TABLE 2. ENVIRONMENTAL PLANNING STAFF RECOMMENDATIONS ON COMPENSATION CREDITS FOR PROPOSED ENVIRONMENTAL BUFFER ENCROACHMENTS FOR INDIAN SPRING PROPERTY PRELIMINARY PLAN

Totals:

Total environmental buffers on property =	99.5 ac.
Proposed permanent buffer encroachments (excluding necessary road crossings and outfalls) =	36 ac. (36 % of the buffer)
Minimum total compensation credits that are needed, as recommended by staff (136% of 36 ac.) =	49 credits. with minimum 36 credits in Northwest Branch watershed and 13 credits can be out of watershed

Proposed Compensation Measure in Northwest Branch Watershed	**Credits Proposed by Applicant**	**Credits Recommended by Staff**
1. 12.8 acres forested wetlands in buffer with conservation easement in excess of forest conservation requirements	12.8 credits (1 acre = 1 credit) Created forested wetlands: ▪ would be more extensive and ▪ would be in place sooner than if formed through natural processes.	6.4 credits (2 acres = 1 credit, per Table 1) ▪ No additional credits for wetlands creation. ▪ Wetlands would form naturally and readily if area is reforested (as occurs today in adjoining NW Branch park) ▪ Time factor in establishing wetlands (man-made vs. natural) not critical; once wetlands are formed, they will be sustained naturally. ▪ Area is in buffer and would require conservation easement under normal requirements– no credit.

Proposed Compensation Measure in Northwest Branch Watershed	Credits Proposed by Applicant	Credits Recommended by Staff
2a. Place 1.9 acres of onsite land next to buffer in conservation easement to directly offset 1.9acres of encroachment in isolated buffer.	1.9 credits (1 acre = 1 credit)	1.9 credits (1acre = 1 credit)
2b. Place 4.6 acres of land next to buffer in conservation easement.	2.3 credits (2 acres = 1 credit)	2.3 credits (2 acres = 1 credit)
2c. Plant 6.5 acres onsite next to buffers.	3.25 credits (2 acres = 1 credit)	3.25 credits (2 acres = 1 credit)
Plant forest with larger trees than forest conservation law minimums—1.5 to 2-inch caliper trees at 350 trees/acre, 5-year maintenance.	Should get more compensation credits—amount not specified. ▪ Far exceeds forest conservation law requirements ▪ Will create closed canopy forest within 10 years of planting and provide growth "above browse line of deer".	Credit already recommended for forest planting. No additional credit for planting larger trees with longer maintenance: ▪ Priority is for establishing forest, not how long it takes to establish forest.
3. Plant 3.5 acres in existing M-NCPPC parkland.	1.75 credits (2 acres = 1 credit)	1.75 credits (2 acres = 1 credit) only if planted to park standards.
4. Plant 0.9 acres in onsite buffer	0.45 credit (2 acres = 1 credit)	0.45 credit (2 acres = 1 credit)
5. On-site invasive plant control – 5 acres along Bel Pre Creek for 3 years	5.0 credits (1 acre = 1 credit)	No credit -- Forests have only low non-native plant occurrence. Also, some proposed areas will be forest planting areas, which require non-native plant controls, if needed, by law during maintenance period.
6. Invasive plant control in	14.0 credits (1 acre = 1 credit)	5 credits (2 acres = 1 credit) only if controls are for life of

Proposed Compensation Measure in Northwest Branch Watershed	Credits Proposed by Applicant	Credits Recommended by Staff
M-NCPPC Northwest Branch Park – 14 acres for 3 years. Applicant also proposes to conduct experimental programs to determine effectiveness of control methods for various invasive species.		golf course and trees and shrubs are planted to close gaps in forest canopy. ▪ Credit ratio is the same as for forest planting. ▪ Staff has identified about 10 acres of forest (6 acres in one area, 4 acres in another) with moderate to heavy non-native plant problems that would benefit from controls. ▪ Most intensive controls in the first year; program of monitoring and spot controls in following years. ▪ There may be no known effective way to control certain invasive species (e.g., *Microstegium*). Controls for some species may have adverse affects on other species in the ecosystem (e.g., long-term, continuous herbicide use over large areas). ▪ Experimental programs not appropriate for credit for compensation; benefits to ecosystem unknown.
7. Plant within existing riprap along Bel Pre Creek onsite.-- 1100 linear feet of streambank	1.0 credit (unknown credit ratio) ▪ Consistent with DEP objectives for watershed restoration. ▪ Adds some near-stream native vegetation to help shade riprap and provide some food/cover to stream community	0.17 credit -- If use 1200 linear feet (1200 linear feet x 25 ft. x ¼) only if there is a minimum of 25 ft. wide no-mow or forest planting area along same streambank as riprap: ▪ Not establishing forest, or forest already counted, and vegetation cover from plant stakes will be small, so credit is ¼: 1.

