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**VIA ELECTRONIC MAIL**

September 13, 2019

Erica L. Batdorf, Township Manager  
West Vincent Township  
729 Saint Matthews Road  
Chester Springs, PA 19425

RE: 352 Black Horse Road  
Minor Subdivision Plan Review – **RESUBMISSION REQUIRED**  
West Vincent Township  
File No: 11084.51

Dear Ms. Batdorf:

As requested, we have completed a review of the Final Minor Subdivision application for 352 Black Horse Road – Parcel 25-6-83. The site (UPI No. 25-6-83) containing 8.653 acres, is located on the south side of Black Horse Road within the R-2 Residential Zoning District. The owner is proposing to create three lots, one of which (Lot #2) will contain the existing dwelling, barn, and other outbuildings; the surrounding two lots created by the subdivision (Lots #1 & 3), are proposed for development of single-family dwellings.

The following information was received by ARRO on August 5, 2019:

- A plan set, consisting of six (6) sheets – Plan for Land Development of Parcel 25-5-83 dated January 15, 2019 and prepared by E. B. Walsh & Associates, Inc. (Plan).
- Natural Features Analysis Parcel 25-5-83 dated July 16, 2019 and prepared by E. B. Walsh & Associates, Inc. (Analysis).
- Erosion and Sedimentation Pollution Control Report, dated July 11, 2019 and prepared by E. B. Walsh & Associates, Inc. (E&S Report).
- Post Construction Stormwater Management Report, dated July 11, 2019 and prepared by E. B. Walsh & Associates, Inc. (PCSM Report).

We have reviewed the information for compliance with the following Ordinances:

- West Vincent Township Subdivision and Land Development Ordinance of 1998 (As amended by Ordinance No. 170-2016)
- West Vincent Township Stormwater Management Ordinance (Ordinance No. 160 of 2014).

We offer the following comments for your consideration:

**Subdivision and Land Development Comments:**

1. §403.D. – Existing Resources and Site Analysis Plan

*For all subdivisions ( except those in which all proposed lots are to be ten or more acres in area), an Existing Resources and Site Analysis Plan shall be prepared to provide the developer and the Township with a comprehensive analysis of existing conditions, both on the proposed development site and within 500 feet of the site. Conditions beyond the parcel boundaries may be described on the basis of existing published data available from governmental agencies, and from aerial photographs.*

*The Township shall review the Plan to assess its accuracy and thoroughness. Unless otherwise specified by the Planning Commission, such plans shall generally be prepared at the scale of 1"= 100' or 1"= 200', whichever would fit best on a single standard size sheet( 24" x 36"). The following information shall be included in this Plan: (add text from section).*

The aforementioned Analysis and Sheet 1 of the Plan, Natural Features Plan, were provided, which include some but not all of the required information, see below:

2. §403.D.1 - *Topography, the contour lines of which shall generally be at two-foot intervals, determined by photogrammetry and measured in accordance with the standards contained in Article XVII of the Township Zoning Ordinance (although 10-foot intervals are permissible beyond the parcel boundaries, interpolated from U.S.G.S. published maps). The determination of appropriate contour intervals shall be made by the Planning Commission, which may specify greater or lesser intervals on exceptionally steep or flat sites. Slopes between 15 and 25 percent and exceeding 25 percent shall be clearly indicated. Topography for major subdivisions shall be prepared by a professional land surveyor or professional engineer from an actual field survey of the site or from stereoscopic aerial photography and shall be coordinated with official U.S.G.S. benchmarks. Datum to which contour elevations refer shall be noted.*

No steep slopes are shown on the Plan although cursory review and measurement reveal 15-25% slope in the following areas: Lot #1 – northern portion of lot adjacent to Black Horse Road and at the proposed garage and walkway; Lot #3 – western edge of lot through which the proposed driveway traverses.

Additionally, an area of 25%+ slope appears to be in the northwestern corner of Lot #3 and steep slope appears to exist on Lot #2 to the rear of the existing historic dwelling. These areas should be confirmed, and the requisite steep slope category shown. The Plan legend depicts a block labeled precautionary slope 15-25%, but no delineation on the lots; perhaps a layer was not turned on.

3. *§403.D.4 - Vegetative cover conditions on the property according to general cover type including cultivated land, permanent grass land, old field, hedgerow, woodland and wetland, specimen trees, the actual canopy line of existing trees and woodlands. Vegetative types shall be described by plant community, relative age and condition.*

Individual trees (size), woods, and brush areas are shown on Plan and the Analysis indicates species found on the property, but other than the fallow area being maintained and mowed once or twice a year, there is no mention of type of ground cover – grass land, old field, hedgerow, etc.

