Vicinity; City of Rockville	Proposed		Forms part of important connection to Shady Grove Metrorail station; shared use path to be implemented by Rockville, bike lanes to be implemented by the county
SP-55		Airpark Road	Shared use path	Muncaster Mill Road (MD115)	Woodfield Road (MD124)	Gaithersburg and Vicinity	Existing		Forms part of important connection to Shady Grove Metrorail station
BL-31		Fieldcrest Road	Bike lanes	Woodfield Road (MD124)	Olney-Laytonsville Road (MD108)	Upper Rock Creek	Proposed		An important link between two countywide bikeways. Few alternatives exist in this area.
DB-23		Piney Meetinghouse Road/Shady Grove Road extended	DUAL BIKEWAY - shared use path and signed shared roadway	River Road (MD190)	Darnestown Road	Polomac	Modified proposal		Suitable for both on-road and off-road facilities; includes Shady Grove Road extended
SP-56		Key West Avenue (MD 28)	Shared use path	Darnestown Road	Guide Drive	Gaithersburg and Vicinity	Existing	F	Important connection between countywide bikeway network and City of Rockville bikeway system.
SP-57		Travilah Road	Shared use path	River Road (MD190)	Darnestown Road (MD28)	Gaithersburg and Vicinity; Polomac Subregion	Proposed, but exists in segments on north side		Connects to two major bikeways and to several local destinations; forms part of alternative route to C&O Canal (replaced the Muddy Branch Trail recommended in 1998 C/TP); project underway in 2003
BL-32		Duffier Mill Road	Bike lanes	Travilah Road	Darnestown Road (MD28)	Gaithersburg and Vicinity; Polomac Subregion	Existing		Extra-wide bike lanes, may need to be redesigned
SP-58		Quince Orchard Road	Shared use path	Duffier Mill Road	Darnestown Road (MD28)	Gaithersburg and Vicinity; Polomac Subregion	Exists in segments, mostly proposed		Provides direct connection to Gaithersburg
DB-16		Darnestown Road (MD28) - North	DUAL BIKEWAY; shared use path and bike lanes	Seneca Road	Great Seneca Highway (MD119)	Gaithersburg and Vicinity	Shared use path is planned and exists in segments, remainder in facility planning in 2003; bike lanes are being implemented as part of SHA improvements	E	Provides direct connection to Rockville and forms part of connection to Gaithersburg from Poolesville; SHA-provided 16' wide curb lanes should be striped as bike lanes
SP-59		Darnestown Road - south	Shared use path	Key West Avenue (MD28)	Woolton Parkway	Gaithersburg and Vicinity	Proposed		Forms part of important connection to City of Rockville and Rockville Metrorail station
SP-60		Long Draft Road	Shared use path	Quince Orchard Road	Clopper Road (MD117)	Gaithersburg and Vicinity	Proposed		Connects to 2 major bikeways and to City of Gaithersburg

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
DB-17		Clopper Road/Diamond Avenue (MD117)	DUAL BIKEWAY; shared use path and signed shared roadway	Summit Avenue	Clarksburg Road (MD121)	Gaithersburg and Vicinity; City of Gaithersburg	Proposed	E	Provides direct connection to City of Gaithersburg as well as to several MARC stations; Improvements by SHA underway in 2003 for improvements within Gaithersburg city limits
DB-29		Goshen Road	DUAL BIKEWAY; shared use path and signed shared roadway	Odenhal Avenue	Warfield Road	N/A	New proposal		Currently in facility planning (2003/04), project includes both a shared use path and wide outside travel lanes to accommodate signed shared roadway
DB-24		Muddy Branch Road	DUAL BIKEWAY - shared use path and bike lanes	Darnestown Road (MD28)	Clopper Road (MD117)	Gaithersburg and Vicinity; City of Gaithersburg	Existing 8' concrete sidewalk in segments, path narrows in places		Provides direct connection to City of Gaithersburg as well as an indirect connection to Gaithersburg MARC station; need to provide consistent-width path for entire roadway; adequate ROW exists for bike lanes when road is widened or reconstructed in the future
