Attachment A

M-NCPPC

MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING

THE MARYLAND-NATIONAL CAPITAL
PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20910-3760
301-495-4500, www.mncppc.org

MCPB AGENDA
ITEM # 8
DATE: 3/3/05

MEMORANDUM

DATE: February 25, 2005

TO: Montgomery County Planning Board

VIA: Rose Krasnow, Chief
Catherine Conlon, Acting Supervisor
Development Review Division

FROM: Richard Weaver, Planner Coordinator (301) 495-4544 RAW

REVIEW TYPE: Preliminary Plan Review
APPLYING FOR: Preliminary plan of Subdivision for 565 one family residential lots (including 71 MPDU's), and an 18-hole golf course and clubhouse

PROJECT NAME: Indian Spring
CASE #: 1-04108
REVIEW BASIS: Chapter 50, the Montgomery County Subdivision Regulations

ZONE: R-90 and R-200
LOCATION: Located on the east side of Layhill Road (MD 182) approximately 100 feet north of Randolph Road.

MASTER PLAN: Kensington-Wheaton
APPLICANT: Winchester Homes
HEARING DATE: March 3, 2005

STAFF RECOMMENDATION: Denial

Staff recommends denial of the preliminary plan because the proposed subdivision does not conform to the priorities for protection and enhancement of environmental buffers established in the Planning Board's "Guidelines for Environmental Management of Development in Montgomery County" and the Montgomery County Forest Conservation Law. Consistent with this finding, staff has no basis to conclude that the proposed subdivision has an attached unit mix that is "more desirable from an

environmental perspective than development that would result from adherence" to the 40 percent maximum single family attached unit mix.

It is staff's opinion that the proposed subdivision has significant and excessive encroachments into environmental buffers. The subdivision proposes to encroach in 36 acres out of 99.5 acres of environmental buffers (36 % of the site's buffers). This is the largest environmental buffer encroachment that has been requested to date. For comparison purposes, the requested buffer encroachment is more than twice the buffer encroachment in the recently approved Fairland Golf Course Community Project (16 acres of encroachment in 104 acres of environmental buffers, or, 15 % of the buffers). Some areas of encroachments are not just along buffer edges, but extend all the way to the stream channel. To reduce buffer encroachments to a level suitable in scale to encroachments approved in other plans, staff believes this subdivision would need to be substantially changed, including a significant reduction in the number of dwelling units proposed and/or the possible loss of or significant reduction in the golf course component.

At the request of the applicant, staff has examined the proposed on-site and off-site compensation measures offsetting the proposed buffer disturbance. Staff notes that both the applicant and staff have made significant efforts to identify measures to meet full compensation for the buffer encroachments. However, staff believes that the proposed encroachments are of such a large magnitude that the applicant's proposal can compensate for only 23.6 acres out of the 36 acres of encroachments. The plan would have to substantially change to either reduce buffer encroachments by 12.4 acres or identify more compensation measures.

PREVIOUS PLANNING BOARD ACTION:

On March 11, 2004, the Pre-Preliminary Plan for the proposed development was brought before the Planning Board for a decision pursuant to § 50-33A of the Subdivision Regulations. At the hearing, the applicant requested that the Planning Board make binding conditions of approval with respect to the Adequate Public Facilities ordinance as well as regulations governing environmental buffers. The Board was not able to make decisions on all issues requested by the applicant due to a lack of information. On June 30, 2004, the Planning Board issued a written opinion setting forth its findings of fact and conditions of approval. (See Attachment 1 – Pre-Preliminary Opinion)

With regard to the Adequate Public Facilities, the Planning Board deferred a decision on the extension of Tivoli Lake Boulevard to the preliminary plan stage. Since many other transportation components hinged on this road extension, the Board could not make the requested adequate public facilities findings for transportation. The Board was of the mind that if Tivoli Lake Boulevard were extended, certain road improvements at the intersection of Georgia Avenue and Randolph Road would be required, otherwise the applicant would pay a pro-rata share of future road improvements by SHA to that intersection. The Board also agreed that if Tivoli Lake Boulevard was extended, it would

need to be built to primary road standards. In addition, traffic calming on Tivoli Lake Boulevard would be required and a traffic signal would need to be installed at the entrance on Layhill Road if SHA traffic signal warrants supported it. Finally the Board supported the requirement for bike racks if Tivoli Lake Boulevard was extended. Similarly, the Board did not have adequate information to make a determination on the connection to Foggy Glen Drive to the north.

