

Transportation Impact Study Technical Working Group (TISTWG)

December 2, 2015 Meeting #12

MRO Auditorium

1:30-3:30 PM

Agenda

- 1) Introductions (5 min)
- 2) Preview of December 3 Planning Board roundtable discussion (30 min)
http://www.montgomeryplanningboard.org/agenda/2015/documents/item4_StaffReport_SSPTransportationInitiatives_120315_pd_eg_signedpd_v2_final.pdf
 - a) Opportunities to collapse LATR and TPAR into a single test
 - b) Downtown Bethesda pro-rata share considerations
 - c) TPAR transit updates status
 - d) Trip generation status
- 3) Updates on parallel efforts (15 min)
 - a) MCDOT White Oak transportation analysis
 - b) SHA Transportation Study Guidelines
 - c) M-NCPPC Assessment of Modeling Tools/Measures/Metrics study
- 4) Draft materials for review (60 min)
 - a) Second draft of Subdivision Staging Policy (MS Word)
 - b) First draft of LATR Guidelines (MS Word, with Appendices 1 – 3 in PDF)
 - c) Overview of primary changes (pages 2 – 3 below)
- 5) Next steps and tentative meetings schedule (10 min)
 - a) December 2 TISTWG meeting: second draft of Subdivision Staging Policy; first draft of full LATR Guidelines
 - b) December 3 Planning Board Roundtable
 - c) December 18: TISTWG comments to M-NCPPC on December 2 materials
 - d) January 8: Response to TISTWG comments
 - e) February 3 TISTWG meeting
 - f) Planning Board SSP worksessions: February 11, March 3, March 24 (if necessary)

Description of Agenda Packet Contents and Overview of Primary Changes

Subdivision Staging Policy Amendments – Version 2

Version 1 of the proposed Subdivision Staging Policy Amendments were distributed in the packet for the April 1 TISTWG meeting. Version 2 incorporates changes based on TISTWG comments since April 1, notably:

- Return of Potomac Policy Area to current conditions (no study needed)
- Identification of additional Protected Intersections and payment in lieu requirement
- Refinement of Very Low VMT approach to include Type 2 (*de minimis*) cases

LATR/TPAR Guidelines Amendments – Version 1

The attached MS Word file containing the LATR/TPAR Guidelines Amendments contains two types of markups:

- **Red text** denotes proposed changes accumulated by M-NCPPC staff based on case study experience during the past two years. These changes are predominantly claritive in nature, including notable systemic changes such as:
 - Referring to the “traffic statement” as a “traffic (study) exemption statement”
- **Blue track changes text** denotes proposed changes relating to the amendments developed as part of the TISTWG review process.

Substantial formatting is still required, but the objective at this stage is to distribute this information for review and comment prior to completing mapping and tabular format. Part of the review and comment is expected to include consideration of potential Guidelines reorganization to minimize repetition (i.e., the proposed deletion of Table 5 as duplicative of Map 1) and improve readability.

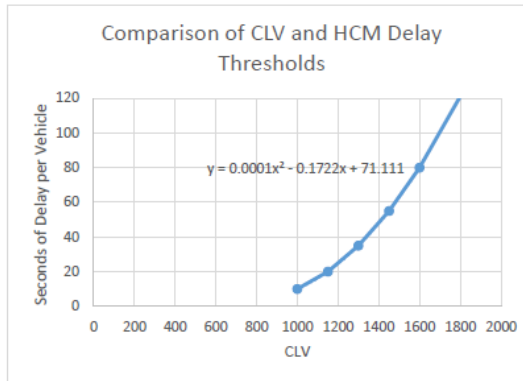
The primary new technical materials included in this packet are the development of replacement LATR/TPAR Guidelines Appendices 1 through 3 that replace the legacy LATR vehicle trip generation rates with new context-sensitive trip generation rates based on ITE vehicle trip generation rates and modal split assumptions developed through analysis of Travel/4 trip generation and mode split assumptions.

Additional proposals developed since the last TISTWG review include:

- A vehicular delay equivalent for MSPAs at 120 seconds per vehicle as equivalent to the 1800 CLV standard, based on the assessment of CLV to average HCM delay values as indicated in the chart below:

Equivalency between CLV and HCM delay

Threshold	LOS	HCM delay	Fitted Curve (with values:)	X ²	X	constant
				0.0001111	0.1722	71.111
LOS A/B	1000	10	10.0			
LOS B/C	1150	20	20.0			
LOS C/D	1300	35	35.0			
LOS D/E	1450	55	55.0			
LOS E/F	1600	80	80.0			
MSPA	1800		121.1			



- An acceptance of twice the value for non-auto facilities (i.e., \$24,000 per peak hour vehicle trip) for improvements that achieve a Level of Traffic Stress of LTS-2 or better for sites that are required to perform a bicycle quantitative analysis, based on the criteria (>100 peak hour non-motorized site generated trips and presence of nearby bicycle trip generators) requiring quantitative analysis.

One other pertinent notice is that the “Adams amendment” regarding the applicant’s responsibility for mitigating minor impacts to a second study intersection when a first intersection is already being mitigated by the applicant has had several rounds of discussion. While the proposal as of April was to change the “no need to mitigate if less than 5 CLVs” to “no need to study if less than 5 trips” it appears now that such a change would, in many cases, be superseded by the new “no need to study if less than 1% of total intersection volume and less than 5% of site generated trips”.

Abstract

The Local Area Transportation Review and Policy Area Mobility Review Guidelines were updated by the Planning Board on May 13, 2010, June 17, 2011, and February 9, 2012.

Does not include Amend 14-2 for White Oak LATR updates

On November 13, 2012 the County Council adopted changes to the Subdivision Staging Policy eliminating the Policy Area Mobility Review (PAMR) as an area-wide test for transportation adequacy and replacing it with Transportation Policy Area Review (TPAR). The Planning Board approved these revised guidelines to incorporate the Council's action on January 24, 2013. Since the release of the latest LATR & TPAR Guidelines (January 2013), the County Council adopted an amendment to the Subdivision Staging Policy (Resolution 17-1204) creating the White Oak Policy Area (July 29, 2014) and the Planning Board approved the results of the revised TPAR transit and roadway adequacy tests (February 5, 2015). This document reflects those changes.

These Guidelines are to be used for preparation and review of transportation impact studies for development in Montgomery County. This document should be used by transportation engineers, planners, public agency reviewers, and community members participating in the development review process.

Source of Copies

The Maryland-National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3760

Online at: www.mc-mncppc.org/transportation/index.shtm www.montgomeryplanning.org/transportation

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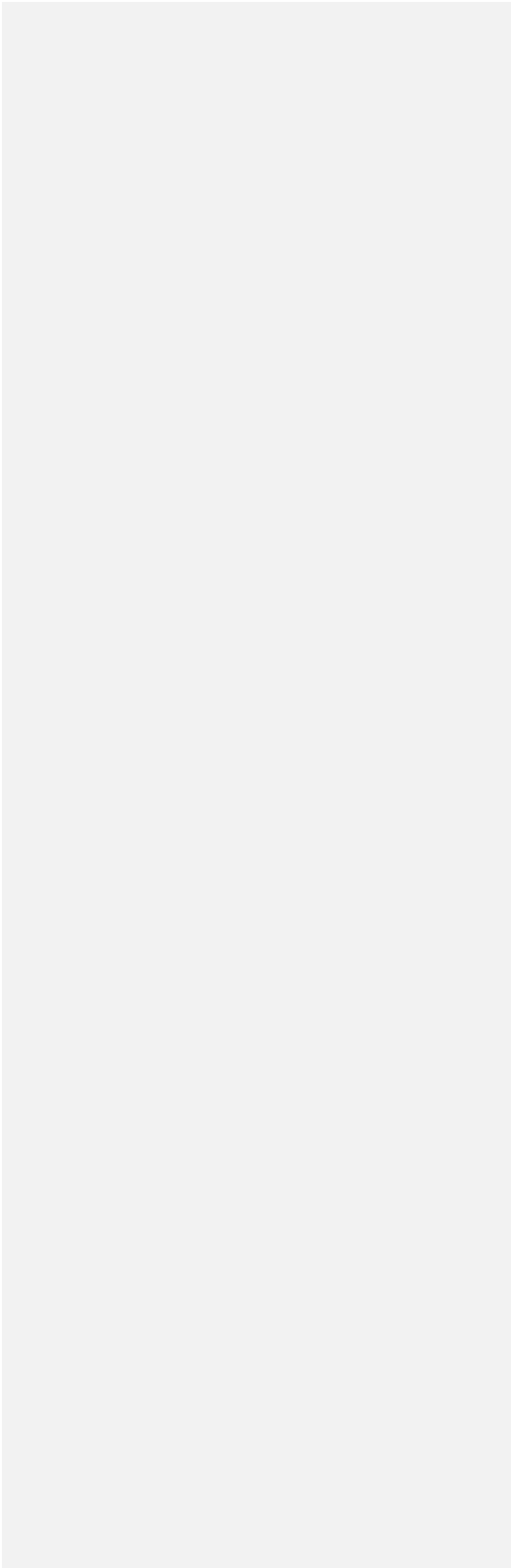
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- Appendix 8 Provisional Adequate Public Facilities Findings
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Introduction

Section 50-35(k) of the County Code directs the Montgomery County Planning Board to find that public facilities will be adequate to serve proposed development. This Adequate Public Facilities (APF) finding requires forecasting traffic generated by proposed development and comparing it to the capacity of existing and programmed roads and transit. An applicant for proposed development must show that adequate transportation facilities will be in place within a specified period of time. Alternatively, the applicant must provide those facilities or make a Traffic Mitigation Payment toward area-wide transportation needs. These guidelines show the methodology for determining adequacy, specify mitigation for projected traffic generated by proposed development projects, and describe how Traffic Mitigation Payments are determined.

There are two tests for determining transportation adequacy—the Local Area Transportation Review (LATR) test and the policy area test called Transportation Policy Area Review (TPAR). These tests are required by the 2012-2016 Subdivision Staging Policy adopted by the County Council on November 13, 2012.

LATR determines the adequacy of local roads by measuring congestion at roadway intersections based on critical lane volume (CLV) and volume to capacity ratio (v/c). The estimated vehicle trips generated by a proposed development are compared to the applicable policy area standard to evaluate likely future congestion. The development's trips that contribute to nearby intersections exceeding the standard must be mitigated in some fashion.

The TPAR test first considers whether a policy area is considered inadequate for transit or roadways (or both). If the area is inadequate, a development in the area must make a Traffic Mitigation Payment based on the number of dwelling units or square footage of nonresidential space, or make improvements that increase capacity in the policy area to address identified specific roadway and transit inadequacies.

These Guidelines explain the methodology for documenting and analyzing the likely impact of proposed development on intersection performance, that is, the LATR part of Subdivision Staging. The Guidelines focus on LATR because this aspect of the transportation adequacy test reflects the majority of the analysis conducted by applicants using these Guidelines. The TPAR test is updated every two years by the Planning staff and adequacy standards are established by the Planning Board. The current TPAR standards (2015-2016) updated and approved by the Planning Board on February 5, 2015 are also presented in this document.

The criteria in these Guidelines determine whether a development can satisfy the requirements for transportation adequacy. Following the standards of the Subdivision Staging Policy, the Planning Board must not approve a development if unacceptable weekday peak-hour intersection congestion will result. The Planning Department staff's review and the Planning Board's decision is based on existing and programmed roads, available and programmed mass transportation, and physical improvements or trip mitigation measures to be provided by the applicant.

Together, the two transportation tests provide a picture of traffic impacts, and the necessary improvements to maintain congestion standards.

APPLICABILITY

LATR is applied to development projects that will generate ~~more than 30 or more total morning or evening~~ a significant number of weekday peak hour ~~person~~ trips. A significant number of weekday peak hour person trips is defined as 75 or more in Metro Station Policy Areas (MSPAs) and 50 or more in all other areas of the County. TPAR is applied to projects that will generate more than three total weekday peak hour trips. Projects that generate fewer than 30 total weekday peak hour trips must prepare a traffic exemption statement describing the basis for any exemption from an LATR ~~traffic study~~ transportation study and/ or TPAR.

Both tests are applied by policy area (see Map 1). Detailed maps, with streets shown, can be found in Appendix 9. Each policy area has a particular congestion standard for intersections, which is applied to meet the LATR test. Each policy area also has a transportation adequacy determination for roadway and transit service applied in the TPAR test. These standards and mitigation requirements are adopted by the County Council and specified in these Guidelines, which are updated as needed to reflect industry standards, local traffic conditions, and Council action.

Project applications requiring LATR/TPAR studies:

- preliminary plan (as part of a subdivision application)
- site plans not requiring subdivision
- **conditional use/special exception, and other zoning cases before the Board of Appeals and County Council**
- **mandatory referral cases (exclusive of transportation projects)**
- **These Guidelines may also apply to** building permit review cases requiring an APF finding, though in some cases (less than 12 months vacancy, no increase in square footage, fewer than 30 **new total** weekday peak hour trips) the APF test may be approved administratively by Planning Staff.
- **Provisional Adequate Public Facilities (PAPF) applications associated with Development Districts, as described in Appendix 8. The Planning Board may consider the use of the PAPF process for an individual property, in the absence of a Development District, in the event that it would accelerate public infrastructure through private investment.**

HOW TO USE THESE GUIDELINES

These Guidelines are to be used by applicants to prepare ~~traffic studies~~transportation studies for Planning Board approval and by staff when reviewing those studies. These Guidelines are also recognized as the standard for reports to the Board of Appeals and Hearing Examiner for **conditional use/special exception, and other zoning cases, respectively.**

The following chart illustrates the steps needed to arrive at a recommendation for approval of the transportation test for the Adequate Public Facilities Ordinance. These Guidelines describe the information needed from the applicant to determine the answer at each step of the process and the considerations staff must evaluate when reviewing the document.

LATR and TPAR compliance is not required for developments in the White Flint Policy Area **if because** applicants **agree are required** to participate in the White Flint Special Taxing District for transportation infrastructure improvements in lieu of satisfying the transportation APF tests for LATR and TPAR.

LATR and TPAR mitigation and/or payments are not required for public facility project mandatory referrals, in which the Planning Board's **review of an LATR study and** comments are advisory. Mandatory referrals are often unique uses, such as schools or other public services, and their traffic review follows Mandatory Referral Guidelines, which requires a pedestrian and bicycle safety statement, pedestrian and vehicular circulation plan, and a traffic **exemption** statement or ~~traffic study~~transportation study as applicable.

Figure 1: Montgomery County Transportation Review Process – LATR and TPAR (note: new graphic in progress)

When a proposed development is projected by the LATR ~~test study~~ to generate a ~~significant impact~~ ~~unacceptable level of peak hour congestion~~, the applicant should consult with Planning Department staff, the Montgomery County Department of Transportation (MCDOT), the Maryland State Highway Administration (SHA), ~~the Washington Metropolitan Area Transit Authority (WMATA)~~ and the municipalities of Rockville and Gaithersburg (when applicable) to develop recommendations for trip reduction, including specific intersection improvements or pedestrian, bicycle, and transit enhancements that can mitigate the project's impact and thereby gain Planning Board approval.

The Guideline procedures outlined in this document are intended to provide a snapshot of estimated future ~~traffic-transportation~~ conditions for proposed development. These procedures are not intended to establish delay-free travel conditions.

Map 1: Subdivision Staging Policy Areas and
Intersection Congestion Standards
(note: map to be updated to show
White Oak Policy Area)

(CLV) standard

26 Rural East 27 Rural West	1,350
7 Damascus	1,400
5 Clarksburg 11 Gaithersburg City 12 Germantown East 14 Germantown West 18 Montgomery Village/Airpark	1,425
6 Cloverly 20 North Potomac 21 Olney 22 Potomac 23 R&D Village	1,450
2 Aspen Hill 8 Derwood 9 Fairland/White Oak Colesville	1,475

policy area critical lane volume
(CLV) standard

24 Rockville City	1,500
19 North Bethesda	1,550
4 Bethesda-Chevy Chase 17 Kensington-Wheaton 13 Germantown Town Center 30 Silver Spring-Takoma Park 34 White Oak	1,600
28 Shady Grove MSPA	1,650
3 Bethesda CBD 10 Friendship Heights CBD 29 Silver Spring CBD 32 Wheaton CBD 15 Glenmont MSPA 16 Grosvenor MSPA 25 Rockville Town Center MSPA 28 Shady Grove MSPA 31 Twinbrook MSPA	1,800
33 White Flint MSPA	

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Local Area Transportation Review

INTENT AND STANDARDS

The Local Area Transportation Review process considers both quantitative and qualitative multimodal measures of adequacy for the transportation conditions in the general vicinity of the development site. Quantitative analysis is required for each mode (auto, transit, pedestrian, and bicycle) for which a significant number of peak hour trips is generated by that mode. Qualitative analysis of pedestrian and bicyclist conditions, defined as a "pedestrian and bicyclist impact statement", is required regardless of the number of trips generated.

Priority Approach to Implement Mitigating Actions

In all areas of the County, priority should be given to identifying mitigating actions that accomplish one or more of the following objectives, in the following order:

- Reduce transportation demand, particularly in single-occupant vehicles
- Improve pedestrian or bicyclist quality of service
- Improve transit quality of service
- Improve auto level of service

In CBDs and MSPAs, the consideration of each priority approach should include a statement of mitigation approaches proposed and their expected effect on person trip generation by mode with an attempt to achieve any mode share goals in applicable master or sector plans. Where intersection or roadway widening is proposed as mitigation, the narrative must describe why the higher priority approaches of trip reduction, non-auto facilities, or transit services were not sufficient to mitigate LATR impacts (whether through true shifting of modal demand or through the LATR concepts such as the \$12K/vehicle trip mitigation exchange rate for non-auto facilities). Typical explanations may include the fact that capacity improvements were required to satisfy access permit, or other safety, requirements; that the LATR maximums for such non-auto facilities were reached; that the developer interests were better served by a lower-priority improvement approach; or that appropriate non-auto mitigation sites could not be identified in conjunction with agency staff. The statement should identify potential actions that the public sector might consider to better support the higher priority approaches for interagency staff consideration in CIP and operating budget commentary.

In other Urban Areas, the consideration of each priority approach should include a similar statement regarding the examination of non-auto facilities, but without supporting quantitative assessments of modal shift or plan mode share goal achievement.

In other areas of the county besides CBDs, MSPAs, and Urban Areas, the consideration of each priority approach should include a paragraph describing options considered and why they were not pursued; this statement may be brief and entirely qualitative. An exception to the priority approach should be made so that any proposed mitigation that is explicitly described in a master plan or sector plan can be elevated above a higher-priority approach.

Quantitative and Qualitative Analyses

The table below describes the peak hour person trip generation rates by mode that constitute a significant impact:

<u>Location</u>	<u>Triggers for quantitative analysis (all peak hour of site generator)</u>			
	<u>Auto</u>	<u>Pedestrian</u>	<u>Bicycle</u>	<u>Transit</u>
<u>CBD/MSPAs</u>	<u>75 vehicle trips</u>	<u>100 pedestrian trips</u>	<u>100 person trips and site located within a quarter mile of an existing or proposed bikeshare station, college, or high school</u>	<u>50 transit trips</u>
<u>Elsewhere</u>	<u>50 vehicle trips</u>			

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Context-Sensitive Trip Generation

The LATR process uses context-sensitive trip generation and mode split analyses to determine the need for an LATR Transportation Study (as contrasted with a Transportation Study Exemption Statement) and the need for quantitative analysis of each of the four modes of travel. The LATR process utilizes the most recently published vehicle trip generation rates in the *ITE Trip Generation* in concert with context-sensitive trip generation adjustment factors associated with each policy area to define site vehicle driver, vehicle passenger, transit patron, and non-motorized person trips, using tables in Appendices 1 through 3. The table below describes the application of Appendices 1 through 3 using a hypothetical 100,000 GSF office building in the Germantown East Policy Area:

<u>Appendix</u>	<u>Title/Purpose</u>	<u>Primary Use</u>	<u>Example Case</u>
1	<u>ITE Vehicle Trip Rate Adjustment Factors</u>	<u>Adjust ITE estimate of site-generated vehicle trips</u>	Using the average rates from pages 1260 and 1261 of the 9 th Edition of <i>Trip Generation and Appendix 1</i> , the site is estimated to generate 156*0.90=140 AM peak hour vehicle trips and 149*0.90=134 PM peak hour vehicle trips.
2	<u>Trips by Mode for Developments With Significant Impact</u>	<u>Identify whether site has significant impact (and requires LATR Study)</u>	For Germantown East, the context-sensitive vehicle trip generation rates exceed the 34.0 threshold that equates to 50.0 person trips so an LATR Study is required
3	<u>Mode Split Assumptions by Policy Area</u>	<u>Identify which modes require quantitative analysis.</u>	<p>The number of vehicle trips exceeds the threshold of 50 so that a quantitative auto analysis <i>is required</i>.</p> <p>The number of transit trips (156 * 2.8% / 68.0% = 6) is less than the threshold of 50 so that a quantitative transit analysis <i>is not required</i>.</p> <p>The number of non-motorized trips (156 * 4.9% / 68.0% = 11) is less than the threshold of 100 so that quantitative pedestrian or bicycle analyses <i>are not required</i>.</p>

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Once the context-sensitive number of person-trips generated by mode is established, certain sites may be eligible to conduct further mode shifts as follows:

- Based on the 2005 WMATA Development Related Ridership Survey findings (Table S-2), sites that are located within 1,000' of a Metrorail station may shift additional trips from auto driver to transit patron based on the actual walking distance from the site's main entrance to the Metrorail station portal, with a value of:
 - 1 percentage point of mode share for every 50 feet closer than 1,000 feet for office development
 - 1 percentage point of mode share for every 100 feet closer than 1,000 feet for residential development.
- ADDITIONAL PARKING MANAGEMENT VEHICLE TRIP REDUCTION TBD: A reduction in trip generation rates is yet to be defined for office and residential developments that provide less than the maximum amount of required parking, although this reduction should only apply in TMDs where conditions can be managed and monitored (particularly regarding the likelihood of shared parking opportunities and any adverse effects of spillover parking. Conversely, the parking management vehicle trip generation rate reduction would not be applicable in Parking Lot Districts where private sector contributions towards publicly managed shared parking is encouraged.
- Applicants wishing to further reduce vehicular impacts through Transportation Demand Management programs may propose additional TDM programs and services whose effectiveness will be negotiated with M-NCPPC staff, pivoting from the context-sensitive trip generation rates already incorporated above and with binding elements to be included in a Traffic Mitigation Agreement (TMAg).

Pedestrian Mode

The LATR quantitative pedestrian analysis requires the consideration of pedestrian capacity analyses to identify the number of existing pedestrians and total future pedestrians along each sidewalk segment and marked crosswalk. The total future pedestrians are defined as existing pedestrians plus site generated non-motorized and transit patron trips unless a level of background pedestrian traffic growth is provided by M-NCPPC staff during the transportation study scoping process based on other recently conducted studies.

The quantitative pedestrian analysis study area will extend 500' from the site boundary in all directions unless a specific pedestrian destination, such as a transit station, is agreed upon as a more logical terminus for the analysis during the study scoping process. Only sidewalks and crosswalks that serve a desire line connecting the development site to the edge of the pedestrian study area need to be analyzed. For the purposes of capacity analyses, Sidewalk segments within 500' but separated by a non-traversable barrier such as a freeway segment, railroad, or body of water need not be analyzed. For the purposes of capacity analysis:

- transit patron trips should be assigned on a direct path towards the nearest fixed-guideway transit station if one exists within 1,000' of the study site, or distributed evenly towards any bus stop within the pedestrian study area, and
- pedestrian trips should be distributed evenly along sidewalk and crosswalk segments,
- unless otherwise directed by M-NCPPC staff during the transportation study scoping process.

For the purposes of ADA compliance, the number of estimated pedestrian trips along any desire line will not affect the need to address non-compliance; the nexus in this regard is based on the total site generation and proximity to the element of non-compliance.

The pedestrian analysis will consider sidewalk and crosswalk capacities as defined in the current edition of the *Highway Capacity Manual* as well as ADA compliance. An adverse impact will be identified if any sidewalk or crosswalk capacity exceeds LOS D or if the sidewalk is not ADA compliant in terms of effective sidewalk width or provision of curb cuts. Based on the generation of a significant number of new pedestrian trips, the applicant will be responsible for mitigating LOS D conditions and correcting ADA non-compliance.

Bicycle Mode

The quantitative bicycle analysis study area will extend 1,000' from the site boundary in all directions unless a specific bicycle destination, such as a bikeshare station, college, or high school, is agreed upon as a more logical terminus for the analysis during the study scoping process. The bicycle analysis will consist of identifying the current and total future Level of Traffic Stress (LTS) along public streets and shared-use paths within 1,000' of the study area in all directions. The total future LTS will consider increases in vehicle traffic due to background developments identified by M-NCPPC staff during the study scoping process.

The applicant will identify potential changes to the motor vehicle and bicycle network that could contribute to achievement of an LTS-2 on any study area roadways where LTS-2 or better conditions do not exist in the study area. The applicant will not be responsible for implementing any actions identified in this analysis. However, should the applicant agree with M-NCPPC and implementing agencies to implement any recommendations, they will be considered non-auto facilities with twice the monetary value (i.e., \$24,000 per peak hour vehicle trip rather than \$12,000 per peak hour vehicle trip).

Transit Mode

The quantitative transit analysis study area will consist of a direct path towards the nearest fixed-guideway transit station if one exists within 1,000' of the study site, or distributed evenly towards any bus stop within the pedestrian study area. A capacity analysis of transit conditions will be performed for existing conditions for all fixed-route transit services serving those stations or stops. Justification of the capability of the transit system to accommodate the projected site-generated transit volume is to be performed qualitatively in coordination with MCDOT and WMATA, considering the transit service characteristics and adequacy of the pedestrian access between the transit station and the site.

Auto Mode

The LATR quantitative auto mode analysis test is undertaken in two steps to best measure congestion levels. The initial Critical Lane Volume (CLV) analysis is performed to screen out intersections with a CLV less than 1,600, the threshold between stable (but close to congested) and unstable (over-congested) road conditions.

