



Subdivision Staging Policy – Alternative Constructs for the Determination of Transportation Adequacy



Eric Graye, Supervisor, Functional Planning & Policy Division, eric.graye@montgomeryplanning.org, 301-495-4632



Pamela Dunn, Chief, Functional Planning & Policy Division, pamela.dunn@montgomeryplanning.org, 301.605-5649



Tom Autrey, Supervisor, Functional Planning & Policy Division, thomas.autrey@montgomeryplanning.org, 301-495-4533

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Description

As an element of the review of the Subdivision Staging Policy (SSP) process, the Planning Board has requested that staff present alternative approaches to the application of the Transportation Policy Area Review (TPAR) and the Local Area Transportation Review (LATR) “tests” now in use for determining whether adequate transportation facilities exist when reviewing development applications.¹

Today’s briefing will provide an opportunity to:

- (1) initiate the discussion of potential alternative approaches for the application of these transportation tests and
- (2) continue the December 3rd discussion regarding transportation initiatives underway in support of the SSP Update. Specifically, staff will brief the Planning Board on efforts to refine the transit component of the current TPAR process and update trip generation rates used in support of LATR.

1. ALTERNATIVE TRANSPORTATION TEST APPROACHES

Why Look at Alternatives?

The methodology of how best to determine whether adequate transportation facilities exist at subdivision was last reviewed in 2012. The Planning Board at that time expressed concern that while generally technically sound, there were shortcomings in the actual application of the transportation tests.

In the case of TPAR, one of the main concerns was (and continues to be) that the test is dependent on results from the Department’s regional travel forecasting model that may be better suited for comparing alternative potential transportation network investments rather than as a tool for assessing

¹ TPAR and LATR methodology is also used in the analysis of transportation networks examined during the development of master plans (in addition to review of development applications).

transportation adequacy in a regulatory context. There is also a generally recognized and related drawback in that the regional travel forecasting model is considered by some stakeholders a “black box” in terms of complexity and transparency.

In the case of LATR, two main concerns were identified. The first is that the conventional Level of Service (LOS) measurement (which uses the Critical Lane Volume or CLV metric) is auto-centric and exhibits the limitation of focusing on recommendations for physical intersection improvements. The second is that policy area CLV “standards or thresholds” unfairly penalize the project that “comes in last”, produces traffic levels “over the applicable standard”, and may not be able to proceed in the development review process without significant payments or counter-productive intersection improvements.

In addition, there is concern that the current tests are not sufficiently aligned with County planning objectives and policy as closely as they should be after years of observation locally and in recognition of transportation planning practices in comparable areas in the nation. There is also growing consensus and acceptance among most planners and many stakeholders that the application of transportation tests needs to be more flexible and sensitive to the land use typology of the area under study.

Three Conceptual Alternatives for Discussion

In response to the concerns with the current approach, staff has developed three different conceptual alternatives or “constructs” for consideration and discussion. These alternatives are very preliminary in nature but they do provide enough detail at this point to identify some initial strengths and weaknesses of each.

It is important to note that the extent to which all, part, or some combination of these alternatives could eventually be applied is dependent on not only more discussion but also a more detailed examination of the metrics and in some cases, the further development of tools for actually conducting the measurements and/or adopting new targets or thresholds.

Objectives

In developing these alternative concepts for discussion, staff attempted to keep in mind three overriding objectives that might address stakeholder concerns most often expressed during the work to date;

Clarity

The methodology or approach should be as clear and simple as possible to understand (even while recognizing the complexity of the subject at hand). The clarity should extend through development and to and beyond application.

Relevance

The approach should reflect the County's goals and policies as they vary among different place types – including those areas in transition and in doing so, it should specifically recognize the County's different contexts with respect to land use and transportation infrastructure – both existing and future.

Transparency

The approach should be transparent and the results should be readily recognized as something that intuitively “makes sense”. An important part of transparency is that the assumptions and data sources are well documented through development and generally accessible to most stakeholders with a reasonable amount of effort.