Proposed Compensation Measure in Northwest Branch Watershed	Credits Proposed by Applicant	Credits Recommended by Staff
		▪ Riprap already exists and provides stream bank stabilization. ▪ Amount of vegetation cover that can occur will depend on how tightly packed current riprap is. If there is not many spaces between riprap, there will not be much planting.
8. Stream restoration in 2 areas: a. 700 ft. in Bel Pre Creek—instream rock vanes b. 3000 ft. of stream improvement (from plan drawing) on 2 onsite tributaries – add native grass/shrubs, no mow areas, take out stones. c. 100-150 ft. eroded channel -- divert stormwater flows away from channel, fill channel with soil and plant.	5.0 credits (unknown credit ratio) ▪ Consistent with DEP objectives for watershed restoration ▪ Improve stream habitat ▪ Provide some shade and cover for stream channels ▪ Stabilize some eroded conditions on the smaller streams	1.1 credit if : there is a minimum of 25 ft. wide no-mow or forest planting area along each bank of restored section of stream (3700 linear feet x 50 ft. x ¼). No additional credit since this is not establishing forest, or forest is already counted, and vegetation cover from plant stakes will be small. No credit for work on 150 ft. eroded channel: ▪ Not a stream, no baseflow; created from uncontrolled stormflows from impervious surfaces. ▪ DPS requires diversion of stormflows away from channel ▪ Without stormflows, channel will not erode further or carry erosive flows to Bel Pre Creek. Over time, vegetation will establish since it is in existing forest.
9. 5 acres of SWM offsite controls to offset location of SWM facility #1 in 1.3 acres in buffer	1.3 credits (1 acre = 1 credit)	1.3 credits (1 acre = 1 credit)

Proposed Compensation Measure in Northwest Branch Watershed	Credits Proposed by Applicant	Credits Recommended by Staff
TOTAL CREDITS PROPOSED IN NORTHWEST BRANCH	42.3 CREDITS PER APPLICANT	23.6 CREDITS PER ENVIRONMENTAL PLANNING STAFF
TOTAL CREDITS NEEDED (NORTHWEST BRANCH MEASURES ONLY)	36 CREDITS	36 CREDITS

could naturally revert back to wetland conditions. Many of these buffer areas have hydric soils, which naturally retain water. So, while a created wetland may establish wetland conditions sooner, it would not necessarily establish more or higher quality wetlands than would be created through the natural process. For buffer compensation purposes, staff does not give credit to measures that establish a natural feature sooner than natural processes would achieve the desired enhancement.

- The applicant believes that extra credits should be given to planting forest with more and larger trees than is required under the forest conservation law. Staff disagrees with the applicant. For buffer compensation purposes, staff prioritizes the ultimate establishment of forest land over how quickly the forest can be created. Therefore, staff does not believe that extra credit should be given to planting larger and more trees beyond what is currently stipulated in the forest conservation law. Under the law, the ability to establish forest could be achieved by making the area available for forest planting for offsite projects or as a forest bank. Alternatively, if this area is left alone, it would naturally regenerate into forest habitat.

- Staff and the applicant disagree on assigning credits to measures that remove and control non-native invasive plants in existing forest. Much of the forests within the county have some level of invasive plant growth, particularly forests in the down-county area. Some forest stands have a relatively low level of invasive plant growth, the forest habitat quality is not degraded, or the invasive plants can be easily removed. Other forest stands have high levels of invasive plant growth, and the forest habitat values and functions are significantly impaired because of the presence of these invasive species. There are also some invasive plant species for which there is no known method to effectively eliminate and control their growth because these species can withstand a wide range of physical conditions and are so prevalent in the landscape.

The applicant believes that each acre of forest that is proposed for invasive plant control should receive 1 compensation credit. The applicant identified 5 acres of forest onsite and 14 acres of forest on the adjoining Northwest Branch stream valley park.