Traffic-Transportation Study Exemption Statement

Projects that are projected to generate less than 30 new weekday peak hour trips for LATR and less than three or fewer peak hour trips for TPAR may need to submit only a more limited traffic-transportation study exemption statement. This statement must demonstrate the conditions that justify the exemption.

Information to be included in a more limited traffic-transportation study exemption statement:

- development project location—Planning Area and policy area
- proposed nonresidential square footage
- proposed number of dwelling units (single-family or multifamily)
- proposed land uses (as defined by DPS)
- estimated number of new and total peak hour trips generated by the proposed land uses
- proposed access points, location of parking, site circulation
- proposed operations (i.e., hours of operation, # of employees, # of residents, deliveries staggered hours for staff and visitor arrival/departure, etc.)
- rationale for exemption demonstrate fewer than 30 total peak hour trips generated (or in the case of unbuilt development on an amended plan that will generate 30 or more total peak hour trips, demonstrate no increase in trips)
- Houses of worship (over 300 seats or equivalent) must include a study showing on-site vehicular and pedestrian circulation

For intersections with a CLV of 1,600 or greater, or intersections with a CLV of 1,450 or greater that are within 600' of another signalized intersection, the more detailed Highway Capacity Manual (HCM) method is used to measure delay. In these cases, the applicant should use a traffic-flow model such as Synchro or CORSIM.

In the HCM method, intersection level of service can be is expressed as an average vehicular level of delay in seconds per vehicle - volume/capacity (v/c) ratio and the standards are set at levels parallel with the current CLV standards in a policy area. For example, the 1,600 CLV standard, applicable in the Bethesda/Chevy Chase, Silver Spring/Takoma Park, Kensington/Wheaton, and Germantown Town Center policy areas (see Map 1) is expressed as a v/c ratio of 1.00 and is equivalent to 80 seconds of delay per vehicle. For Metro Station Policy Areas (MSPAs), the applicable 1,800 CLV standard is expressed as a v/c ratio of 1.13 (that is, 1,800/1,600) and is equivalent to 120 seconds of delay per vehicle.

APPLICANT'S PREPARATION OF AN LATR TRAFFIC-STUDY/TRANSPORTATION STUDY

Applicants should use the following general criteria and analytical techniques to demonstrate the expected impact on public roadway intersections by the proposed development. The analysis should consider existing traffic, background traffic generated by developments approved and not yet built, and projected traffic generated by the applicant's project. Planning Department staff may require that traffic from nearby pending applications is included in the traffic-study/transportation study if those applications are likely to be approved by the Planning Board before the subject application's projected Planning Board hearing date. Otherwise, the traffic-study/transportation study would have to be updated to include the pending applications that were approved between the traffic-study/transportation study's scoping and the Planning Board hearing date. Traffic studies should also reflect any traffic improvements that will be made by nearby projects.

Scope of an LATR Traffic/Transportation Study

If the project is not exempt does not qualify for a traffic statement, the applicant must prepare a transportation~~traffic-~~study~~transportation study~~. Depending on the project size, uses, and location, the contents of a ~~traffic-transportation~~ study will vary. The applicant and Planning Department staff, in a meeting or through correspondence, will establish a scope for the study using the elements described below. (For zoning and special exception cases, Planning Department staff may consult with the Hearing Examiner, and initiate a meeting with the applicant and interested groups or individuals to establish the scope of the ~~traffic-transportation~~ analysis.) A template ~~traffic-transportation~~ study scoping form is provided in Appendix 10. Applicants must fill out a scoping form for all applications (even those that do not meet the 30 total peak hour trips threshold for a ~~traffic-transportation~~ study) and submit to the Planning Department for review. If staff agrees that only a traffic statement is warranted or finds the ~~traffic-transportation~~ study assumptions to be complete and adequate then the Applicant may proceed with conducting the analysis based on those assumptions

A quantitative auto analysis traffic study must consider the following elements:

1. CLV of intersections
2. Approved but unbuilt development
3. Existing intersection turning movement counts
4. Trip generation, directional distribution, and trip assignment
5. Mode split assumptions
6. CIP (county) and CTP (state) improvements
7. Circulation and Safety for High Traffic impact venues
8. Land use and size
9. Queuing/delay analysis (if applicable)
10. Pedestrian and bicycle impacts
11. Improvement and mitigation options
12. Traffic mitigation agreement (if needed)

1. Intersections

The number of intersections included will be based on the projected trips generated by the development under consideration (see page 17, Staff’s Evaluation of Traffic-Transportation Study, for specific criteria regarding “land at one location”). As shown in Table 1, the number of signalized intersections and significant non-signalized intersections in each direction is based on the maximum number of total weekday peak hour trips (pass-by, diverted, transportation demand management, and transit trip reductions may not be taken in this calculation; internal capture reduction and trip credit for twelve year old developments may be applied) generated by the proposed land uses, unless Planning Department staff in consultation with MCDOT, SHA, and municipalities if appropriate, finds that special circumstances warrant a more limited study.

Table 1: Intersections to be Included in a Traffic-Transportation Study

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

The term “each direction” applies to every study intersection. For example, in a hypothetical grid, the first ring from the site access point or off-site parking, if applicable, would include four intersections. The second ring would include not only the next four intersections along the streets serving the site, but also the four intersections with cross streets encountered in the first ring. As the number of intersections in each direction grows linearly from one to five, the number of total study area intersections grows at a greater rate.

Planning Department staff, in cooperation with the applicant, will use judgment and experience in deciding the significant intersections to be studied. For example, the ramps and termini of future interchanges will be treated as signalized intersections. The County’s central business districts (CBDs) and Metro Station Policy Areas (MSPAs) have more closely-spaced intersections. Accordingly, not every signalized intersection should be studied and as a result, the study may cover a larger area. Site access driveways are not included in the first ring of intersections.

When determining the intersections to be studied, Planning Department staff will also consider:

- geographic boundaries such as rivers, major streams, parks, interstate routes, railroads
- political boundaries, although intersections located within **neighboring counties, and** the Cities of Rockville, and Gaithersburg, **and the District of Columbia**, where the Planning Board does not have subdivision authority, will be included in the **traffic-transportation** study and the studies will be shared with nearby incorporated cities¹
- contiguous land under common ownership
- the type of trip generated: existing, new, **primary**, diverted, **or** pass-by, **or internal**
- the functional classification of roadways, for example six-lane major highway.

If a site's number of peak hour vehicle trips is projected to increase the critical lane volume through an intersection by fewer than five **trips-CLVs** and the applicant is required to improve another intersection for the same project and/or is participating in a traffic mitigation program, **the applicant is not required to make any improvements at that intersection does not need to be analyzed in the traffic study, even if it would otherwise be identified as appropriate to study.** Applicants may develop a trip distribution and assignment pattern before the study scoping process and work with Planning Department staff to determine which intersections don't require full study. This process will be documented **in the scoping correspondence on the scope of work agreement form (Appendix 10).**

No intersection need be included in an quantitative auto analysis if the number of peak hour vehicle trips that would be assigned through that intersection (regardless of direction of travel) would be both less than 5% of the total site generated traffic and less than 1% of the intersection's total peak hour volume (based on the most recent count on record with M-NCPPC).

Total trips refers to the sum of all vehicular trips attracted to and generated by a site including primary, pass-by, diverted, transportation demand management and transit trips. No trip reductions should be taken except internal capture and a trip credit for 12 year old developments, if applicable, in the 30 peak hour trip **traffic-transportation** study and tiers of study intersections calculations.

Pass-by trips are existing trips often generated by retail uses located along roadways and designed to draw from traffic already on the road. Diverted trips are part of a chain of trips and travel on adjacent routes to access a particular site in certain circumstances. Planning Staff will provide guidance during the scoping process as to whether it is appropriate to apply this method in the **traffic-study** transportation study.

CLV Intersection Analysis Method

An intersection's ability to carry traffic is expressed as CLV, the level of congestion at critical locations with conflicting vehicle movements, usually an intersection. Current CLV standards for each policy area are based on achieving approximately equivalent combined transportation roadway and transit levels of service in all areas of the County (see Map 1). Greater vehicular traffic congestion is permitted in policy areas with greater transit accessibility and use.

For a **traffic study** transportation study, the existing, background, and site-generated traffic for identified intersections should be measured against intersection capacity using the critical lane volume method. 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 and other non-typical occurrences.

The CLV method is generally accepted by most Maryland public agencies including SHA, MCDOT, the Cities of Rockville, Gaithersburg, Takoma Park, and M-NCPPC Planning Department. The methodology will fit most intersection configurations and can be easily varied for special situations and unusual conditions.

While some assumptions, for example lane use factors (see Step 3 below), may vary between jurisdictions and agencies, the general CLV methodology is consistent. An excellent reference source is SHA's web site: <http://marylandroads.com/Index.aspx?PageId=461>. Note that the lane use factors used by SHA differ from the factors used in Montgomery County listed on Table 2 in these Guidelines. **The traffic study should utilize the SHA lane use factors on state roads only. Utilize the Montgomery County lane use factors for county-maintained roads.**

8 | The CLV method can be used at signalized or unsignalized intersections. For unsignalized intersections, a two-
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phase operation should be assumed. The traffic volumes should be those approaching the intersection as determined in each step of the ~~traffic study~~ transportation study (existing, existing plus background, and existing plus background plus site).

¹ In such cases, the coordination of any proposed intersection improvements shall be in accordance with the memorandum of understanding provided as Appendix 7.

Applicants should use the following steps 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 of entering turning movements on all intersection approaches and the traffic movements permitted in each lane.

Step 2: Subtract from the total approach volume any right-turn volume that operates continuously throughout the signal cycle (a free-flow right-turn bypass). Also, subtract the left-turn volume if it has an exclusive lane. An exclusive turning lane must be long enough to store all of the turning vehicles in a typical signal cycle without overflowing into the adjacent through lanes. Otherwise, none or only percentage of the turning volume may be subtracted from the total approach volume.

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 Table 2. (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 Planning Department staff and MCDOT regarding any overlap signal phasing.)

Table 2: Montgomery County Lane Use Factors*

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

* Note that the lane use factors used in Montgomery County, as shown in this table, differ from the factors used by SHA as discussed on the previous page of these Guidelines. ~~The traffic study should utilize the lane use factors in this table for County roads.~~

** Based on local observed data and the 2010 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 CLV for the intersection. At some intersections, two opposing flows may move on separate phases. For these cases, each opposing phase becomes a part of the intersection's CLV (see Table 3).

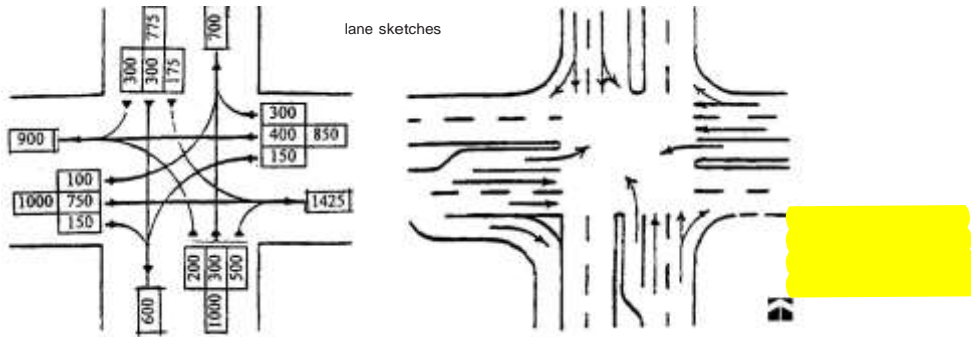
Step 9: Compare the resultant CLV for the intersection with the congestion standards in Map 1.

An example of a CLV calculation for a hypothetical intersection is provided in Table 3.

Table 3: Example Critical Lane Volume Calculations

direction from the	lane approach volume		critical lane use factor	=	approach volume	+	opposing lefts	=	lane volume per approach
southbound	775 ¹	x	0.53	=	411	+	200	=	611 ⁵
northbound	800 ²	x	0.53	=	424	+	175	=	599
	500	x	1.00	=	500	±	175	=	675 ³
westbound	700 ³	x	0.53	=	371	+	100	=	471
eastbound	750 ⁴	x	0.53	=	398	+	150	=	548 ⁵

- ¹ Approach volumes are the sum of through, right, and left turn movements in two lanes.
- ² For a heavy right turn, evaluate worst of rights in one lane or through and rights in two lanes
- ³ Approach volumes are the sum of through and right turn movements in two lanes.
- ⁴ Approach volumes are through only because of free right and separate left.
- ⁵ Intersection Critical Lane Volume = higher sum of highest NB/SB and highest EB/WB = 675 + 548 = 1,223.



The following conditions should be observed where applicable.

- Right turn overlaps can be assumed where an exclusive right turn lane exists, except in cases when an approach is signed for a "no turn on red" condition.
- The CLV for five-leg intersections should be addressed according to the individual signal phases identified in the field.
- In cases where pedestrian crossing time criteria are not met, applicants must inform MCDOT, request that they revise the signal timing, and include this in the pedestrian statement.
- Crossing distances are to be measured from the curb to the edge of the far travel lane (not curb to curb).
- "Desired times" are to be determined by dividing the crossing distance by 3.5 ft/sec and then subtracting the total clearance time for that associated phase, as per the Manual on Uniform Traffic Control Devices.
- The CLV calculation for roundabouts should calculate the sum of the approach flow and circulating flows, as defined by the Highway Capacity Manual, for each approach and comparing the highest sum to the LATR standards.

2. Approved but Unbuilt Development

As a general guideline, background traffic from approved but unbuilt developments will be in the same geographic area as the intersections to be studied will be factored into the study if that background development traffic is estimated to contribute at least 5 CLV to an intersection. defined by a polygon connecting the intersections farthest from the site.

M-NCPPC staff may identify existing development with a substantive amount of vacancy as appropriate for inclusion as background development if the vacancy is judged sufficient to cause a notable effect on area traffic volumes. Generally, to be included as background development any individual building should have at least a 10% vacancy in either gross square feet or dwelling units and the vacant space

should be of significant size (i.e., large enough to warrant a transportation study if the vacant space were considered to be a stand-alone development site).

If the background traffic is generated from a large, staged development, the ~~traffic study~~ transportation study and its review will also be staged. As noted above, background traffic data should also include effective trip mitigation programs or uncompleted physical improvements that have been required of nearby developments. In appropriate cases, Planning Department staff may require that traffic from nearby unapproved applications also be included in the ~~traffic study~~ transportation study as described on page 6.

3. Existing Intersection Turning Movement Counts

Generally, i Intersection turning movement counts used in traffic studies must be less than one year old when at the time the development application is determined to be complete by the Planning Department. is submitted are acceptable. Traffic counts should not be conducted:

- on a Monday or Friday
- during summer months or when public schools are not in session (i.e. summer vacation, week of graduation)
- on federal, state, 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 a major incident or event results in significantly different traffic volumes and patterns
- when weather or other conditions have disrupted normal daily traffic.

For special circumstances such as summer camps, non-summer or summer traffic counts, whichever is higher, will be used in the study.

4. Trip Generation, Directional Distribution, Directional Split, and Trip Assignment

Trip Generation

Trips projected to be generated by the proposed development and background traffic should be determined in accordance with the ~~latest Trip Generation Guidelines (see Appendix 1) guidance for developments of significant impact described under Intent of LATR and in Appendices 1 through 3. Developments that generate fewer than five peak hour background trips (i.e., subdivisions of four or fewer single-family detached houses) are not generally included unless located at a critical analyzed intersection, since tracking those trips is not pragmatic.~~

~~Trip generation equations and rates are shown in Appendix 1 for 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. Equations for calculating trips from other land uses or zoning classifications can be obtained from the Institute of Transportation Engineer's (ITE) latest edition of the Trip Generation Manual, as can guidance regarding pass-by, diverted, and internal trip capture rates.~~

~~Applicants should use Appendix 1 for trip generation rates and equations for typical land uses within Montgomery County. Planning Department staff can assist in calculating trips and using the trip generation tables in Appendix 2. Appendix 3 contains the trip generation rates for the Silver Spring, Bethesda, and Friendship Heights CBDs, which reflect higher transit use. Planning Department staff is authorized to make minor technical changes to Appendixes 1, 2, and 3 to reflect new information or to correct errors. Applicants should check with staff to ensure they are using the latest version of the Appendix.~~

~~Another special case is retail sites over 200,000 square feet of gross leasable area. Their trip generation rates will be set after discussion with staff and the applicant's analysis of data for one or more similar-sized retail sites within the County. In lieu of data collection, a trip rate set at two times the rate in the latest edition of ITE's Trip Generation Manual may be used.~~

In some cases, adjusting the trips from the trip generation rates and equations in the Appendix may be appropriate. For example, the effect of pass-by and diverted 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 will be considered on a case-by-case basis, using the best available information. Deviations, such as use of diverted trips, may also be appropriate for a particular site. Appropriate rates for these sites could be based on traffic counts of comparable facilities on vehicles both entering and leaving those sites, preferably in the County, and will be considered by staff.

Directional Distribution

Planning Department staff provides applicants with guidance pertaining to the directional distribution of background and site traffic generated by office and residential uses from the latest edition of the Trip Distribution and Traffic Assignment Guidelines (see Appendix 4). The distribution of trips entering and leaving the proposed development will be determined based on the relative location of other traffic generators, including background development, employment centers, commercial centers, regional or area shopping centers, transportation terminals, or other trip table information provided by staff. For land uses not covered in the Appendix, distribution should be developed in consultation with Planning Department staff.

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The distributions provided in Appendix 4 are only intended to provide an additional source of information for the planner/engineer conducting the transportation study. Each study should take a fresh look at the directional distribution of site-generated traffic based on the specific uses proposed and the characteristics of the adjacent roadway and surrounding land uses.

Directional Split

The directional split is the percentage of the trips entering or leaving the site during the peak hour and the direction in which those trips are traveling. Appendix 1 contains the directional split for general land uses and Appendix 3 contains directional split assumptions for the Bethesda, Friendship Heights, and Silver Spring CBDs. For all other uses, refer to the latest edition of ITE's Trip Generation Manual. If data are not available, staff and the applicant will determine an appropriate in-out directional split.

Trip Assignment

Trip assignment is an estimate of the impact of future traffic on the nearby road network. It tends to be less accurate farther from the origin or destination of travel. The assignment factors shall be determined in consultation with Planning Department staff and applied to the generated trips. The resulting volumes will be assigned to the nearby road network. Site-generated trips, background traffic, and existing traffic will be combined to determine the adequacy of transportation facilities. Trip assignment will be extended to the nearest major intersection, or intersections, in consultation with Planning Department staff (see Table 1).

Once an intersection assignment exceeds a CLV of 2,000, diverting estimated traffic to alternate routes may be considered **as long as those roads have adequate capacity to absorb the additional traffic**. Diversions will be based on feasible alternatives and should create a balance that reflects the project's traffic impacts on both primary and alternate routes, and without excessively burdening local residential streets. Impacts on primary and alternate intersections must be mitigated in accordance with the policy area congestion standards. Staff, in consultation with the applicant, SHA, and MCDOT, will resolve these cases individually before presentation to the Planning Board.

5. Mode Split Assumptions

Estimates of transit use should be included if the study is to include trip reduction generated using non-auto trip factors. Appendices 1 through 3 provide a starting point for consideration of context-sensitive mode split assumptions. The applicant may propose additional Transportation Demand Management (TDM) programs or services and conduct additional modal shifts as agreed to with M-NCPPC staff if the application includes a Traffic Mitigation Agreement (TMAg). For mixed-use developments, the trip-generation rates and formulas in ITE's Trip Generation Manual include the impacts of transit users. Refer to the most recent WMATA Metro report or MWCOG projections for additional assistance in MSPAs.

6. Capital Improvement Projects and Consolidated Transportation Program Improvements

Transportation projects fully funded for construction within six years in the latest version of the County's Capital Improvement Program (CIP), the State's Consolidated Transportation Program (CTP), or any relevant municipal capital improvements program should be included in the study, along with techniques for estimating traffic diversion to major new programmed facilities.

Applicants should use the CIP and CTP to define a capital improvements project to be included in their ~~traffic-study~~ transportation study. For an improvement to qualify for use, it must be fully funded for construction in the first six years of the applicable CIP or CTP as of the date of the ~~traffic-study~~ transportation study's submission.

If a capital project is not currently fully funded for construction within six years of the capital program, but such funding is reasonably anticipated to occur in the next capital program, Planning Department staff may recommend the Planning Board delay an APF decision until the County or State is ready to appropriate that funding. The Planning Board would then require the developer to consult with the County or State when building permit applications are filed. If the County or State agrees at that time in writing that the capital project will be constructed within six years, then the developer will contribute an amount equivalent to the cost of the LATR improvements that they would otherwise be required to make.

7. Circulation and Safety

The ~~traffic-study~~ transportation study should provide peak hour turning movement projections (into and out of the site) for all driveways to commercial and multifamily residential developments, sites that share access through an easement agreement, and proposed intersections of any new public streets with existing public roads.

On sites with public or private facilities with 800 or more seats or that can otherwise accommodate 800 or more people during an event, which may have high traffic impacts, traffic studies should address concerns about site access and circulation.

8. Land Use and Size

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The study should include the number and square footage of buildings on the site and whether they are commercial, residential, or some other use as described in Appendix 2 and in the latest version of the Highway Capacity Manual.

9. Queuing-Intersection Operational Analysis

The study should be based on data from the Highway Capacity Manual methodology, and reflect the different standards for CBDs and MSPAs (see Map 1). See page 48 for more detail.

The following elements should be incorporated into Intersection Operational Analysis:

LATR study scenarios are described for operational analyses below as one of four scenarios:

- Existing
- Background (with approved development and any CIP/CTP improvements)
- Baseline (with site generated traffic and no mitigation)
- Proposed (with site generated traffic and proposed mitigation)

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The study area, and operational area network, will be defined as centered upon any intersection with a CLV greater than 1,600, or a CLV greater than 1,450 if located within 600' of another signalized intersection. The study area network will be considered to encompass additional signalized intersections in all directions that meet either of those two criteria (CLV > 1,600 or CLV > 1,450 and within 600' of another signalized intersection). Upstream "dummy" links will extend far enough to accommodate total future vehicular demand during the peak hour.

Operational analysis will also be conducted for any study intersection located on a corridor with a Travel Time Index greater than 2.5 as defined by the most recent MWCOG Congestion Management Process (CMP) Technical Report.

The assessment of operational adequacy will be based on the overall network-wide level of vehicular delay. For study networks located entirely within a Metro Station Policy Area, an adequate network-wide level of vehicular delay is 120 seconds per vehicle or less. For study networks that are entirely outside a Metro Station Policy Area, an adequate network-wide level of vehicular delay is 80 seconds per vehicle or less. For study networks that include both portions of a Metro Station Policy Areas and portions of adjacent policy areas, an adequate network-wide level of vehicular delay is 100 seconds per vehicle or less.

Simulation network temporal extent will include the peak hour, plus sufficient initialization time so that network output equals network input within 5% or output stabilizes if demand significantly exceeds capacity.

Signal phasing and timing: Existing signal timing parameters used for existing conditions and background/baseline conditions (unless changes explicitly provided by MCDOT at time of study scoping). Adjustments to signal phasing (including adjustment to cycle lengths) for proposed conditions are encouraged to seek operational improvements in lieu of vehicular capacity additions, but are subject to review and concurrence from SHA (phasing, for intersections with State highways) and MCDOT (phasing and timing).

For existing conditions validation, the total peak hour vehicular throughput should matches existing conditions counts within 1% at network entry/exit points and within 10% at individual intersection approaches. Network sink/source nodes may be used to address observed imbalances in flow between intersections.

For pedestrian crossing time, all intersection approaches for proposed conditions require 3.5 ft/sec pedestrian crossing time from curb to edge of far travel lane unless crossing of approach is explicitly prohibited.

Transit vehicle characteristics are to be modeled explicitly only in MSPAs and CBDs, using existing transit route frequencies and assuming 10 second dwell times unless otherwise directed by M-NCPPC staff at time of scoping or if development triggers transit quantitative analysis.

Other vehicular operating conditions (i.e., truck percentages, start up lost time, car-following) use software defaults unless changes are needed to achieve validation.

Within Road Code Urban Areas, the analysis must ensure that average pedestrian delay for proposed condition is not greater than average pedestrian delay for baseline condition and that average

pedestrian crossing distance for proposed condition is not greater than average pedestrian crossing distance for baseline condition.

10. Pedestrian and Bicycle Impact Statement

To ensure safe and efficient pedestrian and bicycle access and circulation to and within the site, the study should include:

- pedestrian and bicycle counts at each intersection: pedestrian counts will be recorded at each leg of the intersection; bicycle counts will be recorded as turn movements
- any capital or operating modifications required to maximize safe pedestrian and bicyclist access to the site and surrounding area
- inventory map of existing and proposed sidewalks, off-road shared-use paths, and bikeways near the site noting whether these facilities are generally consistent with the County's Road Code design standards for sidewalk, path, landscape panel width, and street trees
- existing and proposed bus stops, shelters, and benches, including real time transit information
- pedestrian and bicycle accommodations at nearby intersections, including crosswalks, countdown pedestrian signals (CPS), push buttons, median refuges, and ADA-compliant ramps and accessible pedestrian signals (APS)
- information on bus route numbers, service frequency, and end destinations of bus routes
- in CBDs and MSPAs, recognition of peak pedestrian and bicycle activity periods
- inventory of existing streetlighting and additional lighting needs in the vicinity of the site.

11. Improvement and Mitigation Recommendations

The study should include a feasible range of traffic engineering improvements and/or trip mitigation measures associated with implementing the development.

12. Traffic Mitigation Agreement (TMAg)

If an applicant is proposing trip reduction measures as mitigation, the study Traffic Mitigation Agreement (TMAg), which is sometimes referred to as a "hard TMAg" because it is required by the Planning Board and often includes on-going traffic monitoring, must include:

- a description of proposed Traffic Mitigation Agreement (TMAg) provisions, including unless determined by staff not to be applicable, elements that will be entered into by the Planning Board, the Board of Appeals and MCDOT, and included in the opinions issued by the Board of Appeals. The description must include, at a minimum, the following elements:
 - the vehicle trip reduction goals, including the specific number of peak hour vehicles to be reduced in both the weekday morning and evening peak periods
 - the TMAg's actions and a quantitative assessment of how they will achieve the required vehicle trip reduction goal
 - the required duration of the TMAg, whether the TMAg will be enforced based on the provision of specified actions (regardless of outcome), the measured outcome (regardless of actions provided), or a combination of both
 - the measures to be used in enforcement
 - the suggested method of monitoring, if applicable
 - a security instrument to fund the continuation of the traffic mitigation program for its remaining term if the applicant defaults
 - the penalties if the vehicle trip reduction goals are not met.
- written statements from both MCDOT and Planning Department staffs concurring with the proposed approach to traffic mitigation.

