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CASHELL ESTATES

A CONDITIONAL USE DESIGN FOR LIFE COMMUNITY

PREPARED FOR GARRETT GATEWAY PARTNERS, LLC

APPLICANT:

Garrett Gateway Partners, LLC
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Packard & Associates, LLC is responsible for the engineering associated with the proposed Conditional Use application for a "Design for Life" townhouse living community. The engineering focus is to assure both compliance with applicable regulations and with the design standards for universal accessibility.

The Subject Property, located at 7009 Garrett Road, Derwood, MD 20855 is a 2 acre portion of a previously recorded lot described as "Part of Lot 5, Block B", on that certain plat of subdivision identified as "Lots 5 to 12, Block B, A Resubdivision of Lots 1, 2 & 3, Block B, Cashell Estates Subdivision" recorded in Plat Book 32 as Plat Number 2038 among the Land Records of Montgomery County, Maryland.. It is the same property descripted in a certain deed of conveyance to Garrett Gateway Partners, LLC, dated December 19. 2014, and recorded in said land records in Liber 49667 at Folio 284

The Subject Property is located at the northeast corner of Redland Road and Garrett Road and is improved with a single family detached residential dwelling. The existing dwelling is located on the northern end of the Subject Property, facing Redland Road. Vehicle access is currently provided by a gravel driveway from Garrett Road adjacent to the Garrett Road/Redland Road intersection. The Subject Property is fairly flat, sloping upward, from south to north, with the rise in elevation of Redland Road.

No forest exists on the Subject Property. Five significant and/or specimen trees are scattered across the property. There are no wetlands, stream, floodplain or other environmental features, or historic or cultural features are on the property. Most of the Subject Property appears to be a typical suburban mowed lawn and is depicted that way on the approved Natural Resource Inventory/Forest Stand Delineation Plan.

Redland Park is located directly across Redland Road as is a Ride-On bus stop. The Gaithersburg Police Station, located on South Summit Avenue, is 2.8 miles from the Subject Property and the Gaithersburg – Washington Grove Fire Station #28 is located on Muncaster Mill Road, at the intersection with Shady Grove Road, 0.7 miles from the property. The Subject Property is served by the Candlewood Elementary School that feeds into Shady Grove Middle School and Magruder High School. The closest public library is the regional library in Rockville.

The existing one family dwelling will be demolished if the Conditional Use application is approved in order to construct the proposed 19 unit Design for Life Certified community. The townhomes are designed to be two story 24' and 26' wide units, each having a two car garage and wide driveway. Six of the townhomes will be located on Garrett Road with driveways directly accessing that road. The remaining townhomes will have access through a 20' wide, paved private drive intersecting Redland Road, approximately 320' north of Garrett Road. The private drive will be designed to meet all current road code construction standards and fire department access paving widths, loading requirements, turnaround requirements, and fire access to each of the townhome units. The driveways to each of the units will be 16' wide. The driveways and garages will be designed to accommodate up to 4 passenger cars or 2 van accessible handicap vehicles, or a combination of such.

Forest Conservation requirements will be met either offsite, by paying a fee in lieu or by securing an offsite easement in the Rock Creek Watershed. Public water service is available to serve the Subject Property by tapping into an existing 16" water main in Redland Road and extending an 8" water main in Garrett Road from an existing tee stub. Sewer service will be provided by a sewer extension to the

property from an existing manhole in Redland Road, approximately 300' south of Garrett Road.. Both the existing water and sewer infrastructure are adequate to serve the Subject Property. An existing gas main in Redland Road is adequate to provide gas service to the property. Electric, Telephone and Cable overhead lines on existing telephone poles run parallel to Redland Road and are adequate to service the proposed design for Life community.

Currently there are no stormwater management facilities on the Subject Property. Stormwater runoff from the eastern end of the property sheet flows across grass onto the adjoining state highway property. Stormwater runoff from the rest of the property sheet flows onto Redland or Garrett Roads. Redland Road is super-elevated, without a crown in the pavement in the vicinity of the Subject Property so runoff draining to the intersection of Redland Road and Garrett Roads sheet flows across the roadway into a swale on the opposite site of the road. Some of the runoff flows to an existing J inlet, approximately 300' south of Garrett Road in the west shoulder of Redland Road and excess runoff overflows the roadside swale onto the Redland Park property.

