



Layhill Primrose, Preliminary Plan No. 120180250

ET

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Staff Report Completed: 5/13/19

Description

Request for approval of one lot to construct a Day Care Center for up to 200 children.

Location: 14041 Layhill Road, southeast corner of the intersection of Layhill Road and Queensguard Road;

Zone: R-200;

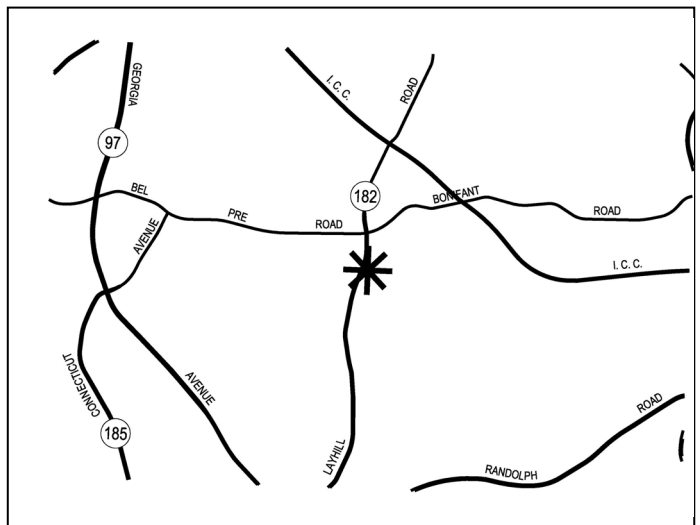
Master Plan: 1994 *Aspen Hill Master Plan*;

Property Size: 4.22 acres;

Application Accepted: October 26, 2018;

Applicant: Layhill Property, LLC, t/a Primrose School;

Review Basis: Chapter 50.



Summary

- Staff recommends approval with conditions.
- The Hearing Examiner approved Conditional Use CU 17-16 for this project on May 18, 2018.
- Approval of the Preliminary Plan includes approval of the Final Forest Conservation Plan.
- Staff received two letters from community members concerned about traffic and safety issues associated with the proposed project.

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SECTION 1: STAFF RECOMMENDATION AND CONDITIONS

General Approval

1. This Preliminary Plan is limited to one (1) lot for a Day Care Center up to 12,635 square feet in size for up to 200 children.

Adequate Public Facilities and Outside Agencies

2. The Adequate Public Facility (“APF”) review for the Preliminary Plan will remain valid for sixty (60) months from the date of mailing of this Planning Board Resolution.
3. The Planning Board accepts the recommendations of the Montgomery County Department of Transportation (“MCDOT”) in its letter dated January 3, 2019 and amended on April 25, 2019, and incorporates them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations as set forth in the letter, which may be amended by MCDOT if the amendment does not conflict with any other conditions of the Preliminary Plan approval.
4. Before recording a plat for the Subject Property, the Applicant must satisfy MCDOT’s requirements for access and improvements.
5. Before the issuance of access permits, the Applicant must satisfy the Maryland State Highway Administration’s (“MDSHA”) requirements for access and improvements.
6. The Planning Board accepts the recommendations of the Montgomery County Department of Permitting Services (“MCDPS”) – Water Resources Section in its stormwater management concept letter dated June 12, 2018, (reconfirmed December 21, 2018) and incorporates them as conditions of the Preliminary Plan approval. The Applicant must comply with each of the recommendations as set forth in the letter, which may be amended by MCDPS – Water Resources Section if the amendment does not conflict with any other conditions of the Preliminary Plan approval.
7. The Planning Board accepts the recommendations of the Montgomery County Department of Permitting Services (“MCDPS”), Fire Department Access and Water Supply Section in its letter dated January 10, 2019 and incorporates them as conditions of approval. The Applicant must comply with each of the recommendations as set forth in the letter, which MCDPS may amend if the amendment does not conflict with other conditions of Preliminary Plan approval.

Other Approvals

8. The Applicant must comply with conditions of the Hearing Examiner’s decision for conditional use No. CU 17-16.

Forest Conservation/Environment

9. The Applicant must comply with the following conditions of approval of Final Forest Conservation Plan (FFCP) 120180250, approved as part of this Preliminary Plan.
 - a) Before clearing or grading on the Subject Property, the Applicant must record the Category I Conservation Easements in the Montgomery County Land Records by deed. The deed must be in a form approved by the Maryland-National Capital Park and Planning Commission (M-NCPPC) Office of the General Counsel and the Book and Page for the easements must be referenced on the record plat. Forest retention and forest planting areas must be placed in a Category I Forest Conservation Easement.
 - b) Three native shade trees of at least three inches caliper each, must be planted to mitigate for the removal of one specimen tree on the Property. The replacement trees are shown on the Final Forest Conservation Plan. The trees must be planted within one year after final stabilization.
 - c) Prior to any demolition, clearing, or grading onsite, the Applicant must submit a forest conservation maintenance and management agreement and a financial surety for the onsite forest planting and obtain approval of said agreement from M-NCPPC Staff.
 - d) Prior to Certified Preliminary Plan approval, the Applicant must make the following changes to the FFCP:
 1. Remove the "Project Data Chart" from the FFCP.
 2. Correct the Forest Conservation Data Table.
 3. Update the Specimen Tree and Forest Retention signs and post detail.
 4. Remove the "Non-native Invasive Narrative" from the FFCP.
 - e) The Applicant must comply with all tree protection and tree save measures shown on the approved FFCP. Tree save measures not specified on the FFCP may be required by the M-NCPPC Forest Conservation Inspector.
 - f) Prior to plat recordation, the Applicant must abandon the 0.15-acre existing conservation easement. The deed of abandonment must be submitted to the Planning Department for review by the Associate General Counsel's office and signed by the Executive Director of the M-NCPPC before the deed of abandonment can be recorded.
 - g) Within one year after final stabilization, the Applicant must plant 0.19 acres of forest as shown on the FFCP.
 - h) The Applicant must install and maintain the permeable pavers shown on the Certified Preliminary Plan.