Additional Guidance on Scope Elements

The project's size and location will determine its traffic impact, as will the land uses in the proposed development. In calculating their impact, the applicant's ~~traffic study~~ transportation study must consider the following factors.

Traffic Data and Peak Hours

Traffic studies should be based on the one hour period with the highest trips during the typical weekday morning (6:30 a.m. to 9:30 a.m.) and/or evening (4:00 p.m. to 7:00 p.m.) peak period. 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, even if the peak hour spans quarter past or half past full hours (i.e., 8:15 to 9:15 a.m., 6:30 to 7:30 a.m., or 7:45 to 8:45 a.m.). In some situations Planning Department staff may require analysis for non-weekday or non-traditional peak periods depending on the proposed land uses, such as a major shopping center on a Saturday for example.

Traffic Data

Current existing traffic volume data may be available from the Planning Department's intersection traffic count database, SHA, or MCDOT. New traffic counts should be conducted by the applicant if, in staff's opinion, traffic volumes have increased due to some change in the traffic pattern, such as the completion of a nearby development or roadway project after the count was made. Applicants are responsible for collecting new traffic counts if turning movement data are more than one year old when the project application is considered complete by the Planning Department or if there are locations for which traffic count data are non-existent. All weekday peak-period turning movement data should be submitted electronically as part of the applicant's traffic study/transportation study.

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 in 15-minute intervals covering the typical weekday peak periods, 6:30 a.m. to 9:30 a.m. and 4:00 p.m. to 7:00 p.m., or some other agreed upon time period. The data must be collected in 15-minute intervals to allow selection of the peak hour within the nearest 15 minutes. All weekday peak-period turning movement data should be submitted as part of the applicant's traffic study/transportation study.

All new intersection traffic counts for vehicles, pedestrians, and bicycles must be submitted digitally to Planning Department staff to become part of the Planning Department's Intersection Traffic Count database, which is available to developers, consultants, and others. Traffic counts affected by adverse weather or nearby traffic incidents will not be accepted (see page 11, Applicant's Preparation of an LATR ~~Traffic Study~~Transportation Study, Existing Intersection Turning Movement Counts).

Submitting an LATR ~~Traffic Study~~Transportation Study

If an applicant is uncertain whether a traffic study/transportation study is required, a traffic exemption statement must be filed as a part of an applicant's development submittal. The traffic exemption statement must show:

- that the number of peak hour vehicle trips generated by the project's proposed land use is fewer than 30 trips
- how the TPAR test is satisfied.

Planning Department staff will review the initial traffic exemption statement and determine if a traffic study/transportation study is necessary.

If a traffic study/transportation study is necessary, Planning Department staff has 15 working days to develop a study scope after receiving a written request and working with the applicant. As part of the scope, staff will supply the applicant with information on approved but unbuilt developments, relevant pending applications, nearby intersections to study, trip distribution and traffic assignment guidelines, and other information required to complete the study.

When determined to be complete and adequate, the applicant can return the study with the complete development application. Planning Department staff has 15 working days to let the applicant know if the study is complete and adequate.

The traffic study/transportation study and statement submission process begins with the Applicant submitting a filled out scope of work agreement form (Appendix 10) to be reviewed by Planning Department Staff. Staff will help the Applicant to research site history, pipeline development, and planned infrastructure, if necessary, in order to complete the form. After staff finds the traffic study/transportation study or statement assumptions to be complete and adequate, the Applicant may conduct the study based on those set of assumptions. A signed copy of the scoping agreement form should be included with the submitted traffic study/transportation study or statement.

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

~~Traffic Study~~Transportation study Submittals

Two copies of the transportation study must be submitted with the development application. Once Planning Department staff confirms that the traffic study is complete and adequate, 13 copies must be submitted within five working days of notification, along with a PDF copy for inclusion in the application file and available for public review via the Planning Department website's Development Activity Information Center (DAIC).

A complete and adequate transportation study must include:

- A site or area map showing:
 - Existing roads serving the site and any CIP or CTP transportation improvements that are fully funded for construction within six years and that affect traffic at the critical intersections
 - Nearby approved but unbuilt developments and associated improvements that would affect traffic at the critical intersections with their location shown on the area map. (This information is provided by staff and included as part of the transportation study).

- Name and contact information of the licensed or certified professional submitting the ~~traffic-~~ ~~study~~ transportation study. LATR traffic studies must be submitted by a registered Professional Engineer (PE), Certified Professional Traffic Operations Engineer (PTOE), Certified Professional Transportation Planner (PTP) or **AICP Certified Transportation Planner (AICP CTP), per the Subdivision Staging Policy. Planners with the American Institute of Certified Planners certification (AICP without CTP) may not submit a ~~traffic-~~ ~~study~~ transportation study but they may sign off on a ~~traffic study~~ transportation study scope of work agreement.**
- Existing pedestrian and bicycle weekday morning and evening peak period traffic count summaries for the intersections analyzed in the ~~traffic-study~~ transportation study. The summary should include any safety deficiencies or conditions that fail to comply with the Americans with Disabilities Act.
- For approved but unbuilt development:
 - weekday morning and evening peak hour trips expected to be generated by each nearby approved but unbuilt development, including the source of the generation rates and equations for each trip distribution patterns, as percentages, during the weekday morning and evening peak hours. The pattern of both distribution and assignment should be shown on an area map of the local roadway network.
- For the proposed development:
 - weekday morning and evening peak hour trips entering and leaving the site, including the site driveways trip distribution patterns, as percentages, during the weekday morning and evening peak hours. The pattern of both distribution and assignment should be shown on an area map of the local roadway network.
 - **stated trip generation rates, equations, other sources, and/or trip reduction assumptions and justifications, as agreed to in the scope of work agreement form.**
- Maps that show separately and in combination:
 - existing weekday morning and evening peak hour traffic volumes using the affected highway system, including turning movements at analyzed intersections
 - projected weekday morning and evening peak hour trips assigned to the affected highway system and turning movements at analyzed intersections for all nearby approved developments, included as part of the background traffic volumes derived by adding trips from approved development to existing traffic
 - if a roadway CIP/CTP or developer-sponsored project is considered as being in place, the resulting reassignment and redistribution of trip patterns
 - projected weekday morning and evening peak hour trips assigned to the affected highway system and turning movements at analyzed intersections for the proposed development
 - traffic volumes derived by adding site trips to the sum of existing plus background traffic assigned to the affected highway system and turning movements at the analyzed intersections.
- 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.
- Copies of all critical lane volume analyses for each analyzed intersection, showing calculations for each approach.
- A list 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, bikeway, landscaping, as required. Coordination with MCDOT, SHA and, if impacted, the Cities of Rockville and Gaithersburg, should be shown.
- **Include ~~traffic study~~ transportation study scoping form previously reviewed and found to be complete and adequate by staff in the appendix of the ~~traffic study~~ transportation study.**

Electronic copies of all vehicle, pedestrian, and bicycle traffic counts in approved digital format submitted to: www.montgomeryplanning.org/transportation/latr_guidelines/submission.pdf.

- Traffic counts affected by adverse weather, nearby traffic incidents, or other factors resulting in non-typical volumes will not be accepted.

Before a ~~traffic study~~ transportation study is accepted for review, the applicant must show proof that the MCDOT Development Review

Fee (to review the ~~traffic study~~ transportation study) has been paid, in accordance with Executive Regulation No. 28-06 AM (Schedule of

Fees for Transportation-related Reviews of Subdivision Plans and Documents).

Planning Department staff acceptance of that study becomes the completion date. After a traffic study/transportation study or statement has been submitted as part of an application to the Planning Department staff will inform the Planning Department's Development Application and Regulatory Coordination (DARC) division, that the study will be reviewed and determined whether it is complete and adequate (Table 4) for the purpose of distribution to MCDOT and SHA, if applicable. Traffic counts used in the traffic study/transportation study must have been collected within one year of the date that the entire application is determined to be complete by DARC. As part of a development application, the traffic study/transportation study will follow the standard notification

Planning Department staff is available to review the ~~traffic study~~transportation study's recommendations with community representatives. Traffic studies are available for public review as part of the application's general file. Copies can be made or requested from the applicant, as needed. PDF copies are also available online at the Planning Department's Development Activity Information Center.

After the ~~traffic study~~transportation study is determined to be complete and adequate, Planning Department staff will distribute the study ~~it~~ to relevant transportation agencies MCDOT, SHA, and neighboring jurisdictions incorporated cities, as appropriate if applicable. Traffic studies be distributed at or the date when subdivision plans are distributed for review by the Development Review Committee. These agencies will have 30 days to review the traffic study/transportation study and comment. Planning Department staff will determine if a traffic-study/transportation study's recommendations are acceptable in consultation with the applicant, MCDOT, and SHA. Planning Department staff will work with the applicant to obtain other agencies' comments from SHA and MCDOT five weeks prior to a scheduled Planning Board hearing.

It is the applicant's responsibility to determine how to respond to written and/or oral communication by Planning Department staff regarding issues associated with and/or required modifications to the ~~traffic study~~transportation study.

Table 4: Checklist for Complete and Adequate Traffic Studies

Applicants should consider the following questions that Planning Department staff will use to determine whether a traffic study transportation study is complete and adequate, and can be accepted for DRC review and eventual decision by the Planning Board.	
Process	
Traffic study Transportation study submitted/receipt date	
Contact information of licensed or certified person who prepared it	
Has an electronic copy of traffic counts been received/receipt date	
Have the fees required by Executive Regulation 28-06 AM been paid?	
Does the study follow LATR / & TPAR Guidelines, the traffic study transportation study scope letter, and generally accepted transportation planning principles?	
Are policy area congestion standards, lane configurations, lane factors, and CLV calculations in the traffic-study transportation study acceptable?	
Information about surrounding area	
Are existing traffic conditions presented accurately?	
Are pipeline developments adequately represented?	
Are background traffic conditions appropriate?	
Are the relevant fully-funded transportation network improvements included?	
Information about the proposed development	
Does the study reflect latest submitted development plan and land uses?	
Is site trip generation estimated according to LATR requirements?	
Is the TPAR fee calculated based on the Department of Permitting Services (DPS) development impact tax? <u>number of dwelling units and gross square footage?</u>	
Are assumptions for the percent of new, diverted, pass-by, internal, TDM, and transit trips acceptable?	
Does site trip distribution represent regional travel patterns in the LATR / & TPAR Guidelines and local road network?	
Is site trip assignment acceptable?	
Information about proposed mitigation	
If proposed, what percentage of LATR trips needs to be reduced and mitigated? Are intersection and roadway improvements identified?	
Is the Pedestrian and Bicycle Impact Statement acceptable?	
Are necessary trip reduction measures identified?	
Are intersection and roadway improvements identified?	
If proposed, are trip reduction measures acceptable?	
If proposed, are the required elements of the Traffic Mitigation Agreement (TMAg) identified?	
Has the PDF copy of the traffic study transportation study been submitted?	

STAFF'S EVALUATION OF A ~~TRAFFIC STUDY~~TRANSPORTATION STUDY

Planning Department staff evaluates traffic studies considering the following elements, described here to ensure consistent review by staff and to provide applicants additional information about how their studies will be analyzed. The review includes variations for MSPAs, CBDs, and projects with multiple applicants.

Project Size and Location

To warrant an LATR ~~traffic study~~transportation study, a proposed development must have a measurable traffic impact on a local area. Measurable traffic impact is defined as a development that generates 30 or more total ~~weekday~~ peak hour trips (i.e., ~~existing, new, total trips of entire development not just proposed increase from previous approval; no pass-by, diverted or transportation demand management reductions taken in this calculation~~) ~~weekday peak hour~~ trips in the morning (6:30 a.m. to 9:30 a.m.) and/or evening (4:00 p.m. to 7:00 p.m.) peak periods. If the proposal generates ~~less fewer~~ than 30 total peak hour trips or is a renovation of an existing development or an amendment to a previously approved plan and will generate no net increase in peak hour total trips, a traffic exemption statement is required instead of a ~~traffic study~~transportation study.

~~An LATR traffic study/transportation study is not required for any expansion that generates five or fewer additional peak hour trips, if~~ If

use and occupancy permits for at least 75 percent of the originally approved development were issued more than 12 years before the LATR ~~traffic study/transportation study exemption~~ scope request then the applicant may take a credit of existing site trips (based on LATR trip generation methodology not driveway counts to reflect full build-out) toward determining the 30 trip threshold. These existing trips should be accounted for in the traffic analysis as 'background' traffic. If an

LATR ~~traffic study/transportation study~~ is required and the 12 year existing trip credit is applicable, the number of signalized intersections in the study will be based on the increased number of peak hour trips rather than the total number of peak hour trips.

To determine if a development will generate 30 or more total weekday peak hour trips, Planning Department staff ~~at the site or in the development~~, all peak hour trips are counted (i.e., no trip reductions taken) even if, as part of the analysis, some of the trips will be considered as existing, pass by, or diverted trips to the site from existing traffic.

For retail development, pass-by and diverted trips are included (i.e., no trip reductions taken) in establishing the 30 total trip ~~vehicle~~ threshold for a ~~traffic study/transportation study~~ and later, for designing site access and circulation.

~~Pass-by and diverted trips are not added to site-generated trips because they are already on the network, but diverted turning movements are considered in evaluating CLV measurement.~~

- Planning Department staff shall exercise their professional judgment in consultation with the applicant in determining the appropriate land area to consider. Parcels that will be separated by unbuilt roadways remain "land at one location" but parcels separated by business district streets, arterial roadways, major highways, or freeways may cease to be "land at one location" even if still in common ownership.

In certain circumstances, Planning Department staff may, in consultation with the applicant, require analysis of traffic conditions during a different three-hour weekday peak period for example, 6:00 a.m. to 9:00 a.m. (versus the standard 6:30 a.m. to 9:30 a.m.) or 3:30 p.m. to 6:30 p.m. (versus the standard 4:00 p.m. to 7:00 p.m.) or during a non-traditional peak period for certain land uses, as previously discussed on pages 13 and 14, to reflect the site's location or trip-generation characteristics, existing conditions, or background traffic. For example, a school where classes end before the start of the evening peak period may warrant analysis of an earlier peak period.

~~The applicant calculates the number of trips using the following sources:~~

~~Appendix 3, Tables 3-1 or 3-2.~~

- ~~in all other parts of the County:~~

~~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 1 and the tables provided in Appendix 2.~~

~~for other land uses, use the latest edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE), regardless of Manual edition used in previous approval.~~

~~For some specialized land uses, trip-generation rates may not be available. In such cases, Planning Department staff may request that determining rates be a part of the traffic study, most likely by collecting existing driveway counts at similar land uses. If special rates are to be used, staff must approve them prior to submission of the traffic study.~~

An applicant shall not avoid the intent of this requirement by submitting piecemeal applications or approval requests. However, an applicant may submit a plan of subdivision for ~~less fewer~~ than 30 total weekday peak hour trips if agreeing in writing that, upon filing future applications, the applicant will comply with the

requirements of the LATR/TPAR Guidelines when the total number of site-generated peak hour vehicle trips at one location has reached 30 or more. Then, a ~~traffic study~~transportation study will be required to evaluate the impact of the total number of site-generated trips in accordance with the Guidelines.

Planning Department staff may elect to waive the criteria described in this section if the development results in no net increase in weekday peak-hour trips.

Congestion Standards

The County Council establishes congestion standards throughout the County (stated in terms of CLV levels), which depend on the character of development and the availability of transit options. These standards are developed by policy area and adopted in the Subdivision Staging Policy (see Map 1). Planning Department staff maintains an inventory of intersection traffic data based on traffic counts collected by MCDOT, SHA, and private traffic consultants to provide applicants with a preliminary assessment of conditions in the vicinity of a proposed development.

Reviewing Development in MSPAs and CBDs

In reviewing MSPA and CBD applications, staff uses the following criteria.

Adequacy of Traffic Flows

- ~~Any intersection with a CLV less than 1,600 will be considered acceptable with no further analysis required. The CLV will be calculated in accordance with the procedures defined in these Guidelines.~~
- ~~If the CLV is 1,600 or higher, an HCM analysis shall be performed. Existing queues shall be measured by the applicant and total traffic (existing, background, and site) and planned roadway and circulation changes shall be taken into account. The HCM methodology shall be applied using simulation software such as SYNCHRO or CORSIM based on simulation parameters agreed upon by the applicant and Planning Department staff. 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 85th percentile queue length in the weekday peak hour should not extend more than 90 percent of the distance to the adjacent signalized intersection. The assumed signal timing analysis must be consistent with the crossing time required for pedestrians as described in the CLV Analysis Methods section (page 8).~~

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.

- Vehicle access points for parking and loading must be located so that they will not interfere with traffic flows on the adjacent streets or with access points to neighboring buildings or transit terminal areas. Access directly onto roads classified as arterials or above should be avoided, but if proposed it will be considered in the context of the application.
- In addition to the pedestrian and bicycle impact statement, pedestrian and bicycle safety shall be assessed based on the potential for conflicts between pedestrians, bicycles, and vehicles. Actions shall be taken to minimize conflicts and ensure pedestrian and bicycle safety on and adjacent to the site.

In MSPA cases where pedestrian crossing time criteria are not met, the applicant must inform MCDOT and request them to revise the signal timing. Any adjustments must be documented in the traffic study/transportation 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.

Other Criteria

- Total traffic is defined as the existing traffic, plus trips from approved but unbuilt development, plus the trips from the proposed development during the peak hour of the weekday morning and evening peak periods.
- Critical intersections are those within the CBD or MSPA, defined by Planning Department 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 MSPA may be identified by staff for inclusion in the ~~traffic study/transportation study~~.

- Vehicles can be assigned to parking garages encountered on their trip into the CBD or MSPA. The capacity of parking garages must be accounted for based on guidance from Planning Department staff and consultation with MCDOT.
- Trip generation rates for background and site development traffic are contained in Appendixes 1, 2, and 3.

Multiple Applicants

Applicants can request that trip mitigation programs or intersection improvements be considered for more than one application. In those cases, the program or improvement must provide enough capacity to allow all participating applicants to satisfy LATR conditions.

An intersection improvement that is not yet complete may be used by two or more developments to meet LATR conditions. To be considered, the improvement must provide sufficient capacity to:

- result in a CLV that is less than the congestion standard for that policy area; **and or**
- result in a CLV reduction equal to 150 percent of the CLV impact generated by the developments, that is, the intersection improvement must not only mitigate the impact of a proposed development, but improve conditions.

Any type of mitigation listed in this document or acceptable to MCDOT, SHA, and the Planning Board can be used to achieve this goal.

When development is conditioned on intersection and roadway improvements by more than one application, those improvements must be permitted and bonded¹, under construction, or under contract for construction prior to the issuance of building permits for any new development. Exceptions may be made if an applicant's trip contribution to an intersection or roadway is less than 25 percent of the sum of total trips².

This requirement may be fulfilled by the creation of a road club or other mechanism approved by the Planning Board that:

- includes the terms, conditions, and responsibilities for funding 100 percent of the cost for design approval, right-of-way acquisition, and construction of the improvements as set forth in the individual project APF approvals; and ensures that all parties contribute in accordance with their respective shares to the total cost of the improvements
- ensures the improvements are either permitted and bonded or under contract for construction within three years of the first building permit issued for any of the developments dependent on the required improvements
- ensures the improvements are substantially complete and open within five years of the first building permit issued for any of the developments dependent on the required improvements.

If the second or third conditions above have not been met, no building permit that is conditioned on construction of the improvements may be issued to any other participant in the road club until all above conditions are met³. If a road club or other mechanism is formed, but not all parties responsible for the improvements join, the non-participating parties will not be permitted to proceed with platting or construction of their projects until they either join the road club or, if the improvements have been completed, reimburse the other road club participants for their share of the total costs. Non-participating parties include those with projects with preliminary plan or APF approvals, which are obligated to participate in the same improvements, whether the approval occurred before or after the road club formation.

Construction of an improvement by one applicant does not relieve other applicants of their responsibility to participate in the cost of that improvement. The final percentage of the construction cost contribution is determined by the participating applicants.

¹This condition is satisfied if the project is included in the first six years of the County's Capital Improvement Program or the State's Consolidated Transportation Program and the developer's contribution is applied to that project.

²Trip total is the sum of the total peak-hour trips generated by all developments required by the Planning Board to participate in the construction of the particular improvement.

³In certain APF approvals, an applicant is not required to build an improvement until a certain number of building permits have already been released. Such a project would not be responsible for constructing those improvements until the specified number of building permits has been released.

If the Planning Board is asked to consider extending the time period to comply with APF requirements for an approved preliminary plan, Planning Department staff will determine if the ~~traffic study~~[transportation study](#) needs to be updated based on the APF validity period.

Participation in Transportation Improvements

The Planning Board may require that applicants participate in some capital program transportation improvements. Participation will be proportional to the development's impact on the improvement and will be determined by Transportation Planning staff, MCDOT, SHA, and other agencies that fund transportation-related improvements. If the ~~traffic study~~[transportation study](#) identifies roadway changes or other transportation-related activities required to mitigate the proposed development's on- or off-site impact, these changes will be the responsibility of the applicant as part of LATR.

Traffic Mitigation Agreement (TMAg)

Each applicant in a Transportation Management District (TMD) must have a proposed [Traffic Mitigation Agreement \(TMAg\)](#) outlining a participation plan for trip reduction measures and other strategies for participating in efforts to achieve the non-auto mode share goals for that policy area. This plan should be prepared in conjunction with the area's TMD, MCDOT, and Planning Department staff. The TMAg for TMD participation, which is sometimes referred to as a "soft TMAg" because there are not the hard requirements by the Planning Board or on-going traffic monitoring, may be structured to incorporate applicable LATR and TPAR requirements. There are currently five TMDs: Friendship Heights, Downtown Silver Spring, Downtown Bethesda, North Bethesda, and Greater Shady Grove. TMDs have been recommended for Wheaton and White Oak in the Wheaton CBD Sector Plan and White Oak Science Gateway Master Plan, respectively, but neither has been established by the County. More information on TMDs can be found at www.montgomerycountymd.gov/dot-transit/commuter/tmd/index.html.

A TMAg may be required in areas where **I**nsportation **D**emand **M**anagement (TDM) strategies are **is** anticipated in the future, or in situations where the applicant has claimed credit for travel volume reductions by using transit without identifying specific measures to guarantee those reductions.

Proposed Traffic Mitigation Agreements should be:

- submitted as a draft, electronically and in writing, with subdivision plan submissions (the draft document should detail the project's proposed the trip reduction program)
- executed and recorded before the issuance of the project's first building permit.

Information Provided by Staff

The following information may be provided to the applicant by Planning Department and MCDOT staffs for use in the ~~traffic study~~[transportation study](#).

- 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 applicant submits a completed development application to the Planning Department.)
- Trip generation rates or equations and their source.
- Initial directional distributions (see Appendix 4) to be refined based on the existing road network
- In CBDs, parking garage capacity information and locations of future public parking garages.
- A list of approved but unbuilt developments and their locations.
- Public and private transportation improvements in the study area, with funding assigned for construction within six years (see Appendix 6).

Staff Findings

In their report to the Planning Board, staff presents findings for each of the following categories and makes recommendations about the adequacy of transportation facilities. The Planning Board will use these findings and recommendations, along with comments and recommendations from the public, MCDOT, SHA, and incorporated cities and towns, to determine the adequacy of public facilities for the proposed development.

Staff determines adequacy by finding that:

- congestion conditions will not exceed policy area standards
- proposed intersections improvements are feasible and will improve congestion conditions
- the applicant will pay into a fund to make required improvements.

Transportation Solutions

If the applicant's ~~traffic study~~[transportation study](#) identifies a condition that exceeds the congestion standard for the policy area, Planning Department staff will notify the applicant, MCDOT and SHA so that feasible mitigation can be developed. The Planning Department staff may recommend and the Planning Board may approve traffic mitigation

agreements, non-automobile transportation facilities, or physical road improvements, alone or in combination, as the required means to relieve local congestion. For LATR, priority will be given to non-physical improvements in MSPAs and CBDs. No transportation mitigation improvement or transportation mitigation payment is required under TPAR in MSPAs.

The Subdivision Staging Policy seeks to reduce congestion in areas where it may already be unacceptable. It stipulates that in policy areas where local area conditions exceed the congestion standard, development may only be approved if the applicant agrees to mitigate the LATR impact by either:

- making improvements that bring the local area condition to within the congestion standard, or
- reducing CLV by an amount to equal to 150 percent of the CLV impact generated by the development.

Whenever modifications to signalized intersections and other physical improvements are proposed to remedy congestion standard issues, the ~~traffic study~~ transportation study must provide preliminary information to establish the feasibility of implementing the proposed measures. In these instances, the ~~traffic study~~ transportation study should include:

- alternative intersection improvements that were considered but not recommended, plus the rationale for not proposing them
- existing and proposed pavement
- existing and proposed right-of-way
- the length and width of proposed modifications
- cross sections of existing and proposed improvements in the right-of-way
- modifications to receiving lanes (such as additional through or turn lanes) or right-turn lanes
- the adequacy of turn radii—particularly for opposing vehicle movements where additional turn lanes are proposed
- proposed changes to the operation of existing traffic signals (timing, phasing, etc.).

Once the applicant, Planning Department staff, and MCDOT and SHA have identified solutions that will create local transportation capacity, these solutions will be incorporated as conditions of approval in the Planning Department staff report. These solutions could include additional traffic engineering or operations changes beyond those currently programmed, or new transit or ridesharing activities.

For applicants participating in traffic mitigation or intersection improvements to satisfy LATR requirements, that participation also counts toward meeting LATR for intersections where site-generated trip volume is less than five critical lane movements.