The Planning Board was also asked to make binding conditions on the environmental buffer encroachment as shown on the pre-preliminary plan. The Board determined they did not have enough information to make a judgment on the amount of buffer encroachment that they would accept. The Board did find that the full buffer is required by the current guidelines and any encroachment should be offset by compensating environmental mitigation measures. A decision on the buffer encroachment was deferred to preliminary plan. The Board instructed staff to begin its analysis with the full buffer and ensure that any compensation for encroachments into the buffer should result in a net increase in protection and/or enhancement over what is lost.

The Board also deferred a decision on unit type, number and mix of units shown on the pre-preliminary plan. The applicant requested a waiver of the required mix of 60% detached and 40% attached units based on compatibility and environmental reasons. Given the lack of decision regarding buffer encroachments requested by the applicant, the Board was deferred a decision on any waivers of unit mix to the preliminary plan stage when more information could be made available.

The applicant proffered to provide all required MPDU's on the subject property, with the number and location to be determined at the time of preliminary and/or site plan. The Board accepted this proffer.

The Board did include certain conditions of approval regarding: forest conservation, trails stormwater management, parkland encroachments, and schools to be addressed at the time of preliminary plan. These conditions are outlined in the Attachment 1.

SITE DESCRIPTION:

The 308.4-acre site lies within the Northwest Branch watershed (Use Classification IV[1]). The mainstem of Northwest Branch lies along the east property boundary in M-NCPPC parkland, and Bel Pre Creek, a major tributary of Northwest Branch, lies within the site along the southern property boundary. Five smaller tributary streams are also located within the site. Northwest Branch Stream Valley Park surrounds the property to the south and east.

The majority of the land cover on the site is associated with the country club and golf course uses that have existed since the 1950's. The country club facilities include

[1] Use IV waters is the state use designation for Maryland streams which has the second highest water quality standards.

the club house, parking lots, maintenance building and area, tennis courts, driving range, swimming pool, and golf course. About 10 percent of the site (31.7 acres) is covered in forest, most of which is associated with stream valleys.

There are 99.5 acres of environmental buffers onsite. Currently, 72.4 acres of these buffers are in golf course use. Stream buffers on site have been modified to varying degrees by the existing golf course use. Some of the buffer is fully forested while others are partly or completely within the golf course and are covered in grass that is mowed down to the stream channel. Portions of the stream channels have been partly or completely piped or been converted to aesthetic ponds. Staff has not required long sections of piped stream channels to have a buffer.

A significant portion of the 99.5 acre environmental buffer, or 45.8 acres is floodplain Floodplains cover 45.8 acres of the site, all of which are in golf course use. Much of the upland topography on the site is rolling, with some areas of steep slopes along parts of wooded stream valleys adjacent to the flat floodplains of Northwest Branch and Bel Pre Creek.

The applicant proposes a golf course community in which both a new golf course and residential units would be constructed. The applicant has proposed 36 acres of environmental buffer encroachments as shown on the submitted preliminary plan, excluding encroachments associated with roads and utilities.

PROJECT DESCRIPTION:

The applicant, Winchester Homes ("Applicant") has submitted a plan for development of 565 single-family units under the R-200 MPDU development standards. The plan proposes 226 detached units and 339 attached units with 71 MPDUs on-site. The plan also proposes the development of a new 18-hole private golf course and clubhouse. The Applicant proposes access to and through the site at three locations: 1) Tivoli Lake Boulevard to the south; 2) the existing access road from Layhill Road to the west; and 3) Foggy Glen Road to the north. The extension of Tivoli Lake Boulevard and the Layhill access road will be built to primary road standards.

