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June 5, 2020

Carol Guttschall, Chair
Bedminster Township Land Use Board
1 Miller Lane
Bedminster, New Jersey 07921

Re: 1120/1310 Lamington Road LLC Major Subdivision
Technical Review
Block 39, Lots 12, 15, 21
1120/1310 Lamington Road
Our Project No. 20BD202

Dear Ms. Guttschall:

The above referenced application requests preliminary and final major subdivision and variance approval for lots 12, 15 and 21 in block 39 along Lamington Road. The proposal is to create a total of nine residential building lots. One of the parcels, lot 15, was the subject of a prior subdivision review before the Board however the conditions of the approval have never been satisfied. The following documents have been submitted in support of the application:

1. Cover letter, dated January 23, 2020, prepared by Michael Lavery, Esq.
2. Land Use Board Application, undated, prepared by Michael Lavery, Esq.
3. Checklist with waiver requests, undated and unsigned.
4. Ownership disclosure
5. Property deeds
6. Resource constraints calculations
7. Agricultural use acknowledgement
8. Environmental Review Scoping Checklist
9. Somerset County Planning Board application, dated January 24, 2020.
10. Subdivision Plans, consisting of 14 sheets, dated January 15, 2020, prepared by Ronald A. Kennedy, PE.
11. Stormwater Management Report, dated January 15, 2020, prepared by Ronald A. Kennedy, PE.
12. Boundary Survey, dated April 22, 2019, prepared by Jeffrey S. Grunn, PLS.

A review of the above documents results in the following comments for the Board's consideration:

I. Completeness Review

- A. The remaining open completeness item for the subdivision was approval by the Board of Health. The application was approved by the Board of Health, however lot 12.06 was not

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approved since the septic system testing did not comply with the Township ordinances. It should be noted that The Realty Improvement Sewerage and Facilities Act prohibits the construction of any realty improvement with facilities for sanitary waste disposal.

(N.J.S.A. 58:11-25) A realty improvement is defined as any structure requiring water or sewer service. Based on this, the application should only be considered if lot 12.06 is shown as part of lot 12.07 and the subdivision proposal is for only seven lots instead of the eight shown on the plans. While additional soil testing and a subsequent application to the Board of Health may yield acceptable results on what is designated as lot 12.06, it should not be shown as part of this subdivision. A future application would be required.

- B. Assuming the subdivision is for a total of eight lots, and subject to the waivers requests identified in the February 15, 2020 letter from this office, the application may be deemed complete.
- C. A photo overlay of the subdivision is attached to this letter.

II. Subdivision Plans

A. Sheet 1 – Project Data/Vicinity Plan

- 1. The general notes indicate that a letter of interpretation is required for lots 12 and 21. The plans also show the limits of the Flood Hazard Area of both the Middle Brook and Hoopstick Brook. Any approval by the Board should include a condition that the LOI and a FHA verification be issued. The status of these applications should be provided to the Board.
- 2. The notes indicate that individual lot development plans will be prepared for each lot when developed. These must be designed to major development stormwater management standards since the overall project is a major development. This requirement should be a condition in any approval.
- 3. Note 26 states that the base course of paving will be installed prior to the issuance of the first certificate of occupancy. The means by which the roadway (all pavement), drainage, etc. will be completed needs to be identified.
- 4. Under the current MLUL, the Township cannot require a performance bond on the improvements if they are not to be dedicated to the municipality. The plans are for a private road and it does not appear the Township can require a performance bond for the roadway or its associated drainage improvements. Without the ability to bond the improvements, all improvements must be installed prior to the signing of the filed map.
- 5. The zoning table should include the additional front yard setback requirement applicable to lots greater than 10 acres in size “In no case less than 3' setback for every 1' of width of principal building for lots 10 acres and greater in size”.
- 6. The zoning table should include the combined side yard setback requirement (50% of lot width).
- 7. The lot layouts (areas etc.) are different on the preliminary and final subdivision plats (which coincides with the zoning table on the cover sheet) than are depicted on the site

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- dimension plan (preferred layout). The applicant should confirm the difference is due to the area of the private road is included with the individual lot areas on the preferred layout.
8. Based on the list of variances, proposed lots 15, 21 and 21.04 are not fully compliant with the Township Land Management Ordinance.
 9. The Resource Constraints calculations indicate that the lot yield from lot 12 is 1.73 lots and the yield from lot 21 is 5.05 lots. Lot 15 is not included in the resource constraints calculations however it is included in the subdivision. It is recommended that lot 15 be added to these calculations to evaluate the development potential of the overall tract based on the resource constraints ordinance.
 10. The resource constraints calculations do not show any area for conservation easements, however lot 12 has a significant conservation easement on it. Clarification is required.