Establishing Local Congestion Standards

The applicant's ~~traffic study~~ transportation study must identify a development proposal's impact and the degree of intersection congestion for the peak hour of the weekday morning and evening peak periods by comparing the calculated CLVs with the policy area congestion standards in Map 1. For intersections straddling policy area boundaries, the higher congestion standard shall be used.

The LATR congestion standards are based on an approximately equivalent level of service that balances transit availability with roadway congestion in all County policy areas. In areas of greater transit accessibility and use, greater traffic congestion is permitted (see Map 1).

If staff finds that congestion standards are exceeded under background conditions, an applicant is required to provide a traffic mitigation program consisting of either or both trip reduction or intersection improvements. The mitigation program should:

- bring the intersection to acceptable levels of congestion, or
- reduce CLV by an amount equal to 150 percent of the CLV impact generated by the development.

Unavoidable Congestion

In their analysis, Planning Department staff will identify alternate routes to serve associated trips that could mitigate congestion. If there are no appropriate alternate routes, then it must be assumed that trips from the proposed development will increase local area congestion. It is not ~~apro-priate~~ appropriate to anticipate that the development's associated trips associated would use local streets other than for site access unless those streets are classified as arterial, business district, or higher.

Transportation Demand Management Strategies

As part of the ~~traffic study~~ transportation study review and approval, staff, in coordination with MCDOT, will confirm the degree to which transit, ridesharing, or other TDM activities can mitigate vehicle trips generated by a development. This activity should occur before the ~~traffic study~~ transportation study scoping letter stage to aid in preparing and reviewing the report. If the proposed development or immediate area can be served with transit or ridesharing services, then priority will be given to developing a transit alternative or trip mitigation program using transit. If it is physically or fiscally ineffective for public agencies to provide transit or ridesharing services, then it must be assumed that trips from the proposed development will increase local area congestion. In most cases, TDM strategies will be included in TMAgs and monitored over time to ensure effectiveness.

Project-Related Traffic

Planning Department staff will identify the degree to which local traffic congestion is attributable to the proposed development by measuring traffic from three sources: existing traffic, background traffic generated by the total of all nearby approved but unbuilt development, and total trips generated by the proposed development. The more trips the proposed development contributes to local traffic congestion, the greater the local impact area.

~~Table 5: LATR Intersection Congestion Standards – Critical Lane Volume and Volume-to-Capacity Equivalencies~~

These standards for congestion in each policy area are based on critical lane volume measurements and volume-to-capacity equivalencies based on data in the Highway Capacity Manual.		
policy area	critical lane volume standard	volume-to-capacity equivalent
Rural East Rural West	1,350	0.84
Damascus	1,400	0.88
Clarksburg-Gaithersburg- City Germantown East- Germantown West- Montgomery Village/Airpark	1,425	0.89
Cloverly North Potomac Olney- Potomac- R&D Village	1,450	0.91
Aspen Hill Derwood Fairland/White Oak Colesville	1,475	0.92
Rockville City	1,500	0.94
North Bethesda	1,550	0.97
Bethesda-Chevy Chase- Germantown Town Center- Kensington-Wheaton Silver Spring Takoma Park White Oak	1,600	1.0
Bethesda CBD Silver Spring CBD Wheaton CBD Friendship Heights CBD- Glenmont MSPA Grosvener- MSPA Rockville Town Center MSPA- Shady Grove MSPA- Twinbrook MSPA White Flint MSPA	1,800	1.13



Exceptions to LATR

There are several exceptions or additions to the LATR process and standards.

Protected Intersections

The following intersections are located in policy areas of the County where providing additional motor vehicle capacity is not desirable as the intersection:

- Is located in an Urban Road Code area where pedestrian quality of service is paramount and additional through or turning lanes would increase pedestrian crossing distances and exposure, degrading quality of service.
- Is located within a sufficiently robust grid of master planned, traffic-carrying streets that help to diffuse traffic throughout the street network.
- Is in an area served by a Transportation Management District where Transportation Demand Management (TDM) programs are regularly funded and monitored.

For these intersections, an quantitative auto analysis may include diversion of existing background, and/or site generated traffic to alternative routes around the intersection. The quantitative analysis will identify potential means to mitigate remaining impacts. Mitigation of remaining impacts will be achieved by paying \$12,000 per peak hour vehicle trip assigned through the intersection for use in programs operated by the Transportation Management District as payment in lieu of construction or operation.

Protected intersections are:

- Wisconsin Avenue and East-West Highway (Bethesda CBD Policy Area)
- Wisconsin Avenue and Montgomery Lane (Bethesda CBD Policy Area)
- Key West Avenue and Great Seneca Highway (R&D Village Policy Area)
- Key West Avenue and Shady Grove Road (R&D Village Policy Area)
- Georgia Avenue and Colesville Road (Silver Spring CBD Policy Area)
- Georgia Avenue and University Boulevard (Wheaton CBD Policy Area)

Alternative Review Procedure for Very Low VMT Developments

An Alternative Review Procedure is available for three types of Very Low VMT Developments, which are defined as residential developments within the Bethesda or Silver Spring CBDs with less than 10,000 GSF of supporting ground-floor retail:

Type 1 Zero-VMT Development: Very Low VMT Developments that include fewer than 0.18 on-site parking spaces per development residential unit (and no on-site spaces for supporting retail uses) are automatically exempted from any transportation mitigation action (i.e., no action under LATR, TPAR, or transportation impact taxes)

Type 2 Very Low VMT Development: Very Low VMT Developments with more than 0.20 on-site parking spaces per residential unit (and no on-site spaces for supporting retail uses) may be considered to have a *de minimis* effect and follow the *de minimis* rules (i.e., no action under LATR, but still action based on TPAR and payment of transportation impact taxes), based on the following relationship between the number of on-site parking spaces and development intensity in terms of dwelling units:

<u>If parking is limited to the following number of on-site parking spaces per dwelling unit (and no parking spaces for supporting retail):</u>	<u>Maximum number of residential dwelling units for a <i>de minimis</i> finding.</u>
<u>No limit</u>	<u>71</u>
<u>0.8 spaces per DU</u>	<u>74</u>
<u>0.6 spaces per DU</u>	<u>98</u>
<u>0.4 spaces per DU</u>	<u>147</u>
<u>0.2 spaces per DU</u>	<u>295</u>

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Type 3 Mitigated VMT Development: Applicants may propose that M-NCPPC consider their development a Low-VMT case following the same logic currently applied under the Alternative Review Procedure for Trip Mitigation (a 50% reduction in vehicle impact monitored through a Traffic Mitigation Agreement). This Type 3 development follows the same approach, except that VMT is measured rather than vehicle trips:

- Applicant proposes analysis, mitigation, and monitoring to achieve site-generated VMT that is 50% or lower than that VMT which would otherwise be assumed to be generated by the site.
- No action under LATR or TPAR
- Payment of twice the applicable transportation impact tax
- TMAg with accepted monitoring, mitigation, and incentives/disincentives for achieving the 50% VMT reduction.

Potomac Policy Area

In the Potomac Policy Area the only developments subject to LATR are those with site-generated trips that will impact the following intersections:

- Montrose Road and Seven Locks Road
- Democracy Boulevard and Seven Locks Road
- Tuckerman Lane and Seven Locks Road
- Bradley Boulevard and Seven Locks Road
- Democracy Boulevard and Westlake Drive
- Westlake Drive and Westlake Terrace
- Westlake Drive and Tuckerman Lane
- River Road and Bradley Boulevard
- River Road and Piney Meetinghouse Road
- River Road and Seven Locks Road
- River Road and Falls Road
- Falls Road and Democracy Boulevard.

White Flint Policy Area

In the White Flint Policy Area, LATR compliance is not required because applicants are required to participate in the White Flint Special Taxing District for infrastructure improvements in lieu of satisfying the transportation APF tests.

Alternative Review Procedure for Trip Mitigation

The congestion standard for intersections in Metro Station Policy Areas is a CLV of 1,800 (see Map 1) and development within these areas is eligible for the Subdivision Staging Policy's Alternative Review Procedure (ARP), which exempts projects from LATR and requires paying twice the TMD fees and reducing their trips by at least 50 percent.

For applicants using the Alternative Review Procedure (see Subdivision Staging Policy Section TA2), the solutions must be identified, agreed to, and made conditions of approval.

An applicant for a subdivision that will be built completely within an MSPA need not take any action under TPAR or LATR if they agree in a contract with the Planning Board and MCDOT to:

- submit an application containing all information, including a traffic study/transportation study, that would normally be required for LATR
- meet trip reduction goals of no less than 50 percent set by the Planning Board as a condition of approving that subdivision, either by reducing trips from the subdivision itself or from other occupants of that policy area per an executed and recorded Traffic Mitigation Agreement, and provide a surety document to ensure that the reduction of trips in fact takes place
- participate in programs operated by, and take actions specified by, a TMO TMD to be established for that policy area (or a group of policy areas) to meet the established mode share goals

Subdivision Staging Alternative Review Process

For commercial or residential developments, an applicant can meet LATR requirements by doing all of the following:

- paying 75 percent of the applicable development impact tax without claiming any credit for transportation improvements
- participating in and paying an on-going annual contribution to a Transportation Management District Organization (TMO) (TMD) if and when one exists
- mitigating 50 percent of their total weekday morning and evening peak hour vehicle trips per an executed and recorded TMAg
- submitting a traffic study/transportation study to identify intersection improvements and trip mitigation measures that would have been required.

- pay an on-going annual contribution or transportation development impact tax to fund the [TMO's TMD's](#) operating expenses, including minor capital items such as buses, as established by County law
- pay 75 percent of the applicable General District Transportation Impact Tax without claiming any credits for transportation improvements.

To calculate mitigated trips for the Alternate Review Procedure, the applicant must explicitly document the conversion between person-trips and vehicle trips to account for transit use, vehicle occupancy, walk/bike use, internal site trip capture, and telecommute options. The estimates should document the effect of home-based work trips separately from all other trips. Special trip rates in Appendix 2, such as for office uses within 1,000 feet of Metrorail stations outside the Beltway, or rates for any uses within the Bethesda, Silver Spring, and Friendship Heights CBDs (Appendix 3), should not be used in either ARP or LATR-TPAR trip calculations. Countywide rates in Appendixes 1 and 2 are allowed, otherwise calculation rates and procedures recommended by the ITE or the TRB must be applied and referenced for Planning Department staff to consider the quantification of any trip reduction proposal.

ALTERNATIVE SOLUTIONS AND MITIGATION APPROACHES

If an applicant's LATR findings indicate an unacceptable intersection congestion level, their options to mitigate that impact include the physical or program improvements as outlined below.

In general, any mitigation measure or combination of mitigation measures must be scheduled for completion or be operating before or at the same time the proposed development is scheduled to be completed. The nature, design, and scale of any additional facility or program must receive approval from any government agency that would construct or maintain it and the applicant and public agency must execute an appropriate agreement before the Planning Board approves a record plat.

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

If an approved subdivision already constructed or participated in the construction of off-site improvements to accommodate its peak hour trips (based upon the LATR requirements the Board imposed when it approved a development plan), and if the development later converts one or more approved uses or reduces its size so that the subdivision generates fewer or an equal number of peak hour trips than estimated when the Board imposed the LATR requirements, the trip mitigation agreement must reduce the development's peak hour trip mitigation requirement by one trip for each peak hour trip that no longer would be generated by the development. If the conversion of all or part of the subdivision from one use to another would cause a different trip distribution or would place new or different burdens on one or more intersections, and if the subdivision is otherwise required to do so, the subdivision must construct or contribute to improvements specified by the Board to mitigate that result.

Applicants required to make intersection improvements to satisfy LATR may apply the capital cost of those improvements toward any TPAR mitigation obligation only if the conditions qualifying those improvements as being appropriate for TPAR mitigation are met.

LATR Mitigation Options

Traffic Mitigation Agreements

The applicant may be required to reduce or mitigate trips by entering into a legally-binding [transportation traffic mitigation agreement \(TMAg\)](#), which is sometimes referred to as a "hard TMAg". Each traffic mitigation program will be required to operate for at least 12 years, but not more than 15 years, once trip reduction requirements are initially achieved and after use and occupancy permits are drawn. Some elements are designed to continue in perpetuity.

TMAg measures could include:

- subsidizing transit fares to increase ridership
- constructing and maintaining a new park-and-ride facility or providing funds to increase use of an existing park-and-ride facility
- funding a private shuttle service, for example, between the site and a nearby Metrorail station or park-and-ride facility
- constructing queue-jumper lanes, providing traffic signal priority treatment for transit (after MCDOT and SHA have implemented this process) and other techniques to improve bus travel times (only results that improve travel times will be considered)
- parking management activities
- establishing live-near-work, flex-time, or telecommuting programs.

Other measures may be suggested by applicants, Planning Department staff, or MCDOT. Creative approaches to reducing traffic impacts are encouraged. The final trip reduction measures must be approved by the Planning Department and MCDOT staffs.

To ensure compliance with the contract conditions, TMAgs will be monitored at a minimum on a quarterly basis, at the applicant's expense, by MCDOT staff or a consultant selected by the Planning Board. If the quarterly monitoring finds that the goals are not being met, the TMAg will be monitored on a monthly basis until the goals are met for three consecutive months. When the goals aren't being met, staff and the applicant will work together to seek alternative or additional measures and monthly monitoring will take place until the trip reduction goals are met.

Non-Auto Transportation Facilities

To maintain an equivalent level of service for both auto and non-auto modes of travel, the Planning Board may permit an applicant to provide fewer roadway improvements or less traffic mitigation in exchange for providing non-auto transportation facilities that will enhance pedestrian safety or encourage non-auto mode choices.

Such facilities must be implemented to reduce the congestion levels at intersections that exceed the congestion standard and where an improvement need has been identified. Trip distribution and assignment assumptions in the LATR ~~Traffic Study~~ Transportation Study are key factors in determining local intersection impacts and the level of trip mitigation required.

Table 6: Graduated and Maximum Trip Credits Related to Congestion Standards

non-automobile transportation facility	trip credit vs. congestion standard		
	1,350-1,500	1,550-1,600	1,800
100 linear feet of five-foot wide sidewalk	0.5	0.75	1.0
100 linear feet of eight-foot wide bike path			1.0
bikeshare station (including 12 years operation expenses)	\$12,000 per vehicle trip *		
other non-automobile facilities	\$12,000 per vehicle trip *		
maximum trip credits	60	90	120

Note: * or relevant rate in the latest Subdivision Staging Policy

Table 6 identifies trip reduction options. Any or all of these may be used for a given application. The maximum trip reduction per development is a function of the policy area congestion standard for the development site.

In determining the adequacy of improvements, the Planning Board must balance the environmental and community impacts of reducing congestion as well as the safe and efficient accommodation of pedestrians, bike riders, and bus patrons. Periodic monitoring may or may not be required of non-auto transportation facilities.

Non-auto facilities to mitigate congestion may include bikeshare stations (in County-designated expansion areas), sidewalks, bike paths, Super Shelters, bus shelters and benches, bike racks and lockers, and static or real time transit information signs, described in more detail below.

Sidewalks, Bike Paths, Pedestrian Refuge Islands, Accessible or Countdown Pedestrian Signals, and Curb Ramps These features can must be constructed off-site (i.e. across center line of adjacent roadway, outside of extension of lot lines) and should provide safe access from the proposed or existing development to any of the following uses:

- rail or bus transit stations or stops
- public facilities (school, library, park, post office, etc.)
- recreation centers
- retail centers that employ 20 or more persons at any time
- housing developments of 27 or more single-family detached units
- office centers that employ 100 or more persons
- existing sidewalks or bike paths
- adjacent private amenity space (sitting area, theater, community center).

Accessible pedestrian signals (for the visually-impaired), retrofitting existing traffic signals with countdown lights, and reconstructing existing substandard curb ramps (to current ADA guidelines) should be allowed as optional facilities.

These features must be within one-quarter mile of the edge of the proposed development, **must not be master planned facilities, and must be located off-site. Staff will determine the eligibility of off-site improvements.** 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. Appropriate new bikeway segments can be found in the Countywide Bikeways Functional Master Plan, or in the applicable master or sector plan. The Plan prioritizes bikeways by activity center, for example Metro stations, CBDs, **downtowns**, park trails, etc.

Super Shelters, Bus Shelters, and Benches

An applicant may propose to construct a Super Shelter, bus shelter, or bench, including a concrete pad.

Encouraging bus use can reduce weekday peak hour vehicle trips by diverting some person-trips to buses. Two types of shelters can be provided: standard bus shelters and Super Shelters.

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

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

Bike Racks and Lockers

An applicant may propose to reduce LATR impact by providing bike racks, lockers, or a secured bike area in a parking garage for a minimum of eight bikes, at an activity center located within a one-mile radius of the edge of the proposed development.

Transit Information Signs and Kiosks

An applicant may propose to reduce LATR impact by providing static or electronic signs and information kiosks at bus shelters, large office buildings, retail centers, transit centers, or residential complexes. The signs should communicate scheduled or real-time transit information, for example, the scheduled or estimated arrival of the next bus on a given route. The applicant must work with and obtain approval from WMATA for Metrobus routes or with the Montgomery County Division of Transit Services (DTS) for Ride On routes.

Static transit information signs may be provided only at locations other than CCO-provided standard bus shelters, since they include that information. The applicant will be required to provide for way to change static transit information as often as three times a year.

Other Non-Auto Facilities

An applicant may reduce LATR impact by providing other non-auto facilities, including but not limited to bus layover spaces, crosswalks or pedestrian bridges, on-road bicycle lanes, park-and-ride lots, park trails, transit stations, streetlights, transitways, and busways.

For these facilities, pedestrians and bicyclists should be able to safely cross any roadway to reach their destination. The applicant may provide improvements that Planning Department, MCDOT, and SHA staffs agree would increase the safety of the crossing.

Applying Trip Reduction Measures

Applicants may only apply a trip reduction measure after the total number of peak hour trips is determined using standard trip rates. Developments generating more than 30 total weekday peak hour trips will be required to complete a ~~traffic study~~ transportation study, which should include proposed trip reduction strategies. Applicants may be required to gather data on current bus patronage or pedestrian/bicycle activity within the local area to aid in evaluating the strategies.

Payment Instead of Construction

Where an applicant has made a good faith effort to implement an acceptable improvement and where the Board finds that a desirable improvement cannot feasibly be implemented by the applicant but that it can be implemented by a public agency within six years after the subdivision is approved, the County Council has authorized the Planning Board to accept payment to the County of a fee commensurate with the cost of the required improvement.

Transportation Policy Area Review

INTENT AND STANDARDS

Transportation Policy Area Review (TPAR) is a policy area-wide test of public transportation facilities. The test is separate from LATR in that it considers average transportation system performance for defined policy area boundaries. This process evaluates the adequacy of transit and roadways separately to allow more in-depth analysis and staging of improvements of these two types of transportation.

TPAR measures transit adequacy by evaluating neighborhood bus service using three measures of adequacy: coverage, peak headway, and span of service.

- Coverage is the percentage of the “transit-supportive area” of a policy area that is within ¼-mile of a bus stop or ½-mile of a transit station. This definition is consistent with the Transportation Research Board’s *Transit Capacity and Quality of Service Manual* (2nd edition, 2002) that describes a “transit-supportive area” as one with a household density of at least three units per gross acre or an employment density of at least four jobs per gross acre. Transit-supportive areas do not include land uses such as parks, farms, golf courses, bodies of water, major road rights-of-way, and low-density housing and employment zones.
- Peak headway is average time between buses traveling in the same direction during the weekday peak hour in the peak direction.
- Span of service is the average duration of weekday bus service for that subset of routes in each policy area that is scheduled to operate throughout most of the day without a split in service during the midday hours.

EXEMPTIONS FROM TPAR

* Per County Council 2012-2016 Subdivision Staging Policy Resolution 17-601 (p.17), MPDU and any other lower- and moderate-income housing which is exempt from paying a development impact tax must also be exempt from any TPAR payment.

* TPAR compliance is not required for developments in the White Flint Policy Area because applicants are required to participate in the White Flint Special Taxing District for transportation infrastructure improvements in lieu of satisfying the TPAR transportation APF tests.

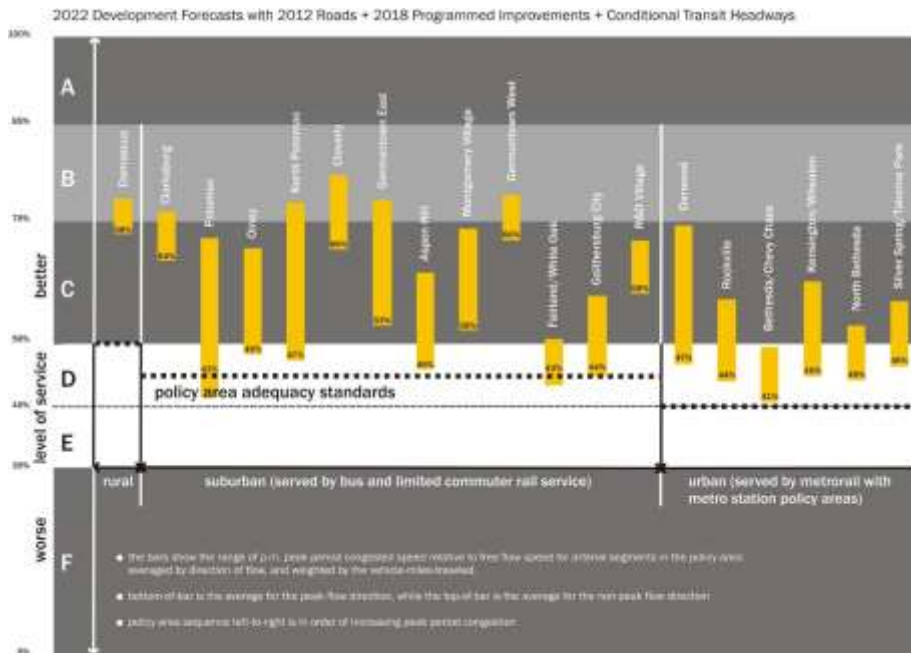
* TPAR payments are not required for public facility project mandatory referrals, in which the Planning Board’s comments are advisory. Mandatory referrals are often unique uses, such as schools or other public services, and their traffic review follows Mandatory Referral Guidelines, which requires a pedestrian and bicycle safety statement, pedestrian and vehicular circulation plan, and a traffic statement or ~~traffic study~~ transportation study as applicable.

TPAR measures roadway adequacy, based on vehicle miles traveled (VMT) over a 10-year horizon (year 2022-2024) by forecasting travel speed on arterial roads in peak travel directions (derived from the Planning Department's regional travel demand model). This result is compared to uncongested, free flow speed. Roads with the most trips are weight-averaged to reflect their impact on the overall network.

The resulting ratio of forecasted speed to uncongested speed is consistent with analysis standards in the Highway Capacity Manual. It is then compared with Subdivision Staging Policy adequacy standards for Urban, Suburban, and Rural policy areas—40 percent (level of service D/E), 45 percent (mid-Level of Service D), and 50 percent (level of service C/D), respectively.

The results of the TPAR roadway adequacy analysis, by policy area, are depicted in Figure 2.

Figure 2: Adequacy of the main roads countywide summary – Year 2022-2024 Forecast [graphic below needs to be updated - add two years to each referenced year, plus new chart approved by Planning Board with more failing policy areas]



Roadways in Three Seven policy areas—Potomac, North Potomac, Aspen Hill, Fairland/Colesville, White Oak, and Gaithersburg City, and Bethesda/Chevy Chase — are forecast to be inadequate or approach inadequacy by 2022-2024.

Table 7 summarizes the TPAR transportation adequacy status and transportation mitigation payment requirement for each policy area between January 1, 2013 and July 1, 2014, based on staff's updated analysis presented to and approved by the Planning Board on February 5, 2015.

Table 7: TPAR Transportation Adequacy Analysis Results and Transportation Mitigation Payment Requirements

Policy area	Transit test	Roadway test	TPAR payment *
Rural areas			
Rural East	exempt	exempt	
Rural West	exempt	exempt	
Damascus	adequate	adequate	
Suburban areas			
Aspen Hill	adequate	inadequate	25 % of Impact Tax
Clarksburg	inadequate	adequate	25 % of Impact Tax
Fairland/White Oak Colesville	inadequate	inadequate	25 50% of Impact Tax
Gaithersburg City	adequate	inadequate	25 % of Impact Tax
Germantown East	inadequate	adequate	25 % of Impact Tax
Germantown West	inadequate	adequate	25 % of Impact Tax
Montgomery Village/Airpark	inadequate	adequate	25 % of Impact Tax
Cloverly	inadequate	adequate	25 % of Impact Tax
North Potomac	inadequate	inadequate	25 50% of Impact Tax
Olney	inadequate	adequate	25 % of Impact Tax
Potomac	inadequate	exempt	25 % of Impact Tax
R&D Village	inadequate	adequate	25 % of Impact Tax
White Oak	inadequate	inadequate	50% of Impact Tax
Urban areas			
Derwood	inadequate	adequate	25 % of Impact Tax
Rockville City	inadequate	adequate	25 % of Impact Tax
North Bethesda	inadequate	adequate	25 % of Impact Tax
Bethesda-Chevy Chase	inadequate	inadequate	25 50% of Impact Tax
Germantown Town Center	inadequate	adequate	25 % of Impact Tax
Kensington-Wheaton	inadequate	adequate	25 % of Impact Tax
Silver Spring-Takoma Park	inadequate	adequate	25 % of Impact Tax
CBDs and Metro Station Policy Areas			
Bethesda CBD	exempt	adequate	
Silver Spring CBD	exempt	adequate	
Wheaton CBD	exempt	adequate	
Friendship Heights CBD	exempt	adequate	
Glenmont MSPA	exempt	adequate	
Grosvenor MSPA	exempt	adequate	
Rockville Town Center MSPA	exempt	adequate	
Shady Grove MSPA	exempt	adequate	
Twinbrook MSPA	exempt	adequate	
White Flint MSPA	exempt	exempt	

Note: * 25% TPAR payment is required for each of the transit and roadway tests if determined to be 'inadequate.'

EVALUATING A TPAR CONDITION

Staff will evaluate the following information submitted by the applicant, using the TPAR adequacy standards in the relevant policy area.

- The development's policy area (**geographic location of site**).
- The type of development as defined in the development impact legislation.