The residential component and clubhouse are located in the upland area of the site. The new 18 hole golf course would be reconstructed in the lower areas of the property. The applicant strongly believes there should be a golf course associated with this residential community and that encroachment into the environmental buffer on the site is needed to facilitate such a use.

DISCUSSION OF ISSUES

THE ENVIRONMENT

I. Background

Forest Conservation Law

The Montgomery County Forest Conservation Law identifies natural areas found in environmental buffers as priority areas for forest retention and forest planting. Section 22A-12 (b) of the law states:

"(1) The primary objective of the forest conservation plan should be to retain existing forest and trees and avoid reforestation in accordance with this Chapter. The forest conservation plan must retain certain vegetation and specific areas in an undisturbed condition unless the Planning Director finds that:

(A) the development would make maximum use of any available planning and zoning options that would result in the greatest possible retention;
(B) reasonable efforts have been made to protect the specific areas and vegetation listed in the plan: and
(C) the development proposal cannot reasonably be altered.

(2) In general, areas protected under this subsection include:

(A) floodplains, stream buffers, steep slopes, and critical habitats;
(B) contiguous forests;
(C) rare, threatened, and endangered species;
(D) trees connected to an historic site;
(E) exceptionally large trees; and
(F) areas which have been designated as priority save areas in a master plan or functional plan." (Emphasis added.)

Further, section 22A-12 (e)(3) states that "afforestation and reforestation should be directed to stream buffer areas, connections between and additions to forested areas, critical habitat areas, topographically unstable areas, and land use and road buffers." (Emphasis added.)

Environmental Buffer Guidelines

The Environmental Guidelines (formally known as "Guidelines for Environmental Management of Development in Montgomery County") were first adopted by the Planning Board in 1983. Subsequent revisions were adopted in 1991, 1997, and 2000 with substantial input in public session from all stakeholder groups. Objectives of these guidelines include:

- maintenance of biologically viable and diverse streams and wetlands
- protection and restoration of water quality

- preservation/protection of wildlife habitat, wildlife corridors
- implementation of state and county riparian buffer programs

One of the major goals of the guidelines is the preservation and restoration of environmentally-sensitive areas as part of land development activities. Environmentally sensitive areas include sensitive areas as defined in the 1992 Maryland Economic Growth, Resource, and Planning Act: streams and their buffers, the 100-year floodplain, steep slopes, and habitats of rare, threatened, and endangered species. The Environmental Guidelines also explicitly include wetlands and their buffers as environmentally-sensitive areas.

The Environmental Guidelines recommend avoidance and protection of environmental buffers as part of new development. In conjunction with the County Forest Conservation Law, the guidelines identify buffers as the highest priority location to protect existing forest and to plant new forest. Staff normally does not support encroachments into buffers unless they are for unavoidable infrastructure (e.g., sewer lines, road crossings, and stormwater management outfalls). In limited instances staff has also allowed non-infrastructure buffer encroachments. In such cases, the following features have typically applied:

- Reasonable alternatives for avoidance of the buffer have been determined to be infeasible.
- Encroachment into the buffer is a small area, usually along an edge of the buffer, and has been minimized.
- The encroachment area is not forested and does not include sensitive areas (floodplain, wetlands and state-defined buffers, steep slopes, and habitat for rare, threatened and endangered species)
- The proposed plan provides compensation for the loss of the buffer. In many cases, compensation has involved protecting land next to a buffer and and protecting forest or planting the land at a ratio of 2:1 (i.e., for every acre of buffer encroachment, staff has recommended two acres of land to be protected outside but adjacent to a buffer; if the land is not currently forested, afforestation is recommended). On a case by case basis, staff has also allowed limited compensation measures to be out-of-kind (e.g., stream restoration projects).

Two-for-one compensation to mitigate for the loss or permanent impairment of a natural resource feature has its basis in other environmental laws and regulations. The state and county forest conservation laws require reforestation at a 2:1 rate to compensate for clearing forest below a defined threshold known as the conservation threshold. The Maryland wetland regulations (COMAR 26.23.04.03 (C)) require a replacement ratio of at least 2:1 for loss of scrub-shrub or forested non-tidal wetlands.