SP-63	S-85	Great Seneca Highway (MD119)	Shared use path	Darnestown Road (MD28)	Middlebrook Road	Gaithersburg and Vicinity; City of Gaithersburg	Existing	No score	Provides excellent off-road connection between Germantown and Gaithersburg
SP-64		Frederick Road (MD355)	Shared use path	Gude Drive	Watkins Mill Road	City of Rockville, City of Gaithersburg; Shady Grove Sector	Exists in segments, mostly proposed	F	Provides excellent connections to downtown Rockville and Gaithersburg; Will be implemented incrementally as part of future roadway improvements and by developers
SP-65		Richter Farm Road	Shared use path	Great Seneca Highway (MD119)	Clopper Road (MD117)	N/A	New proposal		To be built incrementally by developers mostly
SP-66		Corridor Cities Transitway bike path	Shared use path	Shady Grove Metrorail Station	Frederick Road (MD355)	I-270/US15 Corridor Study	Proposed, although already exists in segments as part of other bikeways		Connects most of the major employment centers in the I-270 Corridor north of Rockville; to be implemented fully as part of CCT project
BL-33		Seneca Road	Bike lanes	River Road (MD190)	Darnestown Road (MD28)	Gaithersburg and Vicinity	Proposed, although portion exists at intersection f Seneca and MD28		Connects River Road dual bikeway with upcounty bikeway system
<b>Germantown &amp; Clarksburg</b>									
DB-25		Germantown Road (MD118)	DUAL BIKEWAY; shared use path and signed shared roadway	Darnestown Road (MD28)	Frederick Road (MD355)	Germantown	Modified proposal; segment of path between Clopper Road (MD117) and Germantown Park Road is existing; other path segments proposed or exist only in short segments; wide outside travel lanes to be provided when road is widened or reconstructed	E, F	Major connection to and through Germantown Center
SP-68		Father Hurley Boulevard/Ridge Road (MD 27)	Shared use path	Germantown Road (MD118)	Emk Road	Germantown	Proposed	No score	Provides connection to Germantown Center; segment of path will be built as part of Father Hurley Boulevard extension (project underway in 2003)
SP-69		Observation Drive	Shared use path	Germantown Road (MD118)	Frederick Road (MD355)	Germantown	Segment between MD118 and Little Seneca Creek is existing; segment between Little Seneca Creek and MD355 is proposed		Provides direct connection through Clarksburg

Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SP-70		MidCounty Highway	Shared use path	ICC	Frederick Road (MD355)	Clarksburg, Germantown, Gaithersburg and Vicinity	Proposed		Major north-side off-road connection; may extend to ICC; Will be built as part of future roadway construction and/or improvements
SP-71		- Middlebrook Road	Shared use path	Father Hurley Boulevard	MidCounty Highway	Germantown	Exists in segments, otherwise proposed		Good connection to Germantown Center
SP-72		Frederick Road (MD355)-Upcounty	Shared use path	Walkins Mill Road	Frederick County line	Germantown	Exists in segments, otherwise proposed	B	Provides excellent connections to downtown Gaithersburg and Clarksburg Town Center; Will be built incrementally as part of future SFA projects as well as by developers
DB-18		Clarksburg Road (MD121)/Stringtown Road	DUAL BIKEWAY; shared use path and signed shared roadway	Clopper Road (MD117)	MidCounty Highway	Germantown	Proposed	No score	Provides good connections to Clarksburg Town Center, Black Hill Regional Park; path to be built mostly by developers; shared roadway requires only signage improvements
DB-26		Old Baltimore Road/New Cut Road	DUAL BIKEWAY; shared use path and signed shared roadway	Clarksburg Road (MD121)	Frederick Road (MD355)	Clarksburg	Proposed		Minor connection to Clarksburg, part of important connection to Black Hill Regional Park
DB-27		Walkins Mill Road	DUAL BIKEWAY; shared use path and signed shared roadway	Frederick Road (MD355)	MidCounty Highway	Germantown	Proposed; section between Seneca Creek and MidCounty Highway is a new proposal		Forms part of connection to City of Gaithersburg