TPAR MITIGATION OPTIONS

If projected transportation capacity in a policy area is not adequate, the Planning Board may approve a subdivision in that area if the applicant commits to either:

- fully mitigate the incremental traffic impact of the subdivision by adding capacity or implementing a trip reduction program
- pay a Transportation Mitigation Payment as provided in County law.

The Transportation Mitigation Payment is charged to developments in policy areas determined as inadequate for transit or roadway conditions based on the analysis prepared every two years by Planning Department staff and approved by the Planning Board. It is calculated as an amount equal to a percentage of the General District Transportation Impact Tax based on the type and amount of development. Table 7 shows which Policy Areas are required to pay the Transportation Mitigation Payment. The General District Transportation Tax rate for different types of development is updated by County Council and can be found at:

<http://permittingservices.montgomerycountymd.gov/DPS/fee/ImpactTaxes.aspx>

The TPAR payment must be made prior to release of any building permit and may not be credited toward the applicable development impact tax. The funds are used to make transportation improvements that will bring a policy area into roadway and transit adequacy.

- No TPAR compliance is necessary if the Planning Board finds that the proposed development will generate three or fewer **total** new peak hour trips, or if the proposed development is in a policy area adequate for both transit and roadways.
- Developments in MSPAs are exempt from Transportation Mitigation Payments.
- TPAR compliance is necessary in policy areas found inadequate. Payment rates for **either** roadways **or and** transit **being deemed inadequate** are to equal 25 percent of the General District Transportation Impact tax for the same project based on the type and amount of development. In areas **deemed** inadequate for both roadways and transit, payment rates are set to equal 50 percent of the General District Transportation Impact Tax for the same project based on the type and amount of development.

It is possible to provide significant improvements to transit and/or roadway capacity instead of making the payment.

To fully mitigate the subdivision's incremental traffic impact (by adding capacity or implementing a trip reduction program), added capacity must improve congestion in the affected policy area by addressing roadway inadequacies or transit inadequacies. Transit improvements can be used to address either roadway or transit inadequacies if they can be shown to improve roadway capacity. See Appendix 6 for preferred roadway improvements.

Roadway improvements must:

- Improve transportation capacity in the same policy area as the development project
- have logical end points and connect at least two signalized intersections
- be approved by MCDOT for operation and safety considerations.

Transit improvements to improve capacity under TPAR may only consist of the purchase of new Ride On buses to provide improved transit service in the relevant policy area if that policy area is inadequate for peak headway or coverage. The number of buses required to achieve mitigation will be determined in consultation with Planning Department and MCDOT staffs. If the relevant policy area is inadequate for span of service, the TPAR payment is the only option.

The cost of the transportation capacity improvement must be equal to or exceed the value of the TPAR payment and the expenditure is not creditable for future use under the transportation impact tax (that is, the TPAR payment and the impact tax are additive). In general, any mitigation measure or combination of mitigation measures must be scheduled for completion or be operating before or at the same time the proposed development is scheduled to be completed. The nature, design, and scale of any additional facility or program must receive approval from any government agency that would construct or maintain it and the applicant and public agency must execute an appropriate agreement before the Planning Board approves a record plat.

POLICY AREA REVIEW (PAR) BACKGROUND

For the Applicant's reference, TPAR took effect on January 1, 2013. Prior to TPAR, the following PAR programs were in effect and applicable to development applications during the noted time frames:

- Policy Area Mobility Review (PAMR) - 11/15/07 through 12/31/12
- No Policy Area Review - 7/1/03 through 11/14/07
- Policy Area Transportation Review (PATR) - 1982 through 6/30/03

If an application seeks to amend a previously approved preliminary plan or site plan for approved but unbuilt development with a valid APF from the time frames listed above, then the corresponding PAR program is still in effect for that property. Any new development (not yet approved) would be subject to TPAR.

Appendix

NOTE: APPENDICES 1 THROUGH 3 PROVIDED UNDER SEPARATE COVER

APPENDIX 4 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 of the Guidelines. For most development sites, the process is a combination of trip distribution and traffic assignment.

Definitions

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

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

Discussion

The tables in this appendix 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 Map 4-1. The remaining five super districts represent neighboring jurisdictions.

The trip distribution assumptions are contained in Tables 4-1 through 4-11 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 percent of trips generated by a general office development in Germantown (see Table 4-9) would be expected to travel to or from Frederick County. However, only two percent 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/transportation study](#).

The application of the trip distribution information in Tables 4-1 through 4-11 is straightforward in cases where a ~~traffic-~~[study/transportation 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 4-2 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 4-4 (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.

Map 4-1: Super Districts in Montgomery County

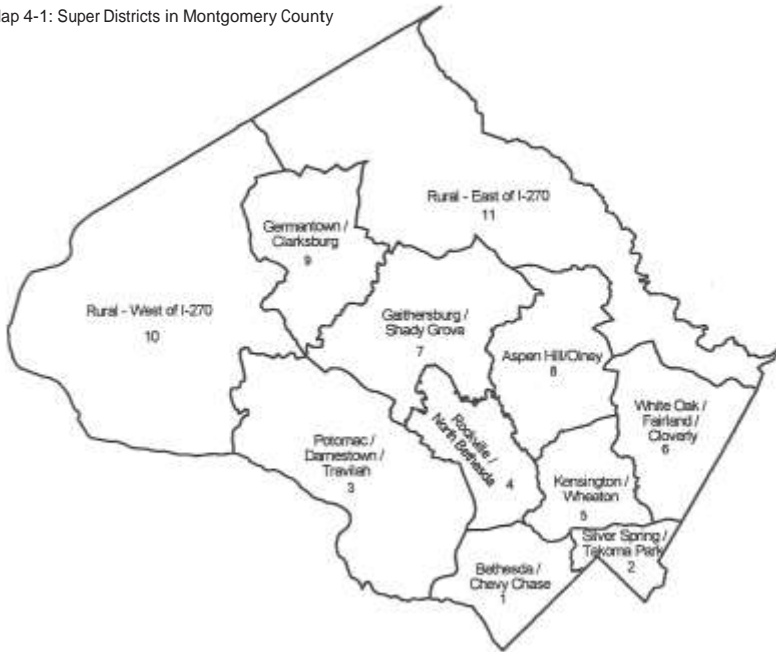


Table 4-1: Trip Distribution - Assignment Matrix
Hypothetical Case in North Bethesda with both Office and Residential Components

Part 1 - Office Component

Trip distribution by super district	Trip assignment for origin by super-district						Trip assignment for development case					
	Montrose west	MD 355 north	Randolph east	Md 355 south	MD 187 south	TOTAL	Montrose west	MD 355 north	Randolph east	Md 355 south	MD 187 south	TOTAL
Bethesda	3.5%			50%	50%	100%	0.0%	0.0%	0.0%	1.8%	1.8%	3.5%
Silver Spring	2.2			100%		100%	0.0	0.0	0.0	2.2	0.0	2.2
Potomac Potomac	8.0	80%			20%	100%	6.4	0.0	0.0	0.0	1.6	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	1.4	0.0	7.2
Fairland	4.1		80%	20%		100%	0.0	0.0	3.3	0.8	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
Germantown	6.5	90%	10%			100%	5.9	0.7	0.0	1.0	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	0.0	8.8
Virginia	7.8	80%	10%		10%	100%	6.2	0.0	0.8	0.0	0.8	7.8
Frederick County	4.6	100%				100%	4.6	0.0	0.0	0.0	0.0	4.6
Howard County	2.9		10%	10%	80%	100%	0.0	0.3	0.3	2.3	0.0	2.9
TOTAL	100%					USE >	44%	20%	14%	18%	4%	100%

Part 2 - Residential Component

Trip distribution by super district	Trip assignment for origin by super-district						Trip assignment for development case					
	Montrose west	MD 355 north	Randolph east	Md 355 south	MD 187 south	TOTAL	Montrose west	MD 355 north	Randolph east	Md 355 south	MD 187 south	TOTAL
Bethesda	15.6%			50%	50%	100%	0.0%	0.0%	0.0%	7.8%	7.8%	15.6%
Silver Spring	2.4			100%		100%	0.0	0.0	0.0	2.4	0.0	2.4
Potomac Potomac	3.3	80%			20%	100%	2.6	0.0	0.0	0.0	0.7	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	0.5	0.0	2.6
Fairland	0.7		80%	20%		100%	0.0	0.0	0.6	0.1	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
Germantown	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	0.0	6.1
Virginia	9.7	80%	10%		10%	100%	7.8	0.0	1.0	0.0	1.0	9.7
Frederick County	0.5	100%				100%	0.5	0.0	0.0	0.0	0.0	0.5
Howard County	0.7		10%	10%	80%	100%	0.0	0.1	0.1	0.6	0.0	0.7
TOTAL	100%					USE >	38%	27%	4%	22%	9%	100%

Table 4-2: Trip Distribution Report in Super District 1: Bethesda/Chevy Chase

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

Trip Distribution to Super District for	Office Development	Residential Development
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 4-3: 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

Trip Distribution to Super District for	Office Development	Residential Development
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 4-4: Trip Distribution Report in Super District 3: Potomac/Darnestown/Travilah
 Auto-Driver Trip Distribution for Development in Super District 3: Potomac/Darnestown/Travilah

Trip Distribution to Super District for	Office Development	Residential Development
1. Bethesda/Chevy Chase	5.7%	13.0%
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 4-5: Trip Distribution Report in Super District 4: Rockville/North Bethesda
 Auto-Driver Trip Distribution for Development in Super District 4: Rockville/North Bethesda

Trip Distribution to Super District for	Office Development	Residential Development
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	5.6 2.9%	0.7% 1.4%

Table 4-6: Trip Distribution Report in Super District 5: Kensington/Wheaton

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

Trip Distribution to Super District for	Office Development	Residential Development
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 4-7: 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

Trip Distribution to Super District for	Office Development	Residential Development
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	5.6%	1.4%

Table 4-8: Trip Distribution Report in Super District 7: Gaithersburg/Shady Grove
 Auto-Driver Trip Distribution for Development in Super District 7: Potomac/Gaithersburg/Shady Grove

Trip Distribution to Super District for	Office Development	Residential Development
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%	1.9%
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 4-9: Trip Distribution Report in Super District 8: Aspen Hill/Olney
 Auto-Driver Trip Distribution for Development in Super District 8: Aspen Hill/Olney

Trip Distribution to Super District for	Office Development	Residential Development
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 4-10: Trip Distribution Report in Super District 9: Germantown/Clarksburg

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

Trip Distribution to Super District for	Office Development	Residential Development
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 4-11: 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

Trip Distribution to Super District for	Office Development	Residential Development
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 4-12: 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

Trip Distribution to Super District for	Office Development	Residential Development
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%	7.3%
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%	2.8%

APPENDIX 5 Delegation Procedures for Certain APF Findings by Staff at Time of Building Permit

Procedures

For a building permit where a traffic **exemption** statement is submitted to demonstrate that TPAR is not applicable and an LATR ~~traffic-study~~**transportation study** are not needed, or when the LATR ~~traffic-study~~**transportation study** is conducted with a finding that no mitigation is required, Planning Department staff can make a finding that public facilities will be adequate to support the proposed development, set the validity period for the APF approval, and authorize release of the building permit.

For a building permit where the TPAR test requires mitigation less than five trips, Planning Department staff may authorize release of the building permit by letter if:

1. Planning Department staff finds that the public facilities will be adequate for the proposed development with the proposed trip mitigation and sets the validity period for the APF approval; and
2. MCDOT, the Superintendent of the Montgomery County Public School System, County Fire and Rescue Services, the Department of Police, and DPS have been notified of the method of mitigation, and have not explicitly objected; and
3. interested parties and the applicant have been given notice of the pending case, and have not objected to the proposed mitigation (see below, Noticing); and
4. a copy of a permit for construction within the right-of-way for the mitigation item has been received from DPS.

For cases requiring mitigation of five or more vehicle trips, the item will be scheduled for an APF finding at a public hearing before the Planning Board after 1, 2, and 4 above are met. If no objections are raised by any interested parties or any of the agencies listed in 2 above, the case may be scheduled as a consent item before the Planning Board.

If an Applicant requests a hearing before the Planning Board or if any interested party or agency listed in 2 or 3 above objects to the proposed mitigation, the item will be scheduled for an APF finding at a public hearing before the Planning Board.

Noticing

The applicant must notify all fronting and adjacent property owners, and community and homeowners associations (following the procedure in the Development Review Manual [link]) of the application for APF approval as well as any proposed mitigation measures. The notice must also state that anyone objecting to the proposal must do so in writing within 14 days to Transportation Planning and provide the appropriate contact information.

Update pending on this page - consider changing threshold from five to three or thirty.

Eric to double check Improvement and Facility Types and add footnote with definitions (T = transit, R = road, facility types from model?)

APPENDIX 6 Unbuilt Master Plan Projects

Master Planned Transportation Improvements Sorted by Policy Area, Mode, and Improvement Type and Not Programmed by 2018

Policy Area(s)	Project Name	Implementation	Limits	Improvement Type	Facility Type
CLK,GTE,GTW,GBG,RDV,DER,RKV	Corridor Cities Transitway (proposed)	State	Shady Grove to Clarksburg	T	LRT
BCC,SSTP	Purple Line Transitway (proposed)	State	Bethesda to New Carrollton	T	LRT
NB,POT	North Bethesda Transitway (proposed)	State	Grosvenor Metro to Montgomery Mall	T	LRT
OLY,AH,KW	Georgia Avenue Busway (proposed)	State	Glenmont to Olney	T	BRT
POT,BCC,NB,KW,SSTP,FWO	Capital Beltway	State	American Legion Bridge to Woodrow Wilson Bridge	R	1
GTE,MVA,GBG	Midcounty Hwy (proposed)	County	Montgomery Village Av to MD 27	R	2
AH	MD 97 Georgia Ave and MD 28 Norbeck Rd	State	Interchange	R	1
AH	MD 28 Norbeck Rd	State	MD 97 to MD 182	R	2
AH	MD 182 Layhill Rd	State	ICC to Norwood Rd	R	2
AH	Aspen Hill Rd	County	MD 586 to MD 185	R	3
BCC	MD 355 and Cedar Ln	State	Interchange	R	1
BCC	River Rd	State	DC Line to I-495	R	2
BCC	Bradley Blv	State	MD 614 to I-495	R	3
BCC	Goldsboro Rd	State	MD 396 to MD 191	R	3
BCC	Massachusetts Ave	State	Sangamore Rd to MD 614	R	3
CLK	I-270 and Newcut Rd	State	Interchange	R	1
CLK	MD 27 Ridge Rd	State/Dev	MD 355 - Brink Rd to Skylark Rd	R	2
CLK	MD 121 Clarksburg Rd	State/Dev	Top Tidge Dr to Chrisman Hill Dr (Broadway Av to I-270)	R	2
CLK	MD 121 Clarksburg Rd Relocated	State/Dev	West Old Baltimore Rd to Broadway Ave	R	2
CLK	MD 355 Frederick Rd	State/Dev	Brink Rd to Cool Brook Ln	R	2
CLK	MD 355 Frederick Rd Relocated	State	Cool Brook Ln to Snowden Farm Pkwy	R	2
CLK	A-304 (proposed)	County/Developer	MD 121 to Newcut Rd Extended	R	3
CLK	A-307 (proposed)	County/Developer		R	3
CLK	Observation Dr Extended	County/Developer	Little Seneca Cr to Roberts Tavern Dr	R	2
CLK	Hyattstown Bypass (proposed)	State	MD 355 to MD 355	R	3
CLK	Newcut Rd Extended	County/Developer	West Old Baltimore Rd; Broadway Ave. to MD 27	R	2
CLK	Snowden Farm Pkwy (Proposed)	County/Developer	MD 27 to Clarksburg Rd	R	2
CLK	Snowden Farm Pkwy (Proposed)	County/Developer	Clarksburg Rd to MD 355	R	2
CLK	Brink Rd	County/Developer	MD 355 to MD 27	R	3
CLK	Shawnee La	County/Developer	Gateway Center Dr to MD 355	R	3
CLK	Stringtown Rd	County/Developer	Overlook Crossing Dr to Snowden Farm Pkwy	R	3
CLV	Norwood Rd	County	MD 650 to MD 182	R	3
CLV	MD 28 Norbeck Rd	State	MD182 to Peach Orchard Rd	R	2
CLV	Thompson Rd Extended	County	Rainbow Dr to Thompson Dr	R	3

Master Planned Transportation Improvements Sorted by Policy Area, Mode, and Improvement Type and Not Programmed by 2018

Policy Area(s)	Project Name	Implementation	Limits	Improvement Type	Facility Type
DAM	none				
DER	MD 355 Frederick Rd and Gude Dr	State	Interchange	R	1
DER	ICC and Mid-County Hwy	State	Interchange	R	1
DER	Metro Access Crabbs Branch Wy	County/ Developer	Interchange	R	1
DER	Crabbs Branch Way Extended	County/ Developer	Shady Grove Rd to Amity Dr	R	3
FWO	US 29 and Blackburn Dr	State	Interchange	R	1
FWO	US 29 and Fairland	State	Interchange	R	1
FWO	US 29 and Greencastle Rd	State	Interchange	R	1
FWO	US 29 and Musgrove Rd	State	Interchange	R	1
FWO	US 29 and Stewart Dr	State	Interchange	R	1
FWO	US 29 and Tech Rd	State	Interchange	R	1
FWO	MD 28 Norbeck Rd	State	Peach Orchard Rd to Prince George's Line	R	2
FWO	Briggs Chaney Rd	County	ICC to PG Line	R	3
FWO	Burtonsville Blv	State/ Developer	MD 198 to Dustin Rd	R	3
FWO	Calverton Blv	County	Cherry Hill Rd to PG Line	R	3
FWO	Fairland Rd	County	MD 650 to PG Line	R	3
FWO	Greencastle Rd	County	Robey Rd to PG Line	R	3
GBG	I-270 and Watkins Mill Rd	County/ State/ Developer	Interchange	R	1
GBG,NP	MD 117 West Diamond Ave	State	Seneca Creek St Pk to Muddy Branch Rd	R	2
GBG,NP	MD 124 Montgomery Village Ave	State	MD 28 to Longdraft Rd	R	2
GBG,NP	Muddy Branch Rd	County	MD 28 to MD 117	R	2
GBG,NP	Longdraft Rd	County	MD 124 to MD 117	R	3
GBG	Oakmont Ave Extended	County	Oakmont Av to Washington Grove Ln	R	3
GBG	Odenhal Ave	County	Lost Knife Rd to Summit Av	R	3
GTE	MD 27 and MD 355	State	Interchange	R	1
GTE	MD 27 and Observation Dr	State	Interchange	R	1
GTE	MD 118 and MD 355	State	Interchange	R	1
GTE	MD 118 and Midcounty Hwy	State	Interchange	R	1
GTE	MD355 and Middlebrook Rd	State	Interchange	R	1
GTE	Shakespeare Dr	County/ Developer	Watkins Mill Rd to MD 355	R	3
GTE	Watkins Mill Rd	County	Midcounty Hwy to Midcounty Hwy	R	3
GTE	Dorsey Mill Rd	County	Bridge over I-270	R	3
GTW	MD 117 Clopper Rd	State	Seneca Creek SVP to east of MD 121	R	2
GTW	MD 119 Great Seneca Hwy	State	Longdraft Rd to Middlebrook Rd	R	2
GTW	Father Hurlay Blv	County	Wisteria Dr to Crystal Rock Dr	R	2
GTW	Crystal Rock Dr Extended	Developer (Kinster Dr to Dorsey Mill Rd)	Kinster Dr to Dorsey Mill Rd	R	3
GTW	Dorsey Mill Rd	County/ Developer	Bridge over I-270	R	3
GTW	Observation Dr Extended	County	Waters Discovery Ln to Little Seneca Cr	R	3

Master Planned Transportation Improvements Sorted by Policy Area, Mode, and Improvement Type and Not Programmed by 2018

Policy Area(s)	Project Name	Implementation	Limits	Improvement Type	Facility Type
KW	MD 586 Veirs Mill Rd and Randolph Rd	State	Interchange	R	1
KW	MD 586 Veirs Mill Rd	State	Twinbrook Pkwy to Randolph Rd	R	2
KW	Capitol View Ave Relocated	State/ Developer	Edgewood Rd to Stoneybrook Dr	R	3
MVA	MD 115 Muncaster Mill Rd	State	Redland Rd to MD 124	R	2
MVA	MD 124 Woodfield Rd	State	Emory Grove Rd to Warfield Rd	R	2
MVA	MD 124 Montgomery Village Av	State	Russell Av to Midcounty Hwy	R	2
MVA	Goshen Rd Widening	County	Odenhal Rd Odendhal Ave to Warfield Rd	R	2
MVA	Snouffer School Rd	County/ Developer	MD 124 to Goshen Rd	R	3
MVA	Wightman Rd	County	Goshen Rd to Brink Rd	R	3
NB	Montrose Pkw (proposed)	State	Maple Av to Parklawn Dr	R	2
NB	Montrose Pkw (proposed)	County	Parklawn Dr to MD 586	R	2
NB	Old Georgetown Rd	County	MD 355 to Nebel St	R	2
NB	Twinbrook Pkw	County	Chapman Av to Ardennes Av	R	3
NB	Woodglen Dr Extended	County/ Developer	Nicholson Ln to Marinelli Rd	R	3
OLY	MD097 Brookeville Byp (proposed)	State	Goldmine Rd to Georgia Av	R	2
OLY	MD 97 Georgia Ave	State	MD 108 to Prince Phillip Dr	R	2
OLY	MD 28 Norbeck Rd	State	MD 97 to MD 182	R	2
OLY	MD 108 Olney-Laytonsville Rd	State	Muncaster Rd to Olney Mill Rd	R	2
POT	MD 189 Falls Rd Relocated	State	Democracy Blvd to Rockville Line	R	2
POT	MD 190 River Rd Relocated	State	Riverwood Dr To River Oaks Ln	R	2
POT	Montrose Rd Extended	County	MD 189 to Falls Rd Relocated	R	3
POT	Montrose Rd	County	Seven Locks Rd to I-270	R	3
POT	Westlake Dr	County	Westlake Ter to Tuckerman Ln	R	3
RDV	MD 28 Key West Ave and MD119 Great Seneca Hwy	State	Interchange	R	1
RDV	Sam Eig Hwy and Fields/ Diamondback Dr	State/County	Interchange	R	1
RDV	Sam Eig Hwy and MD 119 Great Seneca Hwy	State	Interchange	R	1
RDV	Shady Grove Rd and MD 28 Darnestown Rd	State	Interchange	R	1
RDV	Darnestown Rd Relocated	County	Darnestown Rd to Great Seneca Hwy	R	2
RDV	MD 119 Great Seneca Hwy Relocated	County/State	Darnestown Rd to Sam Eig Hwy	R	2
SSTP	Lyttonsville Rd	County	Grubb Rd to Lyttonsville Pl	R	3
SSTP	Seminary Rd	County/ Developer	MD 192 to MD 97	R	3
RKV,GBG,GTE, GTE,CLK	I-270 (HOV and widening)	State	I-370 to Frederick Co Line	R	1
RURW	MD118 Germantown Rd	State	MD 28 to MD 117	R	2
RURW	Whites Ferry Rd Relocated	County	Partnership Rd to west of Partnership Rd	R	3

MEMORANDUM OF UNDERSTANDING BETWEEN
THE CITY OF GAITHERSBURG
AND
THE CITY OF ROCKVILLE
AND
THE MONTGOMERY COUNTY PLANNING BOARD OF
THE MARYLAND-NATIONAL CAPITAL PARK AND
PLANNING COMMISSION
FOR
THE COORDINATION OF TRAFFIC IMPACT STUDIES
FOR PROPOSED DEVELOPMENT PROJECTS

This Memorandum of Understanding (MOU) is entered into by and between Montgomery County Planning Department of The Maryland-National Capital Park and Planning Commission, the City of Gaithersburg, and the City of Rockville (collectively, the Parties)

WHEREAS, the purpose of this MOU is for the Parties to work cooperatively to better manage traffic conditions given the inter-jurisdictional impact of traffic generated by development in close proximity to nearby jurisdictions through the exchange of information regarding traffic reports (traffic impact study or applicable traffic statement) of proposed development and through the coordination and review of such reports; and

WHEREAS, the parties acknowledge that each has a different set of standards for traffic reports within their jurisdiction.

NOW, THEREFORE, the Parties agree to the following:

1. The methodology for determining the scope of traffic reports for proposed development projects, and also for analyzing the intersections included in such reports, will be determined in accordance with the standards set by the approving jurisdiction.
2. If a proposed development project has a signalized intersection within the scope's study area and located in a neighboring jurisdiction (one of the other parties to this MOU), that such intersection will be analyzed as part of the required traffic reports in accordance with the standards set by the approving jurisdiction.

3. Each Party will notify their neighboring jurisdiction when a project is submitted for review that includes a signalized intersection within the scope's study area and located in that neighboring jurisdiction. This includes notification of pre-Development Review Committee/Development Review Team (DRC/DRT) meetings and regular DRC/DRT meetings for such project.
4. When a signalized intersection falls within a neighboring jurisdiction, the approving jurisdiction will provide the neighboring jurisdiction with a copy of the applicable traffic report scope between the applicant and the approving jurisdiction. The approving jurisdiction will also provide the accepted traffic report to the neighboring jurisdiction. The neighboring jurisdiction will then be allowed up to thirty (30) days to review and submit comments back to the approving jurisdiction regarding the proposed development's traffic report.

IN WITNESS WHEREOF, the undersigned being duly authorized by the respective agencies, has signed this MOU.

City of Gaithersburg, Maryland:



John Schlichting, Director, Planning and Code Administration

Date: 10/10/12

City of Rockville, Maryland:



Susan Swift, Director, Community Planning & Development Services

Date: 10-2-12

Montgomery County Planning Department:



Rose Krasnow, Acting Director

Date: 9-27-12

APPENDIX 8 Provisional Adequate Public Facilities Finding

Section TP4 of the Subdivision Staging Policy provides guidance on Provisional Adequate Public Facilities (PAPF) applications for Development District Participation, as specified in Chapter 14 of the Montgomery County Code. Section TP4 is designed to facilitate:

- Acceptance of transportation APF mitigation through public/private partnerships, and
- Identification and conditioning of APF mitigation requirements in advance of the submission of a preliminary plan that would trigger APF requirements under Section 50-35(k).

