



**TOWNSHIP
OF
LOWER MERION**
MONTGOMERY COUNTY

TOWNSHIP ENGINEER

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LOWM 256.30

February 24, 2020

Christopher Leswing, Director of Building and Planning
Township of Lower Merion
75 East Lancaster Avenue
Ardmore, PA 19003

**Re: 130 Avon Road
Conditional Use Plan Review**

Dear Mr. Leswing:

In accordance with your request for the above referenced submission, we have reviewed a plan dated 10-14-19, latest revision dated 0-07-20, prepared by Van Potteiger Architects. We offer the following comments for your consideration:

A. MAJOR ENGINEERING ISSUE

- ❖ **Stormwater/Erosion Control** – Since the installation of the garage within the setback and the associated driveway modifications will result in increased runoff, a stormwater seepage bed must be provided. In addition, because the amount of added impervious surface will exceed the underlying code limit, the excess impervious must be fully recharged for runoff from all design storms. Therefore, it has been requested that the mandatory seepage bed be sized to recharge the direct runoff from the new garage roof area for the 100 year design storm event. Erosion and sediment control measures that are in accordance with Township standards have been requested to be fully shown and to be certified compliant by the design professional.

With the resolution of the above major engineering issue and the remaining comments in this letter incorporated, we recommend that the Conditional Use Plan be approved.

B. ORDINANCE REQUIREMENTS

1. ~~Section 101-6A(1) – All woody vegetation to be retained with driplines within twenty-five (25') feet of a building site or disturbed area shall be protected from equipment damage by fencing placed at the driplines. Accurate location of the driplines must be shown on the plan. A detail of the protection fence shall be added to the plans and must comply with township standards. If the tree protection fence is not shown at the driplines of all trees to remain, the Township Arborist must approve the location of the tree protection fence.~~

2. Section 101-6A(5)—No impervious cover shall be permitted within the driplines of trees to remain without approval from the Township Arborist. The Township Arborist must approve the location and extent of the impervious surface if the impacted trees are scheduled to remain.
3. Section 101-6A(6)—Grade changes around the driplines of trees to be retained shall be minimized. Impacted trees shall be clearly identified on the plan. Treatment of the impacted trees prior to construction to protect the root system shall be performed if/as directed by the Township Arborist. The Township Arborist must also approve the procedure.
4. Section 101-6A(8)—Should any trees not scheduled or permitted to be removed be irreparably damaged during construction and die within eighteen (18) months of the conclusion of construction activities, those trees will be required to be replaced in accordance with the provisions of Section 101-9A(2). Escrow shall be posted to guarantee the survival of the impacted trees until the allotted time has expired.
5. Section 101-6B(2)—If trenches for utilities or storm facilities are proposed within the driplines of trees, all disturbed roots must be cut as cleanly as possible. The trench must be backfilled as quickly as possible, avoiding compaction. Tree limbs must be cut back in proportion to the root area loss. This shall be noted on the plan and made a condition of permit issuance.
6. Section 155-153B(10), Section 121-15—Since the installation of the garage and associated driveway revisions will result in an increase in the runoff leaving the property, a seepage bed must be provided. Also, since the underlying zoning district allowable will be exceeded, all runoff from the impervious surface above the allowable must be recharged for the runoff during the 100 year storm. Therefore, in accordance with this provision and also in order to improve the water quality of runoff leaving the property, the seepage bed is requested to be sized to recharge the direct runoff from the new garage area for the 100 year design storm.
7. Section 121-4A(2)—All roof drains from the proposed garage have not been shown to be directly connected to a seepage bed. The location, material, size and slope of all lines must be indicated. The capacity of the design must be documented clearly in the calculations.
8. Section 121-4A(4)—The responsibility for the continued maintenance and operation of the requested recharge basin shall be the obligation of the property owner. This note shall be clearly indicated on the plan.
9. Section 121-4E(1b)—Discharge from the requested seepage bed shall be converted from a concentrated flow to a sheet flow. The overflow shall be piped to a level spreader or bubble-up spreader. A detail shall be added to the plans. Calculations shall be provided qualifying the design proposed.
10. Section 121-4E(2d)—A detail of the required seepage bed shall be added to the plan. The seepage bed detail shall note a minimum twelve (12) inches of cover. It shall be

dimensioned to be located ten (10') feet from any basement wall. It shall be located downhill from a building in the direction of surface runoff where feasible.

11. Section 121-4E(2f)—All seepage beds must contain a sediment trap accessible for maintenance.
12. Section 121-4E(2j)—Separate distribution piping and collection piping shall be shown in the seepage bed detail. The size and number of perforations per linear foot of pipe shall be included in the seepage bed detail for each and all pipe diameters used. Perforations shall not be less than five-sixteenths (5/16") inch in diameter and provide an opening area not less than three and thirty-one hundredth (3.31) square inches per square foot of pipe surface.
13. Section 121-4F(10)—Structures and/or cleanouts shall be used where abrupt changes are made in storm sewer alignment.
14. Section 121-5A(2)—The maximum time of exposure for bare soil areas shall be twenty (20) days before stabilization measures are implemented. This shall be clearly noted on the plan.
15. Section 121-5A(7)—Maintenance requirements of the erosion control provisions shall be listed on the plan in outline form. Routine end-of-day checks and checks following storms shall be required during the construction to ensure the measures are working properly.
16. Section 121-6B—Certification attesting to the completeness of the design and compliance with Chapter 121 of the Lower Merion Code shall be included and signed on the plans.
17. Section 121-6C—The limits of disturbance shall be clearly delineated on the plan. The amount of square feet of earth disturbance shall be listed.
18. Section 121-6F—Existing topography for a peripheral strip of forty (40') feet shall be provided on the adjacent properties in order to clearly define existing drainage patterns.
19. Section 121-6F, 135-17C(1), 135-33—The existing and proposed contours shall be certified to conform to Lower Merion Township Datum. Assumed datum cannot be used.
20. Section 121-6H—The species in addition to the size of trees on the property with drip lines within twenty-five (25') feet of disturbance shall be included on the plan. The species has not been provided for all trees meeting this requirement.
21. Section 121-6J—A sequence of construction activities shall be provided on the plan. Installation of tree protection fence, seepage bed, roof collection system, and level spreader system shall be listed. Notification of the Township Engineer shall be listed in the sequence following installation of protective barriers and prior to earth disturbance. The removal of trees and clearing in the area of stormwater controls for the construction phase shall be listed. The demolition of the existing drive areas to be replaced shall be listed. Notification of the Township Engineer for inspection shall be listed prior to installation of

