HIGH KNOB PROPERTY OWNERS ASSOCIATION, INC. 17 WINDY WAY FRONT ROYAL, VIRGINIA 22630 540-635-6131

LOT DEVELOPMENT STANDARDS

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I. Purpose

The purpose of these standards is to establish guidelines to be followed by lot owners and their builders in building on and developing lots in the High Knob development. These standards have been developed to primarily to address storm drainage flows from a developed lot and hopefully minimize the impacts these flows have on the downstream properties and drainage facilities of High Knob. If these standards are followed, it is hoped that these impacts will be mitigated.

II. Procedures

The lot developer or builder shall prepare a sketch plan of the lot showing the existing lot dimensions and proposed improvements. This sketch plan should be prepared to a fixed scale and show the proposed improvements to a reasonable level of accuracy. The sketch plan should include the following:

Existing Site:

- 1. Property lines with meets and bounds shown.
- 2. Building restriction lines with setback distance noted.
- 3. Adjoining property lines
- 4. Existing roadway layout in front of lot.
- 5. If contour information is not available, show an arrow that shows the direction of lot grade from high point to low point. Provide estimated difference in elevation for lot high point to low point.

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- 6. If any natural drainage swales cross the property, show the approximate centerline location of the swale.
- 7. Drainfield and well location

Proposed Improvements:

- House footprint showing any proposed garages, porches, decks and/or patios.
 Note number of floors and total area per floor. Provide distances from house to each adjoining property line.
- Driveway location and dimensions. Note thickness of base stone and type and thickness of any additional surface treatment that is proposed. Show stone ditch location.
- 3. Entrance culvert length, size and material.
- 4. Roof downspout locations.
- 5. Stormwater Management (SWM) System location and general arrangement.
- 6. Storm drain piping from house to SWM.
- 7. Storm drain piping from SWM to point of discharge.
- 8. Septic system tanks and piping.

The site sketch may be prepared by the builder or a representative of their choosing. It shall be drawn to a reasonable scale and depict the proposed improvements as accurately as possible. The sketch plan will be submitted to the HKPOA for their review and approval. HKPOA may at their discretion have the plan reviewed by a third party. The cost of this third party review will be born by the lot developer.

The sketch will be submitted to the HKPOA at the same time as the Building Permit Application. The HKPOA will provide the developer with their approval and or comments within 30 days of original submission.

The lot developer may request an exemption or variance from the requirements of this standard. A formal written request describing the nature of the variance or waiver shall be submitted to the HKPOA Board. The Board shall have 60 days to study the request and render a decision to the applicant.

III. Standards and Specifications

1. Stormwater Management System (SWM) – The lot developer shall install a subsurface infiltration type SWM as shown on details D-5 and D-6 of the Section IV of these standards. All roof, area, and patio drains will be piped into this system. The system will be installed to provide a minimum 150 cubic feet of subsurface storage volume. The system uses sixteen (16) High Capacity Infiltrator Chambers as manufactured by Infiltrator Systems, Inc. Technical data on this system is included in Section IV.

The SWM can be laid out in one continuous section or broken into multiple sections connected by 4" piping. The final layout and arrangement for the system will be dependent on the lot topography and overall development scheme. Site conditions may be such that it will be necessary to split the SWM into two

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separate systems. If this is necessary, the quantity of chambers shall be split proportionately to the contributing areas draining into the SWMs.

The excess stormwater leaving the SWM shall be piped to a discharge point. The discharge point shall be located near a property line and in a manner to minimize the impacts on the adjoining downstream property. If there is a natural drainage way on the lot, it is desirable to have the discharge located at this natural feature. On uphill lots, the discharge shall be into the adjoining roadway ditch line. All piping to be PVC or ADS (high density polyethylene).

Outlet protection shall be installed at the discharge point as shown in Detail D-4 in Section IV of this Standard. It shall be installed in a manner to prevent erosion and spread the water discharge out as much as possible.

2. Driveway Stone Ditch – All driveways accessing homes constructed on uphill lots shall be constructed with a crowned typical section with stone ditches on each side of the driveway surface. A typical driveway section is shown in Detail D-3 in Section IV. The purpose of the ditches on each side of the driveway is to slow the runoff of water from the lot.

The ditches shall tie into the ditch line of the adjoining roadway on the low side of the lot. If the roadway ditch line is not well defined the driveway ditches shall tie into the lot side of the roadway section.

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As an alternate the driveway as shown in Detail D-1, Alternate 2 could be constructed with a single cross slope with the stone ditch located on the up slope side of the driveway. This layout eliminates the need for the two ditches and can save cost to the lot developer.

Stone ditches are not required on downhill lots however their use may be beneficial in many cases and should be considered by the lot developer.

IV. Details

- D-1 Typical Uphill Lot Layout
- D-2 Typical Downhill Lot Layout
- D-3 Typical Driveway Section
- D-4 Stormwater Outlet Protection Detail
- D-5 Stormwater Management System Plan
- D-6 Stormwater Management System Section
- High Capacity Infiltrator Chamber