Transportation

10. The Applicant must dedicate and show on the record plat all land necessary to accommodate seventy-five (75) feet from the existing pavement centerline along the Property frontage for Layhill Road.
11. Prior to the recordation of plat(s), the Applicant must:
 - a) Satisfy all necessary requirements of MDSHA to construct a 10-foot-wide sidepath along the Property frontage on Layhill Road; and
 - b) Coordinate with MDSHA and Planning Staff to design a pedestrian crossing at the intersection of Layhill Road and Queensguard Road.

12. The following improvements, as shown on the Preliminary Plan, must be completed prior to issuance of any Use and Occupancy permit:
 - a) Construct the sidepath on Layhill Road along the Property frontage.
 - b) Restripe Queensguard Road;
 - c) Widen the sidewalk on Queensguard Road along the Property frontage from four feet to five feet;
 - d) Install the specified pedestrian crossing at the intersection of Layhill Road and Queensguard Road, subject to SHA review and approval; and
 - e) Coordinate with MCDOT on the installation of “No Parking” (during weekday peak hour) signs on Queensguard Road between Layhill Road and the Mid-County Community Recreation Center.
13. Prior to issuance of any building permit, the Applicant must coordinate with the MCDOT Division of Transit Services about relocation of the Ride On bus stop on Layhill Road adjacent to the Property to allow for required sight distance on Layhill Road. The bus stop must be relocated prior to issuance of the Use and Occupancy certificate.

Record Plats

14. There shall be no clearing or grading of the site prior to recordation of plat(s).
15. The record plat must show necessary easements.
16. The slope easement for Layhill Road must be approved by MCDOT and shown on the record plat. The forest conservation plan must be amended if there is any overlap between the slope easement and forest conservation easement.

Certified Preliminary Plan

17. The certified Preliminary Plan must contain the following note:
Unless specifically noted on this plan drawing or in the Planning Board conditions of approval, the building footprints, building heights, on-site parking, site circulation, and sidewalks shown on the Preliminary Plan are illustrative. The final locations of buildings, structures and hardscape will be determined at the time of issuance of building permit(s). Please refer to the zoning data table for development standards such as setbacks, building restriction lines, building height, and lot coverage for each lot.
18. Prior to submittal of the Certified Preliminary Plan, the Applicant must make the following changes:
 - a. Show resolutions and approval letters on the approval sheet of the Certified Preliminary Plan.
 - b. Remove the building setback boundaries.
 - c. On Sheet PP-03, include a pedestrian crossing at the intersection of Layhill Road and Queensguard Road with a note that says, “Subject to SHA review and approval.”

SECTION 2: VICINITY AND SITE DESCRIPTION

Vicinity

The project vicinity is primarily residential in character, with detached houses and townhouses in the R-200, R-60, and PD zones. The Mid-County Community Recreation Center abuts the Property to the east. A small commercial property with a bank (zoned CRN) and Argyle Magnet Middle School are located to the north, and M-NCPPC parkland to the south and southeast.



Figure 1: Vicinity Map

Site Description

The subject site (Subject Property or Property – outlined in red in Figure 2 below) is located at the southeast corner of the intersection of Layhill Road (MD 182) and Queensguard Road in Silver Spring. It is a 4.22-acre assemblage of properties that includes Parcel A, Block B, Layhill Village East and Lots 5 and 6, Block B, Atwood Knolls.



Figure 2: Aerial photo of the Property (outlined in red)

The Property is within the R-200 Zone and largely unimproved, except for a concrete driveway apron and asphalt on Lot 5. It contains two wetlands and an ephemeral stream. The majority of Parcel A is forested. A Category I Forest Conservation Easement covers part of Lots 5 and 6, although only a portion of the easement contains forest. The Property slopes down from both road frontages towards a low point on the southeast corner.

SECTION 3: PROJECT DESCRIPTION

Background/Previous Approvals

Two previous Special Exceptions were approved, but never implemented, on the Property. In 1981, the County's Board of Appeals (BOA) approved BAS-781 to permit a private club (the Wheaton Boy's Club) on the Property. The proposed use included the construction of a two-story club headquarters and off-street parking for 118 automobiles and 12 two-wheel vehicles. In 1986, the BOA approved BAS-1307 to permit the construction and operation of a child day care center for up to 136 children from toddlers to age 12. That day care facility was to be a single-story building with over 4,200 square feet of play area. Because the approvals were never implemented, both special exception approvals were revoked by the Board of Appeals in 2004.

A plat (No. 16672) was recorded in 1987 for Parcel A, but Staff could not locate an associated Preliminary Plan. On November 6, 2000, the Planning Board approved Preliminary Plan No. 120010140, to create one lot on Parcel A for a 300 seat House of Worship (with no weekday child day care or school). However, a plat was not recorded and the facility was never constructed.