the seepage bed and piping. A notice of forty-eight (48) hours is required by the Township Engineer prior to earthmoving or other required inspection.

22. Section 121-10—No grading changes shall be shown within three (3') feet of the property line in order to ensure transition to the grading on the adjoining property. This shall be clearly noted on the plan.
23. Section 121-15—The runoff crossing to the adjacent properties during the construction phase of the project shall be managed so that the water quality/quantity impact is minimized to the adjacent properties. Diversion berms, stoned construction staging areas, and inlets/piping shall be noted to be provided as required or as directed by the township so as to ensure acceptable conditions during the construction phase.
24. Section 135-16B(13), 121-15—The soil limitation and hydrologic classification shall be provided.
25. Section 135-17B(1), 135-17B(13)—The existing structures and driveways on adjoining properties within two hundred (200') feet of the property shall be clearly provided.
26. Section 135-17B(1)—The existing sanitary sewers shall be shown on the north side of the property to within two hundred (200') feet of the development. Any easements shall be shown.
27. Section 135-17B(1)—All existing utility service locations shall be shown from the structure to the mains. All utility services have not been fully shown.
28. Section 135-17B(2)—The location of the existing sanitary lateral shall be shown.
29. Section 135-17B(6)—The error of closure shall be provided for the lot and shall not be greater than 1:5,000.
30. Section 135-17B(13)—The existing storm sewers, inlets and any other manhole or other structure shall be shown within 200'. Invert, rim, and grate elevations shall be indicated. The size and material of all storm sewers shall be provided.
31. Section 135-19B(8)—The actual sight distance triangles shall be shown for the driveway. It shall be demonstrated that the existing drive provides the minimum safe stopping distance required by PaDOT Publication Title 67, Chapter 441. Calculations shall be provided as necessary. It shall be noted what improvements are necessary to be performed to achieve minimum safe stopping distance. The Traffic Safety Unit of the Lower Merion Police Department must approve the final drive condition.
32. Section 135-32—Concrete road control monuments shall be shown to be installed at the right-of-way at the intersection of each property line and at all changes in direction. Iron pins or other survey monumentation shall be permitted if concrete monuments cannot be installed. Approval from the Township Engineer is required for the substitution.

33. Section 155-152—The relief from the code front and side setback requirements exceeds the 15% maximum amount. Additional relief may be granted by the board of Commissioners per code section 155-152C if deemed essential to the preservation of the historic resource.
34. Section 155-167.7(B)—Wooded lot calculations shall be provided on the plans. The total number of trees removed for the proposed construction shall be indicated.

C. ENGINEERING COMMENTS

1. Erosion control measures shall be provided on the plan. Details that conform to township standards shall be shown.
2. A fill material and topsoil stockpile location shall be provided. Notes shall be added regarding stabilization of the stockpiles.
3. Any required Planting Plan must be approved by the Planning Department and the Township Arborist prior to issuance of a permit.
4. A full reveal and depressed granite curb detail shall be provided.
5. Depressed granite curb shall be indicated at the driveway access location. The length of depressed curb shall be dimensioned on the plan. Paving shall be clearly shown to be retained in front of the existing open mouth inlet.
6. A construction entrance location and detail shall be provided.
7. Notes shall be added to the requested full reveal and depressed granite curb detail that include the following:
 - The depressed curb height for the driveway shall be ¼ inch for each inch of existing curb reveal
 - Any curb replacement must meet existing curb reveal height.
 - One foot cut back is needed in the street area where any curb is adjusted and/or replaced. All joints must be sealed.
 - An additional concrete support is needed mid-span of each section of depressed curb in the driveway area
8. The mean grade of the garage structure shall be calculated and shown on the plan. The architectural plans must be coordinated with and must comply with the grading proposed with this application.
9. Dimensions shall be added for the driveway and new walkways as necessary in order to clearly define the limits of each.
10. Any electric lines to the proposed garage shall be shown.

11. A legend shall be added to the plan for all line types used. Clarification of the fence location shall be made. Any interference of the fence and proposed driveway shall be eliminated.
12. A copy of the revised plan shall be submitted with any changes highlighted. A letter shall also be provided with the revised plan indicating how each requested revision has been addressed in the re-submission.

Please advise if we may be of further assistance in this matter.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Kevin J. Bowers", with a stylized flourish at the end.

Kevin J. Bowers, P.E.

PENNONI ASSOCIATES

Township Engineer

Cc: Robert E. Duncan, Assistant Township Manager
VPA Architects
John Hamilton