Common Aspects of All Three Approaches

A brief narrative on each of the three concept approaches is provided below. Summary outlines, in matrix format, for each approach follow the brief narratives.

Before reviewing each approach, it is worth noting that there are some common aspects to all three approaches:

Policy Area Typology

The Policy Area or place typology has been modified a bit from the current approach. **There are two main categories – “Transit-Oriented Development (TOD)” and “Beyond TOD.”** Within TOD, there are two sub-areas (CBD's and “Emerging TOD Centers”). Within “Beyond TOD” there are also two sub-areas (Mature Suburban and Residential Suburban). There are also two other categories – Rural and “Master Plan Special Pro-Rata” (i.e., White Flint Sector Plan Area and White Oak Policy Area) that are not envisioned at this point to be subject to any significant changes beyond that in place or under active review (e.g., White Oak Policy Area). This policy area typology is summarized in the matrix provided below.

POLICY AREA TYPOLOGY

| | TOD - Established | TOD - Emerging | Beyond TOD - Mature Suburban | Beyond TOD - Residential Suburban | Rural | Master Plan Special Pro- Rata |
|---------------------------------|-------------------|----------------|---------------------------------|--------------------------------------|-------|-------------------------------------|
| Bethesda CBD | X | | | | | |
| Friendship Heights CBD | X | | | | | |
| Silver Spring CBD | X | | | | | |
| White Flint MSPA | X | | | | | |
| Wheaton CBD | X | | | | | |
| Glenmont MSPA | | X | | | | |
| Grosvenor MSPA | | X | | | | |
| Rockville TC MSPA | | X | | | | |
| Shady Grove MSPA | | X | | | | |
| Twinbrook MSPA | | X | | | | |
| Chevy Chase Lake | | X | | | | |
| Long Branch | | X | | | | |
| Takoma Langley | | X | | | | |
| Life Science Center | | X | | | | |
| Derwood | | | X | | | |
| Rockville City | | | X | | | |
| North Bethesda | | | X | | | |
| Bethesda – Chevy Chase | | | X | | | |
| Germantown TC | | | X | | | |
| Kensington – Wheaton | | | X | | | |
| Silver Spring – Takoma Park | | | X | | | |
| Aspen Hill | | | | X | | |
| Clarksburg | | | | X | | |
| Fairland | | | | X | | |
| Gaithersburg City | | | | X | | |
| Germantown East | | | | X | | |
| Germantown West | | | | X | | |
| Montgomery Village / Airpark | | | | X | | |
| Cloverly | | | | X | | |
| North Potomac | | | | X | | |
| Olney | | | | X | | |
| Potomac | | | | X | | |
| R&D Village | | | | X | | |
| Rural East | | | | | X | |
| Rural West | | | | | X | |
| Damascus | | | | | X | |
| White Oak Policy Area | | | | | | X |
| White Flint Sector Plan Area | | | | | | X |

New vs. Old Approach

In general, each of the concepts involve new approaches for the area “tests” for both of the two main categories – “TOD” and “Beyond TOD”. **There is no TPAR.** TPAR is replaced by other measurements.

For local tests, two of the three concept alternatives retain the local test (and CLV metric) in all but the “CBD” typology (i.e., Bethesda, FH, SS, WF - a new designation for WF, and Wheaton) but provide for a “pay and go” approach in “Emerging TOD Centers” (as well in CBD’s).

A third concept alternative employs NADMS goal attainment as the local area metric in both CBD’s and “Emerging TOD Centers” with a “pay and go” approach.

All three concepts retain the local area CLV test in “Beyond TOD” areas in response to stakeholder concerns that more conventional metrics for monitoring intersection performance remain consistent in those areas without significant levels of transit service. There is no provision for “pay and go” in these areas.

JOB ACCESS VIA TRANSIT & VMT/HOUSEHOLD APPROACH

This concept or approach places a priority for the area test on job access via transit in TOD areas and VMT per household in the Beyond TOD areas.

The Department is working with its consulting partners to refine the Travel 4 regional model to produce accessibility indices for job access by transit – a metric that could theoretically be developed for the existing condition and a forecast condition under different assumptions for transit level of service (e.g., a BRT network).

