

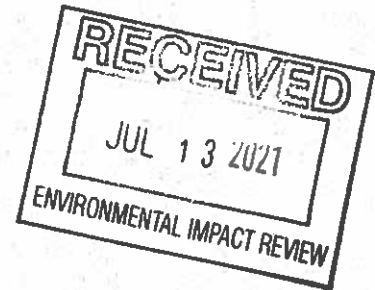


# SOUTHERN CROSSROADS

## ALTERNATIVE ANALYSIS

prepared for:

**Bohler Engineering, Inc.**  
**901 Dulaney Valley Road, Suite 801**  
**Towson, Maryland 21204**



prepared by:

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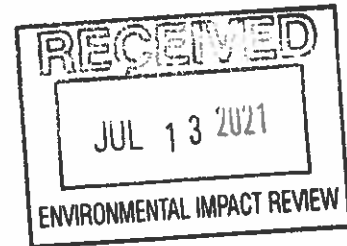
**ALTERNATIVES ANALYSIS  
APPLICATION**

**Regulations for the Protection of Water Quality,  
Streams, Wetlands, and Floodplains**

**Part A. Applicant Information**

**Applicant(s):**

Mr. Mark Levy  
H & H Rock Companies  
6800 Deerpath Court, Suite 100  
Elkridge , Maryland 21075



**Property Owner(s):**

**Engineer/Other Representative:**

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**Part B. Property Information**

**Property Address/Location:** 4100 Maple Avenue, Halethorpe MD 21227

**Tax Account Number(s)** 2500015832, 1600007730, 2500015833

**Subdivision/Property Name:** pka - Good Shepherd Center

<b>Tax Map</b>	108	<b>Parcel No.</b>	861
	109		393 and 578

**Acreage/Lot Size** 18.45 acres

**Zoning** DR 5.5, BR, ML

**Water:** public                      **Sewer:** public

**Part C. Describe the purpose and need for the project (e.g., a stream crossing is needed to access the property).**

The applicant is proposing a redevelopment project to convert an existing institutionally developed property into a residential community. As part of this overall project there are several instances where impacts to the forest buffer will be required for roads and stormwater management facilities and outfalls.

**Part D. Describe the existing site constraints. This section must be accompanied by a plan as described in the instructions accompanying this application.**

The subject property is almost defined by its site constraints. The property was historically mined for iron ore and this activity left many steep slopes across the property. Within the previous excavations wetland development is prevalent and these wetlands cast large buffers across the site.

In addition the fact that buffers occupy a substantial portion of the site, the buffers are oddly configured with many long fingers and broad headwaters that dissect the site and leave few contiguous developable areas. The configuration of the buffers creates practical difficulty as it related to a standard site plan layout.

**Part E. Describe all of the alternatives which have been investigated which could achieve the purpose and need for the project. Identify the preferred alternative, and provide supporting documentation to indicate why the remaining alternatives were eliminated from consideration.**

The Baltimore County Regulations for the Protection of Water Quality, Streams, Wetlands, and Floodplains 33-3-112 (c)(2) (I) indicates that roads, bridges, trails, storm drainage, stormwater management devices and practices, and utilities approved by the Department are authorized within the forest buffer provided that an alternatives analysis has clearly demonstrated that no other feasible alternative exists and that minimal disturbance will take place. The proposed development includes impacts to the forest buffer that qualify as approved uses within the buffer.

A description of each impact area and the justification of the impacts is provided below. Each proposed approved use impact is identified on the accompanying plan.

**AA Impact 1 - Road Access**

The proposed site plan results in impacts to the County forest buffer for construction of the access road into the property. The impacts in this location include 8,460 sq.ft. of buffer that will be converted permanently to road and sidewalk, 850 sq.ft. of permanent wetland fill to allow for road slope grading, and 4,700 sq.ft. of temporary impact where grading within the buffer can be restored and replanted. The majority of the impact area is currently maintained as existing roadway and lawn. The wetland areas being impacted receive run-off from the existing roadway.

The proposed access location does not have any reasonable alternatives due to the location of the existing offsite road network and the onsite resources.

Alternate 1 considered adding a slight turn into the entrance road to help reduce buffer impacts. Unfortunately due to turning radius requirements, the curvature of the road would not completely avoid the impacts and would result in impacts to the forested wetland/buffer system to the north of the entrance drive. The large meander in the road would also increase the paving. Given that the proposed access road is being located over the existing access areas and the buffer to be impacted is already disturbed and maintained primarily as lawn the resource impacts associated with the alignment are minimal.

