



April 28, 2004

**MEMORANDUM**

TO: Richard Weaver, Senior Planner  
Development Review Division

VIA: Ronald C. Welke, Supervisor *DKH for*  
Transportation Planning

FROM: Ed Axler, Coordinator/Planner *EA*  
Transportation Planning

SUBJECT: Preliminary Plan No. 1-04054  
Twinbrook Commons East  
Twinbrook Policy Area

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This memorandum is Transportation Planning staff's adequate public facilities (APF) review of the subject Preliminary Plan under the Alternative Review Procedures for Metro Station Policy Areas. (Refer to the attached page for Section TA1 of the *FY 2004 Annual Growth Policy (AGP)*).

**RECOMMENDATIONS**

Transportation Planning staff recommends the following conditions as part of the APF test for transportation requirements related to this preliminary plan as approved as Zoning Application No. G-810:

1. Limit the preliminary plan to, and base the Trip Reduction Goal in the Traffic Mitigation Agreement on a maximum of 690 high-rise apartments, 424 garden apartments, and 140,000 gross square feet of general retail uses.
2. Satisfy the APF test under the AGP's Alternative Review Procedures for Metro Station Policy Areas that includes:
  - a. Using the alternative review procedure in the Twinbrook Metro Station Policy Area, the applicant need not take any actions typically required of preliminary plan applicants to satisfy Policy Area Transportation Review or Local Area Transportation

Review (i.e., typically to submit a traffic study and improve any local area intersection exceeding its congestion standard).

- b. Enter into a traffic mitigation agreement with the Planning Board and the Montgomery County Department of Public Works and Transportation (DPWT) to satisfy a trip reduction goal to reduce at least 50% of the number of weekday peak-hour trips attributable to the subdivision.

A large number of external site-generated weekday peak-hour trips could be reduced as follows:

- 1) With a compatible combination of residential and retail land uses on-site and nearby office use within easy walking distance.
- 2) With a pedestrian-friendly location conveniently within walking distance to transit facilities.

Based on the experiences of other mixed-use developments near transit facilities, these characteristics are likely to result in reducing the number of external weekday peak-hour trips.

The remaining external weekday peak-hour trips could be reduced by the proposed possible traffic mitigation measures that include the following:

Transportation demand management participation:

- 1) Participate in the North Bethesda Transportation Management District (TMD).
- 2) Appoint a transportation coordinator as the point of contact between the residents and tenants of the development (and nearby Fishers Place) and the North Bethesda TMD.
- 3) Assist the North Bethesda TMD in monitoring the performance of the trip reduction measures by participating in the annual commuter survey.

Information distribution as an incentive for single-occupant-vehicular travelers to use alternative transportation modes:

- 1) Provide marketing information on alternative transportation modes to single-occupant-vehicle travelers at easily accessible and convenient locations and media sources including a transportation information section within the Twinbrook Commons website. The website should also include links to Washington Metropolitan Area Transit Authority (WMATA), Ride-On, Maryland Department of Transportation, North Bethesda TMD, DPWT roadway traffic cameras, and other commuter assistance websites.

- 2) Distribute to new residents and tenants marketing information on alternative transportation modes to single-occupant vehicular trips.
- 3) Distribute to existing residents and tenants marketing information on alternative transportation modes to single-occupant vehicular trips four times a year.
- 4) Keep the residents and tenants updated about “Ozone Action Days” and other regionally sponsored clean air programs.

Parking costs for single-occupant vehicular trips:

- 1) Provide market-rate parking for single-occupant vehicles.
- 2) Provide reserved parking spaces for registered carpools (with at least two occupants per vehicle) associated with the on-site retail and nearby off-site office.
- 3) Provide reserved parking spaces for participants in the “car-sharing” program for residents living on the site. The “car-sharing” program “on-demand” provides car rentals at Metrorail stations on a short notice to transit users and carpools (i.e., the Flexcar and Zipcar programs).
- 4) Provide reduced rate parking spaces for residents (one space per household) living on-site, and working at on-site retail businesses, or at the off-site offices located in the adjacent City of Rockville’s section of Twinbrook Commons West, and in the nearby Fishers Place (i.e., Preliminary Plan No. 1-99043 and amend Site Plan No. 8-01025). The applicant, JBG, controls these off-site offices buildings.
- 5) Provide free or reduced priced parking spaces for registered carpools associated with the on-site retail and nearby off-site office.
- 6) Provide free parking spaces for registered vanpools associated with the on-site retail and nearby off-site office.

Employment-based incentives to use alternatives to single-occupant vehicular trips during the weekday morning peak period (6:30 to 9:30 a.m.) and evening peak period (4:00 to 7:00 p.m.) on-site and nearby Fishers Place:

- 1) Provide monthly transit fare subsidies to employees in coordination with DPWT’s Commuter Services Section.
- 2) Offer transit passes and tokens to employees at work sites.