B. Sheets 2 and 3 – Existing Conditions and Environmental Constraints Map – No comments

C. Sheets 4 and 5 – Preliminary and Final Subdivision Plat

1. All outbound monuments are to be set prior the signing of the final plat.
2. The map will need to be signed by the applicant prior to submission for signature.
3. The surveyor certifications on the maps will need to be signed before they are presented for signature.
4. Lot closure calculations and descriptions must be approved for the private road, all lots and easements prior to signing of the maps.
5. All easement language must be approved by the Board/Township attorney prior to the signing of the maps.
6. The notes need to be updated when the LOI/FHA verifications are received.
7. Note 14 indicates the lot numbers are to be approved by the Tax Assessor. This must be completed before the map is presented for signature and the note should be removed at that time.
8. As noted above, lot 12.06 needs to be removed from plans and joined with 12.07. The lot area summary will need to be revised accordingly.
9. The spelling of the name of the Board Secretary must be corrected. (DeLeon)
10. The setbacks to the existing buildings on lot 21 to the private road right of way need to be shown on the plans.
11. There is a structure on lot 21 that is labeled as a “guest house”. If this is a second dwelling, it must either comply with the condition use standard for an accessory dwelling unit, or be a valid, pre-existing, non-conforming use. If it is pre-existing and non-conforming, a D variance is likely required since the lot on which it is located is being made smaller and therefore it is an intensification of a non-conforming use. Alternatively, the structure can be removed.

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D. Sheets 6 and 7 – Site Dimension Plan (Preferred Layout)

1. The 20 foot curb radii where the private road intersects with Lamington Road should be widened to 25 feet to be consistent with RSIS design criteria (table 4.6).
2. It appears that all individual lots will be major developments under the stormwater standards. Each lot will have to be designed accordingly when the lot development plans are submitted.
3. The septic system for the existing building appears to be on lot proposed lot 21.04. The new system for remaining lot 21 must be constructed prior to the filing of the map.
4. The plan should note that all proposed utilities are to be underground.

E. Sheets 8 and 9 – Grading, Drainage and Utility Plan

1. The bio-retention basins are depicted at 1"=100'. Larger scale grading plans for each of the basins are needed to confirm design parameters. 1" = 30' minimum scale plans are recommended.
2. It is recommended that all sections of the private road be constructed with a crown. This will improve the drainage characteristics of the road by reducing the sheet flow across it. This will require the installation of some additional stormwater improvements to convey runoff across the street.
3. The existing structures to be removed should be removed completely below grade and backfilled with structural fill. The existing well and septic for the dwelling on Remaining Lot 15 will need to be abandoned in accordance with NJDEP requirements.
4. The two proposed culverts and the bio-retention basin outlets (basins #4, 5, 6 and 9) will require permits from the NJDEP and any approval should be subject to those permits.
5. The toe of slope for the proposed bio-retention basins (4, 5 & 6) should be indicated. It appears the grading may extend into the wetland buffers for some of these basins, which would require approval from NJDEP.
6. The plans depict a septic structure on proposed lot 21.04. Additional information should be provided regarding the existing septic structure. The extent of the existing septic system should be completely removed and backfilled with structural fill material (within the private road area). Any material from the old system will need to be disposed of in accordance with NJDEP requirements.
7. An inlet will be required on the westerly side of the private road (station 9+25?) adjacent to basin #5 in order for the roadway swale to be directed to the basin as indicated on the post developed drainage area map.
8. Correct the 5' weir invert within the control structure for basin #6.
9. The proposed grading of basin #9 needs to tie into the existing 134 contour.

F. Sheets 10 and 11 – Soil Erosion & Sediment Control Plan

1. These plans will need to be certified by the Somerset-Union Soil Conservation District.

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G. Sheet 12 – Driveway Profiles (Preferred Layout)

1. As noted previously, the road grading should be modified to create a crowned section.

H. Sheets 13 and 14 – Construction Details

1. Additional information needs to be provided on how the proposed 12' weir within outlet structure #6 will be constructed.
2. There are two bio-retention basin detail; one with an underdrain and one without an underdrain. The basins that will have underdrains should be identified.
3. As noted above, 1"=30' plans should be provided for the bioretention basins.
4. Revise the sand content within the planting bed in the bio-retention basin details to be consistent with Chapter 9.1 of the BMP Manual. The specification for the sand layer should be provided. Also confirm whether the bottom layer of filter fabric will restrict infiltration into the subsoil for the basins that do not have underdrains.
5. Correct the spillway elevation for Basin #6 within the spillway detail.