Staff disagrees and believes that compensation credits should be based on how degraded the forest habitat is today due to the presence of invasive species, how much improvement could occur in the habitat with invasive plant removal and control, how much control is realistic given the prolific nature of some of these invasive species, and the level of effort that would be needed to remove and control these species.

Staff assigned no compensation credit for 5 acres of onsite forest along Bel Pre Creek because it has a relatively low level of invasive plant growth and the habitat is currently relatively healthy.

In Northwest Branch stream valley park, the M-NCPPC forest ecologist and wildlife biologist conducted a preliminary evaluation of areas that would benefit from invasive plant control. Staff identified 10 acres of forested parkland with moderate to heavy invasive plant growth that staff believes would benefit from long-term control measures. Staff would assign 5 credits to this measure, which is at a rate of 2 acres = 1 credit. This is the same credit ratio as the ratio assigned to planting forest on land that is already protected.

It should be noted that staff believes that the *Microstegium* species (a non-native, annual, ground-cover plant) is so persistent and prevalent that there is currently no known effective way to control the species and any control measures would involve such intensive herbicide use in environmentally sensitive areas that adverse affects could occur on other species in the ecosystem. Therefore, staff would not recommend control of this species at this time.

- The applicant proposes several measures that involve stream channel or stream bank restoration or enhancement. These include planting within existing riprap along some portions of the Bel Pre Creek stream bank, placing instream rock vanes, creating no-mow areas and planting native grasses and shrubs along specific stream bank segments, and restoring stream banks that currently are covered in stones. The applicant proposes specific credits, but does not specify how the credits are derived. These projects are consistent with Montgomery County Department of Environmental Protection's objectives for watershed restoration, improve stream habitat some segments of streams, and stabilize some eroded conditions on parts of smaller streams.

  Staff agrees that there is some environmental benefit to most of these proposed measures. But they cannot be directly equated to the loss of environmental buffer lands. The value of these measures are related narrowly to stream habitats, and

not other habitats (e.g., forest, wetlands, floodplains) that may be found environmental buffers. Therefore, staff assigns these measures low compensation credits.

- Staff assigns low compensation credits to measures proposed outside the Northwest Branch watershed. This is because such measures deviate greatly from staff's typical requirement for compensation measures to be located near the encroachment area. Conceptually, if out-of-watershed measures are acceptable to the Planning Board, staff would allow forest retention and forest planting to be counted as compensation measures, but at a low ratio. The applicant has indicated that enough measures may be identified to meet staff's recommended credits allowed for out-of-watershed compensation measures.

In conclusion, staff believes that the applicant's proposed measures does not meet the criteria for full compensation either using staff's general practice of 2:1 land replacement rate or staff's more flexible, two-step method of defining compensation credits. Staff's analysis using the two-step method shows that the applicant's proposed measures equates to 23.6 credits within Northwest Branch watershed,, which would compensate for only 23.6 of the 36 acres of environmental buffer encroachments.

The applicant disagrees and believes that the proposed compensation measures exceed staff's required 36 credits in the Northwest Branch watershed to fully compensate for the entire 36 acres of buffer encroachments.

D. Request for Waiver from Allowed Single Family Attached Unit Mix in the R-200 Zone

Section 59-C-1.62 of the Montgomery County zoning ordinance states:

"The maximum percentage of one-family attached or semidetached dwelling units, townhouses, or a combination, thereof, in a subdivision is:

R-200 and R-150 Zones: 40%;
R-90 Zone: 50%;
R-60 Zone: 60%.

The balance must be one-family detached dwelling units. The planning board may, however, approve a development in which up to 100 percent of the total number of units consists of one-family attached dwelling units, one-family semidetached dwelling units, townhouses, or a combination thereof, upon a finding that a proposed development is (1) more desirable from an environmental perspective than development that would result from adherence to these percentage limits, and (2) compatible with adjacent existing and approved development."

The subdivision proposes 226 detached lots and 339 townhouses. This results in a 60 % mix of townhouses and requires a waiver of the 40% required mix of attached units.

Generally, staff can make an environmental finding for a subdivision if the subdivision protects the full environmental buffers and also provides natural areas (e.g., forest retention or forest planting) that lie outside buffers. However, given that staff believes the proposed subdivision does not even meet the basic requirements of the Environmental Guidelines and the forest conservation law for protecting environmental buffer areas or for adequate compensation of buffer encroachments, staff cannot conclude that the proposed mix is environmentally better than a subdivision that uses the required unit mix.