- 3) Offer employers' pretax payroll deduction of transit subsidies for their employees (that is beyond the current benefits offered by the County and State).
- 4) Provide carpool-matching services for employees.
- 5) Develop and implement a program to encourage employers and tenants' flextime, compressed workweek, telecommuting, and job sharing.
- 6) Provide information to all office tenants in nearby Fishers Place on special pre-leasing opportunities for housing and retail shopping within Twinbrook Commons East.

Developer-based on-site incentives to use alternatives to single occupant vehicular trips:

- 1) Operate a shuttle bus between nearby Fishers Place and the Twinbrook Metrorail Station for employees working in the Fishers Place office development (that would include NIH and other employers).
- 2) Provide on-site taxi loading and waiting zones (two locations).
- 3) Provide on-site pick-up, drop-off, and waiting areas accessible for paratransit vehicles to approach, load, and unload wheel chairs.
- 4) Operate an on-site concierge service for on-site residents and retail tenants pick-up and delivery of goods and services.
- 5) Provide on-site business centers with the necessary office equipment for the residents to telework or telecommute, instead of commuting to their places of work.

Based on the effectiveness of prior traffic mitigation programs and the success of the current transportation management organization (TMO), the likelihood of success of these traffic mitigation measures in achieving and maintaining their trip reduction goals is reasonably probable of fruition. The current TMO is the North Bethesda TMD that is headed by the Executive Director, Peggy Schwartz.

- c. Satisfy the recommendations in the *North Bethesda-Garrett Park Master Plan* to mitigate site-generated traffic as follows:

Participate in the North Bethesda TMD as multi-family housing and non-residential development and its "programs operated by, or take actions specified by, the transportation management organization."

The applicant must have a draft Traffic Mitigation Agreement (TMA) at the time of site plan review and enter into the TMA with the Planning Board and DPWT prior to

release of building permits. The TMA should include participation in the North Bethesda TMD. The traffic mitigation goals for Stage II of the master plan development are to achieve and maintain:

- 1) A 39% non-auto-driver mode share for employees.
  - 2) A 30% non-auto-driver mode share for multi-family residents.
- d. Pay the development impact tax without claiming any credits for transportation improvements. The applicant's tax payment should be used for the following transportation improvements:
- 1) Rockville Pike (MD 355) and Montrose Road - Randolph Road: To mitigate the site-generated peak-hour vehicular trips during the weekday evening peak period, contribute to the Maryland State Highway Administration's interchange project No. MO830A11. As a short-term alternative improvement, construction of a second westbound (Randolph Road) right-turn lane.
  - 2) Rockville Pike and Twinbrook Parkway – Rollins Avenue: To mitigate the site-generated peak-hour vehicular trips during the weekday evening peak period, construction of second southbound (Rockville Pike) left-turn lane and a westbound (Twinbrook Parkway) right-turn lane. These two improvements would also require additional right-of-way, relocation of utilities, and modification of the traffic signal installation.
  - 3) Rockville Pike and Halpine Road: To mitigate the site-generated peak-hour vehicular trips during the weekday morning and evening peak periods, construction of a second northbound (Rockville Pike) left-turn lane and a second westbound (Halpine Road) right-turn lane. Alternatively, Chapman Avenue could be extended to the north from Halpine Road to Rockville Pike at Congressional Lane.
  - 4) Rockville Pike and Bou Avenue: To mitigate the site-generated peak-hour vehicular trips during the weekday evening peak period, re-striping westbound (Bou Avenue) for two left-turn lanes and a combination left-turn/through/right-turn lane. The improvement would require modifying the traffic signal installation and timing. Alternatively, contribute to DPWT's Capital Improvements Program project No. 500401, to construct the extension of Nebel Street from Randolph Road to Chapman Avenue at Bou Avenue.
  - 5) Rockville Pike and Edmonston Drive: To mitigate the site-generated peak-hour vehicular trips during the weekday morning and evening peak periods, construction of an additional eastbound (Edmonston Drive) combination through/right-turn lane.