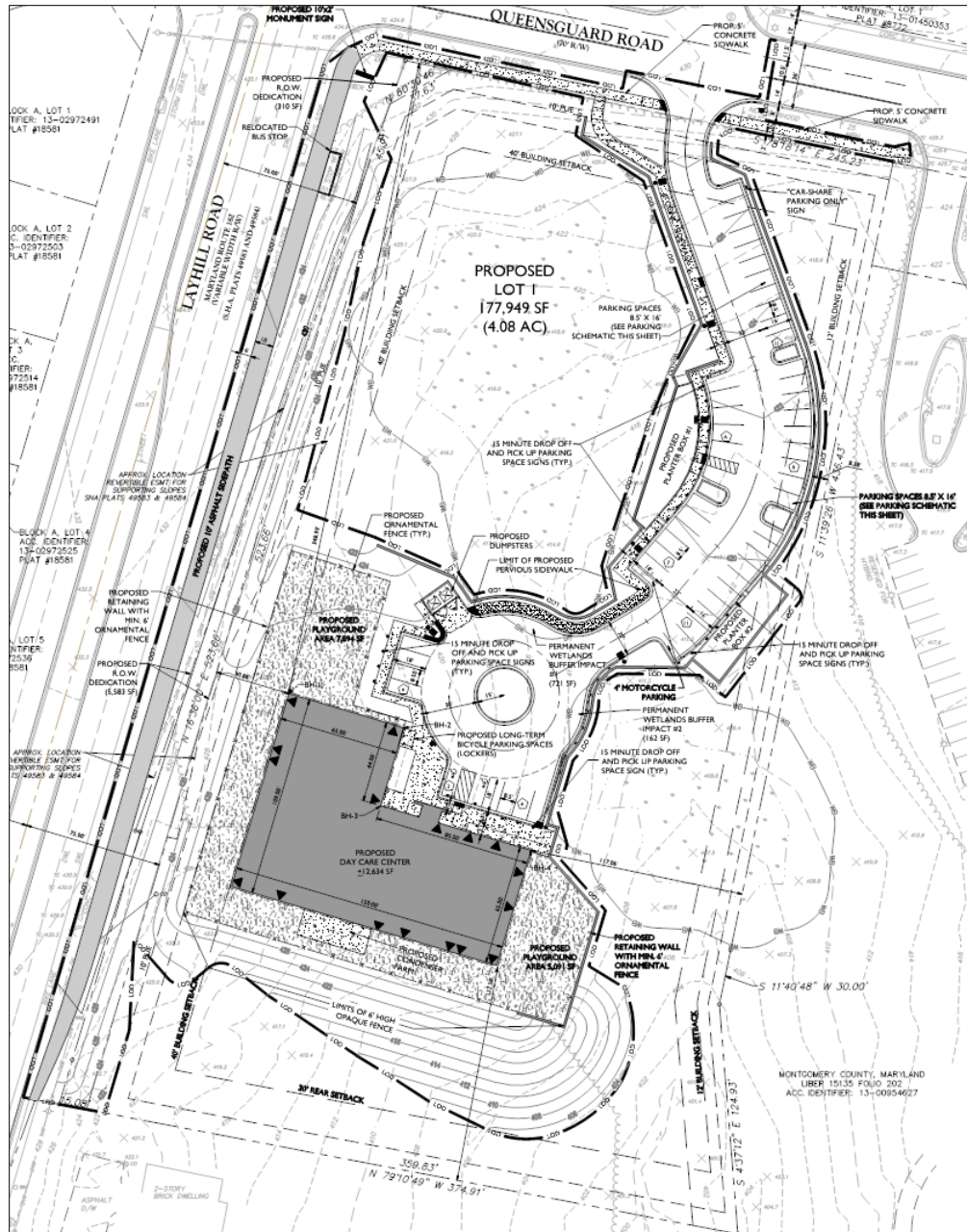
On April 8, 2003, the Planning Board approved Preliminary Plan No. 120030440 for two lots to allow construction of two detached houses on the southern portion of the Property (Lots 5 and 6). At the time, there was a house on Lot 5 that has since been razed. Lots 5 and 6 were platted (Plat No. 23706) in 2007, but no houses have been constructed.

On May 18, 2018, the Hearing Examiner approved Conditional Use CU 17-16 for a 200-child Day Care Facility (Attachment 1).

Project Description

The Applicant intends to construct and operate a Primrose School franchise on the Property. Primrose focuses on early education and care and has approximately 350 daycares nationwide (Figure 3 and Attachment 2). The proposed Primrose School will be in a new 12,634 -square foot, one-story building with 11 classrooms. The facility will serve up to 200 children, with up to 32 employees onsite at any one time. All-day care will be available for children age six-weeks old to pre-Kindergarten age, and before and after school programs may be offered for elementary school students ages 5-12.

The two wetlands (and their buffers) largely dictate the proposed site design, which attempts to minimize impacts on these environmental features (Figure 3). The Applicant plans to remove the existing asphalt and concrete apron on existing Lot 5 and create a new access point for pedestrians and vehicles from Queensguard Road. The Applicant proposes a curvilinear driveway connecting the Property to Queensguard Road and is providing 52 parking spaces: two ADA accessible spaces, 25 short-term drop-off and pick-up spaces for parents and caretakers, and 25 parking spaces for employees. A driveway loop at the entrance to the day care will facilitate pick-ups and drop-offs, with all queuing contained within the Property's internal driveway.



A six-foot-wide lead-in sidewalk connects to the sidewalk along Queensguard Road and provides pedestrian access to the proposed building from the Ride On bus stop located at the corner of Layhill Road and Queensguard Road. Permeable pavement is proposed for the portion of the sidewalk that traverses the wetland buffer.

The Applicant proposes 13,000 square feet of fenced outdoor play area covered with artificial turf. Distinct outdoor play areas will be provided for different age groups. One outdoor play area will be for infants, two for early preschool-age, and one for preschool aged children. A 6-foot-tall decorative iron

fence will surround the west, east, and north sides of the play area. The play area on the south side of the building that faces the adjacent residential property will be enclosed by a semi-opaque vinyl fence. Retaining walls border most of the proposed parking and play areas.

The Applicant will also implement the following transportation improvements that are further discussed in the transportation section of the report.

- Restripe Queensguard Road from two lanes to three lanes, with one 14-foot-wide receiving lane (for vehicles turning from Layhill Road onto Queensguard Road) and two approach lanes exiting Queensguard Road onto Layhill Road.
- Widen the sidewalk along Queensguard Road from four feet to five feet.
- Construct a 10-foot-wide sidepath along the Property's Layhill Road frontage.
- Relocate the Ride On bus stop on Layhill Road adjacent to the Property to allow for appropriate sight distance on Layhill Road.
- Install a pedestrian crossing at the intersection of Layhill Road and Queensguard Road, subject to MDSHA review and approval.

Community Outreach

The Applicant has met all proper signage, noticing and pre-submission meeting requirements for the submitted Application.