E. Tivloli Lakes Boulevard Extension

The extension of Tivoli Lakes Boulevard requires the crossing of Bel Pre Creek. The applicant proposes to cross the stream with a 60-foot wide arch culvert. If the road extension is necessary, staff believes the proposed structure is acceptable. Staff recommends that at the site plan stage, additional measures are used to further reduce forest clearing, steep slopes disturbance, and stream impacts.

F. Forest Conservation

There are 31.7 acres of existng forest on the site. The applicant proposes 3.8 acres of forest clearing, including 0.6 acres of offsite forest. To meet the Forest Conservation Law requirements, 21.50 acres of forest planting are proposed onsite and will be placed in Category I conservation easements. Additional forest planting is proposed to help compensate for the proposed buffer encroachments (see above discussion). The preliminary forest conservation plan complies with the Forest Conservation Law.

TRANSPORTATION

Site Location and Vehicular Access

The proposed primary internal roadway network consists of Indian Spring Access Road, Tivoli Lake Boulevard, and Foggy Glen Drive. The three streets intersect at a public square in the center of the site. Fifteen other public streets, six of which terminate at cul-de-sacs, and a network of private alleyways provide access to the residential units. Each unit has parking accommodations for two vehicles and a few visitor parking lots are provided on the site. Narrow, primary environmental roadway sections, the Public Square, and traffic circles are provided to discourage non-local traffic through the neighborhoods.

Transportation planning staff recommends the proposed site have two primary points of access, and one tertiary:

1. Primary access from the Layhill Road - Currently, Indian Spring Access Road is a private drive that connects Layhill Road to the existing Indian Spring Country Club's parking area. Indian Spring Access Road is buffered from the residential neighborhoods by physical barriers, and different vertical grades. For this reason, it cannot be connected to the adjacent residential streets of Wagon Way, and Middlevale Lanes on the northeast, and Middlebridge Drive to the southeast. The existing Indian Spring Access Road will be upgraded to a primary residential roadway with recommended improvements to provide two approach lanes at the intersection with Layhill Road. The available right-of-way varies from 60.5 feet to 70 feet. Since the existing property width does not meet minimum right-of-way width requirements, DPWT will accept a road built to environmental primary residential standards with a sidewalk on one side, and minor storm water management structures, within the available right-of-way, provided the maximum grade is limited to eight percent, and core samples show the road can be constructed to DPWT standards. In addition, a detailed storm drain, and/or flood plain study must be reviewed, and approved by DPWT, and 35 feet of additional right-of-way along Indian Springs Access Road, at Layhill Road is provided for the eastbound lane.

2. Primary access from the Tivoli Lake Boulevard and Randolph Road intersection -Tivoli Lake Boulevard currently provides access to 527 residential units in the Tivoli Community. It is consistent with primary residential roadway standards with a 36-foot paving width. It terminates at the southern property line of the proposed site, near Hugo Circle. Parking on Tivoli Lake Boulevard is prohibited in order to allow a path for emergency vehicles. Transportation planning staff has recommended a condition in this memorandum to extend Tivoli Lake Boulevard into the proposed site to provide a needed second point of primary access. This condition is in accordance with the Kensington-Wheaton Master plan recommendations for this connection if the subject site is developed.

   The proposed road should be tapered from the existing road section to a closed section of the road that is considered for an environmental primary residential roadway design that includes 26 feet of pavement and a pathway on the west side. This is to reduce the limit of disturbance as the road crosses the Bel Pre Creek.

3. Tertiary access from the existing terminus of Foggy Glen Drive – Foggy Glen Drive currently terminates at the northern property line of the proposed site. It is a tertiary residential roadway that does not make a direct connection to Bonifant Road because no nearby roadways cross the Matthew Henson Greenway. It provides a circuitous connection to Layhill Road via Wagon Way, Huxley Cove Court/Sullivan Lane, or Middlevale Lane. Foggy Glen Drive is recommended to continue onto the proposed site as a secondary residential roadway with a 70-foot wide right-of-way, a 26-foot wide paving section, and sidewalks on both sides.