Given that the curving road alignment creates greater impervious surface and would not substantially improve resource protection, this alternate was not selected.

Alternate 2 considered abandonment of this access point. Since access to the site can be gained directly from Route 1, alternate 2 consider the site plan impacts of allowing access only from Route 1. This alternate was not selected because access across Route 1 is limited and would require additional signaling.

Further, for the number of units proposed the Bureau of Development Plans review will require more than one access point to ensure for emergency vehicle access at all times. Maintaining two points of access will maximize the protection and safety of the community.

#### AA Impact 2 - SWM Outfall

The proposed site plan will result in 150 sq.ft. of buffer impact in this location to allow for the installation of a stormdrain outfall. The location of the outfall is driven by the elevation of the associated drainage and SWM systems. There are no other alternate locations that can provide an appropriate outfall elevation that is outside the buffer.

Alternate 1 considered the possibility of elevating the associated SWM facilities to allow the outfall to be accomplished at a higher elevation, outside the buffer. This alternate, however, would require that the site within the SWM drainage service area be elevated to allow for adequate slope for gravity flow to be maintained. Increasing the elevation of the site would increase the site disturbance and would require longer tie-in-slopes that could push additional grading into the buffer or at least generate the need for more structural soil retention. The complications associated with site design and increased site disturbance that would be required to avoid 150 sq.ft. of buffer impact in this area are not warranted and therefore this alternate was not selected.

#### AA Impact 3 - Temporary Grading

The proposed site plan will result in 280 sq.ft of temporary disturbance to allow for tie-in grading for the proposed access road. The road alignment in this location has been configured to follow the natural slope of the land to the extent practicable and turns along the top of the slope to maintain proper road grades. The grading that is proposed will establish 3:1 side slopes for the road which is the County standard.

Alternate 1 considered the use of a retaining wall to avoid the need for the disturbance in the buffer. This alternate was rejected because the addition of an impervious retaining wall and man-made structure along the edge of the buffer is not warranted given the minor and temporary impact associated with the proposed site grading. Further, the long term maintenance of a retaining wall in this location would add to the obligations of the community. Given that the disturbed areas will be stabilized and reforested following grading to maintain the fully functioning buffer condition, the added complication and obligations created by installing a retaining wall in this area is not warranted.

The project engineer also considered Alternate 2 which would lower the grades of the road to reduce the width of the tie in grading. This alternate would result in more grading to the west of the proposed impact area that would then cause greater buffer where the road alignment currently passes at grade along the edge of the buffer. In consideration of the temporary nature of the proposed buffer impact in this location, this alternate was also rejected.

#### AA Impact 4 -

The proposed plan will result in 3,796 sq.ft. of impact to the buffer in this location for the grading of a road side slope. This road impact is necessary to facilitate access to developable areas along the ridgeline between two easement areas. The location and design of the central cul-de-sac was planned to allow and future extension of the north/south road into the developable plateau area north of the cul-de-sac. The location of the future road is a natural ridge between the starting points of two separate streams which flow in different directions away from the ridge. The impacts shown are the minimum necessary to build an access road through this constricted ridge area while meeting the County's road width and geometry standards. Retaining walls are not proposed in this area as those are not permitted within public road right-of ways.

The specific uses proposed for the plateau area shown conceptually on the enclosed exhibit remain subject to zoning and regulatory review and approval in later phases. But, residential uses are anticipated for this area as the Phase I plans only proposed approximately 78% (196 of 252) of the residential density for this area that would be allowed under DR5.5 Zoning.

In evaluating the access possibilities to this portion of the site several alternatives were considered but there are no other alternates that can be used with less resource impact. The proposed alternative makes use of an existing ridgeline that is not encumbered by an easement. All other points of access to the developable plateau would require wetland/stream crossing. The proposed alternative will have minimal wetland fill and will not bisect a resource corridor and therefore was consider the least impacting alternate.

**Part F. Describe how the impacts associated with the proposed alternative will be minimized.**

An original goal in the site design process was the avoidance and minimization of impacts. As such, the current site design reflects the engineering efforts taken to reach that goal. Each of the proposed AA related impacts has been designed to result in the smallest possible impact footprint and are proposed only because no other practicable alternative exists.

To minimize the unavoidable impacts that the project will have on the adjacent water resources and uplands, the applicant will utilize appropriate sediment and erosion control techniques. Super silt fence will be used to reduce runoff from the site during the active construction period. Once the site construction is complete and disturbed areas are stabilized the silt fence will be removed.

Post construction, the additional runoff generated by impervious surface will be treated through appropriate SWM techniques.