The metric for the area test in “Beyond TOD” areas would be VMT/Household as it relates to the County average (as an example). This metric would also be a product of the Travel 4 regional model. It would be necessary (from a policy perspective) to set some threshold above or below the County average for each policy area in the “Beyond TOD” category.

JOB ACCESS VIA TRANSIT & VMT/HOUSEHOLD APPROACH

| Policy Area | Sub-Area | Area Test | Local Test | Area Payment | Local Payment | Annual Additional Tax for Cap. & Ops. | Impact Tax | Pay & Go |
|-------------|-------------------------------|------------------------|---------------|-------------------|---|---------------------------------------|-------------------------------|----------|
| TOD | Bethesda, FH, SS, WF, Wheaton | None | None | N/A | N/A | Yes | Yes or Pro-Rata as Applicable | Yes |
| | Emerging TOD Center | Job Access via Transit | 1700 CLV& HCM | 25% of Impact Tax | 50% of Impact Tax or Mitigate or Pro-Rata as Applicable | No | Yes or Pro Rata as Applicable | Yes |

| | | | | | | | | |
|---------------|-------------------------|--|----------------------|----------------------|----------|----|-----|----|
| Beyond TOD | Mature Suburban | Policy Area VMT/Household vs. County Average | 1600 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |
| | Residential Suburban | Policy Area VMT/Household vs. County Average | 1500 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |

COMPARATIVE RATING (GOOD, FAIR, POOR) FOR ADDRESSING MAJOR COMPONENTS/ISSUES

| Component/Issue | Clarity | Relevance | Transparency |
|---------------------------|---|---|---|
| Definition of Place Types | Good – uses existing boundaries for the most part | Good – similar places are grouped together | Good – changes are made in master plan context or Subdivision Staging Policy review |
| Area Test | Fair – uses model or other relatively detailed analysis | Good – tests measure goal related metrics on a per capita basis | Good – despite model complexity results should be mostly intuitive & can be forecasted |
| Local Test | Good – fewer CLV levels with more focus on place appropriate metrics. | Good – using CLV or LOS in mature TOD's with Metrorail is counter-productive. Balance of County pivots from 1600 CLV metric generally accepted as capacity. | Good – traffic studies using established guidelines and current conditions still required in 3 of 4 sub-areas |
| Funding / Mitigation | Fair – structure of annual additional tax TBD. | Fair – impact tax payments or pro-rata share may or may not lead to programmed improvements for specific locations. | Fair – per trip calculation for Pro Rata has numerous necessary assumptions, same for impact tax calculation |
| Monitoring | Good – Methodology in place for all but job access via transit (which is under development) | Fair - Metrics in area test will likely not vary much except for job access via transit when major high quality facilities introduced | Good – metrics are examined by Planning Board every two years with changes noted |

JOB ACCESS VIA TRANSIT & JOBS/HOUSING BALANCE APPROACH

This concept places a priority for the area test on job access via transit in TOD areas (see above) and the balance between jobs and housing in the “Beyond TOD” areas.

The metric for the area test in “Beyond TOD” would be the ratio of jobs to housing and would be derived from the regional cooperative land use forecasts. It would also be necessary from a policy perspective to set some threshold (if not set through a previously adopted master plan) above or below the County average for each policy area in the “Beyond TOD” category.

JOB ACCESS VIA TRANSIT & JOBS/HOUSING BALANCE APPROACH

| Policy Area | Sub-Area | Area Test | Local Test | Area Payment | Local Payment | Annual Additional Tax for Cap. & Ops. | Impact Tax | Pay & Go |
|-------------|-------------------------------|--|----------------|-------------------|---|---------------------------------------|-------------------------------|----------|
| TOD | Bethesda, FH, SS, WF, Wheaton | None | None | N/A | N/A | Yes | Yes or Pro-Rata as Applicable | Yes |
| | Emerging TOD Center | Job Access via Transit | 1700 CLV & HCM | 25% of Impact Tax | 50% of Impact Tax or Mitigate or Pro-Rata as Applicable | No | Yes or Pro-Rata as Applicable | Yes |
| Beyond TOD | Mature Suburban | Policy Area Jobs/Housing Balance vs. County Goal | 1600 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |
| | Residential Suburban | Policy Area Jobs/Housing Balance vs. County Goal | 1500 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |

COMPARATIVE RATING (GOOD, FAIR, POOR) FOR ADDRESSING MAJOR COMPONENTS/ISSUES

| Component/Issue | Clarity | Relevance | Transparency |
|---------------------------|---|---|--|
| Definition of Place Types | Good – uses existing boundaries for the most part | Good – similar places are grouped together | Good – changes are made in master plan context or Subdivision Staging Policy review |
| Area Test | Fair for TOD – dependent on relatively detailed model Good for Beyond TOD – uses Cooperative Land Use Forecast for Jobs/Housing Balance | Fair – measures goal related metrics but jobs/housing balance is largely determined by market forces. | Good – despite model complexity for TOD test, results should be mostly intuitive & can be forecasted. Good for Beyond TOD as goal would be set by Council. |
| Local Test | Good – fewer CLV levels with more focus on place appropriate metrics. | Good – using CLV or LOS in mature TOD’s with Metrorail is counter-productive. Balance of County pivots from 1600 CLV metric generally accepted as capacity. | Good – traffic studies using established guidelines and current conditions still required in 3 of 4 sub-areas |
| Funding / Mitigation | Fair – structure of annual additional tax TBD. | Fair – impact tax payments or pro-rata share may or may not lead to programmed improvements for specific locations. | Fair – per trip calculation for Pro Rata has numerous necessary assumptions, same for impact tax calculation |
| Monitoring | Good – Methodology in place for all but job access via transit (which is under development) | Fair - Metrics in area test will likely not vary much except for job access via transit when major high quality facilities introduced | Good – metrics are examined by Planning Board every two years with changes noted |

NON-AUTO DRIVER MODE SHARE (NADMS) & JOBS/HOUSING BALANCE

This concept draws heavily upon a proposal from Transportation Impact Study Transportation Working Group (TISTWG) member Dan Wilhelm where the focus is on an initial and subsequent measure of NADMS in TOD areas in lieu of either an area test or local test. This concept also includes a pay and go approach in TOD areas.²

The general approach with this concept is that an initial payment in lieu of the impact tax would be made based upon the cost of the development and the Policy Area NADMS goal. Subsequent annual payments to support on-going infrastructure costs (capital and/or operating) could be based on the assessed value of the property and attainment of NADMS targets tied to the phase of development.

NADMS & JOBS/HOUSING BALANCE APPROACH

| Policy Area | Sub-Area | NADMS Goal | Local Test | Area Payment | Local Payment | Annual Additional Tax for Operations & Maintenance | Initial Impact Tax | Pay & Go |
|-------------|-------------------------------|--|----------------|-------------------------------|---------------|---|---|----------|
| TOD | Bethesda, FH, SS, WF, Wheaton | 50% (or Per Master Plan) | None | See Initial Impact Tax Column | N/A | Annual Fee Based on Assessed Value & Graduated Attainment of Policy Area NADMS Goal | Based on Cost of Development & Policy Area NADMS Goal @ Time of Development Application | Yes |
| | Emerging TOD Center | 35% (or Per Master Plan) | None | See Initial Impact Tax Column | N/A | Annual Fee Based on Assessed Value & Graduated Attainment of Policy Area NADMS Goal | Based on Cost of Development & Policy Area NADMS Goal @ Time of Development Application | Yes |
| Beyond TOD | Mature Suburban | Policy Area Jobs/Housing Balance vs. County Goal | 1600 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |
| | Residential Suburban | Policy Area Jobs/Housing Balance vs. County Goal | 1500 CLV & HCM | 25% of Impact Tax | Mitigate | No | Yes | No |

² This concept as presented in the summary tables is intended to be **generally** representative of Mr. Wilhelm's proposal and not an exact duplication. As an example, where Mr. Wilhelm's proposal calls for consideration of the NADMS approach in established or planned transit corridors the concept shown here simply applies it to TOD areas as an over-simplified means of fitting the concept into a construct similar to the other two concepts for comparison purposes.