Staff received two letters from community members concerned about traffic and safety issues associated with the proposed facility (Attachment 4). Staff have also met twice and spoken several times with one of the residents. The concerns are primarily related to traffic generated by the proposed daycare and are summarized below with Staff responses.

- *Community Concern:* The proposed day care center will create excessive vehicular delay and queuing at the intersection of Layhill Road and Queensguard Road.

Staff Response: The intersection of Layhill Road and Queensguard Road is projected to operate within the congestion standard for this policy area pursuant to the LATR Guidelines, as discussed in detail on page 16 of this report.

- *Community Concern:* Existing and proposed signage, a bus shelter, and overgrown vegetation limit sight distance and create a safety hazard for vehicles turning onto Layhill Road from westbound Queensguard Road.

Staff Response: The relocation of the existing bus shelter and clearing of vegetation will provide adequate sight distance for vehicles turning from Queensguard Road onto Layhill Road, as determined by SHA (Attachment 5).

- *Community Concern:* Increased traffic generated by the proposed daycare will exacerbate existing vehicular and pedestrian safety issues.

Staff Response: The Applicant has offered to install a crosswalk and signage with rapid flashing beacons to facilitate safer pedestrian movements across Layhill Road at its intersection with Queensguard Road, subject to SHA approval (Attachment 6).

- *Community Concern:* The Project does not substantially conform with the *Aspen Hill Master Plan's* guidance to "Avoid excessive concentration of special exception and other nonresidential land uses along major transportation corridors...Minimize uses that might diminish the safety and reduce the capacity of the roadway by creating too many access points and conflicting turning movements."

Staff response: In approving Conditional Use CU 17-16, the Hearing Examiner determined that the Project is in substantial conformance with the *Aspen Hill Master Plan*. The adjacent Mid-County Community Recreation Center is buffered from Layhill Road by the Subject Property and neither the Recreation Center nor the proposed daycare have access directly onto Layhill Road. The proposed Project will increase turning movements at the intersection of Queensguard Road and Layhill Road, but traffic at the intersection is within the congestion standard for the policy area under the LATR Guidelines.

SECTION 4 - ANALYSIS AND FINDINGS

Under Section 50.4.2.D of the Montgomery County Subdivision Regulations, the Planning Board must make the following findings to approve a Preliminary Plan:

1. *The layout of the subdivision, including size, width, shape, orientation and diversity of lots, and location and design of roads is appropriate for the subdivision given its location and the type of development or use contemplated and the applicable requirements of Chapter 59;*

Given the proposed use of the Property as a day care center and the applicable requirements of Chapter 59, the size, width, shape, and orientation of the proposed lot will be appropriate for the location. The proposed lot will accommodate the day care center building, outdoor play areas and vehicular parking while retaining the existing forested wetlands. The lot will also include the area that will be extensively graded on the southern portion of the Property including the proposed retaining wall.

The proposed lot was reviewed for compliance with the dimensional requirements for the R-200 Zone as specified in the Zoning Ordinance. The proposed lot and structure will meet all the dimensional requirements and all development standards of the R-200 Zone (see Table 1 below).

TABLE 1: R-200 ZONE DEVELOPMENT STANDARDS		
Development Standard	Required/Permitted	Proposed
Minimum Lot Area (Section 59-4.4.7.B.1)	20,000 sq. ft.	177,949 sq. ft.
Minimum Lot Width at Front Building Line (Section 59-4.4.7.B.1)	100 ft.	275 ft.
Minimum Lot Width at Front Lot Line (Section 59-4.4.7.B.1)	25 ft.	245 ft.
Maximum Lot Coverage (Section 59-4.4.7.B.1)	25%	7.5%
Minimum Front Setback- Queensguard Rd. (Section 59-4.4.7.B.2)	40 ft.	345 ft.
Minimum Side Street Setback- Layhill Rd. (Section 59-4.4.7.B.2)	40 ft.	40 ft.
Minimum Side Setback (Section 59-4.4.7.B.2)	12 ft.	117 ft.
Minimum Rear Setback (Section 59-4.4.7.B.2)	30 ft.	117 ft.
Maximum Height; Lot > 40,000 SF (Section 59-4.4.7.B.3)	50 ft	21 ft.
Minimum Vehicle Parking Spaces (Section 59-6.2.4.B)	38 (3 spaces per 1,000 sf of GFA)	52

2. *The Preliminary Plan substantially conforms to the Master Plan;*

As established by the approval of Conditional Use CU 17-16, and as conditioned, the proposed day care center substantially conforms to the Master Plan. The Property is located within the 1994 *Aspen Hill Master Plan* (Master Plan). The Master Plan does not have any specific language regarding the Property, but it provides pertinent recommendations about child day care facilities, special exceptions/conditional uses, and environmental features within the plan area.

Child Day Care Facilities

The Master Plan provides a general recommendation to support various types of child day care facilities within the planning area, and it includes an in-depth analysis of the area's child care needs (pgs. 177, 195-198). According to data at the time, a larger percentage of women with children under the age of six worked either full- or part-time in Aspen Hill than County-wide. This suggested that the need for child day care was somewhat greater in Aspen Hill than County-wide. The data also

showed that Aspen Hill households used day care centers rather than home-based care to a much greater degree than County households in general. At the time, the area was particularly in need of care for infants. The Master Plan encourages the development of child care facilities with the following relevant attributes (page 196):

1. *Sufficient open space to provide adequate access to sunlight and suitable play areas, taking into consideration the size of the facility.*
2. *Location and design to protect children from excessive exposure to noise, air pollutants and other environmental factors potentially injurious to health or welfare.*
3. *Location and design to ensure safe and convenient access. This includes appropriate parking areas and safe and effective on-site circulation of automobiles and pedestrians.*
4. *Location and design to avoid creating undesirable traffic, noise and other impacts upon the surrounding community.*

The proposed day care center will fulfill many of the child care needs and recommendations described in the Master Plan. The facility will provide care for infants, and children will have access to large play areas. Play areas will be set back at least 50 feet from Layhill Road and they will be surrounded by a secure fence. Retained trees will surround portions of the play areas.