BL-34		Riffleford Road	Bike lanes	Darnestown Road (MD28)	Germantown Road (MD118)		New proposal		Important connection to South Germantown Park
SP-75		CCT-Black Hill connector	Shared use path	Crystal Rock Drive	Black Hill Regional Park		New proposal		Connects the Corridor Cities Transitway and Germantown to Black Hill Regional Park
<b>Agricultural Crescent</b>									
SR-39		Ridge Road (MD27)	Signed shared roadway	Brink Road	Howard County line	N/A	New proposal	No score	Provides connection between Damascus and Germantown
DB-30		Woodfield Road (MD124) -North	DUAL BIKEWAY; Signed shared roadway and shared use path	Woodfield Elementary School	Ridge Road (MD27)	Damascus	New proposal	Mostly F, A, B	Forms part of a connection between Damascus and Gaithersburg; consistent with Damascus Master Plan update currently underway
SR-61		Woodfield Road (MD124) -Central	Signed shared roadway	Warfield Road	Woodfield Elementary School	Damascus		F	Forms part of a connection between Damascus and Gaithersburg; primarily passes through farmland, for which on-road accommodation is highly desirable, but a shared use path is less desirable
DB-28		Woodfield Road (MD 124) - South	DUAL BIKEWAY; Signed shared roadway and shared use path	Midcounty Highway	Warfield Road	1978 MPB; Gaithersburg and Vicinity	New proposal	F	Provides important connection to Gaithersburg from the northeast



Route #	1978 Route # reference	Bikeway Name	Bikeway Type	Limits		Plan Reference	Status/ Condition	BLOC Score*	Discussion
				From	To				
SR-62		Sundown Road/Bmk Road	Signed shared roadway	Frederick Road (MD 355)	Damascus Road (MD 650)	Olney	Modified proposal		Provides rare east-west route in this part of the county, connecting Town of Laytonsville with I-270 corridor and the countywide bikeway network
SR-40		Barnesville Road (MD117)/Barnesville Road	Signed shared roadway	Clarksburg Road (MD121)	Beallsville Road (MD109)	N/A	New proposal	E,F	Provides connection between Barnesville and Germantown; needs shoulder improvements
SR-41		Darnestown Road (MD28) - Poolesville	Signed shared roadway	Seneca Road	Beallsville Road (MD109)	N/A	New proposal	F	Provides connection between Poolesville and Countywide Bikeway Network; needs shoulder improvements
SR-42		Darnestown Road (MD28) - Dickerson	Signed shared roadway	Barnesville Road	Frederick County line	N/A	New proposal	E	Connects proposed bikeway along MD28 in Frederick County with Countywide Bikeway Network; needs shoulder improvements
SR-43		Laytonsville Road (MD108)	Signed shared roadway	New Hampshire Avenue (MD650)	Town of Laytonsville	N/A	New proposal	E	Provides part of connection between Damascus and Olney/Laytonsville; needs shoulder improvements
SR-44	P-39, S-79	Damascus Road (MD108)/New Hampshire Avenue (MD650)	Signed shared roadway	Ridge Road (MD27)	Sandy Spring-Ashton Road (MD108)	1978 MPB	Proposed	E	Provides one of only a few east-west connections in upper part of the county; needs shoulder improvements
SR-45		Whites Ferry Road (MD107)	Signed shared roadway	Darnestown Road (MD28)	Beallsville Road (MD109)	N/A	New proposal	E	Provides part of connection between Poolesville and the Gaithersburg and Germantown area; needs shoulder improvements
SR-46		Whites Ferry Road - Poolesville connector	Signed shared roadway	Beallsville Road (MD109)	Whites Ferry/Polomac River	N/A	New proposal		Provides part of connection between Poolesville and the Gaithersburg and Germantown area; needs shoulder improvements
SR-47		Beallsville Road (MD109)	Signed shared roadway	Whites Ferry Road (MD107)	Barnesville Road (MD117)	N/A	New proposal	No score	Provides connectivity between Poolesville and Barnesville. Also provides important connection to Barnesville MARC station; needs shoulder improvements