- 6) Randolph Road and Parklawn Drive: To mitigate the site-generated peak-hour vehicular trips during the weekday morning and evening peak periods, conversion of the northbound (Parklawn Drive) left-turn lane to a combination left-turn/through lane.
  - 7) Veirs Mill Road and Twinbrook Parkway: To mitigate the site-generated peak-hour vehicular trips during the weekday morning and evening peak periods, construction of an eastbound (Veirs Mill Road) right-turn lane.
  - 8) Veirs Mill Road and Aspen Hill Road: To mitigate the site-generated peak-hour vehicular trips during the weekday morning and evening peak periods, re-striping the westbound (Aspen Hill Road) center through lane as a combination left-turn/through lane for use only during the weekday evening peak period. The improvement would require (1) variable signing and pavement lane markings; (2) modification to the traffic signal timing, and (3) widening the Aspen Hill Road leg for an additional receiving lane.
  - 9) Twinbrook Parkway and Chapman Avenue: To mitigate the site-generated peak-hour vehicular trips during the weekday evening peak period, construction of a separate eastbound (Twinbrook Parkway) right-turn lane and a second northbound (Chapman Avenue) right-turn lane.
3. As necessary, widen the existing sidewalks along Twinbrook Parkway, Ardennes Avenue, and Parklawn Drive to provide a continuous sidewalk between the back of the curb and the property line, unless the buildings are setback 25 feet or more from the property line, in accordance with DPWT's standards.
  4. Coordinate with DPWT to modify the traffic signal timing to ensure that there is adequate green time/walk duration for the projected pedestrian volume at the nearby intersection legs.
  5. Coordinate with the City of Rockville regarding their Twinbrook Commons West with the subject preliminary plan, Twinbrook Commons East in Montgomery County.

## DISCUSSION

### Prior, Concurrent, and Future Regulatory Actions

1. Development Plan (DP) No. G-810: A public hearing of the Planning Board was held on September 25, 2003, to make their recommendation to the Hearing Examiner and District Council to rezone from R-90 and I-4 to TS-R. The District Council granted the DP on January 13, 2004.
2. AB 660, Abandonment of Portion of Parklawn Drive: A public hearing of the Planning Board was held on February 5, 2004, to abandon 3,235 square feet of the improved right-of-way. The abandoned area is located within the Parklawn Drive's cul-de-sac in the northwest

corner of the intersection with Wicomico Avenue. DPWT held a public hearing on February 18, 2004, which was followed by County Executive recommendation, and final County Council action on April 13, 2004.

3. Twinbrook Commons West within the City of Rockville: At this time, the proposed land uses are as follows:

- 1) 59,900 square of general retail uses
- 2) 615,500 square of general office uses
- 3) 63 low-rise apartment units

These land uses would generate 750 peak-hour vehicular trips during the weekday morning peak period and 1,258 peak-hour vehicular trips during the weekday evening peak period. Mayor and Council informational worksessions were held – the most recent on March 29, 2004. The applicant will be filing a preliminary development plan application in May 2004.

4. City of Rockville's Pending Annexation Actions: In May, the applicant will be filing a Comprehensive Map Amendment, Zoning Text Amendment, and Introduction of Annexation Resolution. Worksessions by the Mayor and Council are scheduled to begin on May 10, 2004. The public hearing by the Rockville Planning Commission is scheduled in the beginning of June 2004, followed by a Mayor and Council hearing. If approved, anticipated authorization to execute the annexation could be forth coming in October 2004. If the proposed schedule occurs as anticipated, the Rockville Planning Commission would approve the first phase Use Permits in October 2004.

#### Site Location

The site is located between the Metrorail and CSX tracks, and Twinbrook Parkway.

#### External Vehicular Traffic Circulation

External vehicular accesses are proposed from:

1. Street "C" connecting to the intersection of Wicomico Avenue and Parklawn Drive.
2. "Main" Street connecting to the extension of Fishers Lane at Twinbrook Parkway.
3. Street "A" connecting to Ardennes Avenue.

On the northwest, Street "B" will not be extended to Lewis Avenue and the existing residential neighborhoods within the City of Rockville.

Internal Vehicular Traffic Circulation

The internal roadways are proposed to be private streets. The internal circulation is provided by an elongated circle connecting the Twinbrook Metrorail Station to the radial streets -- Street "B", Street "C", and "Main Street".

Non-Local Traffic Movements along Ardennes Avenue

By request of the City of Rockville, the transportation consultant prepared an origin-destination study along Ardennes Avenue to determine the percentage of non-local vehicular trips between Veirs Mill Road and Twinbrook Parkway. A license plate survey was conducted in February 2004, for all vehicles turning into or from Ardennes Avenue and at Twinbrook Parkway. The table below shows the number and percentage of observed non-local vehicular trips compared to the total vehicular trips by origin-destination and direction.

Origin From:	Destination To:	Direction along Ardennes Avenue	Weekday Peak Hour			
			Morning		Evening	
Veirs Mill Road	Twinbrook Metrorail Station	Southbound	2	3%	0	0%
Veirs Mill Road	Twinbrook Parkway	Southbound	9	15%	5	9%
Twinbrook Metrorail Station	Veirs Mill Road	Northbound	0	0%	4	3%
Twinbrook Parkway	Veirs Mill Road	Northbound	0	0%	1	1%

All vehicular trips to and from the subject site would be considered as local traffic on Ardennes Avenue.