The three site access points are recommended for the following reasons:

a. According to the 1989 *Master Plan for the Communities of Kensington-Wheaton* (page 98):

> "*Indian Spring Access Road* (P-13) provides access to the Indian Spring Country Club. If and when redeveloped with another use, the Country Club should be provided with access from Layhill Road and Randolph Road. Access from Layhill Road should be provided by reconstructing the existing access road to the typical primary residential street standard. Access from East Randolph Road should be provided by extending the primary street named Tivoli Lake Boulevard. The internal street network of any such development should be continuous but designed with the idea of preventing a cut-through traffic movement between Layhill Road and Randolph Road."

The description of Parcel # 8 Indian Spring Country Club (page 51) also states this track should provide bicycle and pedestrian access, and a primary road is needed to provide access to arterial roads.

b. The proposed 568 single-family detached and attached units will generate approximately 400 peak-hour trips, in addition to the existing golf facility traffic. The proposed Indian Spring Access Road is designated as a primary residential street. According to Section 49-34(d) of the Montgomery County Code, a primary residential street, serves as a principal outlet to major highways, or arterial roads from a residential development that has at least 200 housing units. According to the master plan, a primary residential street is a local traffic collector for vehicles traveling between higher-level streets (Page 89). Transportation planning staff recommends Indian Spring Access Road as a primary residential because the master plan designates its as such, it is good planning practice, and because the proposed site consists of twice the minimum residential units that a primary residential street minimally serves.

c. Tivoli Lake Boulevard provides the additional primary access road that conforms to the master plan. It provides direct routes to travel between adjacent neighborhoods without using arterial routes, potentially reducing traffic on major highways. It provides an alternative primary route for emergency response from the south, and could potentially reduce the response time of emergency fire, rescue, and medical vehicles. It has the additional benefit of providing an alternative primary access route for the 527 current residential units in the Tivoli Community.

d. The Indian Spring Access Road-Tivoli Lake Boulevard connection as designed with the public square, and traffic circles provides the benefits of a "typical" primary residential that normally collects traffic from subdivisions, and connects

them to two major roadways, while inhibiting cut-through traffic. Additionally, it provides a contiguous route through two neighborhoods where many streets are disjointed due to physical barriers.

e. The Foggy Glen Drive access provides interconnectivity between the proposed site, the Tivoli Community and the neighborhoods located to the north and northwest of the site. It is a minor access point for a minimal number of site-generated trips traveling within the neighborhoods. It provides a secondary route for emergency response from the north, and could potentially reduce the response time of emergency fire rescue, and medical vehicles.

Citizen Input

The Tivoli Community consists of more than 500 homes with primary access provided on Tivoli Lake Boulevard. Using a circuitous route by means of Hutchinson Lane/Way to Middlevale Lane, or Briggs Road provides a secondary access. More than thirty letters from residents of Tivoli were transmitted to the transportation planning staff regarding this preliminary plan. All of the letters expressed opposition to the extension of Tivoli Lake Boulevard into the Indian Spring development. Collectively, the letters declared the increase in traffic created by allowing the extension would have the following affects on their community:

- Increase risk to children accessing tot-lot and bus stops
- It will divide community
- Increase congestion at already congested Randolph Road
- Impact environmental area
- Increase speed, pollution, and crime
- Impede emergency response
- Intensify parking issues on tertiary roads
- Diminish property value
- Promote cut-through traffic
- Diminish diversity

* Staff also received a letter from Knopf and Brown dated February 25, 2005. Due to the late arrival of this letter, staff was not able to respond in this staff report. The letter is included as Attachment 4

Staff's Position

In response to the citizen's input transportation planning staff offers the following:

- Accident increases are not directly proportional to an increase in traffic volumes. Illegal or errant driver or pedestrian behavior or substandard road conditions cause the majority of accidents.

- The extension to Tivoli Lake Boulevard will slightly increase the critical lane volume at its intersection with Randolph Road. The results are well below the congestion standards for the Kensington-Wheaton Policy Area. The dual primary access points will disperse traffic throughout the area, and offers flexibility in route choices to the proposed development, as well as the Tivoli Community.

- Parking on the existing portion of Tivoli Lake Boulevard is currently prohibited, therefore there should be no intensity change in parking conditions on the adjacent side streets.

- Traffic circles, the public square and reduced environmental residential roadway cross sections are anticipated to discourage cut-through traffic.

- Alternative access points provide flexibility for emergency services, and could potentially increase response time.

Local Area Transportation Review (LATR)

A new traffic study was submitted to determine the impact of this application on the local transportation network, and was reviewed under the *Local Area Transportation Review (LATR) Guidelines*, adopted and approved July 1, 2002.