4. *§403.D.6 - Ridge lines and watershed boundaries shall be identified.*

No ridgelines or watershed boundaries are shown on the Plan or described in the Analysis.

5. *§403.D.10 - The location and dimensions of all existing streets, roads, buildings, utilities and other man-made improvements, including wells and sewer systems.*

While not all improvements are dimensioned, most are shown on the Plan, such as Black Horse Road, all buildings, and well. The existing septic system and electric service line are not shown and should be added to the Plan.

6. *§403.D.11 - Locations of all historic districts and resources on the tract and on any abutting tract as defined and identified by Article XXIV of the Zoning Ordinance.*

The house and outbuildings are shown and described as a Class II Historic Site/Structure on the Plan and Analysis. The 150' setback/buffer noted in the Analysis is not shown on the Plan. Additionally, the subject property shares a corner (diagonal across Black Horse Road) with a Class III Historic Resource, also not shown on the Plan or mentioned in the Analysis.

7. *§403.D.11 - All easements and other encumbrances of property which are or have been filed of record with the Recorder of Deeds of Chester County shall be shown on the plan.*

No easement exists other than an apparent access to Upper Uwchlan lot shown on Lot #1, which should be labeled on the Plan.

8. *§403.E. – Preliminary Impact Analysis and Resource Conservation Plan*

An Impact Analysis and Resource Conservation Plan must be provided for review. While the Plan and Analysis submitted does indicate whether or not impacts occur, there is no delineation of primary or secondary impact areas as well as designated protected areas as required by this Section.

9. *§403.F. – Five-Step Design Process for Residential Subdivisions*

A Narrative for the Five-Step Design Process for Residential Subdivisions shall be provided for review and approval unless this requirement is waived by the Board of Supervisors. ARRO offers no objection to this requirement being waived for this Application.

10. §403.I - : Studies and Reports

Various studies such as a Sewer and Water Feasibility Report, a Hydrogeology and Groundwater Feasibility Report, an Erosion and Sediment Control Plan, and a Stormwater Plan must be provided for review and approval.

11. §403.K - Proof of Adjacent Property Owner Notification

*Verification that all property owners within five hundred (500) feet of the tract boundaries of the proposed subdivision or land development have been notified of the proposed plans via certified mail, returned receipt required.*

Proof of notification to all property owners within five hundred (500) feet shall be provided to the Township prior to Final Plan approval.

12. §403.O - Ordinance Relief Report

*The applicant shall provide a report which identifies any conditional uses, special exceptions, and/or variances necessary or granted, along with the applicable decisions of the Zoning Hearing Board and/or Board of Supervisors. The report shall also identify all subdivision waivers requested along with reasons why the waivers are needed in accordance with Section 1203 of this Ordinance.*

An Ordinance Relief Report listing all the requested waivers must be submitted to the Township in accordance with Section 1203 of the Ordinance.

13. §404.D.3: Sufficient data to determine readily the location, bearing and length of every lot and boundary line and to produce such lines upon the ground, including all dimensions, angles, and bearings of the lines. The gross tract acreage and adjusted tract area shall be shown. For each lot created, including areas to be dedicated to public use, the gross and net lot area shall be indicated to the nearest one-thousandth (0.001) of an acre. For lot sizes smaller than one (1) acre, the lot area shall be indicated by square feet.

Legal descriptions and closure reports for the proposed lots must be submitted for review.

14. §404.D.4 – For residential subdivisions, proposed driveway locations and the names of all streets, as approved in writing by the U.S. Postal Service, County Emergency Services Department and local fire companies, and house numbers as assigned by the Township shall be shown.

House numbers as assigned by the Township shall be added to the Plan prior to recordation.

15. *§404.D.5 - Permanent concrete control and reference monuments, as required by Section 603 of this Ordinance.*

Existing found iron pins have been noted on the Plan, but no proposed pins or monuments have been called out on the Plan. Permanent monuments shall be accurately placed at the intersection of all lines forming angles and at changes in directions of lines in the boundary (perimeter) of the property where existing pins were not found. These monuments and pins must be referenced in the legal descriptions for both lots for clarity and completeness.

16. *§404.E.4 – Notification from PennDOT or the Township shall be provided confirming that a Highway Occupancy Permit will be issued after preliminary approval.*

Highway occupancy permit(s) must be obtained for the proposed driveway(s).

17. *§404.G – Using the Final Plan as a base map, the boundaries, acreage and proposed ownership of all proposed Greenway areas shall be shown. A narrative report shall also be prepared indicating how and by whom such Greenway areas will be managed, and demonstrating the Applicant's compliance with Article XIX of the West Vincent Township Zoning Ordinance.*

Final greenway ownership and management plan must be provided. Proposed greenway area(s) must be shown on the Plan.