Pedestrian Facilities

The application is proposing to provide a sidewalk network along the external and internal streets for pedestrian access for the proposed internal residential and retail development and to existing and approved, but unbuilt development adjacent to the site. The traffic signal timing at nearby intersection legs was recommended to be modified to ensure adequate green time/walk duration for the projected pedestrian volume:

1. Rockville Pike and Montrose Road/Randolph Road: North and south legs
2. Rockville Pike and Bou Avenue: North leg
3. Rockville Pike and Twinbrook Parkway/Rollins Avenue: North and south legs
4. Rockville Pike and Halpine Road: North and south legs
5. Rockville Pike and Edmonston Drive: North leg



6. Veirs Mill Road and Aspen Hill Road: East leg
7. Veirs Mill Road and Twinbrook Parkway: West Leg
8. Twin brook Parkway and Chapman Avenue: North and south legs
9. Twin brook Parkway and Parklawn Drive: North leg
10. Twin brook Parkway and Fishers Lane: North leg

#### Available Transit Service

Bus service is currently available along the following roadways:

1. Twinbrook Parkway: Ride-On routes 26 and 45
2. Parklawn Drive: Metrobus routes C-4 and J-5 and Ride-On route 10
3. Fisher Lane: Ride-On route 93
4. Ardennes Avenue: Ride-On route 44

#### Parking

Besides on-street parking, parking garages provide off-street parking in all of the residential buildings and for the Twinbrook Metrorail station users. The 1,151 existing WMATA surface parking spaces will be replaced with the same number of garage parking spaces as follows:

1. The existing 890 surface parking spaces would be replaced by 751 (or 139 less) garage spaces as part of Montgomery County's Twinbrook Commons East.
2. The existing 261 surface parking spaces would be replaced by 400 (or 139 more) garage spaces as part of the City of Rockville's Twinbrook Commons West.

#### Master Plan Roadways and Bikeways

Refer to Appendix A for the master plan designations of the nearby roadways and bikeways.

#### Site-Generated Traffic and Mitigation of Vehicular Trips

As shown in the table below, the proposed land uses generate 50 or more total peak-hour vehicular trips during the weekday morning and evening peak periods. The vehicular trips were determined from the trip-generation rates and formulas in the *Local Area Transportation Review Guidelines* for both land uses.

The table also shows the total weekday peak-hour persons trips that are used in analyzing traffic mitigation measures. Total persons trips were determined by multiplying the vehicular trips times the typical vehicle occupancy rates obtained from publications by the Urban Land Institute and the Institute of Transportation Engineers as follows:

1. 1.20 persons per apartment and office vehicular trip.
2. 1.60 persons per retail vehicular trip.

Land Use	Units or Gross Square Feet	Weekday Peak-Hour Trips			
		Vehicular Trips		Person Trips	
		Morning	Evening	Morning	Evening
Garden Apartments	424 units	173	200	208	240
High-Rise Apartments	690 units	211	247	253	296
Subtotal Residential Units	1,114 units	384	447	461	536
General Retail with Supermarket	140,000 gsf	322	1,287	515	2,060
Total Weekday Peak-Hour Trips		706	1,734	976	2,596

Under the Alternative Review Procedures for Metro Station Policy Areas, a Comprehensive Local Area Transportation Review (CLATR) is required by the Planning Board at preliminary plan of subdivision to analyze the intersection congestion levels. At the intersections to be analyzed in the CLATR, the Critical Lane Volume (CLV) of 1,800 is the congestion standard for the Metro Station Policy Areas. Queuing analysis was not required because the CLV values for the three intersections within the Twinbrook (Metro) Policy Area were less than the 1,800-congestion standard.

#### Trip Reduction Goal

Under the Alternative Review Procedures for Metro Station Policy Areas, the applicant proposed to meet the trip reduction goal of at least 50% of the weekday peak-hour trips that equals:

Weekday Peak-Hour Trips	Weekday Peak-Hour Trips			
	Vehicular Trips		Person Trips	
	Morning	Evening	Morning	Evening
Total Trips Vehicular	706	1,734	976	2,596
50% Trip Reduction Goal	353	867	488	1,298

The table below summarizes the number of weekday peak-hour *person* trips reduced as described in Sections 1 to 4 of Appendix B. The person trips are converted to weekday peak-hour *vehicular* trips based on the typical vehicle occupancy rates used above.