Under existing conditions, stormwater runoff from the Subject Property , Redland Road and Garrett Road is inadequately managed and does not properly covey into the existing downstream storm drainage system.

In order to correct this insufficiency a public storm drainage system will be installed to collect stormwater runoff from the Subject Property, Garrett Road and Redland Road, and safely convey it into a storm drainage system and engineered channel close to the public drainage inlet on the Redland Park property. The proposed storm drainage system will ensure the safe conveyance of the 10 year storm and correct the existing deficiencies.

Maryland Department of the Environment regulations for stormwater management requires that storm drainage systems be designed to meet Environmental Site design standards to the maximum extent possible ("ESD to the MEP"). Micro-design ESD facilities will be provided onsite to control stormwater as required and as approved by the Montgomery County Department of Permitting Services ("DPS"). DPS is currently reviewing proposed ESD compliant paving improvements for Redland Road and Garrett Road that will improve stormwater management in the public right of way. Because these improvements are in the public right of way options for control are limited. One option under review would achieve a degree of infiltration in the proposed outfall swale across the park property by utilizing grass or bio-design measures to provide ESD measures meant to infiltrate runoff into the ground and reduce the impact on the downstream drainage system and stream.

As previously noted, the Subject Property is comprised of two drainage areas. The drainage area that will contain the majority of the impervious area will flow to a proposed micro-bioretention facility near the corner of Redland and Garrett Roads. This micro-bioretention facility is design to control 1.8" of rainfall runoff and will collect, filter, infiltrate and drain the excess runoff into the above mentioned proposed storm drainage system. Runoff from the second (eastern) drainage area will be collected and drain into two landscape infiltration facilities. Each of the two facilities are designed to control 1.8" of rainfall runoff and will collect, filter, infiltrate and discharge any excess runoff as sheet flow onto the adjoining state highway property.

In addition to these three facilities all of the proposed internal sidewalks and paths will be constructed with pervious paving, except for the portions of the sidewalk that are part of the individual townhomes driveway aprons. The required 5' sidewalk path in Redland Road, just inside the public right of way line,

is also proposed to be constructed with pervious pavers. Pervious paving is not recommended for the proposed 5' bike lane because it is an extension to the Redland Road paving.

To enhance the landscaping on the property, the Applicant proposes to plant a number of deciduous, conifer, ornamental trees and shrubs. Also, each of the proposed stormwater management facilities will be designed with planting as required by the county stormwater code. This project is subject to the County tree canopy law and the number, type and location of the plantings may be adjusted to comply with the County Code during permit review. Site lighting will be provided using six 12' high lampposts with colonial type LED post tops. The lights are distributed along the street and parking areas in accordance with the photometric plan prepared by Phillips Lighting in accordance with the County Code requirements.

Design for Life accessibility requires on-site facilities that are available for use by and are designed to accommodate individuals with mobility limitations. Accordingly, a circulation pathway for exercise is proposed along with the parking, recreation areas and streets. All of the proposed pathways connect to sidewalks that run parallel with Redland Road and Garrett Road. A public crosswalk, marked to ensure the safety of pedestrians crossing the road, is proposed to be located at the Redland Road/Garrett Road intersection to connect the bus stop and park, to the proposed community.

Benches to rest and relax and a large gazebo for sitting are all proposed to be included adjacent to the onsite path system. All of these recreation features with grass open space lend to areas, away from the public streets, where children and adults can play and relax. A 5' bike lane is also proposed along Redland Road to become a segment to what is planned to connect Muncaster Mill Road with Shady Grove Metro.

In conclusion, from an engineering standpoint the merger of green site design and accessible building design coupled with ESD to the MEP stormwater management will result in a community that will serve the public interest of the citizens of Montgomery County The environmental site design stormwater management will replace, restore and improve existing drainage conditions and reduce both the quantity of water runoff and the quality of water entering the streams.

PACKARD & ASSOCIATES, LLC

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