18. *§404.K.3 – All offers of dedication of realty or structures and all declarations, easements and covenants governing the reservation and maintenance of undedicated open space, for the Final Plan shall be in such form as shall be satisfactory to the Board of Supervisors.*

An offer of dedication, legal descriptions and closure reports for the dedication of rights-of-way along the property frontage of Black Horse Road must be provided for review and approval. The deed of dedication for the right of way for Black Horse Road will be prepared by the Township Solicitor for execution by the Applicant prior to Final Plan execution and recordation.

19. *§507.E.1 - The landowner shall execute a Subdivision and Land Development Agreement in accordance with Section 509.*

A Subdivision and Land Development Agreement in a format approved by the Township Solicitor must be prepared and recorded with the Final Plan.

20. §607.A.1 - *Each lot shall have a sanitary sewer system in accordance with the provisions of the Pennsylvania Department of Environmental Protection and the Chester County Health Department.*

The existing on-lot septic disposal area shall be shown on the Plan.

21. §603.A.1 - *Permanent stone or concrete monuments shall be accurately placed at the intersection of all lines forming angles and at changes in directions of lines in the boundary (perimeter) of the property being subdivided.*

Monuments shall be placed along the boundary of the property being subdivided.

22. §603.B.1 - *Markers shall be accurately placed at all lot corners within a subdivision.*

Markers must be placed at the corners of the proposed lots.

23. §606.B - *Within the road right-of-way of a Township or private road or for a distance of twenty (20) feet from the edge of the cartway, whichever is greater, all driveways accessing a paved road or street shall be paved with a base of Pennsylvania 3A modified stone compacted to a depth of at least eight (8) inches covered by ID-2A bituminous concrete wearing course compacted to a depth of no less than two and one-half (2 1/2) inches. If the remaining portion of the driveway is paved, such paving shall adhere to these standards above as a minimum. If the remaining portion of the driveway is to remain unpaved or if the driveway accesses an unpaved road, it shall be surfaced with 3A modified stone compacted to a minimum depth of eight (8) inches over undisturbed subsoil. Neither bituminous concrete nor gravel shall be laid over undisturbed or graded topsoil. All driveways accessing a State road shall comply with the specifications contained in Chapter 441 " Access to and Occupancy by Driveways and Local Roads" of Title 67 of the Pennsylvania Code.*

The "typical driveway section" must be changed from 4-in. of 3A stone to 8-in. The 1.5-in. of wearing course must also be changed to 2.5-in.

24. §606.J - *Clear sight triangles shall be provided at all driveway entrances and shall be shown on plans. Within such triangles, no object greater than three and one-half (3.5) feet in height and no other object that would obscure the vision of a motorist shall be permitted. The legs of such triangles shall be a minimum length in both directions as established in Section 2103B. of the Zoning Ordinance, measured from a point ten (10) feet back from the edge of the cartway of the intersecting street. Greater distances may be required if*

*warranted by specific circumstances. Any landscaping elements within the clear sight triangle shall be maintained to a height of three and one-half (3.5) feet or less.*

Clear sight triangles must be added to the plan for each proposed driveway.

**Stormwater Management Comments:**

25. §305.A - *The Post-construction total runoff volume shall not exceed the Predevelopment total runoff volume for all storms equal to or less than the two (2)-year, twenty-four (24)-hour duration precipitation (design storm). The water quality and runoff volume to be managed shall consist of any runoff volume generated by the proposed Regulated Activity over and above the Predevelopment total runoff volume and shall be captured and permanently retained or infiltrated on the Site. Permanent retention options may include, but are not limited to, reuse, evaporation, transpiration, and infiltration.*

Computation of water quality and runoff volumes must include demonstration that the BMP will receive the volume of water it is designed to retain/manage.

26. §305.I - *Weighted averaging of runoff coefficients shall not be used for manual computations or input data for water quality and runoff volume calculations.*

Computation of water quality and runoff volumes must not use weighted averaging of runoff coefficients.

27. §306.I.2 - *Provide field tests such as double ring infiltrometer or other hydraulic conductivity tests (at the elevation of the proposed infiltration surface) to determine the appropriate hydraulic conductivity rate. Standard septic/sewage percolation tests are not acceptable for design purposes.*

Field infiltration tests shall be provided.