COMPARATIVE RATING (GOOD, FAIR, POOR) FOR ADDRESSING MAJOR COMPONENTS/ISSUES

| Component/Issue | Clarity | Relevance | Transparency |
|---------------------------|---|--|---|
| Definition of Place Types | Good – uses existing policy area boundaries – or master plan boundaries for the most part. | Fair – approach focused on NADMS attainment for individual developments. | Good – changes are made in master plan context or Subdivision Staging Policy review |
| Area Test (NADMS Goal) | Good - benchmark is likely set by model output and can be readily compared to existing NADMS - Good for “Beyond TOD” as Cooperative Land Use Forecast used for Jobs/Housing Balance | Fair for TOD – NADMS may not have been addressed in master plan in all areas. Fair for “Beyond TOD” – measures goal related metrics but jobs/housing balance is largely determined by market forces. | Good – despite model complexity for NADMS benchmark, results should be mostly intuitive & can be forecasted. Good for “Beyond TOD”- goal would be set by Council. |
| Local Test | Not Applicable for TOD – Good for Beyond TOD – fewer CLV levels with more focus on place appropriate metrics. | Poor if absence of Local Test applies to corridors with no programmed high quality transit. Good for “Beyond TOD” as balance of County pivots from 1600 CLV metric generally accepted as capacity. | Fair – traffic studies using established guidelines and current conditions still required in 2 of 4 sub-areas |
| Funding / Mitigation | Fair – NADMS incentive clear but process may get complicated if applied to different land uses and project phases | Fair – funding based on assessed value and NADMS attainment and not necessarily related to cost of improvements. | Fair – would require considerable amount of monitoring to establish funding level. |
| Monitoring | Poor – monitoring of NADMS at project level a challenge. | Good – NADMS monitoring in some manner likely to be part of any approach because of relevancy and is established as a metric in multiple existing Master Plans. | Good – NADMS examined by Planning Board in SSP review and Master Plan development and adoption. |

PRO-RATA SHARE

It should be noted that none of the three above alternatives presented for discussion could be considered similar to the “pro-rata share” approach in place in White Flint and evolving for White Oak.

2. TRANSPORTATION INITIATIVES UNDERWAY

In addition to the alternative constructs described above, the following items will be discussed as a continuation of the December 3rd briefing on transportation-related initiatives currently underway in support of the SSP update:

1. **TPAR refinement update** - The TPAR process has two (2) components: (1) **roadway adequacy** based on the evaluation of **forecasted** travel speeds on local roads and (2) **transit adequacy** based on the evaluation of **existing** local transit service metrics (i.e., headway, coverage and span of service). The TPAR transit adequacy test has some utility within the 10-year horizon regulatory context in which it is applied. However, this test has limited applications in the long-range (25-year horizon or more) master plan context given that the metrics used cannot be readily forecasted. In addition, this test is limited in its ability to reflect Bus Rapid Transit (BRT) service.

The TPAR refinement effort is directed toward addressing these issues by the identification and evaluation of new and more “robust” transportation system performance metrics (such as accessibility) that could be incorporated into the process. The Board will be briefed on the progress to date regarding this work.

2. **Trip generation study update** – Current LATR trip generation rates used in support of traffic impact studies have a number of limitations, including:

- Generally reflects suburban-oriented vehicle travel (i.e., non-auto travel such as transit, bike and pedestrian travel not reflected)
- Reflects transit proximity to Metrorail for office buildings only
- Reflects non-auto travel for only selected “unique” urban areas (i.e., Bethesda, Friendship Heights and Silver Spring CBDs)
- Based on outdated local observations for common land uses (based on data collected in 1989)
- May result in over-designed roadway and unwarranted exaction from new development

The Board will be briefed on plans underway to initiate a process to address these issues.

EG/ PD/aj