I. Site Dimension Plan (Conventional Layout) Sheets 1-2 of 3

1. Any variances associated with the conventional layout should be described by the applicant's engineer. For example, it appears remaining lot 21 will require variances and therefor this is not a "conforming" layout.
2. While the plan arguably shows geometry that mostly complies with the ordinance, some of the aspects of the layout do not comply with realistic design. The proposed cul de sac on the road right of way, which provides frontage for four of the lots, is located entirely within the wetlands and would not be permissible by NJDEP regulations. The lots do not use this area for access, however lots 12.06, 12.07 and 12.08 only have access through adjoining lots with the "actual" cul de sac located on portions of lots 12.07, 12.08 and 12.09.

J. Driveway Profiles (Conventional Layout) Sheet 3 of 3 – No comments

K. Sight Distance Plan & Profile (Sheets 1-2 of 2) – No comments

III. Stormwater Management

A. Stormwater Management Report

1. The hydrologic soil group for each of the soils should be added to the soil descriptions within the report (page 2).
2. The coverage summary on sheet 1 of the subdivision plans indicates 2.35 acres of impervious coverage associated with the proposed private road and existing lot improvements on Lot 21 that are to remain. The analysis in the stormwater report

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- indicates 1.9 acres of impervious coverage was used in post developed conditions. The post developed analysis should be revised to be consistent with the coverage included in the coverage summary.
3. The post developed drainage analysis does not include the proposed lot improvements. It appears the intent of the analysis at POS A (drainage area 1) is for the post developed hydrograph to meet or be beneath the existing. The existing improvements associated with remaining Lot 15 were not included within the analysis. The timing of when these improvements will be removed should be provided, or the improvements should be included within the post developed analysis. Also, once detention improvements are incorporated into the design of the proposed lot development plans, a shift in the hydrograph will be likely. It is also noted that the summary tables depict a slight increase in the post developed 100 year storm runoff over what is allowed.
 4. Additional topography should be provided to confirm the middle drainage divide that separates areas #1 and #2. The topography provided on the drainage area maps in conjunction with the USGS map in the report (Figure 2) does not provide enough information. Based on the information provided, it does not appear the portion of drainage area #2 north of dwelling on Lot 21 would be tributary to drainage area #2. Additional information needs to be provided to confirm the areas (since under post developed conditions, this area is shown as being within drainage area #6 which is tributary to proposed bio-retention basin #6).
 5. Consideration should be given to breaking up EDA#2 into smaller sub areas. Under post developed conditions (with smaller drainage areas), the average runoff curve number is lower than the same area that was used within the existing condition (ie the overall existing drainage area is modeled with an average CN of 72 while post developed conditions utilize a curve number of 71 for some of the subareas where these subareas have the same (undisturbed) vegetated cover as existing conditions; in effect, the post developed coverage results in less runoff than the existing condition even though the land cover is the same for these smaller areas).
 6. The time of concentration segment BC for EDA#2 (shown on the drainage area map) is substantially longer than the 220' used within the calculation.
 7. It is recommended that a second analysis point be added within drainage area #1 where the Hoopstick Brook crosses the easterly property line of proposed lot 15.01.
 8. It is noted the analysis to POS B (and to a lesser extent POS C) is based in part on detention being provided for offsite areas. If there is a change in the offsite conditions (as a result of future development), it is unknown how this may impact the