28. §306.O - *Where roof drains are designed to discharge to infiltration practices, they shall have appropriate measures to prevent clogging by unwanted debris (for example, silt, leaves and vegetation). Such measures shall include but are not limited to leaf traps, gutter guards and cleanouts.*

A note indicating that gutter guards will be placed on all roof drains shall be added to the plan.

29. §307.A - *The peak flow rate of the Post-construction two (2)-year, twenty-four (24)-hour design storm shall be reduced to the Predevelopment peak flow rate of the one (1)-year, twenty-four (24)-hour duration precipitation, using the SCS Type II distribution.*

Peak flow rate modeling must use the SCS method.

30. §307.B – *To the maximum extent practicable, and unless otherwise approved by the Municipal Engineer, the Post-construction one (1)-year, twenty-four (24)-hour storm flow shall be detained for a minimum of twenty-four (24) hours and a maximum not to exceed seventy-two (72) hours from a point in time when the maximum volume of water from the one (1)-year, twenty-four (24)-hour storm is stored in a proposed BMP (i.e., when the maximum water surface elevation is achieved in the facility). Release of water can begin at the start of the storm (i.e., the invert of the orifice is at the invert of the proposed BMP).*

The Report must include calculations which demonstrate compliance with this section.

31. §402 - SWM Site Plan Contents

*The SWM Site Plan shall consist of a general description of the project including items described in Section 304, calculations, maps, and plans. A note on the maps shall refer to the associated computations and Erosion and Sediment Control Plan by title and date. The cover sheet of the computations and Erosion and Sediment Control Plan shall refer to the associated maps by title and date. All SWM Site Plan materials shall be submitted to the Municipality in a format that is clear, concise, legible, neat, and well organized; otherwise, the SWM Site Plan shall not be accepted for review and shall be returned to the Applicant.*

The PCSM Report and E&S Report covers shall refer to the Plan and the Plan shall have a note(s) referencing the Reports.

32. §402.A.2 - *A listing of all regulatory approvals required for the proposed project and the status of the review and approval process for each. Final approval or adequacy letters must be submitted to the Municipality prior to (or as a condition of) the Municipality's issuing final approval of the SWM Site Plan. Proof of application or documentation of required permit(s) or approvals for the programs listed below shall be part of the SWM Site Plan, if applicable:*

The NPDES permit status and any other applicable permits must be listed on the plan

33. §402.A.3 - *A statement, signed by the Applicant, acknowledging that any revision to the approved SWM Site Plan shall be submitted to and approved by the Municipality, and that a revised Erosion and Sediment Control Plan shall be submitted to, and approved by, the Conservation District or Municipality (as applicable) for a determination of adequacy prior to construction of the revised features.*

This statement must be added to the plan.

34. §402.A.4 - *The following signature block signed and sealed by the qualified Licensed Professional responsible for the preparation of the SWM Site Plan:*

*"I (name), on this date (date of signature), hereby certify to the best of my knowledge that the SWM Site Plan meets all design standards and criteria of the West Vincent Township Ordinance No. , [followed by title of Ordinance]." [Note: include signature, name, discipline of professional license, and license stamp or seal here]*

This statement must be added to the plan.

35. §402.B.8.N.i - *Location of existing well(s) on the project property and delineation of the(ir) recharge area(s) (if known), or a fifty (50) foot diameter assumed recharge area;*

The existing well recharge area must be shown on the plan.

36. §402.B.12 - *The total extent of the upstream area draining through the Site.*

*§402.B.18.b - Delineation of the land area, structures, Impervious Surfaces, and Conveyances draining to and from the BMP or Conveyance.*

The drainage area to the Lot 1 rain garden appears to be inconsistent with the upslope grading. It is not a requirement that all proposed disturbance or impervious area (i.e. driveway) must be collected into the rain garden. Drainage areas must include upstream area (undisturbed area) that will drain to the BMPs. Contours along the eastern side of the Lot 1 driveway indicate that areas upslope to the east should be included in the BMP drainage area. The Plan and Reports must be revised accordingly.

37. §402.B.13 - *All BMPs, Conveyances and other stormwater management facilities shall be located on the plan sheets, including design drawings, profile drawings, construction details, materials to be used, description of function, etc.*

The proposed roof drains and conveyance to the rain garden shall be shown on the Plan.

38. §402.B.14 - *Complete delineation of the flow paths used for calculating the time of concentration for the Predevelopment and Post-construction conditions shall be included.*

The flow path used for determining the time of concentration shall be shown on the plan.

39. §402.B.16 - *A grading plan, including all areas of proposed Earth Disturbance and the proposed Regulated Activity and delineating the boundary or limits of Earth Disturbance of the Site. The total Disturbed Area of the Site shall be noted in square feet and acres.*

The limits of disturbances must be labeled in square feet and acres for both lots 1 and 3.