The proposed facility fronts on Layhill Road, with access from Queensguard Road, close to its intersection with Layhill Road. The location of the facility will not encourage additional traffic within the adjacent residential neighborhood. The proposed parking lot is designed to ensure safe and convenient access. A limitation on the number of cars dropping off and picking up children at any one time will further ensure safe on-site circulation.

Special Exceptions/Conditional Uses

The Master Plan has specific recommendations regarding special exceptions/conditional uses that are relevant to the subject application (p. 80):

1. *Avoid excessive concentration of special exception and other nonresidential land uses along major transportation corridors.*
2. *Protect major transportation corridors and residential communities from incompatible design of special exception uses.*
 - a. *Any modification or addition to an existing building to accommodate a special exception use should be compatible with the architecture of the adjoining neighborhood and should not be significantly larger than nearby structures.*
 - b. *Front yard parking should be avoided because of its commercial appearance; however, in situations where side or rear yard parking is not available, front yard parking should be allowed only if it can be adequately landscaped and screened.*
 - c. *Close scrutiny should be given to replacing or enhancing the screening and buffering as viewed from the abutting residential areas and along the major roadways.*

With the exception of the commercially zoned properties at the corner of Layhill Road and Bel Pre Road, there are no existing special exceptions or nonresidential uses along this portion of Layhill Road. Therefore, the addition of this use will not create an excessive concentration of conditional and non-residential uses. The design of the proposed facility, with its sloped roofs, stone and brick façade, and windows with mullions, echoes the nearby residential architecture. The size of the proposed building is consistent with the adjacent Mid-County Community Recreation Center building. While the proposed parking for the day care is between the front of the building and Queensguard Road, it will be screened by the retained trees.

Views of the proposed day care facility and play area are well screened based on retained forest and topography from the north, east, and west. A fence, trees, and shrubs will screen the proposed day care from the residential properties to the south and from Layhill Road.

Environment

The Master Plan discusses the protection of wetland areas, and the buffers around them, because they provide habitat for many plant and animal communities and aid in flood control and pollution reduction (p. 130). The Preliminary Plan has been designed to preserve and protect the onsite wetlands within Category I Forest Conservation Easements. The Plan shows a very small area of encroachment into the 25-foot wetland buffer, but not into the wetland itself. The wetland buffer encroachment results from a requirement to have a vehicle turn-around sufficient to accommodate fire and rescue access and pedestrian access. The pedestrian access in this area will use pervious pavement to minimize wetland buffer impacts.

The Master Plan recommends that properties should maintain and add to existing forest cover in accordance with the County's Forest Conservation Law. As demonstrated by the Final Forest Conservation Plan, and as discussed further in finding no. 4, the proposed project is in compliance with the Forest Conservation Law.

Master-Planned Roadways and Bikeway

In accordance with the *Master Plan of Highways and Transitways*, Layhill Road (MD-182) is designated as a major highway, M-16, with a recommended 150-foot-wide right-of-way. The *Bicycle Master Plan* recommends a sidepath on the east side of Layhill Road. Currently, Layhill Road is striped with conventional bike lanes on both sides of Layhill Road. The existing right-of-way ranges from 135 to 150 feet from the opposite right-of-way line along the Layhill Road frontage. The Applicant plans to dedicate additional right-of-way for a total of 75 feet from the centerline along the Property's Layhill Road frontage.

Queensguard Road is not listed in the Master Plan but is a two-lane secondary residential street, with a 70-foot-wide right-of-way and signed shared roadway, PB-14.

3. *Public Facilities will be adequate to support and service the area of the subdivision;*

Transportation

Roadway Improvements

Currently, Queensguard Road east of Layhill Road is two lanes with on-street parking. The Applicant must provide improvements along Queensguard Road to allow for adequate off-site queuing along the approximately 200-foot distance between the Property's proposed driveway and the intersection with Layhill Road. The proposed driveway from Queensguard Road is approximately 100 feet from the existing driveway to the Mid-County Community Recreation Center to the east.

Queensguard Road will be restriped from two lanes to three lanes approaching the intersection with Layhill Road, with one (1) fourteen (14)-foot-wide receiving lane (for vehicles turning from Layhill Road onto Queensguard Road) and two approach lanes exiting Queensguard Road onto Layhill Road. The left approach lane will be 10.5-feet-wide and will allow left turns and thru movements. The right approach lane will be 11.5-feet-wide and is limited to right-turn movements. As proposed, on-street parking on both sides of Queensguard Road will be removed from Layhill Road to the Mid-County Community Recreation Center (see cross-section below).