Update pending The PAPF process described in Section TP4 includes details on the administration of the application for development districts. For development districts, the APF of those developments included in the development district is satisfied once all required infrastructure improvements have been fully financed.

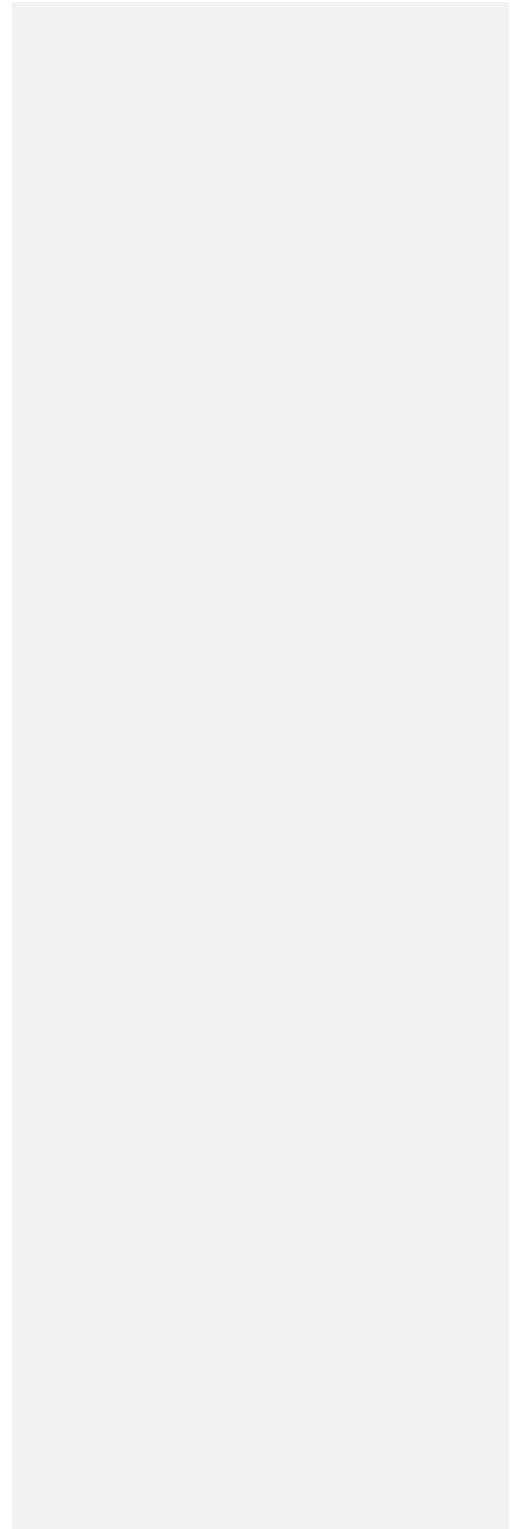
The Planning Board may choose to accept a PAPF application without a development district in the event that an applicant proposes *accelerated public infrastructure through private investment*. The *accelerated public infrastructure investment* may be for any or all of the types of facilities identified in Section TP4.

The Planning Board review of a PAPF for an *accelerated public infrastructure through private investment* must make the following additional findings:

- The APF validity period begins at the time that the Planning Board approved the PAPF.
 - The duration of the APF validity period should consider the proposed project schedule, and may be at or near the maximum length allowed by County law, reflecting the fact that the APF validity period may begin substantially in advance of subdivision approval.
 - The process (financing or construction) and timing of all infrastructure delivery.
 - That the value of the public infrastructure, based on the difference between the construction cost required for access improvements under subdivision regulations and the extent of financing improvements through the PAPF process provides a timely private investment in public infrastructure.
 - The Applicant has no expectation of reimbursement for its private investment.
-

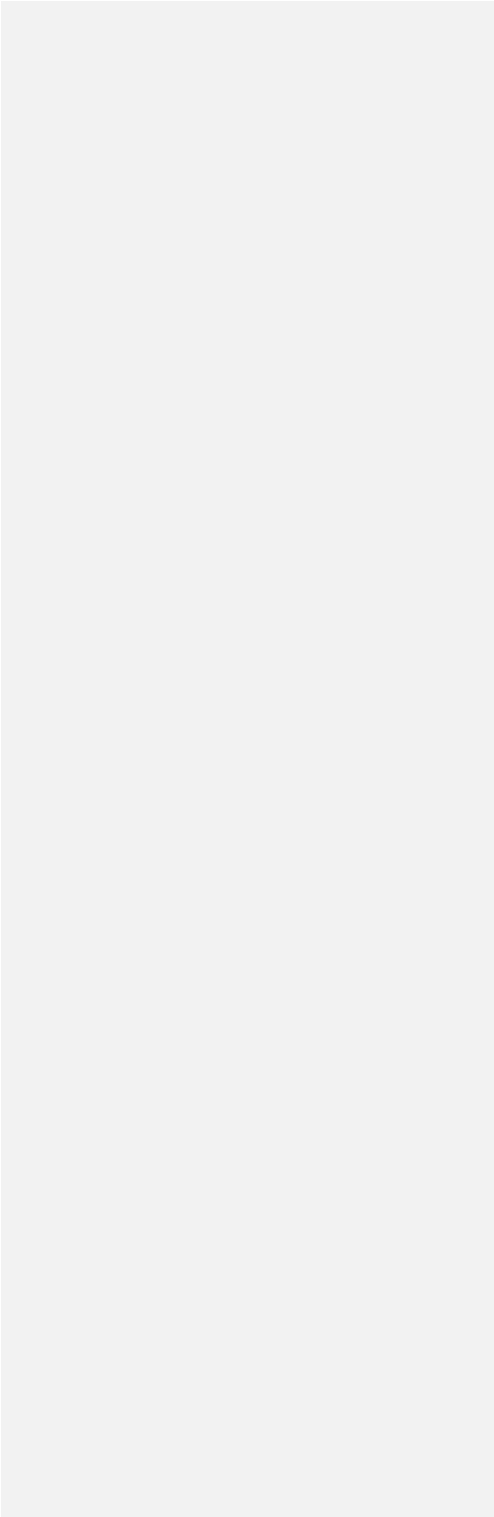
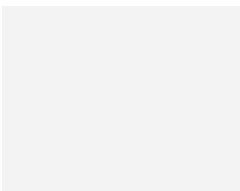
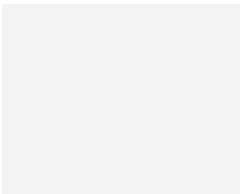
APPENDIX 9- Policy Area Maps

NOTE: DELETED FROM 11/29/15 DRAFT TO SAVE SPACE



APPENDIX 10 - ~~Traffic Study~~Transportation Study Scope of Work Agreement Form

Note: Deleted from 11/29/15 version to save space.



Resolution No: 17-1203
Introduced: January 14, 2014
Adopted: July 29, 2014

~~MARCH 26~~ ~~NOVEMBER 29~~ **DRAFT – TRACK CHANGES MARKUP OF RESOLUTION 17-1203 FOR TISTWG REVIEW AND DISCUSSION ON** ~~APRIL 1~~ ~~DECEMBER 2~~.

**COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND**

By: Council President at the request of the Planning Board

SUBJECT: Amendment to the 2012-2016 Subdivision Staging Policy in association with the White Oak Science Gateway Master Plan

Background

1. On November 13, 2012 the County Council approved Resolution 17-601, the 2012-2016 Subdivision Staging Policy.
2. County Code §33A-15(f) allows either the County Council, County Executive, or the Planning Board to initiate an amendment to the Subdivision Staging Policy.
3. On December 20, 2013, in accordance with §33A-15, the Planning Board transmitted to the County Council its recommendations to amend Resolution 17-601 in association with the White Oak Science Gateway Master Plan. The Draft Amendment to the Subdivision Staging Policy, as submitted by the Planning Board, contained supporting and explanatory materials.
4. On February 4, 2014, the County Council held a public hearing on the Draft Amendment to the Subdivision Staging Policy.
5. On July 1, 7, and 16, 2014 the Council's Planning, Housing, and Economic Development Committee conducted worksessions on the Draft Amendment to the Subdivision Staging Policy.
6. On July 22, 2014, the Council conducted a worksession on the Draft Amendment to the Subdivision Staging Policy, at which careful consideration was given to the public hearing testimony, updated information, recommended revisions and comments of the County Executive and Planning Board, and the comments and concerns of other interested parties.

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Action

The County Council for Montgomery County, Maryland, approves the following Resolution:

The 2012-2016 Subdivision Staging Policy is amended as follows:

Applicability; transition

AP1 Effective dates

This resolution to amend the Subdivision Staging Policy takes effect on July 29, 2014, and applies to any application for a preliminary plan of subdivision filed on or after that date, except that Section S (Public School Facilities) takes effect on November 15, 2012.

AP2 Transition

For any complete application for subdivision approval submitted before January 1, 2013, the applicant may meet its requirements under **TP Transportation Policy Area Review** by either complying with all applicable requirements of **Transportation Policy Area Review** under this resolution or all applicable requirements of **Policy Area Mobility Review** that were in force immediately before this resolution was amended in 2012. The applicant must decide, by the later of March 1, 2013, or 30 days after the Planning Board adopts guidelines to administer **Transportation Policy Area Review**, which set of requirements will apply to its application.

Guidelines for the Administration of the Adequate Public Facilities Ordinance

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 demand from private development and comparing it to the capacity of existing and programmed public facilities. The following guidelines describe the methods and criteria that the Planning Board and its staff must use in determining the adequacy of public facilities. These guidelines supersede all previous ones adopted by the County Council.

The Council accepts the definitions of terms and the assignment of values to key measurement variables that were used by the Planning Board and its staff in developing the recommended Subdivision Staging Policy. The Council delegates to the Planning Board and its staff all other necessary administrative decisions not covered by the guidelines outlined below. In its administration of the APFO, the Planning Board must consider the recommendations of the County Executive and other agencies in determining the adequacy of public facilities.

The findings and directives described in this Subdivision Staging Policy are based primarily on the public facilities in the approved FY 2013-18 Capital Improvements Program (CIP) and the Maryland

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Department of Transportation FY 2012-17 Consolidated Transportation Program (CTP). The Council also reviewed related County and State and Federal funding decisions, master plan guidance and zoning where relevant, and related legislative actions. These findings and directives and their supporting planning and measurement process have been the subject of a public hearing and review during worksessions by the County Council. Approval of the findings and directives reflects a legislative judgment that, all things considered, these findings and procedures constitute a reasonable, appropriate, and desirable set of staged growth limits, which properly relate to the ability of the County to program and construct facilities necessary to accommodate growth. These growth stages will substantially advance County land use objectives by providing for coordinated and orderly development.

These guidelines are intended to be used as a means for government to fulfill its responsibility to provide adequate public facilities. Quadrennial review and oversight, combined with periodic monitoring by the Planning Board, allows the Council to identify problems and initiate solutions that will serve to avoid or limit the duration of any imbalance between the construction of new development and the implementation of transportation improvements in a specific policy area. Further, alternatives may be available for developers who wish to proceed in advance of the adopted public facilities program, through the provision of additional public facility capacity beyond that contained in the approved Capital Improvements Program, or through other measures that accomplish an equivalent effect.

The administration of the Adequate Public Facilities Ordinance must at all times be consistent with adopted master plans and sector plans. Where development staging guidelines in adopted master plans or sector plans are more restrictive than Subdivision Staging Policy guidelines, the guidelines in the adopted master plan or sector plan must be used to the extent that they are more restrictive. The Subdivision Staging Policy does not require the Planning Board to base its analysis and recommendations for any new or revised master or sector plan on the public facility adequacy standards in this resolution.

Guidelines for Transportation Facilities

TP Policy Areas

TP1 Policy Area Boundaries and Definitions

For the purposes of transportation analysis, the County has been divided into 376 areas called traffic zones. Based on their transportation characteristics, these zones are grouped into transportation policy areas, as shown on Map 1. In many cases, transportation policy areas have the same boundaries as planning areas, sector plan areas, or master plan analysis (or special study) areas. Each policy area is categorized as Urban, Suburban, or Rural. The policy areas in effect for 2012-2016 are:

Urban: Bethesda CBD Metro Station Policy Area (MSPA), Bethesda-Chevy Chase, Derwood, Friendship Heights MSPA, Glenmont MSPA, Grosvenor MSPA, Kensington/Wheaton, North Bethesda, Rockville City, Rockville Town Center, Shady Grove MSPA, Silver Spring CBD MSPA, Silver Spring/Takoma Park, Twinbrook MSPA, Wheaton CBD MSPA, White Oak, and White Flint MSPA.

Suburban: Aspen Hill, Clarksburg, Cloverly, Fairland/Colesville, Gaithersburg City,

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Germantown East, Germantown Town Center, Germantown West, Montgomery Village/Airpark, North Potomac, Olney, Potomac, and R&D Village.

Rural: Damascus, Rural East, and Rural West.

The boundaries of the policy areas are shown on maps 2-34.

The boundaries of the Gaithersburg City and Rockville City policy areas reflect existing municipal boundaries, except where County-regulated land is surrounded by city-regulated land. The boundaries of these municipal policy areas do not automatically reflect any change in municipal boundaries; any change in a policy area boundary requires affirmative Council action.

TP2 Transportation Policy Area Review (TPAR)

TP2.1 Components of Transportation Policy Area Review

There are two components to Transportation Policy Area Review: *Roadway Adequacy* and *Transit Adequacy* for each policy area.

TP2.1.1 Roadway Adequacy

Roadway adequacy is a measure of congestion on the County’s arterial roadway network. It is based on the *urban street delay level of service* in the 2010 Highway Capacity Manual, published by the Transportation Research Board. This concept measures congestion by comparing modeled (congested) speeds to free-flow speeds on arterial roadways. The travel speed reflects the projected travel demand in 10 years on a transportation network that includes both the existing network of roads and transit facilities and any road or transit facility funded for completion within 10 years in an approved state, county, or municipal capital improvements program for which construction is funded to begin within 6 years. It then assigns letter grades to the various levels of roadway congestion, with letter A assigned to the best levels of service and letter F assigned to the worst levels of service. For a trip along an urban street that has a free-flow speed (generally akin to posted speed) of 40 MPH, LOS A conditions exist when the actual travel speed is at least 34 MPH excluding delays experienced at traffic signals. At the other end of the spectrum, LOS F conditions exist when the actual travel speed is below 10 MPH. The travel speeds are calculated in the peak direction during the PM peak hour, which presented the worst condition in the analysis.

Roadway Travel Speed and Arterial LOS

<i>If the actual urban street travel speed is</i>	<i>TPAR Arterial LOS is</i>
At least 85% of the free-flow speed	A
At least 70% of the highway speed	B
At least 50% of the highway speed	C
At least 40% of the highway speed	D
At least 30% of the highway speed	E
Less than 30% of the highway speed	F

The following standards are established to assess the level of roadway adequacy for the purposes of Transportation Policy Area Review:

Standards of Acceptable Roadway Average Level of Service

Policy Area Categories	Acceptable Weighted Arterial Level of Service
Urban	Borderline between Levels of Service “D” and “E” in peak directions
Suburban	Mid-Level of Service “D” in peak directions
Rural	Borderline between Levels of Service “C” and “D” in peak directions

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

TP2.1.2 Transit Adequacy

Transit Adequacy is based on the use of measures of three transit service performance factors for combined Ride-On and Metrobus service using the arterial roadway network in the County. It is based on and consistent with the performance factors defined in the 2003 *Transit Capacity and Quality of Service Manual* published by the Transportation Research Board. The three transit service performance factors are: (1) coverage, which indicates how close service is to potential users; (2) peak headway, which indicates how frequent the scheduled service is so as to be convenient to users; and (3) span of service, which indicates over what time duration during a typical weekday the service is available to potential users. Transit Adequacy is determined by comparing bus route coverage, scheduled headways and actual hours of operation based on 2011 data to established standards, as illustrated in the table below.

Transit Adequacy Standards			
	Minimum Coverage	Maximum Headway	Minimum Span
Urban	≥80%	≤14 minutes	≥17 hours
Suburban	≥70%	≤20 minutes	≥14 hours
Rural	≥50%	≤60 minutes	≥4 hours

TP2.2 Conducting Transportation Policy Area Review

TP2.2.1 Geographic Areas

In conducting Transportation Policy Area Reviews, each Metro station policy area is included in its larger parent policy area, so that:

- the Bethesda CBD, Friendship Heights, and Bethesda-Chevy Chase policy areas are treated as a single policy area;

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- the Grosvenor, White Flint, Twinbrook, and North Bethesda policy areas are treated as a single policy area;
- the Rockville Town Center and Rockville City policy areas are treated as a single policy area;
- the Shady Grove and Derwood policy areas are treated as a single policy area;
- the Silver Spring CBD and Silver Spring-Takoma Park policy areas are treated as a single policy area; and
- the Wheaton CBD, Glenmont, and Kensington/Wheaton policy areas are treated as a single policy area.

The Germantown Town Center and Germantown West policy areas are treated as a single policy area. The Rural East policy area consists of all area east of I-270 that is not located in another policy area. The Rural West policy area consists of all area west of I-270 that is not located in another policy area.

Any proposed development in a Metro Station policy area is exempt from the transit adequacy test. Any proposed development in the Rural East or Rural West policy area is exempt from the roadway and transit adequacy tests.

Any proposed development located in the White Flint Metro Station policy area is exempt from Transportation Policy Area Review if that development, as a condition of approval of a preliminary plan of subdivision, is required to provide substantial funds to the Special Tax District created to finance transportation improvements for that Policy Area. However, the traffic impact of any development in that policy area must be considered in any Transportation Policy Area Review calculation for any development that is not exempt under this paragraph where that impact would otherwise be considered.

TP2.2.2 Determination of Adequacy

Each even-numbered year, not later than July 1, the Planning Board must evaluate roadway and transit adequacy for each policy area. At any time between these assessments, the Planning Board may revise its evaluation to reflect a material change in a state, county, or municipal capital improvements program. If the Planning Board revises its measure of adequacy during a fiscal year because of a material change in transportation capacity, that revision must be used during the rest of that fiscal year in reviewing subdivision applications.

Using a transportation planning model, the Planning staff must compute the relationship between the programmed set of transportation facilities and the forecast growth in households and employment, using the Cooperative Regional Forecast. The traffic model tests this forecast growth for its traffic impact, comparing the resulting directional traffic volume, link speed, and distribution to the roadway level of service standard for each policy area. Any policy area that does not achieve the level of service standards specified in **TP2.1.1** is inadequate for roadways. Any policy area that is inadequate for roadways, for transit, or for both is inadequate for transportation.

An applicant for a preliminary plan of subdivision need not take any action under Transportation Policy Area Review if the proposed development will generate 3 or fewer peak-hour trips.

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The Planning Board may adopt Transportation Policy Area Review guidelines and other technical materials to further specify standards and procedures for its adoption of findings of policy area adequacy or inadequacy.

The transportation planning model considers all forecast development and all eligible programmed transportation CIP projects. For these purposes, "forecast development" includes all households and employment forecast by the Cooperative Regional Forecast. "Eligible programmed transportation CIP projects" include all County CIP, State Transportation Program, and City of Rockville or Gaithersburg projects for which 100 percent of the expenditures for construction are estimated to occur in the first 10 years of the applicable program and for which construction is funded to begin within 6 years.

Because of the unique nature of the Purple Line, the Corridor Cities Transitway, and the North Bethesda Transitway compared to other transportation systems which are normally used in calculating development capacity, it is prudent to approach the additional capacity from these systems conservatively, particularly with respect to the timing of capacity and the amount of the capacity recognized. Therefore, the capacity from any operable segment of any of these transit systems must not be counted until that segment is fully funded in the first 10 years of the County or State capital improvements program and for which construction is funded to begin within 6 years.

To discourage sprawl development, no capacity for new development may be counted outside the boundary of the Town of Brookeville as of March 9, 1999, as a result of relocating MD 97 around Brookeville.

TP3 Imposition of Transportation Mitigation Payment

If projected transportation capacity in a policy area is not adequate, the Planning Board may approve a subdivision in that area if the applicant commits to either: (1) fully mitigate the incremental traffic impact of the subdivision by adding capacity or implementing a trip reduction program; or (2) pay a Transportation Mitigation Payment as provided in County law.

If an MSPA is located in an Urban area that does not meet the Roadway Test standard, the Transportation Mitigation Payment is equal to 25% of the MSPA transportation impact tax for that subdivision. If any other policy area does not meet either the Roadway Test or Transit Test standard, the Transportation Mitigation Payment is equal to 25% of the General District transportation impact tax for that subdivision. If any other policy area that is not otherwise exempt does not meet both the Roadway Test and Transit Test standards, the Transportation Mitigation Payment is equal to 50% of the General District transportation impact tax for that subdivision.

Table 1 shows the adequacy status for each policy area from January 1, 2013 - July 1, 2014.

TP4 Development District Participation

Under Chapter 14 of the County Code, the County Council may create development districts as a funding mechanism for needed infrastructure in areas of the County where substantial development is expected or encouraged. The Planning Board may approve subdivision plans in accordance with the terms of the development district's provisional adequate public facilities approval (PAPF).

TP4.1 Preparation of a PAPF

The development district's PAPF must be prepared in the following manner:

One or more property owners in the proposed district may submit to the Planning Board an application for provisional adequate public facilities approval for the entire district. In addition to explaining how each development located in the district will comply with all applicable zoning and subdivision requirements, this application must:

- show the number and type of housing units and square footage and type of the non-residential space to be developed, as well as a schedule of proposed buildout in five-year increments;
- identify any infrastructure improvements necessary to satisfy the adequate public facilities requirements for development districts; and
- estimate the cost to provide these improvements.

TP4.2 Planning Board Review

The Planning Board must then review all developments within the proposed development district as if they are a single development for compliance with the Adequate Public Facilities Ordinance. The Planning Board must identify the public facilities needed to support the buildout of the development district after considering the results of the following tests for facility adequacy:

- Transportation tests for development districts are identical to those for Local Area Transportation Review. Planning Department staff must prepare a list of transportation infrastructure needed to maintain public facility adequacy.
- The PAPF application must be referred to Montgomery County Public Schools staff for recommendations for each stage of development in the proposed district. MCPS staff must calculate the extent to which the development district will add to MCPS's current enrollment projections. MCPS staff must apply the existing school adequacy test to the projections with the additional enrollment and prepare a list of public school infrastructure needed to maintain public facility adequacy.
- The PAPF application must be referred to the Washington Suburban Sanitary Commission for recommendations for each stage of development in the proposed district. Wastewater conveyance and water transmission facilities must be considered adequate if existing or programmed (fully-funded within the first 5 years of the approved WSSC capital improvements program) facilities can accommodate (as defined by WSSC) all existing authorizations plus the growth in the development district. Adequacy of water and wastewater treatment facilities must be evaluated using the intermediate or "most probable" forecasts of future growth plus development district growth, but only to the extent that development district growth exceeds the forecast for any time period. If a test is not met, WSSC must prepare a list of water and sewer system infrastructure needed to maintain public facility adequacy.

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- The PAPF application must be referred to the County Executive for recommendations for each stage of development in the proposed district regarding police, fire, and health facilities. Adequacy of police, fire, and health facilities must be evaluated using the intermediate or most probable forecasts of future growth plus development district growth, but only to the extent that development district growth exceeds the forecast for any time period. Any facility capacity that remains is available to be used by the development district. If any facility capacity deficits exist, the County Executive must prepare a list of infrastructure needed to maintain public facility adequacy.

TP4.3 Planning Board Approval

The Board may conditionally approve the PAPF application if it will meet all of the requirements of the APFO and Subdivision Staging Policy. The Board may condition its approval on, among other things, the creation and funding of the district and the building of no more than the maximum number of housing units and the maximum nonresidential space listed in the petition.

For an application to be approved, the applicants must commit to produce the infrastructure improvements needed to meet APF requirements in the proposed district as well as any added requirements specified by the Planning Board. The Planning Board must list these required infrastructure improvements in its approval. The infrastructure improvements may be funded through the development district or otherwise. The development district's PAPF must be prepared in the following manner:

The Planning Board must not approve a PAPF application unless public facilities adequacy is maintained throughout the life of the plan. The timing of infrastructure delivery may be accomplished by withholding the release of building permits until needed public facilities are available to be "counted," or by another similar mechanism.

Infrastructure may be counted for public facilities adequacy, for infrastructure provided by the district, when construction has begun on the facility and funds have been identified and committed to its completion, and, for infrastructure provided by the public sector, when:

- for Local Area Transportation Review, the project is fully-funded within the first 6 years of the approved County, state, or municipal capital improvements program;
- for water and sewer facilities, the project is fully-funded within the first 5 years of the approved WSSC capital improvements program;
- for public school facilities, the project is fully-funded within the first 5 years of the approved Montgomery County Public Schools capital improvements program; and
- for police, fire, and health facilities, the project is fully-funded within the first 6 years of the relevant approved capital improvements program.

TP4.4 Additional Facilities Recommended for Funding

The County Executive and Planning Board may also recommend to the County Council additional facilities to be provided by the development district or by the public sector to support development

within the district. These facilities may include, but are not limited to libraries, health centers, local parks, social services, greenways, and major recreation facilities.

TP4.5 Satisfaction of APF Requirements

As provided in Chapter 14 of the County Code, once the development district is created and the financing of all required infrastructure is arranged, the development in the district is considered to have satisfied all APF requirements, any additional requirements that apply to development districts in the Subdivision Staging Policy, and any other requirement to provide infrastructure which the County adopts within 12 years after the district is created.

TL Local Area Transportation Review (LATR)

TL1 Standards and Procedures

To achieve an approximately equivalent transportation level of service in all areas of the County, greater vehicular traffic congestion is permitted in policy areas with greater transit accessibility and usage. Table 2 shows the intersection level of service standards by policy area. Local Area Transportation Review must at all times be consistent with the standards and staging mechanisms of adopted master and sector plans.