40. §702.B.4 - *"The Landowner acknowledges that, per the provisions of the Municipality's Stormwater Management Ordinance, it is unlawful to modify, remove, fill, landscape, alter or impair the effectiveness of or place any structure, other vegetation, yard waste, brush cuttings, or other waste or debris into any permanent stormwater management BMP or Conveyance described in this O&M Plan or to allow the BMP or Conveyance to exist in a condition which does not conform to this O&M Plan, without written approval from the Municipality."*

The required statement must be included on the Plan.

41. §702.C - *A statement that no BMP or man-made Conveyance may be used by the owner or others for any purpose other than its intended stormwater control function, or, if approved by the Municipal Engineer, a statement of specific allowable uses of the BMP (i.e., recreational benefits that maybe associated with certain BMPs owned by a homeowners association, or allowable uses by an individual residential Landowner).*

The required statement must be included on the Plan.

42. §703: *Operation and Maintenance Agreements*

An O&M Agreement for each lot will be provided for execution upon approval of the Plan. These agreements shall be executed by the Applicant and provided to the Township for the Township's execution prior to final approval and recording of the Plan.

43. §704.A.5 - *Grant the Municipality the right, but not the duty, to access every BMP and Conveyance from a public right-of-way or public roadway to conduct periodic inspections and to undertake other actions that may be necessary to enforce the requirements of this Ordinance, or of any applicable O&M Plan or O&M Agreement; where roadways will not be dedicated to the Municipality, the Municipality shall be granted access to the private roadways as necessary to access every BMP and Conveyance;*

The required easement(s) shall be provided.

44. §705.B - *The person responsible for the operation and maintenance of a BMP or Conveyance shall make records of the installation and of all maintenance and repairs, and*

*shall retain the records for at least ten (10) years. These records shall be submitted to the Municipality, if requested.*

Stormwater management operation and maintenance notes shall include the requirements of this section.

45. *§705.D - The owner of each BMP and Conveyance shall keep on file with the Municipality the name, address, and telephone number of the person responsible for maintenance activities and implementation of the O&M Plan. In the event of a change, new information shall be submitted by the BMP or Conveyance owner to the Municipality within thirty (30) working days of the change.*

Stormwater management operation and maintenance notes shall include the requirements of this section.

**General Comments:**

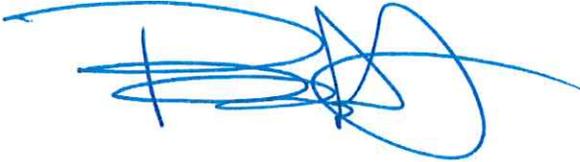
46. The anti-seep collars must be shown on the "MRC BMP Detail".
47. The "MRC BMP Detail" indicates that the geotextile fabric should be placed on the bottom and the sides. The underdrain stone also must be wrapped with geotextile.
48. The "post-construction maintenance program" notes include reference to multiple items not shown elsewhere on the Plan.
49. The "post-construction stormwater management facilities inspections" notes reference a homeowner's association. This shall be clarified as each lot has individual BMPs.
50. Multiple references to page numbers are blank on the MRC pages of the PCSM Report (pages 6-11). The referenced information must be included and correctly referenced.
51. Rock Filter Outlet Detail must require the 6-inch compost layer.
52. Sizing of the level spreader(s) shall be included in the Report. Level spreader detail(s) and/or notes shall be included on the Plan to ensure proper construction of the level spreader with respect to dimensions, grading and relationship to riprap outlet.
53. The PCSM Report is inconsistent as to infiltration rates on the site, using high infiltration rates for runoff calculations and poor infiltration for BMP selection/design.

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Please note, a revised submission may generate further review comments. Once we receive the revised information addressing the comments in this letter, ARRO will confirm that the application is compliant with the West Vincent Township Ordinances.

Please do not hesitate to contact me via email at [bryan.kulakowsky@arroconsulting.com](mailto:bryan.kulakowsky@arroconsulting.com) or by phone at our West Chester office with any questions.

Sincerely,



Bryan D. Kulakowsky, P.E.  
ARRO Consulting, Inc. – Township Engineer

BDK:ted

CC: Kathy Shillenn – West Vincent Township Secretary  
Tracey Franey – West Vincent Township Zoning Officer  
Robert Johnson – Applicant (Applicant's Engineer to distribute)  
E. B. Walsh & Associates, Inc. – Applicant's Engineer ([tgacomis@ebwalshinc.com](mailto:tgacomis@ebwalshinc.com))  
John Mott, P.E. – ARRO  
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