The proposed development is expected to generate a total of 342 and 406 additional peak hour trips during the morning and evening weekday peak periods, respectively. These site-generated trips were added to the existing and background traffic (from approved but unbuilt developments) to form the total future traffic. All traffic was distributed and assigned to the eight intersections in the study area according to the guidelines. The critical lane volume (CLV) results were then compared to the applicable congestion standards as determined by the Policy Area that the intersections were in. Table 1 shows the intersection congestion standards, and the critical lane volume (CLV) results for existing, background and two total future traffic conditions: 1) Total future traffic without Tivoli Lake Boulevard as an access point, and 2) Total future traffic with Tivoli Lake Boulevard as an access to the development.

Planning staff concludes that the applicant's site generated traffic does not exceed the congestion standards for any of the intersections analyzed and the development will not require trip mitigation agreements, non-automobile transportation amenities, or physical road improvements as a required means to relieve local congestion. This conclusion holds true with or without the Tivoli Lake Boulevard access point and with or without the widening of the westbound approach at the intersection of Layhill and Indian Spring Access Roads. But for the reasons indicated above, the recommended connections are crucial for a safe and efficient operation of traffic in the area if this plan is to be approved.

Table 1 – Results of Intersection Capacity Analysis

Intersection	Congestion Standard[1]	Peak Hour	Traffic Condition			
			Existing	Background	Total w/o Tivoli Lake Blvd[2]	Total w/ Tivoli Lake Blvd
Layhill Road & Bonifant Road	1,550 Aspen Hill	Morning	1,391	1,404	1,442	1,442
		Evening	1,361	1,371	1,400	1,400
Layhill Road & Indian Spring Road **Add WB right**	1,650 Kensington /Wheaton	Morning	1,108	1,117	1,332	1,136
			---	1,117	1332	1136
Layhill Road & Indian Spring Road **Add WB right**	1,650 Kensington /Wheaton	Evening	770	779	1,056	852
			---	779	1,056	852
Layhill Road & Glenallen Avenue	1,800 Glenmont	Morning	882	891	962	898
		Evening	1,171	1,183	1,278	1,190
Layhill Road & Georgia Avenue	1,800 Glenmont	Morning	952	965	1,067	975
		Evening	1,059	1,069	1,121	1,074
Georgia Avenue & Randolph Road	1,800 Glenmont	Morning	1,490	1,502	1,585	1,539
		Evening	1,489	1,496	1,535	1,590
Randolph Road & Glenallen Avenue	1,800 Glenmont	Morning	1,532	1,533	1,548	1,596
		Evening	1,100	1,101	1,108	1,164
Randolph Road & Tivoli Lake Boulevard	1,650 Kensington /Wheaton	Morning	991	992	994	1,159
		Evening	865	865	870	921
Randolph Road & Kemp Mill Road	1,650 Kensington /Wheaton	Morning	1,193	1193	1202	1202
		Evening	1,577	1,577	1,582	1,582

1. Congestion Standards for the Aspen Hill, and Kensington/Wheaton Policy Areas for preliminary plan applications accepted before July 1, 2004.
2. Condition does not meet the recommendation of the Master Plan for two points of primary access.

The applicant's transportation engineer submitted a traffic signal warrant study to SHA to determine if installation of a traffic signal is warranted for the intersection of Indian Spring Road and Layhill Road. If a one-lane westbound approach on Indian Spring Access Road is provided, without the connection to Tivoli Lake Boulevard three warrants in the *Manual on Uniform Traffic Control Devices* may be satisfied:

1. Interruption of continuous traffic

2. Four-hour volumes

3. Peak-hour volume.

However, if a one-lane westbound approach on Indian Spring Access Road to Layhill Road is provided, with the connection to Tivoli Lake Boulevard, only two warrants in the *Manual on Uniform Traffic Control Devices* may be satisfied:

1. Four-hour volumes

2. Peak-hour volume

State Highway Administration (SHA), who has the sole authority to approve a traffic signal at this location, has reviewed the traffic study, and recommends:

1. The site access scenario that includes a connection to Tivoli Lake Boulevard will better disperse site traffic to the surrounding roadway network, and

2. The traffic consultant's recommendation to widen westbound Indian Spring Access Road by providing two approach lanes for the westbound Indian Spring Road at Layhill Road to lessen the need for a traffic signal.