The over-riding priority for compensation measures is to provide compensation "in-kind" for the loss to the existing or prospective environmental resource. "In-kind" replacement has several components, including replacement of the resource in kind and function (i.e., land for land; forest for forest); in quantity (acre per acre); and in

geographical proximity (e.g., in immediate proximity or within the watershed). The more the proposed compensation measure strays from any of these objectives, the less the buffer compensation credit given. On a case-by-case, limited basis, staff has also accepted out-of-kind measures (e.g., stream improvements) as partial or total compensation for environmental buffer encroachments.

Using staff's general practice (described above) for defining appropriate compensation for buffer encroachments, the proposed 36 acres of buffer encroachment in the Indian Spring proposal would require 72 acres of compensation land that would be in immediate proximity and be of equivalent or greater natural resource value to the encroached buffers.

II. STAFF EVALUATION OF ENVIRONMENTAL ISSUES FOR THE PROPOSED INDIAN SPRING PRELIMINARY PLAN

A. Application of Environmental Guidelines

Three main issues have been raised with respect to staff's application of the Environmental Guidelines to this plan: (1) golf course uses are within the environmental buffer; (2) golf course use would be a continuation of an existing use within the environmental buffer; and (3) staff's review of the Indian Spring subdivision as compared with its review of the Fairland Golf Course Community.

Golf Courses within Environmental Buffers

It has been argued that golf courses provide a large amount of pervious open spaces that are environmentally beneficial. Grass cover provides for filtering of surface stormwater runoff, possibly some infiltration. Water quality treatment structures, such as created wetlands and sand filters, are required as part of a new golf course and provide an added layer of water quality protection. Therefore, a golf hole should be an acceptable use within an environmental buffer area that is currently not forested.

Staff disagrees with the above analysis. Although a golf hole in an environmental buffer is in vegetative cover, it displaces land identified as highest priority for reforestation in the Forest Conservation Law. That is, the presence of a golf hole in a buffer prevents that buffer from converting (through natural regeneration or man-made reforestation) into forest habitat. From a natural resources management perspective, forest habitat provides greater wildlife value than a golf hole. Forest that surrounds streams provide shade and food for fish and other aquatic organisms. Current literature in the golf industry for designing new golf courses frequently include recommendations to avoid development within environmentally-sensitive areas.

A golf hole within an environmental buffer will likely involve some chemical (fertilizers and pesticides) usage to maintain proper turf conditions, even if the golf course operations employ environmentally-sensitive measures and best management

practices. Such chemical usage would occur in or near recognized sensitive areas such as streams, wetlands, and/or floodplains and could potentially have adverse affects on native riparian or aquatic plants and animals and stream water quality. In addition, fairways, greens, and tees are intensely maintained and groomed. Often, these areas are designed to quickly drain water, which is completely contrary to the natural functions of floodplains and wetlands for water retention or infiltration, floodflow attenuation, and water quality filtration through vegetation.

Continuation of Existing Uses within Environmental Buffers

A second issue has been whether it is appropriate to allow a golf course use within those parts of the environmental buffer where it currently exists. Generally, it is staff's practice/policy to allow existing uses to continue within a buffer if the land use *and* features do not change. If new construction or reconstruction is proposed for the use, or if the use changes, staff typically recommends that the use be relocated outside the buffer. Staff considers the Indian Spring subdivision to be new development and subject to all current standards and guidelines. The proposal is to replace a 36-hole golf course with a residential golf course community consisting of 565 dwelling units and an 18-hole golf course. The golf course component involves complete regrading of the land to create a new 18-hole course. It is not just keeping existing holes with limited land disturbance. Therefore, staff would place high priority in laying out the subdivision to locate the residential lots and the new golf course outside environmental buffer areas.

In addition, there are areas of the existing golf course that are located within the 100-year floodplain and/or on hydric soils, contrary to current standards and guidelines for environmental protection. Land with hydric soils normally support wetland conditions unless it has been artificially altered. Allowing a golf course use to be reconstructed in such sensitive areas within the buffers would prevent these areas from naturally reverting back to forest and possibly wetland habitats.