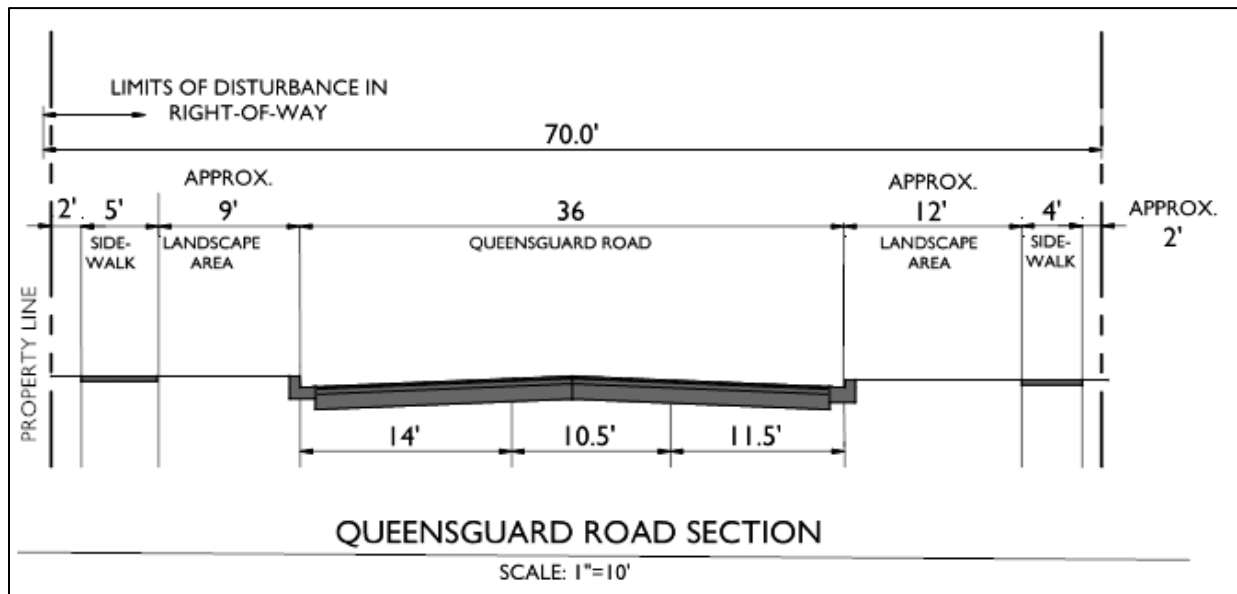


Figure 4: Queensguard Road Section

Public Transit Service

Three Ride On bus routes operate along the Layhill Road frontage:

1. Route 26 operates from the Glenmont Metro Station, via Layhill Road, Bel Pre Road, and Aspen Hill Road, to the Montgomery Mall Transit Center every 30 minutes on weekdays and weekends.
2. Route 39 operates between the Glenmont Metro Station and the Briggs Chaney Park and Ride Lot at Gateshead Manor Way every 30 minutes on weekdays only.
3. Route 49 operates between the Glenmont Metro Station and the Rockville Metro Station every 20-30 minutes on weekdays and weekends.

The nearest bus stop is located at the intersection of Layhill Road and Queensguard Road, on the west side of the Property. The Glenmont Metro Station is approximately two miles south of the Property.

Pedestrian and Bicycle Facilities

Currently, Layhill Road has five (5)-foot-wide sidewalks with 2.5-foot-wide green panels, and Queensguard Road has four (4)-foot-wide sidewalks with eight (8) to eleven (11)-foot-wide green panels. There are handicap ramps at each corner of the Layhill Road and Queensguard Road intersection, but no marked pedestrian crosswalks. The Applicant must upgrade the pedestrian and bicycle facilities as follows:

- Construct a ten (10)-foot-wide asphalt sidepath in the right-of-way along Layhill Road.
- Upgrade the sidewalk on Queensguard Road to five (5) feet where it fronts the Property.
- Provide three (3) long-term bicycle parking spaces for employees located near the main entrance.

Local Area Transportation Review (LATR)

The Institute of Transportation Engineers' Trip Generation rates is used to calculate the peak-hour trips generated by the proposed child daycare center. Tables 2 and 3 show the number of trips generated by the proposed daycare center within the weekday morning peak hour (7:15-8:15 a.m.) and evening peak hour (5:45-6:45 p.m.) peak periods.

Table 2: Vehicle Trip Generation Rates

	AM Peak Hour (7:15-8:15 a.m.)			PM Peak Hour (5:45-6:45 p.m.)		
	In	Out	Total	In	Out	Total
ITE Trip Rate	83	73	156	74	84	158
Policy Area Trip Rate	81	71	152	72	81	153
Pass-by Trips	-22	-19	-41	-9	-10	-19
New Trips	59	52	111	63	71	134
ITE Land Use: Day Care Center (565); Policy Area vehicle trip adjustment is 97%; Pass-by trips are deducted from the Policy Area trip rate, accounting for 27% of trips the AM peak hour and 12% of trips in the PM peak hour						

Table 3: Trip Distribution by Mode

Multimodal Distribution	AM Peak Hour	PM Peak Hour
Auto Driver Trips (74%)	152	153
Auto Passenger Trips (18.2%)	37	38
Transit Trips (2.5%)	5	5
Non-Motorized Trips (5.2%)	11	11
Total Person Trips	205	207
Auto driver trips are derived from the ITE vehicle trip generation rate and adjusted based on the Policy Area		

Intersection Capacity Analysis

Under the 2016-2020 Subdivision Staging Policy (SSP), a traffic study is required as the proposed use generates more than 50-person trips within the weekday peak hours. The number of transit, pedestrian, and bike trips is less than the 50-trip standard, so no further study of these travel modes is needed. As such, only the vehicular level of service must be analyzed in a traffic study.

Three nearby intersections were analyzed in the submitted traffic study. The Layhill Road and Bonifant Road/Bel Pre Road intersection, and the Layhill Road and Queensguard Road intersection are located in the “yellow” policy area (i.e., lower density areas) of the Aspen Hill Policy Area. The yellow policy area requires analysis using the Critical Lane Volume (CLV) method. When the CLV values of these intersections are more than 1,350, the Highway Capacity Manual (HCM) delay is also analyzed. The Layhill Road and Middlevale Lane intersection is located in an “orange” policy area (i.e., emerging transit-oriented development area) of the Kensington/Wheaton Policy Area. The orange policy area requires analysis using the HCM delay-based analysis. The CLV and HCM analyses at the studied intersections are shown in Tables 4 and 5:

1. Existing Traffic: Existing traffic conditions.
2. Background Traffic: The existing traffic conditions plus the trips generated from approved but unbuilt nearby developments.
3. Total Traffic: The existing condition plus the site-generated trips generated by the proposed daycare center.

Based on the results of the CLV and HCM analysis, all of the study area intersections are projected to operate at satisfactory levels of service based on the total traffic conditions.