Transportation staff concurs with SHA's position that the access scenario that includes a connection to Tivoli Lake Boulevard better disperses site traffic to the surrounding roadway network. This connection is needed to meet the requirements of the master plan for a continuous primary residential roadway for the proposed development, and the existing surrounding neighborhood. Transportation planning staff also recommends the applicant design and install a traffic signal at the intersection of Layhill Road and Indian Spring Access Road if SHA determines the need for a traffic signal at this location. In addition, Transportation Planning staff supports the widening of the westbound Indian Spring Access Road approach at the intersection with Layhill Road.

Pedestrian Facilities

The proposed preliminary plan will not adversely affect the existing pedestrian access. The applicant will construct new sidewalks and pathways throughout the development.

Master Plan Roadways, Bikeways, and Trails

In accordance with the approved and adopted 1989 *Master Plan for the Communities of Kensington-Wheaton*, the master plan designations are as follows:

- Layhill Road (MD 182) is designated as a four-to-six-lane divided, major highway, (M-16), with a 120-foot right- of-way with an existing Class II bikeway on both sides. The *Countywide Bikeways Functional Master Plan* recommends bike lanes, BL-18, between Georgia Avenue (MD 97) and Norbeck Road (MD 28).

- Tivoli Lake Boulevard (at the southern end), and Indian Spring Access Road (at the western end) is designated as a 36-foot wide primary residential street, (P-13), with a 70-foot right-of-way. The master plan specifically states (On page 98): "*If and when redeveloped with another use, the Country Club should be provided with access from Layhill Road and Randolph Road. Access from Layhill Road should be provided by reconstructing the existing access road to the typical primary residential street standard. Access from East Randolph Road should be provided by extending the primary street named Tivoli Lake Boulevard. The internal street network of any such development should be continuous but designed with the idea of preventing cut-through traffic movement between Layhill Road and Randolph Road.*"

- Alderton Road is considered a non-master-planned primary residential street. The segment extending southwards from the Matthew Henson Greenway was not identified in the 1989 *Master Plan for the Communities of Kensington-Wheaton* as a primary residential street. Alderton Road connects into the designated primary residential street, (P-13), Tivoli Lake Boulevard or Indian Spring Access Road. Five years later in the 1994 *Aspen Hill Master Plan*, Alderton Road was designated as a primary residential street north of the Matthew Henson Greenway.

- Georgia Avenue (MD 97) is designated as a six-lane divided, major highway, (M-8), with a 120-foot right-of-way. Georgia Avenue Busway was recommended within the right-of-way running between the Glenmont Metrorail Station and Spartan Road in Olney. The Busway includes the *Countywide Bikeways Functional Master Plan*'s shared use path, SP-29, between Glenmont Metrorail Station and MD 108.

- Randolph Road is designated as a six-lane divided, major highway, (M-17), with a 120-foot right-of-way and an existing Class I bikeway. The *Countywide Bikeways Functional Master Plan* recommends a shared use path, SP-26, between Veirs Mill Road and Kemp Mill Road/Northwest Branch Trail.

In accordance with the approved and adopted 1994 *Aspen Hill Master Plan*:

- Alderton Road is designated as a primary residential street, (P-15), between Bonifant Road and Matthew Henson Greenway (former Rockville Facility) with a 70-foot right-of-way.

- Bonifant Road is designated as a two-lane arterial, (A-40), with an 80-foot right-of-way and an existing Class II bikeway. The *Countywide Bikeways Functional Master Plan* recommends bike lanes, BL-17, between Layhill Road and Good Hope Road.

The roadways not designated in either master plan are as follows:

- Foggy Glen Drive is considered a tertiary residential street with a 50-foot right-of-way.

Policy Area Review/Staging Ceiling Analysis

The site is located within the Kensington/Wheaton Hill Policy Area, which had a remaining capacity of 2,770 jobs and excess of 2,524 housing units as of June 30, 2004, when the preliminary plan application was considered complete

MASTER PLAN

The 1989 Approved and Adopted Kensington-Wheaton Master Plan confirmed the existing R-200 and R-90 zones. The master plan is silent on the type of development that could or should occur on the Indian Spring site. The Plan does recommend for the extension of Tivoli Lake Boulevard into the site from the south and connecting it with the existing Indian Spring access road to provide a primary road link from Randolph Road to Layhill Road (MD 182). The master plan specifically recommends that this road network be designed to prevent "cut-through" traffic movement between Layhill Road and Randolph Road. (See master plan excerpt)