Review of Fairland Golf Course Community

While some similarities exist between the Planning Board's recent approval of the Fairland Golf Course Community ("Fairland Project") and the Applicant's proposed development (e.g., an existing golf course in need of upgrade to current golf and environmental standards, appurtenant to a major residential component), there are major differences in the land use objectives for these two projects.

First, the Fairland Master Plan expressly calls for the Fairland Project to be developed as a golf course community "developed in conjunction with an upgraded public golf course." (Fairland Master Plan, pages xiv – xv, 47 – 48). Consequently, a joint housing/golf course community is expressly recommended in the master plan. In contrast, the Indian Spring Property is not expressly recommended for the type of development proposed by the applicant.

The Fairland Master Plan recommends a joint private/public partnership with M-NCPPC for the dual purpose of developing a residential community with a significant percentage of single-family detached dwellings, and also provides a replacement for the existing Gunpowder public golf course, including a "First Tee" program. In addition, the master plan recommends dedication for a new elementary school on the site. Each of these recommendations was incorporated into the regulatory plans approved for the Fairland golf course community subdivision.

The Master Plan for Kensington/Wheaton, however, emphasizes residential development only for Indian Spring. The applicant's propsal includes a private golf club accessible by membership or tournament invitation only, and a private clubhouse/conference center available for rental. Both the golf course and clubhouse are not included as specific recommendations of the Kensington/Wheaton Master Plan.

Second, the subdivision and site plans approved for the Fairland Project achieved multiple environmental objectives, also recommended in the Fairland Master Plan for broad watershed protection benefiting Montgomery and Prince George's Counties. As recommended by the master plan, the Fairland Project (1) provides significant restoration/remediation measures within areas identified in the Fairland Master Plan along the northeastern stem of Little Paint Branch as environmental reclamation areas, which measures are designed to reverse decades of deterioration and degradation associated with sand and gravel operations; (2) the Fairland Project will provide on-site mitigation of off-site stormwater runoff from the current uncontrolled off-site industrial area in Prince George's County;; and (3) will provide for stabilization and remediation the existing unstabilized rubble fill on Parcel X. (See Fairland Master Plan, page 134.)

The express recommendations of the Fairland Master Plan, which seek the multiple objectives of (1) redevelopment of a public golf course; (2) the development of an adjoining golf course community; (3) creating a public school site on the project site; and (4) the restoration of highly degraded industrial sites containing stream beds and generating uncontrolled runoff, dictate flexibility in the standard practice of minimizing environmental buffer encroachments and providing in-kind compensation to achieve the identified environmental upgrades. The application of these master plan recommendations to the site-specific conditions of the Fairland Project does not establish broader precedent for deviation from the Board's standard application of the Forest Conservation Law and Environmental Guidelines. The Indian Spring development, a private development that is neither recommended by the master plan nor offers the significant environmental improvements provided in the Fairland Project as detailed in the Fairland Master Plan, do not justify deviation from the Board's standard environmental review practices.

Finally, it is important to note that the Fairland (314 acres) and Indian Spring (308 acres) sites are comparable in size. They also have comparable amounts of environmental buffers (104 acres of buffers on Fairland, 99.5 acres on Indian Spring). Even with the added public school site in the Fairland project, the buffer encroachments in Fairland are significantly less than those proposed in Indian Spring. *The Fairland golf*

course community was approved with 16 acres (15 % of buffers) of encroachments within 104 acres of environmental buffers. In contrast, Indian Spring proposes 36 acres (36 % of buffers) of encroachment within 99.5 acres of buffers.

B. Environmental Buffer Preservation Vs. Encroachment

As stated above, staff considers the proposed plan to be new development. Therefore, consistent with the application of the Environmental Guidelines and Forest Conservation Law for new development, staff has reviewed this plan in the following sequence as it relates to environmental buffers:

(1) Identify Full Environmental Buffers for Preservation or Restoration

As with any new development, the first priority is to recommend a subdivision layout that identifies all of the environmental buffers as natural areas for either preservation or restoration. This approach is also in keeping with the Planning Board's guidance at the pre-preliminary discussions to start the review from the full buffers. Staff recognizes that there are certain infrastructure features, such as road crossings, sewer lines, and stormwater management facility outfalls that unavoidably must encroach into buffers. Such encroachments are considered by staff to be acceptable and have been excluded from the stated 36 acres of buffer encroachments.