The intersection of Layhill Road (MD 182) and Queensguard Road is projected to operate with a CLV of 1,093 in the morning peak hour and 1,019 in the evening peak hour, which is within the CLV standard of 1,475 for the yellow policy area during both of the peak periods (Table 4).

At the intersection of Layhill Road and Bonifant Road/Bel Pre Road, the CLV value in background and total traffic conditions of the morning peak hour is projected to operate at a CLV of 1,379 and 1,416, respectively, which exceeds the CLV standard of 1,350. Thus, an HCM delay-based analysis was required. The results of the HCM analysis indicate that during the morning peak period this

intersection is projected to operate with a delay of 55.9 seconds/vehicle, which is within the HCM congestion standard of 59 seconds for the Aspen Hill Policy Area (Table 5).

HCM analysis for the intersection of Layhill Road and Middlevale Lane indicates that the intersection is projected to operate with a delay of 3.3 seconds/vehicle in the morning peak hour and with a delay of 1.8 seconds/vehicle in the evening peak hour, which is well below the 80 second HCM congestion standard established for the Kensington/Wheaton Policy Area.

Table 4: CLV Analysis

<u>CLV Analysis</u>		Existing Traffic	Background Traffic	Total Traffic
Morning Peak Hour Traffic	Congestion Standard	CLV	CLV	CLV
1. MD 182 & Bel Pre Rd/Bonifant Rd	1475	1376	1379	1416
2. MD 182 & Queensguard Rd	1475	1029	1030	1093
3. MD 182 & Middlevale Ln	1600	1016	1017	1028
4. Queensguard Rd & Punch St/Site Access	1475	128	128	202
5. Queensguard Rd & Community Rec Center	1475	102	102	102
Evening Peak Hour Traffic				
1. MD 182 & Bel Pre Rd/Bonifant Rd	1475	1215	1216	1223
2. MD 182 & Queensguard Rd	1475	882	884	1019
3. MD 182 & Middlevale Ln	1600	877	879	893
4. Queensguard Rd & Punch St/Site Access	1475	150	150	303
5. Queensguard Rd & Community Rec Center	1475	156	156	156
Note: Intersections #1, #2, #4, #5 are located within the Yellow policy areas while intersection #3 is in Orange policy areas.				

Source: Traffic Impact Analysis completed by The Traffic Group (10/2/18)

Table 5: HCM Analysis

<u>HCM Analysis</u>		Existing Traffic	Background Traffic	Total Traffic
Morning Peak Hour Traffic	Congestion Standard	Delay (sec/veh)	Delay (sec/veh)	Delay (sec/veh)
1. MD 182 & Bel Pre Rd/Bonifant Rd	59	51.8	52.1	55.9
3. MD 182 & Middlevale Ln	80	3.3	3.3	3.3
Evening Peak Hour Traffic				
3. MD 182 & Middlevale Ln	80	1.8	1.8	1.8
Note: Intersection #1 has a CLV over 1350 and intersection #3 is located in the Orange policy areas therefore the HCM delay-based level of service standard applies.				

Source: Traffic Impact Analysis completed by The Traffic Group (10/2/18)

Although the intersection of Layhill Road and Queensguard Road meets the congestion standard in the LATR Guidelines, MCDOT and Planning Staff raised concerns about the delay and queuing along westbound Queensguard Road toward Layhill Road and requested that the Applicant conduct operational analyses of the intersection including delay, gap, and queuing analysis.

Table 6: Delay and Queuing Analysis

<u>Delay/Queuing Analysis</u>	Existing Traffic	Background Traffic	Total Traffic	Total Traffic w/Imp.
Morning Peak Hour Traffic				
WB Queensguard Rd at MD 182				
Delay (sec/veh)	79.4	80.6	242.0	135.6
95th Queue (ft)	125	128	310	195
Evening Peak Hour Traffic				
WB Queensguard Rd at MD 182				
Delay (sec/veh)	38.1	38.4	114.8	53.4
95th Queue (ft)	45	45	180	83

Source: Traffic Impact Analysis completed by The Traffic Group (10/2/18)

Delay and queuing were analyzed using the HCM methodology for unsignalized intersections and the results are summarized in Table 6. The results indicate that the addition of the traffic generated by the daycare center would result in additional delay for the outbound traffic along westbound Queensguard Road at Layhill Road during the morning peak hour and the 95th queue would be 310 feet which would extend beyond Punch Street and the property's proposed entrance. Therefore, the Applicant is proposing to remove the on-street parking along both sides of Queensguard Road between Layhill Road and the Mid-County Community Recreation Center, and to restripe Queensguard Road to include two outbound (westbound) lanes and one inbound (eastbound) lane as previously discussed. The proposed improvement will partially alleviate the delay at the westbound Queensguard Road approach generated by the proposed daycare center and will provide dedicated turning lanes for vehicles turning onto Layhill Road. With the improvement, the analysis indicates that the queue will not extend beyond Punch Street or the property's proposed entrance, which is about 195 feet past the intersection with Layhill Road.

Additionally, a Gap Analysis was conducted at the intersection of Layhill Road & Queensguard Road to evaluate the number of gaps available for each turning movement at this unsignalized intersection. The results of the study, summarized in Table 7, show that there are sufficient gaps for the westbound Queensguard left turning vehicles to enter the median storage area and complete the left-turn maneuvers during both morning and evening peak hours.