The 1989 master plan recommended that the Indian Spring Country Club property "be the subject of a special study should this facility ever become available for redevelopment." The staff did not conduct a special study apart from the review and analysis of the pre-preliminary plan that was submitted by the applicant and presented before the Planning Board in 2004. The extensive review and analysis that was done for the pre-preliminary plan became the special study that the master plan recommended. The information submitted for the pre-preliminary plan review -- NRI/FSD, the traffic analysis, input from the community and other agencies--was more detailed than would have been compiled and analyzed in a separate study. Staff therefore believes that the pre-preliminary plan review addressed the need for a special study recommended in the master plan.

PARKS

The Countywide Park Trails Master Plan that was approved by the Planning Board in 1998 provides for a hard surface trail from Alderton Drive south to Wheaton Regional Park. This trail has major regional significance by linking the Matthew Henson Trail to the Northwest Branch trail system thereby ultimately enabling users to travel on bicycle or foot along the entire Northwest Branch Stream Valley Park hard surface trail system to the Master Planned Matthew Henson Trail and then west to connect with the Rock Creek Trail system. This trail connection is recommended in the Plan to be located outside the Northwest Branch stream valley to best protect the natural resources. The Trails Plan envisioned the widening of Northwest Branch Stream Valley Park when Indian Spring Golf Course developed in order to allow environmentally sensitive construction of the trail. Given the Applicant's desire to preserve the golf course, it is recommended that the trail be routed through a greenway within the community as proposed by the Applicant.

This subdivision offers an ideal opportunity to link the proposed community, as well as existing nearby residents, to Northwest Branch Stream Valley Park and the master planned natural surface trail that lies on the east side of Northwest Branch. Opportunities for these connections include: 1) dedication to M-NCPPC of land adjacent to Bel Pre Creek that would sufficiently widen existing parkland along the creek and allow community access from the southern portion of the development and adjacent neighborhoods to Northwest Branch parkland, and 2) establish a natural surface trail from the northern portion of the development to the master planned natural surface trail along the east side of Northwest Branch.

The plan, as proposed, satisfies the goals of the Park Planning and Resource Analysis Unit. The requirements of the Unit, cited above, can be achieved through conditions of approval.

SCHOOLS

Montgomery County Public Schools (MCPS) have identified the need for an elementary school site in this area of the County. The Indian Spring development, as proposed, contributes to, but does not generate the need for the school. As such, the applicant has been providing engineering support to assist MCPS in locating a suitable school site. The site search has centered on a property located at Queensguard Road and Layhill Road and involves coordination with county-owned property. The engineering feasibility study continues for this site. At the time of this report, MCPS has not approved the site as a suitable location for a public school. MCPS has verbally informed staff that there may be a problem with the Queensguard site that involves recently discovered potential for wetlands, and will be further evaluating the possibility of wetlands on the site.

Given this recent turn of events, MCPS may request that a portion of the Indian Spring Property be held in reservation for an elementary school site. At this time, staff has received no written request from MCPS for reservation and staff does not know the location that they may wish to reserve on the property. Staff anticipates that MCPS staff will be present at the public hearing to express their needs.

CONCLUSION:

Section 50-32 of the Montgomery County Subdivision Regulations contains special provision for environmentally sensitive areas. This section gives the Planning Board the authority to restrict subdivision of land because of stream valleys and floodplains, unsafe land, trees, forest and sensitive areas. Section 50-32 (c) specifically states that the Planning Board has authority to restrict the subdivision of land to achieve objectives of Chapter 22A relating to conservation of trees and forest resources, and to protect environmentally sensitive areas. The Board's "Environmental Guidelines for Management of Development in Montgomery County" describe the typical requirements for protection of environmentally sensitive areas.

The proposed development includes unprecedented impacts to environmentally sensitive areas (stream buffers and floodplains). The applicant has proposed environmental compensation measures to offset these impacts, but staff does not believe they are sufficient to justify the amount of encroachment proposed. Staff cannot make the finding that the sensitive environmental features on the Indian Spring Property will be adequately protected by the proposed development and, therefore, recommends denial of the application.

Attachments

Attachment 1 – Vicinity Map
Attachment 2 - Neighborhood Development Map
Attachment 3 – Preliminary Plan
Attachment 4 – Norman Knopf
Attachment 5 - Correspondence