(2) Buffer Encroachments Must be Minimized

The pre-preliminary plan showed about 38 to 39 acres of buffer encroachments. Over the course of the review, the applicant has revised the plan to reduce buffer encroachments to 36 acres. The applicant indicates that these 36 acres of encroachments cannot be further reduced. The plan has been revised to tighten the residential areas so that some of the golf course may be shifted outside the buffers. The current plan shows the following environmental buffer encroachments:

- 1.9 acres proposed for 8 residential lots
- 34.1 acres proposed for golf course features and stormwater management facilities.

Staff believes that the proposed 36 acres of buffer encroachments are excessive. This is the largest amount and percentage (36 % of the site's buffers) of buffer encroachment that has been proposed for a project that is subject to the Environmental Guidelines. In addition, the configuration of some areas of proposed encroachments are such that there are no natural areas that are preserved next to streams. Staff believes the majority of the encroachments could be avoided if the subdivision is substantially altered, without changing the current zoning on the property. However, these changes may result in the loss of the golf course and/or changes in the unit mix or numbers.

C. Compensation for Environmental Buffer Encroachments

Staff's Recommended Compensation for Buffer Encroachment

As previously noted, in siturations where staff has accepted buffer encroachments, recommendations for predominantly in-kind compensation have been at a rate of 2:1. Applying this generally-accepted "rule" to this site, the proposed 36 acres of buffer encroachment in the Indian Spring proposal would result in 72 acres of replacement land adjoining buffers in Northwest Branch watershed.

In early discussions with the applicant, it became apparent that compensation with land onsite, near the site, or even in the same watershed at a 2:1 rate was not feasible. Therefore, staff crafted an alternative method for defining acceptable compensation for buffer encroachments. This method is more flexible than staff's 2:1 compensation practice, by allowing compensation measures to be located outside the watershed of impact.

Staff's concept for compensation, and credits given, is based on the premise of in-kind replacement in proximity to the area of buffer encroachment. In other words, compensation measure should be able to at least replace the natural value and function of the impact area, as well as located near the area of impact. The more the proposed compensation measure deviates from these primary objectives, the less the buffer compensation credit is given. A secondary consideration is that citizens often complain that compensation for environmental impacts can occur far from the impact area rather than in the immediate vicinity of the environmental impact.

Staff's recommended method has two steps:

Step 1: Calculate the Total Compensation Credits Needed

The total compensation credits needed are the acres of buffer encroachment plus the acreage equal to the proportion of total buffer with encroachment multiplied by the buffer encroachment amount. In addition, of the total credits needed to show full compensation, an amount equal to the acres of encroachment must lie within the same watershed as the encroachment:

Total compensation credit = acres of buffer encroachment + [(% of onsite buffers with encroachment) x (acres of buffer encroachment)]

Example: A project site has 5 acres of environmental buffers. Encroachment is proposed in 2 acres (or 40 %) of the buffers. The compensation credits needed would be 2.80 credits, or, 2 acres + [(40 %) x (2 acres)]. Of this total credit, 2 credits must be within the same watershed as the buffer encroachment.

With the Indian Spring proposal, 36 acres of the 99.5 acres of the site's buffers have encroachments (36 % of the buffers). The compensation credits needed would be 49 credits, or, 36 acres + [(36 %) x (36 acres)]. The applicant would need compensation measures that equate to 49 credits.[2] *Of that, 36 credits must lie within Northwest Branch watershed.*

Step 2: Assign Compensation Credits for Each Proposed Measure

Staff believes that not all measures will equally compensate for buffer encroachments. So, staff assigned compensation ratios to define how much credits a type of measure could generate. The ratios are based on how closely the measure will replace the "loss" of buffer functions and values. Staff believes these criteria need to be clearly defined because: (1) they substantially deviate from staff's standard practice of 2:1 land for land compensation and (2) the large amount of encroachment requires a careful accounting of the compensation measures to ensure that there is a basis for concluding whether or not the measures provide full compensation.