Table 7: Gap Analysis

Movement	AM Peak (7:15-8:15)	PM Peak (6:00-7:00)
WB Queensguard Rd Left Turn to SB MD 182		
Volumes under Total Condition (veh/hr)	103	58
Number of Total Gaps Available (Turn at once from Queensguard Rd to SB MD 182)	57	50
Number of Total Gaps Available (Stage 1 from Queensguard Rd to Median Crossing)	406	157
Number of Total Gaps Available (Stage 2 from Median Crossing to SB MD 182)	185	379
WB Queensguard Rd Right Turn to NB MD 182		
Volumes under Total Condition (veh/hr)	80	94
Number of Total Gaps Available	434	175
SB MD 182 Left Turn to EB Queensguard Rd		
Volumes under Total Condition (veh/hr)	67	106
Number of Total Gaps Available	838	370

Source: The Traffic Group (1/23/2019)

Finally, a traffic signal warrant analysis was also performed based on the criteria in the Manual on Uniform Traffic Control Devices (MUTCD) to examine whether a traffic signal would be warranted at the intersection of MD 182 and Queensguard Road (Attachment 7). SHA ultimately determined that a traffic signal is not warranted with the projected total traffic volumes at the intersection when considering the left turn and thru volume from Queensguard Road (Attachment 8). SHA originally requested that the right-hand turn movements be added to the signal warrant analysis, but ultimately withdrew this request.

Pedestrian Crossing

The Applicant has offered to install a crosswalk and signage with rapid flashing beacons to facilitate safer pedestrian movements across Layhill Road at its intersection with Queensguard Road, subject to SHA approval (Attachment 6). The proposed crossing addresses Staff concerns about pedestrian safety, particularly with the additional vehicular traffic generated by the proposed daycare, as pedestrians currently cross Layhill Road at this intersection to access bus stops and the Mid-County Community Recreation Center. The design of the crosswalk will be refined with Staff and MDSHA prior to plat recordation.

Other Public Facilities and Services

Public facilities and services are available and will be adequate to serve the proposed development. The day care center will not generate any students, so the schools test is not necessary. The Property is served by public water and sewer service. This application has been reviewed by the Montgomery County Department of Permitting Services Fire Department Access and Water Supply Group, which has determined that the Property will have appropriate access for fire and rescue vehicles. Other public facilities and services, such as police stations, firehouses and health services are currently operating within the standards set by the SSP resolution currently in effect and will be adequate to serve the Property. Electrical, telecommunications, and gas services are also available to serve the Property.

4. All Forest Conservation Law, Chapter 22A requirements are satisfied;

Natural Resource Inventory/Forest Stand Delineation

A Natural Resources Inventory/Forest Stand Delineation was approved for this Property on July 15, 2016 (NRI/FSD No. 420162060). The Property contains ephemeral streams that do not require a regulatory buffer. There are no steep slopes associated with a stream buffer, or known habitats of rare, threatened or endangered species. There are two wetlands delineated on the Property, totaling 0.49 acres. Each wetland receives a 25-foot regulatory buffer. The Preliminary Plan shows a very small area of encroachment into the wetland buffer, but not into the wetland itself. The wetland buffer encroachment results from a requirement to have a vehicle turn-around sufficient to accommodate fire and rescue access and pedestrian access. The pedestrian access in this area will use pervious pavement to minimize wetland buffer impacts. The Property includes 3.12 acres of forest. While the Property also contains several specimen-size trees and drains to the Northwest Branch watershed, it is not in a Special Protection Area or Primary Management Area. The Preliminary Plan as submitted is in conformance with the *Environmental Guidelines*.

Forest Conservation

A Preliminary Forest Conservation Plan (PFCP), including a Variance request approval, was approved during the Planning Board's review of Conditional Use No. CU201716. The PFCP approval required that a Final Forest Conservation Plan (FFCP) be approved with the Preliminary Plan of subdivision. The submitted FFCP fulfills that condition of the PFCP approval.

The FFCP permits clearing of 1.93 acres of forest, with 1.20 acres of forest retained. There is an existing Category I Forest Conservation Easement of 0.60 acres on the southern end of the Property. The Applicant proposes to build on a small portion of this area, requiring abandonment of 0.15 acres of the existing easement, with the remainder of the existing easement to be retained. Part of the easement area to be retained is currently unforested. The Forest Conservation Plan permits temporary grading needed for creating the building site in this unforested area, and this area will be reforested following construction of the day care center.

The 0.15 acres of Category I Easement being removed will be replaced onsite by adding it to the new Category I Easement being created elsewhere on the Property. The total area required to be in

easement to fulfill the forest conservation requirements is 1.20 acres to satisfy the forest retention requirement, plus 0.15 acres to replace the existing Category I Easement being removed, and another 0.19 acres of planting to fulfill the remaining planting mitigation requirement, for a total of 1.54 acres. The FFCP delineates the required 1.54 acres of Category I Easement needed to fulfill these requirements.

With approval of this FFCP, the Preliminary Plan is in compliance with Chapter 22A, Forest Conservation.

5. *All stormwater management, water quality plan, and floodplain requirements of Chapter 19 are satisfied;*

A Stormwater Management Concept Plan for the proposed development was approved by MCDPS on June 12, 2018 and was reconfirmed to account for revisions to the Preliminary Plan on December 21, 2018. The Applicant proposes to meet required stormwater management goals via the use of micro bioretention.

6. *Any burial site of which the applicant has actual notice or constructive notice or that is included in the Montgomery County Cemetery Inventory and located within the subdivision boundary is approved under Subsection 50-4.3.M; and*

No known burial sites are located on the Property.

7. *Any other applicable provision specific to the property and necessary for approval of the subdivision is satisfied.*

There are no other applicable provisions specific to the Property and necessary for approval of the subdivision.

SECTION 5: CONCLUSION

This Application meets all applicable requirements established in the Subdivision Regulations and the Zoning Ordinance. Access and public facilities will be adequate to serve the proposed lot, the use conforms with the Master Plan, and the Application has been reviewed by other applicable County agencies, all of which have recommended approval of the Application. Therefore, Staff recommends approval of Preliminary Plan No. 120180250, with the conditions listed at the beginning of the Staff Report.

ATTACHMENTS

1. Conditional Use Decision
2. Preliminary Plan
3. Forest Conservation Plan
4. Correspondence
5. Layhill Road Sight Distance Exhibit
6. Applicant's Layhill Road Pedestrian Crossing Concept
7. Traffic Signal Warrant Analysis
8. MDSHA Letter re: Traffic Impact Analysis
9. Agency Letters