Trip Reduction Measure	Weekday Peak-Hour Trips	
	Morning	Evening
1. Internal On-Site Trips between Different Land Uses	46	268
2. On-Site Transit within Walking Distance	303	587
Subtotal – Reduced On-Site <i>Person</i> Trips	<b>349</b>	<b>855</b>
3. Short-Distance Trips between On-Site Land Uses & nearby Off-Site Office	46	308
4. Off-Site Transportation Demand Management	130	113
Subtotal – Reduced Off-Site <i>Person</i> Trips	<b>176</b>	<b>421</b>
Total - Reduced <i>Person</i> Trips	<b>525</b>	<b>- 1,276</b>
Total Converted back to <i>Vehicular</i> Trips	<b>417</b>	<b>938</b>

The table below summarizes the weekday peak-hour vehicular trips associated with on-site and off-site trip reduction measures discussed in Appendix B, Trip Reduction Due to the Site's Unique Land Use Mix, Size, and Location:

	Weekday Peak-Hour <i>Vehicular</i> Trips	
	Morning	Evening
On-Site <i>Vehicular</i> Trips Reduced	270 (38%)	615 (35%)
Off-Site <i>Vehicular</i> Trips Reduced	147 (21%)	323 (19%)
Total <i>Vehicular</i> Trips Reduced	417 (59%)	938 (54%)
<i>VERSUS</i> --- The 50% Trip Reduction Goal	353	867

The APF test can be satisfied because the total number of reduced weekday peak-hour vehicular trips is more than the required 50% trip reduction goal under the *FY 2004 Annual Growth Policy* Alternative Review Procedures for Metro Station Policy Areas.

#### Congestion Levels at Nearby Intersections

A CLATR was prepared dated March 2004, because the proposed land uses generate 50 or more peak-hour trips during the weekday morning and evening peak periods. The background, total, and total improved traffic conditions include the following:

1. Traffic generated from the City of Rockville's Twinbrook Commons West.
2. The redistribution of parking spaces from the west to the east side of the railroad tracks.

Based on the CLATR, the calculated critical lane volume (CLV) values at nine of the 15 nearby intersections were found to have CLV values more than their CLV/congestion standard. The site-generated traffic would be mitigated at these nine intersections by funding the identified intersection improvements described in Recommendation No. 2d with the applicant's development impact tax. Refer to Appendix C for the CLV values at all 15 intersections.

Policy Area Transportation Review/Staging Ceiling Condition

Based on the *FY 2004 Annual Growth Policy* transportation staging ceilings, the remaining capacity is 1,260 housing units and 490 jobs, as of March 31, 2004, in the Twinbrook Policy Area. Refer to Appendix D for a breakdown by type of land use.

North Bethesda Transportation Management District

Refer to Appendix E for the discussion of North Bethesda Transportation Management District.

EA:gw

Attachments

cc: Sandra Brecher  
Shahriar Etemadi  
Mary Goodman  
Dan Hardy  
Pat Harris  
Karl Moritz  
Scott Parker – City of Rockville  
Peggy Schwartz  
Mike Workosky

mno to weaver re twin brooks common east - pp 104054

In its administration of 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 travel, the Planning Board may adopt administrative guidelines requiring construction of off-site sidewalk improvements consistent with Section 50-25 of the County Code. To maintain an approximately equivalent transportation level of service at the local level considering both auto and non-auto modes of travel, the Planning Board may permit a reduction in the amount of roadway construction or traffic mitigation needed to satisfy the conditions of Local Area Transportation Review in exchange for the construction of non-automobile transportation amenities, such as sidewalks and bus shelters.

#### **TL1.1 Metro Station Policy Area LATR Standards**

In each Metro Station Policy Area, the Planning Board, in consultation with the Department of Public Works and 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.

#### **TL1.2 Potomac LATR Standards**

In the Potomac Policy Area, only the areas contributing traffic to the following intersections must be subject to 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; and (g) Bradley Boulevard at Seven Locks Road.

### **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 submit any application or take any action under *Policy Area Transportation Review* or *Local Area Transportation Review* if the applicant agrees in a contract with the Planning Board and the County Department of Public Works and Transportation to:

- meet trip reduction goals established 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 trips attributable to the subdivision, either by reducing trips from the subdivision itself or from other occupants of that policy area;
- 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) in order 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
- pay the applicable development impact tax without claiming any credits for transportation improvements.

The Planning Board must conduct a comprehensive Local Area Transportation Review for each policy area in which it approves a subdivision under this procedure and should specify for inclusion in the Capital Improvements Program any transportation improvements needed to support that subdivision.

## **TA2 Expedited Non-Residential Development Approval**

If a complete application for a preliminary plan of subdivision was filed between November 1, 1997 and October 31, 1999, an applicant for a preliminary plan of subdivision for any non-residential development need not take any action under Policy Area Transportation Review or Local Area Transportation Review if the applicant pays to the County an expedited development approval excise tax, in an amount and at times set by County law. However, the applicant must include in its application for preliminary subdivision plan approval all information that would be necessary if the requirements for Local Area Transportation Review applied. As used in **TA2**, non-residential development includes the non-residential component of a mixed-use project but does not include the residential component.