Staff's criteria for evaluating compensation for buffer encroachments for the Indian Spring plan are shown in Table 1. The credits are based on the following principles:

- Compensation should be close to the buffer areas that are "lost". Therefore, measures within the site are preferred to offsite measures. Also, measures within the same watershed (Northwest Branch) as the subdivision are preferred to measures outside the watershed.

- Land-based measures (e.g., protecting land and planting forest) are preferred over other types of measures (stream restoration, controlling invasive plants, etc.). Encroachments into a buffer area result in the loss of that land's existing or potential functions and values for wildlife habitat, forest (existing or future) community, and water-related habitats of wetlands, floodplains, and other riparian areas. *Staff believes that the priority for compensating for the loss of that buffer's existing or potential natural resource values and functions should be to replace it with land of equivalent or greater natural value and function.*

- The County Forest Conservation Law allows 1:1 credit for planting forest and protecting the planted forest to mitigate for forest clearing. The law also allows protecting existing forest on a 2:1 basis for forest clearing mitigation. That is, twice as much forested land is needed to mitigate for the loss of forest. Staff has followed a similar approach in defining credit ratios for buffer encroachment compensation.

[2] Staff's evaluation of the applicant's compensation package is based on credits, as defined in Table 1, rather than in acreages.

TABLE 1. STAFF'S RECOMMENDED COMPENSATION CREDIT RATIO

Recommended compensation measure	**Staff's recommended compensation credit ratio (amount of compensation measure: allowed credit)**
Within Northwest Branch watershed:	
Buffer on subject site (will have Category I conservation easement as part of subdivision): ▪ Plant forest	2 acres = 1 credit
Buffer in an already developed property and currently not protected (no conservation easement): • Place Category I conservation easement without planting • Plant forest and place land in easement	2 acres = 1 credit 1 acre = 1 credit
Protect and improve existing forest that is *heavily* overgrown with non-native invasive plants. (Forest must be of a size and location to be considered as valuable forest habitat if improved).	1 acre = 0 credit up to 1 credit, depending on the extent and severity of the invasive plant problem and the benefit to the forest habitat.
Area adjacent to buffer and not currently protected a. onsite: • Place Category I conservation easement with no planting.. • Plant forest and place land in easement b. offsite: • Place Category I conservation easement with no planting. • Plant forest and place land in easement	2 acres = 1 credit 1 acre = 1 credit 4 acres = 1 credit 2 acres = 1 credit
Outside Northwest Branch watershed:	
Buffer in an already developed property	

Recommended compensation measure	Staff's recommended compensation credit ratio (amount of compensation measure: allowed credit)
that is currently not protected (no conservation easement):	
• Place Category I conservation easement with no planting	4 acres = 1 credit
• Plant forest and place land in easement	2 acres = 1 credit
Area adjacent to buffer and not currently protected:	
• Place Category I conservation easement with no planting	8 acres = 1 credit
• Plant forest and place land in easement	4 acres = 1 credit

Staff Evaluation of Applicant's Proposed Compensation for Buffer Encroachment

The applicant proposes a variety of compensation measures. These are shown in Table 2 and include planting forest in excess of meeting the Forest Conservation Law requirements, adding and planting land next to onsite buffers, stream channel and streambank restoration, invasive plant controls, and out-of-watershed forest preservation.

There are certain measures that the applicant proposes more credits than staff recommends. Staff's recommendations for credits are given in Table 2 and differences between staff and the applicant on credits assigned to proposed measures are highlighted as follows:

- The applicant believes that 12.8 credits should be assigned for creating 12.8 acres of forested wetlands in environmental buffers on the site. The applicant believes this measure will accelerate the establishment of forested wetlands where none exist today.

  Staff recommends that this measure should be given 6.4 acres of credit (2 acres = 1 credit). First, protection of this environmental buffer area will occur as part of the normal subdivision process, so no additional compensation credit is appropriate. Second, staff does not support the "value-added" compensation credit of designed wetland creation since we believe that the area, if left alone,

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