Local area transportation review for each mode of travel must be completed for any subdivision that would generate 30 or more a significant number of peak-hour ~~automobile~~ trips by that mode. ~~For any subdivision that would generate 30-49 peak-hour 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 to the County equal to 50% of the applicable transportation impact tax before it receives any building permit in the subdivision.~~

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In administering Local Area Transportation Review for any project that would generate 50 a significant number of or more peak hour ~~vehicle~~ trips by any mode, the Planning Board must not approve a subdivision if it finds that unacceptable peak-hour congestion levels ~~travel conditions~~ will result after considering existing roads, programmed roads, available or programmed mass transportation, and improvements to be provided by the applicant. If the subdivision will affect an intersection or roadway link for which congestion is already unacceptable, then the subdivision may only be approved if the applicant agrees to mitigate either:

- a sufficient number of trips to bring the intersection or link to acceptable levels of congestion, or
- a number of trips equal to 150 percent of the CLV impact attributable to the development.

The nature of the LATR test is such that a traffic study is necessary if local congestion is likely to occur. The Planning Board and staff must examine the applicant's traffic study to determine whether adjustments are necessary to assure that the traffic study is a reasonable and appropriate reflection of the traffic impact of the proposed subdivision after considering all approved development and programmed transportation projects.

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If use and occupancy permits for at least 75% of the originally approved development were issued more than 12 years before the LATR study scope request, the number of signalized intersections in the study must be based on the increased number of peak hour trips rather than the total number of peak hour trips. In these cases, LATR is not required for any expansion that generates 5 or fewer additional peak hour trips.

For Local Area Transportation Review purposes, the programmed transportation projects to be considered are those fully funded for construction in the first 6 years of the current approved Capital Improvements Program, the state's Consolidated Transportation Program, or any municipal capital improvements program. For these purposes, any road required under Section 302 of the County Charter to be authorized by law is not programmed until the time for petition to referendum has expired without a valid petition or the authorizing law has been approved by referendum.

If an applicant is participating in a traffic mitigation program or one or more intersection improvements to meet Local Area Transportation Review requirements, that applicant must be considered to have met Local Area Transportation Review for any other intersection where the volume of trips generated is less than 5 Critical Lane Movements.

Any traffic study required for Local Area Transportation Review must be submitted by a registered Professional Engineer, certified Professional Traffic Operations Engineer, or certified Professional Transportation Planner.

Each traffic study must examine, at a minimum, the number of signalized intersections in the following table. An intersection only needs to be examined if the peak-hour site-generated traffic is greater than 1% of the total intersection existing peak-hour traffic and the peak-hour site generated traffic entering the intersection is greater than or equal to 5% of the total site-generated traffic. ~~unless~~ The Planning Board may also ~~affirmatively~~ find that special circumstances warrant a more limited study.

Maximum Peak-Hour Trips Generated	Minimum Signalized Intersections in Each Direction
< 250	1
250 – 749	2
750 – 1,249	3
1,250 – 1,750	4
1,750-2,249	5
2,250 – 2749	6
>2,750	7

At the Planning Board's discretion, each traffic mitigation program must be required to operate for at least 12 years but no longer than 15 years. The Planning Board may select either trip reduction measures or road improvements, or a combination of both, as the required means of traffic mitigation.

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The Planning Board has adopted guidelines to administer Local Area Transportation Review. To the extent that they are consistent with this Policy, the Planning Board guidelines may continue to apply or may be amended as the Planning Board finds necessary.

The Planning Board may adopt administrative guidelines that allow use of Highway Capacity Manual 2010 methodologies and standards for "delay" and queuing analysis at intersections operating at or above a 1600 Critical Lane Volume threshold to determine the level of intersection congestion.

In administering Local Area Transportation Review, the Planning Board must carefully consider the recommendations of the County Executive concerning the applicant's traffic study and proposed improvements or any other aspect of the review.

To achieve safe and convenient pedestrian, bicycle, and transit system travel, the Planning Board may adopt administrative guidelines requiring construction of off-site sidewalk, bicycle, or transit system improvements consistent with County Code §50-25. To support creating facilities that encourage transit use, walking, and bicycling, to maintain an approximately equivalent level of service at the local level for both auto and non-auto modes, the Board may allow the applicant to use peak hour vehicle trip credits for providing non-auto facilities. Before approving credits for non-auto facilities to reduce Local Area Transportation Review impacts, the Board should first consider the applicability and desirability of traffic mitigation agreement measures. The Board's *LATR and TPAR Guidelines* must identify applicable facilities in terms of actions that can be given trip credits and the maximum number of trips that can be credited. If the Board approves any credits, it must specify mechanisms to monitor the construction of any required facility. During each quadrennial Subdivision Staging Policy the Board must report on the number of credits issued and confirm the construction of any required facility.

In general, any mitigation measure or combination of mitigation measures must be scheduled for completion or otherwise operational either before or at the same time as the proposed development is scheduled to be completed. The nature, design, and scale of any additional facility or program must receive prior approval from any government agency that would construct or maintain the facility or program, and the applicant and the public agency must execute an appropriate public works agreement before the Planning Board approves a record plat.

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

If an approved subdivision already has constructed or participated in the construction of off site improvements to accommodate its peak hour trips, based on the LATR requirements the Board imposed when it approved a preliminary subdivision plan, and if the subdivision later converts one or more approved uses or reduces its size so that the subdivision generates fewer peak hour trips than estimated when the Board imposed the LATR requirements, the trip mitigation agreement must reduce the subdivision's peak hour trip mitigation requirement by one trip for each peak hour trip that the

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subdivision would no longer generate. If the conversion of all or part of a subdivision from one use to another would cause a different trip distribution or would place new or different burdens on one or more intersections, and if the subdivision is otherwise required to do so, the subdivision must construct or contribute to improvements specified by the Board to mitigate that result.

TL2 Metro Station Policy Area LATR Standards

In each Metro Station Policy Area, the Planning Board, in consultation with the Department of Transportation, must prepare performance evaluation criteria for its Local Area Transportation Review. These criteria must be used to accomplish: (a) safety for pedestrians and vehicles; (b) access to buildings and sites; and (c) traffic flow within the vicinity, at levels which are tolerable in an urban situation. The County Executive also must publish a Silver Spring Traffic Management Program after receiving public comment and a recommendation from the Planning Board. This program must list those actions to be taken by government to maintain traffic flow at tolerable levels in the Silver Spring CBD and protect the surrounding residential area.

Any proposed development located in the White Flint Metro Station Policy Area is exempt from Local Area Transportation Review if the development will be required to provide substantial funds to the Special Tax District created to finance master-planned public improvements in that Policy Area. However, the traffic impact of any development in that Policy Area must be considered in any Local Area Transportation Review calculation for any development elsewhere where it would otherwise be considered.

TL3 Potomac LATR Standards

In the Potomac Policy Area, only the ~~areas contributing traffic to the~~ following intersections ~~must are~~be subject to a finding of inadequacy under Local Area Transportation Review: (a) Montrose Road at Seven Locks Road; (b) Democracy Boulevard at Seven Locks Road; (c) Tuckerman Lane at Seven Locks Road; (d) Democracy Boulevard at Westlake Drive; (e) Westlake Drive at Westlake Terrace; (f) Westlake Drive at Tuckerman Lane; (g) Bradley Boulevard at Seven Locks Road; (h) River Road at Bradley Boulevard; (i) River Road at Piney Meetinghouse Road; (j) River Road at Falls Road; (k) Falls Road at Democracy Boulevard; and (l) River Road at Seven Locks Road. Applicants with site development that impact other intersections in the Potomac Policy Area are responsible for examining their impact and identifying potential improvements, but are not subject to any finding of inadequacy nor are they required to take any action under LATR to implement the identified improvements.

TL4 Unique Policy Area Issues

TL4.1 Silver Spring CBD Policy Area and Transportation Management District

The Local Area Review for the Silver Spring CBD policy area must use the following assumptions and guidelines:

- Each traffic limit is derived from the heaviest traffic demand period in Silver Spring's case, the p.m. peak hour outbound traffic.
- When tested during a comprehensive circulation analysis, the critical lane volumes for intersections in the surrounding Silver Spring/Takoma Park policy area must not be worse than

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the adopted level of service standards shown in Table 2 unless the Planning Board finds that the impact of improving the intersection is more burdensome than the increased congestion.

- The Planning Board and the Department of Transportation must implement Transportation Systems Management for the Silver Spring CBD. The goal of this program must be to achieve the commuting goals for transit use and auto occupancy rates set out below.
- The County Government, through the Silver Spring Parking Lot District, must constrain the amount of public and private long term parking spaces.

The parking constraints and commuting goals needed to achieve satisfactory traffic conditions with these staging ceilings are:

Parking constraint: A maximum of 17,500 public and private long-term spaces when all nonresidential development is built; this maximum assumes a peak accumulation factor of 0.9, which requires verification in Silver Spring and may be subject to revision. Interim long-term parking constraints must be imposed in accordance with the amount of interim development. Long-term public parking spaces must be priced to reflect the market value of constrained parking spaces.

Commuting goals: For employers with 25 or more employees, attain 25 percent mass transit use and auto occupancy rates of 1.3 persons per vehicle during the peak periods, or attain any combination of employee mode choice that results in at least 46% non-drivers during the peak periods. For new nonresidential development, attain 30% mass transit use and auto occupancy rates of 1.3 persons per vehicle during the peak periods, or attain any combination of employee mode choice that results in at least 50% non-drivers during the peak periods.

Progress towards achieving these goals should be measured annually by scientific, statistically valid surveys.

To achieve these goals it will be necessary to require developers of new development in Silver Spring to enter into traffic mitigation agreements and the employers and certain owners to submit transportation mitigation plans under County Code Chapter 42A.

In accordance with the amendment to the Silver Spring Sector Plan, subdivision applications for nonresidential standard method projects throughout the CBD may be approved for development or additions of not more than 5,000 square feet of gross floor area. However, if, for a particular use the addition of 5 peak hour trips yields a floor area greater than 5,000 square feet, that additional area may be approved for that particular use.

TL4.2. North Bethesda TMD

In the North Bethesda Transportation Management District, the goal is 39% non-driver mode share for workers in the peak hour.

TL4.3 Bethesda TMD

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In the Bethesda Transportation Management District, the goal is 37% non-driver mode share for workers.

TL4.4 Friendship Heights TMD

In the Friendship Heights Transportation Management District, the goal is 39% non-driver mode share for workers.

TL4.5 Greater Shady Grove TMD

In the Shady Grove Policy Area, the goal is a transit ridership goal of 35% for residents in the Shady Grove Policy Area, 25% for residents elsewhere in the Sector Plan, and 12.5% for employees of office development traveling to work.

Each development that receives preliminary plan approval in the Shady Grove Metro Station Policy Area and generates at least 100 additional peak-hour vehicle trips, other than pass-by trips, must enter into a Traffic Mitigation Agreement (TMAg). The trip mitigation requirement for this Agreement is 50% of the residential-related vehicle trips and 65% of the non-residential-related vehicle trips that would otherwise be expected, based on countywide trip generation rates before any applicable deduction, such as proximity to a Metrorail station. The breakdown in the reduction of trips should be identified in the Agreement. County-owned property in the Shady Grove Policy Area must enter into a TMAg on all new development or redevelopment, with no deduction of existing trips.

TL4.6 Great Seneca Science Corridor Master Plan

In the Great Seneca Science Corridor, an 18% non-auto driver mode share (NADMS) must be attained before Stage 2 begins, a 23% NADMS must be attained before Stage 3 begins, and a 28% NADMS must be attained before Stage 4 begins.

TL4.7 White Oak Policy Area

In the White Oak Policy Area the non-auto driver mode share (NADMS) goal for all new development, based on the area's future transit service (assuming bus rapid transit) and connectivity opportunities, is 25% in the White Oak Center and Hillandale Center, and is 30% in the Life Sciences/FDA Village Center.

- (a) The Board may approve a subdivision in the White Oak Policy Area conditioned on the applicant paying a fee to the County commensurate with the applicant's proportion of the cost of a White Oak Local Area Transportation Improvement Program, including the costs of design, land acquisition, construction, site improvements, and utility relocation. The proportion is based on a subdivision's share of peak-hour vehicle trips generated by all master-planned development in the White Oak Policy Area approved after October 7, 2014.
- (b) The components of the White Oak Local Area Transportation Improvement Program and the fee per peak-hour vehicle trip will be established by Council resolution, after a public hearing. The Council may amend the Program and the fee at any time, after a public hearing.

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- (c) The fee must be paid at a time and manner consistent with Transportation Mitigation Payments as prescribed in Section 52-59(d) of the Montgomery County Code.
- (d) The Department of Finance must retain funds collected under this Section in an account to be appropriated for transportation improvements that result in added transportation capacity serving the White Oak Policy Area.

TL5 Protected Intersections

Several Metro Station Policy Areas and other business districts are centered on the intersection between two Major Highways and served by a robust grid of local business streets that help disperse local traffic. In these locations, traffic assignment is often more dynamic than facilitated by LATR procedures, the addition of vehicular capacity often degrades pedestrian quality of service, and the development of context-sensitive multimodal solutions is best achieved outside the development review arena with a broader consideration of travel trends. These locations, designated Protected Intersections, include the following: (a) Georgia Avenue and Colesville Road, (b) Wisconsin Avenue and East West Highway / Montgomery Lane, (c) ~~(other locations TBD)~~ Georgia Avenue and University Boulevard, (d) Key West Avenue and Great Seneca Highway, (e) Key West Avenue and Shady Grove Road. Applicants with site development that impact these intersections are responsible for examining their impact and identifying potential improvements, but are not ~~subject to any finding of inadequacy nor are they required to take any action under LATR to implement the identified improvements other than mitigating their impacts by payment in lieu of construction in an amount defined by guidelines published by the Planning Board.~~

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TA Alternative Review Procedures

TA1 Metro Station Policy Areas

An applicant for a subdivision which will be built completely within a Metro station policy area need not take any action under **TP Transportation Policy Area Review** or **TL Local Area Transportation Review** if the applicant agrees in a contract with the Planning Board and the County Department of Transportation to:

- submit an application containing all information, including a traffic study, that would normally be required for Local Area Transportation Review;
- meet trip reduction goals set by the Planning Board as a condition of approving that subdivision, which must require the applicant to reduce at least 50% of the number of vehicle trips or vehicle miles of travel (VMT) attributable to the subdivision, either by reducing trips or VMT from the subdivision itself or from other occupants of that policy area, and provide a surety document to ensure that the reduction of trips in fact takes place;
- participate in programs operated by, and take actions specified by, a transportation management organization (TMO) to be established by County law for that policy area (or a group of policy areas including that policy area) to meet the mode share goals established under the preceding paragraph;
- pay an ongoing annual contribution or tax to fund the TMO's operating expenses, including minor capital items such as busses, as established by County law; and

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- pay 75% of the applicable General District development impact tax without claiming any credits for transportation improvements.

TA2 Expiration of Approvals under Previous Alternative Review Procedures

Annual Growth Policy resolutions in effect between 1995 and 2001 contained Alternative Review Procedures that required any development approved under those procedures to receive each building permit no later than 4 years after the Planning Board approved the preliminary plan of subdivision for that development. Any outstanding development project approved under an Alternative Review Procedure is subject to the expiration dates in effect when that development project was approved.

TA3 Automobile related uses in the Cherry Hill Employment Area

For any property located in the Cherry Hill Employment Area with automobile repair, service, sales, parking, storage, or related office uses:

TP Transportation Policy Area Review and **TL Local Transportation Review** are not required.

This provision applies to any application for a preliminary plan of subdivision, site plan, or building permit approved before July 26, 2016.

TA4 Public Facility Project

An applicant for a development which will be built solely as a public facility (such as a school, firehouse, police station, or library) need not take any action under **TP Transportation Policy Area Review** or **TL Local Area Transportation Review** when it undergoes a mandatory referral review by the Planning Board.

TA5 Affordable Housing

The provision of affordable housing in the County is crucial to providing long lasting reductions to regional congestion. Long distance trips affect the County's traffic in many parts of our community. The provision of affordable housing is a fundamental element of the County's General Plan and part of the County's economic development strategy. All trips generated by any moderately priced dwelling unit (MPDU) and any other low- and moderate-income housing which is exempt from paying a development impact tax must also be exempt from any TPAR payment.

TA6 Very Low VMT

The reduction of vehicle miles of travel (VMT) is an integral element of the County's transportation demand management strategy, incorporating both reduced reliance on vehicle trips and facilitating options for shorter-length trips for those trips that are made by private vehicles. ~~The~~ An applicant for a subdivision that can be shown to reduce areawide VMT by its development characteristics, as defined in published Planning Board Guidelines need take no action under LATR, TPAR, or transportation impact

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tax. An applicant for a subdivision that can be expected to generate substantially fewer vehicle trips based on provision of reduced parking spaces as defined in published Planning Board Guidelines need take no action under LATR as a *de minimis* application. An applicant for a subdivision located entirely within a Metro Station Policy Area that can perform Transportation Demand Management actions to reduce peak period areawide VMT by 50% of the amount that would otherwise be generated may apply for Alternative Review Procedure TAI above.

Public School Facilities

S1 Geographic Areas

For the purposes of public school analysis and local area review of school facilities at time of subdivision, the County has been divided into 25 areas called high school clusters. These areas coincide with the cluster boundaries used by the Montgomery County Public School system.

The groupings used are only to administer the Adequate Public Facilities Ordinance and do not require any action by the Board of Education in exercising its power to designate school service boundaries.

S2 Grade Levels

Each cluster must be assessed separately at each of the 3 grade levels -- elementary, intermediate/middle, and high school.

S3 Determination of Adequacy

Each year, not later than July 1, the Planning Board must evaluate available capacity in each high school cluster and compare enrollment projected by Montgomery County Public Schools for each fiscal year with projected school capacity in 5 years. If at any time during a fiscal year the County Council notifies the Planning Board of any material change in the Montgomery County Public Schools Capital Improvements Program, the Planning Board may revise its evaluation to reflect that change.

S4 Moratorium on Residential Subdivision Approvals

In considering whether a moratorium on residential subdivisions must be imposed, the Planning Board must use 120% of Montgomery County Public Schools program capacity as its measure of adequate school capacity. This utilization measure must not count relocatable classrooms in computing a school's permanent capacity. If projected enrollment at any grade level in that cluster will exceed 120% utilization, the Board must not approve any residential subdivision in that cluster during the next fiscal year. If the Planning Board revises its measure of utilization during fiscal year 2013 because of a material change in projected school capacity, that revision must be used during the rest of that fiscal year in reviewing residential subdivisions.

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Table 3 shows the result of this test for July 1, 2012, to July 1, 2013. Table 3 also shows the remaining capacity, in students, at each grade level in each cluster. Using average student generation rates developed from the most recent Census Update Survey, the Planning Board must limit residential subdivision approvals in any cluster during the fiscal year so that the students generated by the housing units approved do not exceed the remaining capacity for students at any grade level in that cluster.

S5 Imposition of School Facilities Payment

In considering whether a School Facilities Payment must be imposed on a residential subdivision, the Planning Board must use 105% of Montgomery County Public Schools' program capacity as its measure of adequate school capacity. This utilization measure must not count relocatable classrooms in computing a school's permanent capacity. If projected enrollment at any grade level in that cluster will exceed 105% utilization but not exceed 120% utilization, the Board may approve a residential subdivision in that cluster during the next fiscal year if the applicant commits to pay a School Facilities Payment as provided in County law before receiving a building permit for any building in that subdivision. If the Planning Board revises its measure of utilization during fiscal year 2013 because of a material change in projected school capacity, that revision must be used during the rest of that fiscal year in reviewing residential subdivisions.

Table 4 shows the result of this test for July 1, 2012, to July 1, 2013. Table 4 also shows the remaining capacity, in students, at each grade level in each cluster. Using average student generation rates developed from the most recent Census Update Survey, the Planning Board must limit residential subdivision approvals in any cluster during the fiscal year so that the students generated by the housing units approved do not exceed the remaining capacity for students at any grade level in that cluster.

S6 Senior Housing

If public school capacity is inadequate in any cluster, the Planning Board may nevertheless approve a subdivision in that cluster without requiring a School Facilities Payment if the subdivision consists solely of housing and related facilities for elderly or handicapped persons or housing units located in the age-restricted section of a planned retirement community.

S7 De Minimis Development

If public school capacity is inadequate in any cluster, the Planning Board may nevertheless approve a subdivision in that cluster if the subdivision consists of no more than 3 housing units and the applicant commits to pay a School Facilities Payment as otherwise required before receiving a building permit for any building in that subdivision.

S8 Development District Participants

The Planning Board may require any development district for which it approves a provisional adequate public facilities approval (PAPF) to produce or contribute to infrastructure improvements needed to address inadequate school capacity.

S9 Allocation of Staging Ceiling to Preliminary Plans of Subdivision

The Planning Board must allocate available staging ceiling capacity in a high school cluster based on the queue date of an application for preliminary plan of subdivision approval.

S9.1 Assignment of queue date

The queue date of a preliminary plan of subdivision is the date:

- a complete application is filed with the Planning Board; or
- 6 months after the prior queue date if the prior queue date expires under **S9.4**.

S9.2 Calculation of available staging ceiling capacity

The Planning Board must determine whether adequate staging ceiling capacity is available for a project by subtracting the capacity required by projects with earlier queue dates from the remaining capacity on Table 3 as updated periodically. Based on this calculation, the Planning Board may:

- approve a project for which there is sufficient capacity;
- approve part of a project for which there is sufficient capacity, leaving the remainder of the project in the queue until additional capacity becomes available;
- deny an application for a project for which there is insufficient capacity; or
- defer approval of a project and leave the project in the queue until sufficient capacity becomes available for all or part of the project. If insufficient capacity is available, the Board must not schedule a hearing on the application unless the applicant requests one.

If sufficient capacity is available for a project based on the queue date, the Planning Board must not deny an application based on pipeline (but not staging ceiling) changes while the queue date is in effect.

S9.3 Applicability of School Facilities Payment

The Planning Board must determine whether a project is required to pay a School Facilities Payment by subtracting the capacity required by projects with earlier queue dates from the remaining capacity on Table 4 as updated periodically. Based on this calculation, the Planning Board may:

- approve a project for which there is sufficient capacity;
- approve part of a project for which there is sufficient capacity, requiring the remainder of the project to pay the applicable School Facilities Payment until additional capacity becomes available; or
- defer approval of a project and leave the project in the queue until sufficient capacity becomes available for all or part of the project. If insufficient capacity is available, the Board must not schedule a hearing on the application unless the applicant requests one.

If a project must pay a School Facilities Payment, the Planning Board must not deny an application based on pipeline (but not staging ceiling) changes while the Payment requirement is in effect.

S9.4 Expiration of queue date

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A queue date for an application for preliminary plan of subdivision approval expires:

- 6 months after the queue date if sufficient staging ceiling capacity was available for the entire project on the queue date and the Planning Board has not approved the application or granted an extension of the queue date; or
- 6 months after sufficient capacity becomes available for the entire project.

The Planning Board may grant one or more 6-month extensions of a queue date if the applicant demonstrates that a queue date expired or will expire because of governmental delay beyond the applicant's control.

Guidelines for Water and Sewerage Facilities

In accordance with the Adequate Public Facilities Ordinance, applications must be considered adequately served by water and sewerage if the subdivision is located in an area in which water and sewer service is presently available, is under construction, is designated by the County Council for extension of service within the first two years of a current approved Comprehensive Water Supply and Sewerage Systems Plan (i.e., categories 1-3), or if the applicant either provides a community water and/or sewerage system or meets Department of Permitting Services requirements for septic and/or well systems, as outlined in the Adequate Public Facilities Ordinance. These requirements are determined either by reference to the Water and Sewerage Plan, adopted by the Council, or by obtaining a satisfactory percolation test from the Department of Permitting Services.

Applications must only be accepted for further Planning staff and Board consideration if they present evidence of meeting the appropriate requirements as described above.

Guidelines for Police, Fire and Health Services

The Planning Board and staff must consider the programmed services to be adequate for facilities such as police stations, firehouses, and health clinics unless there is evidence that a local area problem will be generated. Such a problem is one which cannot be overcome within the context of the approved Capital Improvements Program and operating budgets of the relevant agencies. Where such evidence exists, either through agency response to the Subdivision Review committee clearinghouse, or through public commentary or Planning staff consideration, a Local Area Review must be undertaken. The Board must seek a written opinion from the relevant agency, and require, if necessary, additional data from the applicant, to facilitate the completion of the Planning staff recommendation within the statutory time frame for Planning Board action. In performing this Local Area Review, the facility capacity at the end of the sixth year of the approved CIP must be compared to the demand generated by the "most probable" forecast for the same year prepared by the Planning Department.

Guidelines for Resubdivisions

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An application to amend a previously approved preliminary plan of subdivision does not require a new test for adequacy of public facilities if:

- Revisions to a preliminary plan have not been recorded, the preliminary plan has not expired, and the number of trips which will be produced by the revised plan is not greater than the number of trips produced by the original plan.
- Resubdivision of a recorded lot involves the sale or exchange of parcels of land (not to exceed a total of 2,000 square feet or one percent of the combined area, whichever is greater) between owners of adjoining properties to make small adjustments in boundaries.
- Resubdivision of a recorded lot involves more than 2,000 square feet or one percent of the lot area and the number of trips which will be produced by the revised plan is not greater than the number of trips produced by the original plan.

Timely Adequate Public Facilities Determination and Local Area Transportation Review under Chapter 8.

APF1 General.

Except as otherwise provided by law, an adequate public facilities determination or local area transportation review conducted under Article IV of Chapter 8 must use the standards and criteria applicable under this Resolution when evaluating the adequacy of public facilities to serve the proposed development.