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- design. Consideration to bypassing the offsite areas around the proposed basins, to the greatest extent feasible, should be investigated.
9. The post developed drainage boundary line for DA#2 should run along the edge of pavement along the private road based on the proposed grading verses being approximately 15' off the edge of pavement. The drainage boundary should be revised.
 10. Based on the proposed grading, not all of the area on the south side of the private roadway will be tributary to basin #7. The drainage boundary should be revised.
 11. It appears the existing wetlands located at the corner of the private road (adjacent to basin #6) may be partially tributary to Basins #6 and #7. The Engineer should confirm the drainage boundaries in the area.
 12. The majority of the area on the north side of the private road appears to be tributary to the culvert and not to Basin #8 based on the proposed grading. The drainage boundary should be revised.
 13. It is not clear how water quality will be addressed for the individual lots. The concept improvements depict drywells which cannot be used to treat for water quality.
 14. A groundwater mounding analysis needs to be provided for the bio-retention basins that will infiltrate.
 15. The bio-retention basin outlet pipes need to be modeled within the routing calculations to ensure they do not control runoff through the control structures (basins 4, 6 and 9 specifically).
 16. The proposed runoff volume before infiltration within the groundwater recharge table on Page 6 of the report does not appear to be consistent with the volume within Appendix B3 (18.329 ac-ft verses 17.024 ac-ft) of the report. Clarification is required.
 17. The top of berm for basins #4 and #5 appear to be lower based on the grading plans than is listed on the plan and used within the calculations.
 18. The engineer shall confirm all of the basins have minimum berm widths and freeboard in accordance with RSIS, and NJDEP Dam Safety for those basins which meet the classification of a dam.
 19. The peak times depicted within the pond drawdown chart (Appendix C-3 time vs. elevation summary) does not match the peak times in the routing (Page 2 of 99; Section C-1) for the water quality storm.
 20. Basin #4 appears to empty at 40.08 hours (verses 50.05 hours within the pond drawdown chart) for the 100 year storm event.
 21. The 100 year routed peak water elevation is above the emergency spillway crest within Basin #9.

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22. The emergency spillway analysis utilized 11.3 inches of runoff (in 24 hours) where the 100 year plus 50% would result in 12.3 inches of runoff (using 100 year storm of 8.2 inches in 24 hours).
23. The peak outflow rates are based on an interpolated flow rate whereas they should be based upon the computed rates in the analysis. The summaries should be revised.
24. The computational time increment within the unit hydrographs varies with the different drainage areas. Additional information for the computer software being utilized should be provided. It is not clear why a consistent time increment would not be used.
25. The low impact development checklist at section 3.2B indicates that permanent site disturbance is being restricted as part of the current application, with the reasoning being that any additional disturbance will require additional approval from the Township of Bedminster. It is not clear how this would meet a restriction on permanent site disturbance. It is recommended that areas that have been modeled in post developed conditions as woods and or meadow be restricted against development since these areas have a lower runoff potential than would lawns and impervious areas associated with single family homes. The grading plans should depict a maximum grading limit for each lot so that these areas could be quantified.
26. The reasoning included within the low impact development checklist at section 3.2E and 3.3G do not appear to be applicable since reducing the setbacks and shortening the driveways have no bearing on the development of the private road and associated improvements. Clarification is required.
27. As currently designed, each lot development will need to be designed as a major stormwater development that follows the framework of the overall site analysis (ie each lot should not be submitted as its own individual project, but should include the remainder of the site as well, to confirm that the addition of the different hydrographs for the different phases of the project still meet the requirements for the overall site). This should be addressed in the individual lot deeds in the event that different engineers are utilized to develop the individual lot improvements. Alternatively, the current analysis could be designed to incorporate stormwater improvements based on maximum permitted lot coverages and disturbance.
28. A separate map depicting the location of the soil testing being utilized for the drainage analysis should be provided.
29. It appears that some of the proposed bio-retention basins are located closer in proximity to wetlands than where the soil testing was taken being utilized for the drainage analysis. As a result, design assumptions (infiltration, depth to groundwater) used within the analysis cannot be confirmed at this time.

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30. The depth to the first low level outlet in basin #6 needs to be lowered to the routed elevation of the water quality storm event (approximately 128.65'). The current low level outlet is set at elevation 129.20'. This will result in greater than the volume of the water quality design storm being infiltrated, which is the maximum allowed per the NJDEP BMP Manual.
31. The applicant indicates additional soil testing will be undertaken within the footprints of the bio-retention basins in accordance with Appendix E of the NJDEP BMP Manual. This testing should be done prior to signing of the subdivision map or the construction of the road.
32. The storm sewer analysis is based on the 25 year design storm. The 100 year storm event needs to be analyzed to confirm the 100 year storm runoff will reach the basins. Hydraulic grade line calculations should be included within the analysis.
33. Swale conveyance calculations need to be provided in the report.
34. An Operations and Maintenance (O&M) manual for the private road and the associated drainage improvements will need to be submitted for review and approval.
35. Individual O&M manuals will need to be prepared for each lot as they are developed.
36. Compliance with the O&M manuals should be included as a deed notice for all lots.

I trust the above comments are useful to the Board in its review of the application.

Very truly yours,



Paul W. Ferriero, PE, CME
Township Engineer

cc: Board Members
Thomas Collins, Esq.
Frank Banisch, PP/AICP
Ronald A. Kennedy, PE