This Procedure may also be used if the applicant reapplies for a preliminary plan of subdivision for development approved under a preliminary plan of subdivision approved by the Planning Board before November 1, 1997 and the applicant has not already received a building permit for the building or buildings proposed in the revised preliminary plan. All requirements of this Policy and any other law or regulation otherwise applicable when the reapplication is filed (other than requirements imposed under Policy Area Transportation Review or Local Area Transportation Review) apply to the reapplying subdivision. Any previously approved subdivision for which funds were expended for transportation improvements necessary to meet Policy Area Transportation Review or Local Area Transportation Review requirements must not be reimbursed or credited for those expenditures.

### **TA2.1 Board Must Not Approve if Application Not Filed by Certain Dates**

However, the Planning Board must not approve a preliminary plan of subdivision, or amend a previously-approved plan, under **TA2** if:

- the application for the plan or plan amendment, or the application to use **TA2** to approve the plan or plan amendment, was filed on or after May 18, 1999; and the plan or plan amendment would allow the construction, by itself or in combination with other development already approved, of more than 100,000 square feet of non-residential development; or
- the non-residential development permitted by the plan is located in a policy area with a negative net jobs ceiling, indicating an unacceptable level of congestion created by existing traffic.

### **TA2.2 Board Must Not Approve if Non-residential and Located in Certain Policy Areas**

The Planning Board may approve a preliminary plan of subdivision under **TA2** for any residential development as if **TA2** had not been amended to exclude residential developments, and for any

## Appendix A: Master Plan Roadways and Bikeways

In accordance with the approved and adopted *North Bethesda/Garrett Park Master Plan*, the master plan designations are as follows:

1. Rockville Pike (MD 355): Between Nicholson Lane and Rockville City limits, designated as a divided six-lane major highway, M-6, with a 134-foot right-of-way and a Class I bikeway on the east side. This major highway is a north-south corridor through Montgomery County.
2. Twinbrook Parkway: Designated as an arterial roadway, A-37, with a Class II bikeway and the following:
  - a. Between Rockville City limits and Ardennes Avenue: A six-lane arterial with a 104-foot right-of-way.
  - b. Between Ardennes Avenue and Veirs Mill Road (MD 586): A four-lane arterial with an 80-foot right-of-way.

This arterial is a southwest-northeast connection between Rockville Pike and Veirs Mill Road.

3. Parklawn Drive: Between Randolph Road and the cul-de-sac 6,000 feet west of Twinbrook Parkway, designated as a four-lane arterial roadway, A-64, with an 80-foot right-of-way and a Class II bikeway. This arterial is a north-south connection between Twinbrook Parkway and Randolph Road.
4. Fishers Lane: Designated as a four-lane business street, B-1, with an 80-foot right-of-way and a planned Class I bikeway. This business street is an east-west connection between Twinbrook Parkway and non-residential developments.
5. Chapman Avenue: Between Rockville City limits and Marinelli Road, designated as a four-lane business street, B-4, with a 70-foot right-of-way. This business street is a north-south connection from Randolph Road to past Twinbrook Parkway and parallels Rockville Pike.
6. Wicomico Avenue Connector: Between Parklawn Drive and Wicomico Avenue, designated as a four-lane business street, B-9, with a 70-foot right-of-way. This business street is an east-west connection between Twinbrook Parkway and non-residential developments.

Ardennes Avenue, Bouic Avenue, Halpine Road, Lewis Road, and Thompson Avenue are local roads within the City of Rockville as follows:

1. Ardennes Avenue is a two-lane north-south connector between Twinbrook Parkway and Veirs Mill Road.

2. Bouic Avenue is a two-lane northeast-southwest connector between Rockville Pike and Chapman Avenue.
3. Halpine Road is a two-lane northeast-southwest connector between Lewis Road and Twinbrook Parkway.
4. Lewis Avenue is a two-lane north-south road parallel to Rockville Pike and on the east side of the Metrorail and CSX tracks between First Street (MD 28) and Halpine Road.
5. Thompson Avenue is a two-lane northeast-southwest connector between Lewis Avenue and Twinbrook Parkway.



Appendix B: Trip Reduction Due to the Site's Unique Land Use Mix, Size, and Location

Under the Alternative Review Procedures for Metro Station Policy Areas, the applicants proposed to meet the trip reduction goal of at least 50% of the weekday peak-hour trips. The total number of trips generated is as if each land use was located on a separate site and not located near a Metrorail station. Such is not the case for the subject development on this site with a unique mix of residential and non-residential land uses on a large scale located within walking distance to public transit facilities. The non-residential land uses include the proposed general retail uses with a supermarket and an approved nearby large office development that one of the applicant owns and controls. The nearby office development is within an easy walking distance one-block to the northeast controlled by the co-applicant, JBG – Fishers Place (or Spring Lake Park) approved on June 21, 2001, as Preliminary Plan No. 1-99043, and on September 20, 2001, as Site Plan No. 8-01025 for 715,200 square feet of general office use (Figure 1). Therefore, some of the weekday peak-hour trips could be reduced as follows:

1. Internal On-Site Trips: As a large mixed-use development, from 0% to 25% of the trips could be between the internal residential and retail land uses as indicated below:

Between On-Site Land Uses	No. of Weekday Peak-Hour Person Trips			
	Percentage		<i>Person</i> Trips	
	Morning	Evening	Morning	Evening
Residential Units: to Retail Uses	5%	25%	23	134
Retail Uses: to Residential Units			23	134
<i>Person Trip Reduction within the Site</i>			46	268

The percent of internal person trips was determined based on studies of multi-use developments by the Urban Land Institute and the Institute of Transportation Engineers and Wells and Associates' surveys conducted at Reston Town Center and Villages of Shirlington. The percent of internal trips is also consistent with those used for retail uses in the approved Traville development in North Potomac and (LCOR) White Flint Place, Zoning Application No. G-801, Pre-Preliminary Plan No. 7-04001, and Preliminary Plan No. 1-04049.

2. Non-Vehicular On-Site Trips: As a site located in a pedestrian friendly environment within walking distance to a Metrorail station and a bus transfer facility, 48% of the apartment and 16% of the retail person trips could be made by not driving single-occupant vehicles. To encourage transit use, other TDM measures include market-rates to park single-occupant vehicles and transit fare subsidies. These percents of person trip reduction are shown below and are based on WMATA's "Development-Related Ridership Survey II" and Maryland-National Capital Park and Planning Commission's *Montgomery County Trip Generation Rate Study*, dated July 2002, for the off-site offices located near Metrorail stations.

On-Site Land Uses	Between Land Uses <i>Person</i> Trips			
	Percentage		No. of Person Trips	
	Morning	Evening	Morning	Evening
Residential Units	48%	48%	221	257
Retail Uses	16%	16%	82	330
Total Trip Reduction within the Site			<b>303</b>	<b>587</b>

3. Short-Distance Site-Generated Trips Reduced to and from the nearby Office Development within the Twinbrook Policy Area: As a large mixed-use development, from 0% to 10% of the trips could be between the on-site residential and retail land uses and nearby office uses within easy-walking distance of the same policy area:

Between On-Site & Off-Site Land Uses	No. of Weekday Peak-Hour <i>Person</i> Trips			
	Percentage		<i>Person</i> Trips	
	Morning	Evening	Morning	Evening
On-Site Residential Units to Off-Site Office Use	5%	5%	23	27
On-Site Retail Uses to Off-Site Office Uses	0%	10%	0	127
Off-Site Office to On-Site Residential Units	5%	5%	23	27
Off-Site Office to On-Site Retail Uses	0%	10%	0	127
<i>Person Trips Reduced between the Site &amp; Nearby Off-Site Office</i>			<b>46</b>	<b>308</b>

The percent of internal person trips was determined based on the same studies as discussed in Section 1 above.

4. Off-Site Transportation Demand Management Measures at the Nearby Fishers Place

The possible TMD measures described in Recommendation No. 2b are proposed for the nearby off-site Fishers Place offices within the Twinbrook Policy Area. The table below shows the total number of vehicular weekday peak-hour trips generated by the approved 715,200-square-foot of office space. The vehicular trips were converted to person peak-hour trips based on 1.20 persons per vehicle as previously discussed above. For the off-site TMD measures at Fishers Place, the transportation consultant conservatively proposed to reduce the site-generated person trips by 5% for transit incentives and shuttle bus service and 2% each for carpooling/vanpooling and flex time work schedules.

Weekday Peak-Hour Trips Generated by 715,200-Square Foot Office		
Type of Trips	Morning	Evening
Total <i>Vehicular</i> Trips	1,208	1,050
Total <i>Person</i> Trips	1,450	1,260
TMD <i>Person</i> -Trip Reductions:		
Transit Incentives & Shuttle	72	63
Carpooling/Vanpooling	29	25
Flex Time Work Schedules	29	25
Sum: Reduced <i>Person</i> Trips	<b>130</b>	<b>113</b>

Appendix C: Congestion Levels at Nearby Intersections

Based on the CLATR, the table below gives the resultant calculated critical lane volume (CLV) values at nearby intersections that were found to have CLV values more than their CLV/congestion standard:

Intersection	Congestion Standard	Weekday Peak Period	Traffic Condition			
			Existing	Background	Total	Total Improved
Rockville Pike and Montrose Road - Randolph Road	1,600 North Bethesda	Morning	1,263	1,542	1,555	1,555
		Evening	1,392	1,885*	1,915*	1,883**
Rockville Pike and Twinbrook Parkway – Rollins Avenue	1,600 North Bethesda	Morning	1,010	1,428	1,498	1,421
		Evening	1,228	1,859*	2,104*	1,705**
Rockville Pike and Halpine Road	1,550 Rockville City	Morning	1,096	1,584*	1,596*	1,563**
		Evening	1,153	1,916*	1,955*	1,805**
Rockville Pike and Bou Avenue	1,600 North Bethesda	Morning	1,102	1,521	1,545	1,434
		Evening	1,153	1,937*	1,971*	1,913**
Rockville Pike and Edmonston Drive	1,550 Rockville City	Morning	1,556*	2,017*	2,031*	1,932**
		Evening	1,437	1,972*	2,006*	1,903**
Randolph Road and Parklawn Drive	1,600 North Bethesda	Morning	1,303	1,601*	1,601*	1,601**
		Evening	1,452	1,730*	1,750*	1,726**
Veirs Mill Road and Twinbrook Parkway	1,600 North Bethesda	Morning	1,785*	2,080*	2,102*	1,785**
		Evening	1,470	1,694*	1,746*	1,655**
Veirs Mill Road and Aspen Hill Road	1,550 Rockville City	Morning	1,476	1,634*	1,634*	1,634**
		Evening	1,608*	2,042*	2,067*	1,819**
Twinbrook Parkway and Chapman Avenue	1,550 Rockville City	Morning	763	1,106	1,166	1,154
		Evening	1,086	1,449	1,679*	1,448

As indicated with a single asterisk above, the CLV values are more than the intersection's CLV/congestion standard. As indicated with two asterisks above, site-generated traffic is mitigated because the CLV values in the total improved traffic condition are less than the CLV values in the background traffic condition. The identified intersection improvements should be considered for funding with the required development impact tax as discussed in Recommendation No. 2d.

The Table below gives the resultant calculated CLV values at the other nearby intersections that were found to have CLV values less than their CLV/congestion standard:

Intersection	CLV Congestion Standard & Policy Area	Weekday Peak Hour	Traffic Condition		
			Existing	Background	Total
Veirs Mill Road and Ardennes Avenue	1,550 Rockville City	Morning	957	991	996
		Evening	1,009	1,069	1,087
Twinbrook Parkway and Ardennes Avenue	1,800 Twinbrook (Metrorail)	Morning	926	1,147	1,150
		Evening	682	938	958
Twinbrook Parkway and Fishers Lane	1,800 Twinbrook (Metrorail)	Morning	754	976	998
		Evening	1,204	1,571	1,603
Twinbrook Parkway and Parklawn Drive	1,800 Twinbrook (Metrorail)	Morning	1,057	1,260	1462
		Evening	1,131	1,446	1,799
Rollins Avenue and East Jefferson Street	1,600 North Bethesda	Morning	752	1,002	1,075
		Evening	939	1,311	1,383
Edmonston Drive and Lewis Avenue	1,550 Rockville City	Morning	589	589	589
		Evening	837	837	837

Appendix D: Policy Area Transportation Review/Staging Ceiling Condition

Based on the *FY 2004 Annual Growth Policy* transportation staging ceilings, the remaining capacity is 1,260 housing units, and 490 jobs, as of March 31, 2004, in the Twinbrook Policy Area.

<b>Land Use</b>	<b>Apartments/Gross Square Feet</b>	<b>Housing Units/Jobs</b>
High-Rise Apartments	690 Apartments	690 Housing Units
Garden Apartments	424 Apartments	424 Housing Units
Total Apartments	1,114 Apartments	1,114 Housing Units
Remaining Staging Ceiling Capacity as of 3/31/04		1,260 Housing Units
Remaining Residential Capacity with Proposed Uses		+146 Housing Units
General Retail Uses	140,000 square feet	350 Jobs
Remaining Staging Ceiling Capacity as of 3/31/04		490 Jobs
Remaining Non-Residential Capacity with Proposed Uses		+140 Jobs

## Appendix E: North Bethesda Transportation Management District

This site is within the boundary of the North Bethesda Transportation Management District (TMD). If the County Council adopts the reestablishment of the annual Transportation Management Fee, the applicant of this new multi-family residential and non-residential development would have to pay the fee to the North Bethesda TMD. The pending legislation would re-implement the recommendation in the *North Bethesda-Garrett Park Master Plan* and the requirements under County Code 42A-25, Ridesharing. The applicant would be required to submit a traffic mitigation plan for the North Bethesda TMD, as described in Recommendation 2b.

The North Bethesda TMD is operated by a private nonprofit organization, the North Bethesda Transportation Action Partnership. The TMD is not an entity to join per se but instead an organization in which to participate by cooperating in:

1. Conducting the employee surveys.
2. Appointing a transportation coordinator.
3. Promoting alternative transportation modes to residents on the site.
4. Pay the annual Transportation Management Fee to the North Bethesda TMD given the County Council's renewal of TMD's enabling legislation.

The Stage II goal is to achieve and maintain the 30% non-driver traffic mitigation goal for multi-family residents, and a 39% non-auto-driver mode share for employees in the North Bethesda/Garrett Park Planning Area.