~~**APF2 Traffic Mitigation Goals.**~~

~~Any proposed development that is subject to requirements for a traffic mitigation agreement under Article IV of Chapter 8 and §42A 9A of the County Code must meet the traffic mitigation goals specified in paragraphs (1) or (4), as appropriate.~~

~~(1) Subject to paragraph (2), the portion of peak period non auto driver trips by employees of a proposed development must be at least the following percentage greater than the prevailing non auto driver mode share of comparable nearby land use:~~

In Policy Areas With LATR CLV Standard of	Required Percentage Greater Than Prevailing Non Auto driver Mode Share
1800 and 1600	100%
1550	80%
1500	60%
1475 and 1450	40%

~~LATR CLV standards for each policy area are shown on Table 2.~~

~~(2) The portion of peak period non auto driver trips by employees calculated under paragraph (1) must not be less than 15% nor higher than 55%.~~

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- ~~(3) The applicant for a proposed development in a policy area specified under paragraph (1) is responsible for reviewing existing studies of non-auto driver mode share; conducting new studies, as necessary, of non-auto driver mode share; and identifying the prevailing base non-auto driver mode share of comparable land uses within the area identified for the traffic study. Comparable land uses are improved sites within the area identified for the traffic study for the proposed development that have similar existing land use and trip generation characteristics. As with other aspects of the traffic study required by Article IV of Chapter 8, selection of the comparable studies and land uses to be analyzed and determination of the prevailing base non-auto driver mode share are subject to review by the Planning Department and approval by the Department of Transportation.~~
- ~~(4) Proposed development in the Silver Spring CBD must meet the commuting goals specified under TL4.~~
- ~~(5) In accordance with County Code §42A-9A, the applicant must enter into an agreement with the Director of the Department of Transportation before a building permit is issued. The agreement may include a schedule for full compliance with the traffic mitigation goals. It must provide appropriate enforcement mechanisms for compliance.~~
- ~~(6) As provided by law, these goals supersede traffic mitigation goals established under §42A-9A(a)(4).~~
- ~~(7) As noted in paragraph (5), traffic mitigation agreements are used to assure compliance with reductions in traffic generation from a subdivision, or to achieve non-auto driver mode share goals specified in approved master or sector plans. The Director of Transportation must determine whether a security instrument is required to assure completion and continuation of the elements of a traffic mitigation agreement. When the Director so finds, the Department must require a security instrument to be attached to an agreement. Each security instrument must be held by the Department until performance of each element of the agreement has been satisfied. If the developer or its successor is unable to satisfactorily perform each element of an agreement as specified therein, the security instrument must be forfeited and the Department may retain the funds to operate a program to satisfy the agreement's goals.~~

This is a correct copy of Council action.

Linda M. Lauer, Clerk of the Council

Table 1- Results of TPAR Test, January 1, 2013-June 30, 2014

Policy Area	Adequacy Status
Aspen Hill	Adequate under Roadway and Transit Tests
Bethesda CBD	Adequate under Roadway Test; exempt from Transit Test
Bethesda-Chevy Chase	Inadequate under Transit Test
Clarksburg	Inadequate under Transit Test
Cloverly	Inadequate under Transit Test
Damascus	Adequate under Roadway and Transit Tests
Derwood	Inadequate under Transit Test
Fairland/Colesville	Inadequate under Roadway and Transit Tests
Friendship Heights	Adequate under Roadway Test; exempt from Transit Test
Gaithersburg City*	Inadequate under Roadway Test
Germantown East	Inadequate under Transit Test
Germantown Town Center	Inadequate under Transit Test
Germantown West	Inadequate under Transit Test
Glenmont	Adequate under Roadway Test; exempt from Transit Test
Grosvenor	Adequate under Roadway Test; exempt from Transit Test
Kensington/Wheaton	Inadequate under Transit Test
Montgomery Village/Airpark	Inadequate under Transit Test
North Bethesda	Inadequate under Transit Test
North Potomac	Inadequate under Transit Test
Olney	Inadequate under Transit Test
Potomac**	Inadequate under Transit Test
R&D Village	Inadequate under Transit Test
Rockville City*	Inadequate under Transit Test
Shady Grove	Adequate under Roadway Test; exempt from Transit Test
Silver Spring CBD	Adequate under Roadway Test; exempt from Transit Test
Silver Spring/Takoma Park	Inadequate under Transit Test
Twinbrook	Adequate under Roadway Test; exempt from Transit Test
Wheaton CBD	Adequate under Roadway Test; exempt from Transit Test
White Oak	Inadequate under Roadway and Transit Tests

*Applies to any development that would be located in the policy area but not in the City.

**Under applicable master plans, the Potomac policy area is exempt from the Roadway Test.

The White Flint MSPA and the Rural East and Rural West policy areas are exempt from both the Roadway and Transit Tests.

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Table 2

Local Area Transportation Review Intersection Congestion Standards – Critical Lane Volume and Highway Capacity Manual Volume-to- Capacity Equivalencies

Critical Lane Volume Congestion Standard	Policy Area	HCM volume-to-capacity equivalent
1350	Rural East/ West	0.84
1400	Damascus	0.88
1425	Clarksburg Germantown East Germantown West Gaithersburg City Montgomery Village/Airpark	0.89
1450	Cloverly North Potomac Potomac Olney R&D Village	0.91
1475	Derwood Aspen Hill Fairland/Colesville	0.92
1500	Rockville City	0.94
1550	North Bethesda	0.97
1600	Bethesda/Chevy Chase Kensington/Wheaton Silver Spring/Takoma Park Germantown Town Center White Oak	1.00
<u>1650</u>	<u>Shady Grove</u>	<u>1.03</u>
1800	Bethesda CBD Silver Spring CBD Wheaton CBD Friendship Heights CBD White Flint Twinbrook Grosvenor Glenmont Shady Grove Rockville Town Center	1.13

Appendix 1. ITE Vehicle Trip Generation Rate Adjustment Factors
 (note: Policy Areas to be rearranged by ascending number when finalized)

ITE Vehicle Trip Adjustment Factors

Policy Area #		Residential	Office	Retail	Other
2	Aspen Hill	97%	98%	99%	97%
3	Bethesda CBD	79%	63%	61%	62%
4	Bethesda/Chevy Chase	87%	81%	85%	79%
6	Cloverly	99%	100%	100%	100%
7	Damascus	100%	100%	100%	100%
8	Derwood	94%	94%	87%	94%
11	Gaithersburg City	88%	86%	74%	85%
12	Germantown East	95%	90%	95%	91%
14	Germantown West	93%	87%	92%	88%
13	Germantown Town Center	85%	89%	77%	88%
17	Kensington/Wheaton	91%	92%	96%	92%
18	Montgomery Village/Airpark	93%	100%	93%	100%
19	North Bethesda	83%	87%	71%	82%
20	North Potomac	97%	100%	100%	100%
21	Olney	99%	100%	99%	100%
22	Potomac	97%	98%	96%	98%
23	R&D Village	89%	88%	80%	90%
24	Rockville City	88%	94%	87%	98%
29	Silver Spring CBD	77%	65%	58%	65%
30	Silver Spring/Takoma Park	83%	83%	82%	84%
32	Wheaton CBD	85%	85%	76%	84%
16	Grosvenor	81%	84%	75%	80%
31	Twinbrook	81%	80%	74%	79%
33	White Flint	79%	78%	72%	78%
15	Glenmont	90%	91%	96%	91%
5	Clarksburg	100%	100%	100%	100%
28	Shady Grove Metro Station	89%	88%	77%	88%
10	Friendship Heights	78%	70%	73%	70%
25	Rockville Town Center	79%	80%	70%	79%
27	Rural West	100%	100%	100%	100%
26	Rural East	99%	99%	98%	100%
34	White Oak	89%	90%	91%	88%
9	Fairland/Colesville	96%	96%	99%	97%

Appendix 2. Trips by Mode for Developments With Significant Impact
 (note: Policy Areas to be rearranged by ascending number when finalized)

Policy Area #	Development Type	Auto Driver	Auto Passenger	Transit	Non-Motorized	Total	
2	Aspen Hill	Residential	31.3	12.9	2.7	3.2	50.0
		Office	37.1	9.1	1.4	2.4	50.0
		Retail	36.1	11.7	0.7	1.6	50.0
		Other	37.0	9.1	1.3	2.6	50.0
3	Bethesda CBD	Residential	38.2	15.6	8.8	12.5	75.0
		Office	35.9	9.5	17.8	11.8	75.0
		Retail	33.2	12.7	8.2	20.9	75.0
		Other	35.5	9.9	17.3	12.3	75.0
4	Bethesda/Chevy Chase	Residential	28.1	11.8	3.8	6.3	50.0
		Office	30.9	8.7	5.8	4.6	50.0
		Retail	30.8	12.3	1.6	5.2	50.0
		Other	30.2	8.5	6.3	4.9	50.0
6	Cloverly	Residential	32.1	13.2	1.7	3.0	50.0
		Office	38.4	9.5	0.4	1.7	50.0
		Retail	36.4	12.5	0.1	1.0	50.0
		Other	38.3	9.6	0.4	1.7	50.0
7	Damascus	Residential	32.7	13.3	1.1	2.9	50.0
		Office	38.1	10.2	0.0	1.7	50.0
		Retail	36.3	12.7	0.0	1.0	50.0
		Other	38.0	10.2	0.0	1.7	50.0
8	Derwood	Residential	30.5	13.3	2.8	3.4	50.0
		Office	35.7	10.2	1.8	2.3	50.0
		Retail	31.7	14.4	1.1	2.8	50.0
		Other	35.7	10.2	1.9	2.3	50.0
11	Gaithersburg City	Residential	28.4	13.4	2.7	5.6	50.0
		Office	32.7	11.7	2.0	3.5	50.0
		Retail	26.8	16.3	1.2	5.0	50.0
		Other	32.2	12.2	1.9	3.7	50.0
12	Germantown East	Residential	30.7	13.4	2.2	3.7	50.0
		Office	34.0	12.1	1.4	2.4	50.0
		Retail	34.5	13.3	0.7	1.5	50.0
		Other	34.5	11.7	1.3	2.4	50.0
14	Germantown West	Residential	30.2	13.4	2.1	4.3	50.0
		Office	33.1	12.5	1.6	2.9	50.0
		Retail	33.2	13.8	0.6	2.4	50.0
		Other	33.5	11.8	1.7	3.1	50.0
13	Germantown Town Center	Residential	27.6	13.6	2.8	5.9	50.0
		Office	33.8	10.0	2.7	3.6	50.0
		Retail	28.1	15.0	1.7	5.2	50.0
		Other	33.5	10.2	2.8	3.5	50.0
17	Kensington/Wheaton	Residential	29.5	12.7	4.1	3.7	50.0
		Office	34.8	9.3	3.0	2.8	50.0
		Retail	34.9	11.9	1.0	2.2	50.0
		Other	34.9	9.3	2.8	2.9	50.0
18	Montgomery Village/Airpark	Residential	30.0	13.4	2.3	4.3	50.0
		Office	38.8	7.6	1.5	2.1	50.0
		Retail	33.9	12.6	0.9	2.7	50.0
		Other	38.7	7.6	1.4	2.3	50.0
19	North Bethesda	Residential	26.9	13.0	4.0	6.1	50.0
		Office	32.9	9.2	4.3	3.6	50.0
		Retail	25.8	14.2	3.0	7.0	50.0
		Other	31.2	9.8	4.7	4.3	50.0
20	North Potomac	Residential	31.5	13.5	1.5	3.5	50.0
		Office	37.9	9.3	0.4	2.4	50.0
		Retail	36.2	12.0	0.3	1.5	50.0
		Other	37.9	9.4	0.5	2.2	50.0
21	Olney	Residential	32.1	13.2	1.6	3.0	50.0
		Office	38.1	9.7	0.4	1.8	50.0
		Retail	36.1	12.4	0.2	1.3	50.0
		Other	38.1	9.8	0.3	1.8	50.0

22	Potomac	Residential	31.3	13.4	2.0	3.2	50.0
		Office	37.2	9.6	1.1	2.1	50.0
		Retail	34.9	12.8	0.9	1.4	50.0
		Other	37.4	9.7	1.0	1.9	50.0
23	R&D Village	Residential	28.7	13.6	2.9	4.8	50.0
		Office	33.4	11.7	2.2	2.7	50.0
		Retail	29.0	17.0	1.0	3.0	50.0
		Other	34.4	11.2	1.9	2.5	50.0
24	Rockville City	Residential	28.4	13.3	3.2	5.1	50.0
		Office	35.8	8.7	2.7	2.8	50.0
		Retail	31.4	12.8	1.7	4.1	50.0
		Other	37.3	7.7	2.4	2.6	50.0
29	Silver Spring CBD	Residential	37.6	14.1	10.2	13.1	75.0
		Office	37.2	6.8	19.9	11.1	75.0
		Retail	31.8	9.5	15.7	18.0	75.0
		Other	36.9	6.5	20.1	11.4	75.0
30	Silver Spring/Takoma Park	Residential	27.0	10.5	5.0	7.5	50.0
		Office	31.5	5.4	7.5	5.6	50.0
		Retail	29.7	8.6	3.4	8.2	50.0
		Other	31.9	5.3	7.0	5.8	50.0
32	Wheaton CBD	Residential	41.5	18.6	8.7	6.2	75.0
		Office	48.2	11.3	9.8	5.6	75.0
		Retail	41.1	18.9	5.7	9.3	75.0
		Other	48.1	11.3	9.8	5.7	75.0
16	Grosvenor	Residential	39.2	19.3	8.9	7.5	75.0
		Office	47.6	12.4	10.0	5.1	75.0
		Retail	41.0	20.6	6.3	7.1	75.0
		Other	45.8	12.9	11.6	4.8	75.0
31	Twinbrook	Residential	39.2	19.6	7.3	8.8	75.0
		Office	45.6	12.9	10.3	6.3	75.0
		Retail	40.2	20.8	5.4	8.6	75.0
		Other	45.1	13.1	10.4	6.4	75.0
33	White Flint	Residential	38.6	19.7	8.0	8.7	75.0
		Office	44.4	13.4	10.8	6.4	75.0
		Retail	39.1	21.2	6.2	8.5	75.0
		Other	44.6	13.4	10.5	6.4	75.0
15	Glenmont	Residential	43.8	18.6	7.5	5.1	75.0
		Office	52.1	12.6	6.1	4.2	75.0
		Retail	52.1	17.0	3.0	2.9	75.0
		Other	51.8	12.7	6.3	4.2	75.0
5	Clarksburg	Residential	32.2	13.6	1.3	2.9	50.0
		Office	38.3	10.0	0.0	1.7	50.0
		Retail	36.2	12.9	0.0	1.0	50.0
		Other	38.1	10.2	0.0	1.7	50.0
28	Shady Grove Metro Station	Residential	43.3	19.8	6.5	5.4	75.0
		Office	50.3	15.5	5.1	4.2	75.0
		Retail	41.9	21.9	2.9	8.3	75.0
		Other	50.2	15.5	5.4	3.9	75.0
10	Friendship Heights	Residential	37.7	14.6	11.6	11.1	75.0
		Office	39.8	7.4	18.4	9.5	75.0
		Retail	39.6	11.5	8.9	14.9	75.0
		Other	40.1	7.3	17.9	9.7	75.0
25	Rockville Town Center	Residential	38.5	19.0	6.7	10.9	75.0
		Office	45.4	12.5	9.2	7.9	75.0
		Retail	38.3	19.9	5.1	11.7	75.0
		Other	44.9	12.7	9.3	8.1	75.0
27	Rural West	Residential	32.4	14.1	0.9	2.6	50.0
		Office	38.0	10.2	0.0	1.8	50.0
		Retail	36.3	12.9	0.0	0.8	50.0
		Other	38.1	10.1	0.0	1.8	50.0
26	Rural East	Residential	32.0	14.1	1.3	2.6	50.0
		Office	37.7	10.3	0.2	1.8	50.0
		Retail	35.6	13.4	0.1	0.9	50.0
		Other	37.9	10.1	0.2	1.8	50.0
34	White Oak	Residential	28.9	12.9	3.9	4.3	50.0

		Office	34.3	11.3	1.7	2.7	50.0
		Retail	32.9	14.0	1.0	2.1	50.0
		Other	33.5	11.9	1.7	2.9	50.0
9	Fairland/Colesville	Residential	31.1	13.0	2.4	3.5	50.0
		Office	36.5	9.9	1.4	2.2	50.0
		Retail	35.8	12.2	0.5	1.6	50.0
		Other	37.0	9.7	1.2	2.1	50.0

Appendix 3. Mode Split Assumptions by Policy Area
 (note: Policy Areas to be rearranged by ascending number when finalized)

Policy Area #	Development Type	Auto Driver	Auto Passenger	Transit	Non-Motorized	Total	
2	Aspen Hill	Residential	62.5%	25.8%	5.3%	6.4%	100.0%
	Office	74.2%	18.2%	2.9%	4.7%	100.0%	
	Retail	72.1%	23.4%	1.3%	3.2%	100.0%	
	Other	74.0%	18.2%	2.5%	5.2%	100.0%	
3	Bethesda CBD	Residential	50.9%	20.8%	11.7%	16.6%	100.0%
	Office	47.9%	12.6%	23.8%	15.7%	100.0%	
	Retail	44.2%	16.9%	10.9%	27.9%	100.0%	
	Other	47.3%	13.2%	23.0%	16.5%	100.0%	
4	Bethesda/Chevy Chase	Residential	56.1%	23.6%	7.6%	12.6%	100.0%
	Office	61.8%	17.4%	11.5%	9.3%	100.0%	
	Retail	61.6%	24.7%	3.2%	10.5%	100.0%	
	Other	60.5%	17.1%	12.6%	9.9%	100.0%	
6	Cloverly	Residential	64.1%	26.4%	3.5%	5.9%	99.9%
	Office	76.8%	19.0%	0.7%	3.5%	100.0%	
	Retail	72.8%	25.1%	0.2%	2.0%	100.0%	
	Other	76.5%	19.2%	0.8%	3.4%	100.0%	
7	Damascus	Residential	65.4%	26.6%	2.2%	5.8%	100.0%
	Office	76.1%	20.3%	0.1%	3.5%	100.0%	
	Retail	72.5%	25.5%	0.0%	1.9%	100.0%	
	Other	76.1%	20.4%	0.1%	3.5%	100.0%	
8	Derwood	Residential	61.0%	26.6%	5.6%	6.8%	100.0%
	Office	71.4%	20.4%	3.6%	4.5%	100.0%	
	Retail	63.4%	28.7%	2.2%	5.7%	100.0%	
	Other	71.3%	20.4%	3.7%	4.6%	100.0%	
11	Gaithersburg City	Residential	56.7%	26.8%	5.4%	11.1%	100.0%
	Office	65.4%	23.5%	4.1%	7.1%	100.0%	
	Retail	53.5%	32.7%	2.4%	10.0%	98.6%	
	Other	64.4%	24.5%	3.8%	7.3%	100.0%	
12	Germantown East	Residential	61.5%	26.9%	4.3%	7.3%	100.0%
	Office	68.0%	24.3%	2.8%	4.9%	100.0%	
	Retail	69.1%	26.7%	1.3%	3.0%	100.0%	
	Other	69.1%	23.4%	2.7%	4.8%	100.0%	
14	Germantown West	Residential	60.4%	26.9%	4.1%	8.6%	100.0%
	Office	66.1%	24.9%	3.1%	5.8%	100.0%	
	Retail	66.4%	27.6%	1.2%	4.8%	100.0%	
	Other	66.9%	23.6%	3.3%	6.2%	100.0%	
13	Germantown Town Center	Residential	55.3%	27.2%	5.7%	11.8%	100.0%
	Office	67.6%	19.9%	5.4%	7.1%	100.0%	
	Retail	56.2%	30.1%	3.3%	10.4%	100.0%	
	Other	67.0%	20.5%	5.7%	6.9%	100.0%	
17	Kensington/Wheaton	Residential	59.1%	25.4%	8.1%	7.4%	100.0%
	Office	69.6%	18.6%	6.1%	5.7%	100.0%	
	Retail	69.8%	23.8%	2.1%	4.3%	100.0%	
	Other	69.8%	18.7%	5.6%	5.9%	100.0%	
18	Montgomery Village/Airpark	Residential	59.9%	26.8%	4.6%	8.6%	100.0%
	Office	77.7%	15.1%	2.9%	4.3%	100.0%	
	Retail	67.7%	25.1%	1.7%	5.4%	100.0%	
	Other	77.4%	15.1%	2.8%	4.7%	100.0%	
19	North Bethesda	Residential	53.8%	25.9%	8.0%	12.3%	100.0%
	Office	65.8%	18.4%	8.6%	7.3%	100.0%	
	Retail	51.6%	28.4%	6.1%	14.0%	100.0%	
	Other	62.4%	19.5%	9.4%	8.7%	100.0%	
20	North Potomac	Residential	63.0%	27.1%	3.0%	7.0%	100.0%
	Office	75.7%	18.6%	0.8%	4.8%	100.0%	
	Retail	72.4%	24.1%	0.6%	2.9%	100.0%	
	Other	75.8%	18.8%	1.0%	4.4%	100.0%	
21	Olney	Residential	64.3%	26.4%	3.3%	6.1%	100.0%
	Office	76.3%	19.4%	0.7%	3.6%	100.0%	
	Retail	72.1%	24.8%	0.5%	2.6%	100.0%	
	Other	76.3%	19.5%	0.7%	3.5%	100.0%	

22	Potomac	Residential	62.6%	26.8%	4.1%	6.5%	100.0%
		Office	74.4%	19.3%	2.2%	4.1%	100.0%
		Retail	69.8%	25.7%	1.8%	2.7%	100.0%
		Other	74.8%	19.5%	2.1%	3.7%	100.0%
23	R&D Village	Residential	57.3%	27.3%	5.7%	9.7%	100.0%
		Office	66.7%	23.5%	4.4%	5.4%	100.0%
		Retail	58.0%	34.1%	2.0%	6.0%	100.0%
		Other	68.8%	22.4%	3.8%	5.1%	100.0%
24	Rockville City	Residential	56.8%	26.6%	6.3%	10.2%	100.0%
		Office	71.7%	17.4%	5.4%	5.5%	100.0%
		Retail	62.8%	25.6%	3.3%	8.2%	100.0%
		Other	74.7%	15.3%	4.8%	5.1%	100.0%
29	Silver Spring CBD	Residential	50.1%	18.8%	13.6%	17.5%	100.0%
		Office	49.6%	9.0%	26.6%	14.9%	100.0%
		Retail	42.4%	12.6%	20.9%	24.0%	100.0%
		Other	49.2%	8.7%	26.8%	15.2%	100.0%
30	Silver Spring/Takoma Park	Residential	54.0%	21.0%	10.1%	14.9%	100.0%
		Office	63.0%	10.7%	15.1%	11.2%	100.0%
		Retail	59.5%	17.2%	6.9%	16.4%	100.0%
		Other	63.8%	10.5%	14.0%	11.6%	100.0%
32	Wheaton CBD	Residential	55.3%	24.9%	11.6%	8.2%	100.0%
		Office	64.3%	15.0%	13.1%	7.5%	100.0%
		Retail	54.8%	25.2%	7.6%	12.4%	100.0%
		Other	64.2%	15.1%	13.1%	7.6%	100.0%
16	Grosvenor	Residential	52.3%	25.8%	11.9%	10.0%	100.0%
		Office	63.4%	16.5%	13.3%	6.8%	100.0%
		Retail	54.7%	27.5%	8.4%	9.5%	100.0%
		Other	61.0%	17.2%	15.4%	6.3%	100.0%
31	Twinbrook	Residential	52.3%	26.2%	9.7%	11.8%	100.0%
		Office	60.8%	17.2%	13.7%	8.3%	100.0%
		Retail	53.6%	27.8%	7.2%	11.4%	100.0%
		Other	60.2%	17.5%	13.9%	8.5%	100.0%
33	White Flint	Residential	51.4%	26.3%	10.7%	11.6%	100.0%
		Office	59.2%	17.8%	14.4%	8.5%	100.0%
		Retail	52.2%	28.3%	8.2%	11.3%	100.0%
		Other	59.5%	17.9%	14.0%	8.6%	100.0%
15	Glenmont	Residential	58.4%	24.8%	10.0%	6.8%	100.0%
		Office	69.5%	16.8%	8.2%	5.6%	100.0%
		Retail	69.5%	22.7%	4.0%	3.9%	100.0%
		Other	69.1%	16.9%	8.4%	5.6%	100.0%
5	Clarksburg	Residential	64.5%	27.1%	2.5%	5.9%	100.0%
		Office	76.5%	20.0%	0.0%	3.5%	100.0%
		Retail	72.3%	25.7%	0.0%	2.0%	100.0%
		Other	76.2%	20.3%	0.0%	3.5%	100.0%
28	Shady Grove Metro Station	Residential	57.7%	26.4%	8.7%	7.1%	100.0%
		Office	67.0%	20.6%	6.8%	5.5%	100.0%
		Retail	55.9%	29.2%	3.8%	11.1%	100.0%
		Other	66.9%	20.6%	7.2%	5.2%	100.0%
10	Friendship Heights	Residential	50.3%	19.4%	15.4%	14.8%	100.0%
		Office	53.0%	9.9%	24.5%	12.6%	100.0%
		Retail	52.8%	15.4%	11.8%	19.9%	100.0%
		Other	53.4%	9.7%	23.9%	13.0%	100.0%
25	Rockville Town Center	Residential	51.3%	25.3%	8.9%	14.5%	100.0%
		Office	60.5%	16.7%	12.3%	10.5%	100.0%
		Retail	51.0%	26.5%	6.8%	15.6%	100.0%
		Other	59.9%	16.9%	12.4%	10.8%	100.0%
27	Rural West	Residential	64.8%	28.2%	1.8%	5.2%	100.0%
		Office	76.0%	20.4%	0.0%	3.6%	100.0%
		Retail	72.6%	25.7%	0.0%	1.7%	100.0%
		Other	76.1%	20.3%	0.1%	3.5%	100.0%
26	Rural East	Residential	64.0%	28.2%	2.6%	5.3%	100.0%
		Office	75.4%	20.6%	0.3%	3.7%	100.0%
		Retail	71.2%	26.8%	0.1%	1.9%	100.0%
		Other	75.8%	20.2%	0.5%	3.6%	100.0%
34	White Oak	Residential	57.9%	25.8%	7.8%	8.5%	99.9%

		Office	68.7%	22.6%	3.3%	5.4%	100.0%
		Retail	65.7%	28.0%	2.0%	4.3%	100.0%
		Other	66.9%	23.9%	3.4%	5.8%	100.0%
9	Fairland/Colesville	Residential	62.3%	25.9%	4.9%	6.9%	100.0%
		Office	73.0%	19.8%	2.8%	4.3%	100.0%
		Retail	71.6%	24.3%	1.0%	3.1%	100.0%
		Other	73.9%	19.4%	2.5%	4.2%	100.0%