



**TOWNSHIP
OF
LOWER MERION**
MONTGOMERY COUNTY

TOWNSHIP ENGINEER

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LOWM 248.73

October 26, 2018

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

**Re: 108 Glenn Road & 39, 41 E. Montgomery Avenue Development
Tentative Sketch Plan Review**

Dear Mr. Leswing:

In accordance with your request for the above referenced submission, we have reviewed a set of four (4) plans dated 07-05-18, prepared by Momenee, Inc. We offer the following comments for your consideration:

A. MAJOR ENGINEERING ISSUES

- ❖ **Stormwater**— We have requested that in order to reduce the nuisance flow of runoff from the basins that if surface discharge is proposed from the stormwater facilities, the basins be designed such that they will have no outflow from all design storms up to and including the five (5) year event. We have also requested that the applicant diligently seek the design option proposed that shows the outflow of the basins connecting into the township storm sewers. Since cooperation from the adjoining property owners will be required for an easement that would make this possible, it has not been suggested to be made a Condition of Approval.
- ❖ **Traffic**—A traffic impact study has been requested to be submitted with the Preliminary Plans. Adequate maneuverability has been requested to be demonstrated for truck and vehicle access/egress. The feasibility of the addition of an island at the drive access/egress location on Glenn Road has been requested to be evaluated in order to encourage the proposed left turn restriction out of the development. A left turn restriction from Montgomery Avenue into the one way loop drive has been requested to be evaluated. Also, improvements that the township has recently agreed can be made in the right-of-way at the intersection of Glenn Road and Montgomery Avenue are recommended to be performed as part of this development project. Details of those improvements will be developed/evaluated with the Preliminary Plans.

With the resolution of the above major engineering issues and the remaining comments in this letter incorporated, we recommend that the Tentative Sketch be approved.

B. ORDINANCE REQUIREMENTS

1. Section 101-6A(1)—All woody vegetation to be retained within twenty-five (25') feet of a building site or disturbed area shall be protected from equipment damage by fencing placed at the driplines. The location of the fence shall be provided. A detail shall be included on the plans that complies with township standards. The Township Arborist must approve the location of the tree protection fence if it is not indicated at the driplines. This shall be fully evaluated with the Preliminary Plan Submission.
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 proposed locations of the improvements impact several trees which might remain. The Township Arborist must approve the location and extent of the impervious surface if any impacted trees are scheduled to remain. This shall be fully evaluated with the Preliminary Plan.
3. Section 101-6A(6)—Grade changes around the driplines of trees to be retained shall be minimized. Treatment of the trees prior to construction to protect the root system shall be performed. The Township Arborist must approve the procedure. This shall be evaluated with the Preliminary Plan.
4. Section 121-4B(2a)1—At a minimum, the increased volume of stormwater generated by the proposed development for the twenty five (25) year storm shall be recharged. Since the primary structures on the existing properties are being demolished, meadow cover condition must be used as the base line for determining the volume. Calculations documenting this shall be submitted with the Preliminary Plans.
5. Section 121-4E(2i)—Soil permeability tests shall be performed to a depth adequate to demonstrate the functioning of the system. The location of the percolation tests shall be indicated on the plan and the complete test report must be submitted for review. This shall be submitted with the Preliminary Plans.
6. Section 121-4E(2c)—The seepage beds shall be designed to empty the total design storm volume needed for peak rate control in twenty-four (24) hours or less. Calculations verifying this shall be submitted with the Preliminary Plans.
7. Section 121-4E(4)—A description of how the permanent stormwater control facility will be operated and maintained shall be submitted by the design engineer. The frequency of inspection shall be listed on the plan. The contact information for the party responsible for the operation and maintenance of the facility shall be listed. The plan shall be presented in

recordable form as a covenant running with the land and must be approved by the Township Solicitor prior to recording the Final Plan.

8. Section 121-4E(2f)—All seepage beds must contain a sediment trap accessible for maintenance. Details shall be submitted with the Preliminary Plans.
9. Section 121-5B(4A)—The Cn number for the pre-development conditions on the site shall be considered as meadow for all rate and volume control analysis. This shall be fully evaluated with the Preliminary Plans.
10. 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. This shall be submitted with the Preliminary Plan.
11. Section 121-6F—Existing topography shall be provided in the vicinity of the storm sewer extension alternative shown in St. Georges Road. This is necessary to better document existing drainage patterns off the development site.
12. Section 121-6D—Drainage area maps for the during construction analysis, the permanent facility analysis and for qualification of all proposed storm sewers shall be provided with calculations. These shall be submitted with the Preliminary Plans.
13. Section 121-6J—A sequence of construction activities shall be submitted. Installation of tree protection fence, a temporary basin, seepage bed, roof collection system, and connection to the township storm sewer system (if feasible) shall be listed. Notification of the Township Engineer shall be listed in the sequence following installation of protective barriers and prior to earth disturbance. Notification of the Township Engineer for inspection shall be listed prior to installation of the seepage bed and piping. This shall be fully evaluated with the Preliminary Plan.
14. Section 121-10—Without written permission from the adjoining property owner, 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 demonstrated with the Preliminary Plans.
15. Section 121-15—In order to reduce nuisance flows, it is requested that if the permanent storm detention facilities utilize a surface discharge system, that they be designed to produce zero outflow for all storms up to the five (5) year event.
16. Section 121-15—The location of any basin surface discharge point shall match the existing drainage patterns. The choice for locations of "points of interest" to be considered in the stormwater analysis shall be coordinated with the Township Engineer in order to ensure that there is no increase in the rate of runoff onto adjoining properties. The location of any

spreader structure shall be noted to be field adjusted with concurrence of the Township Engineer's office in order to maintain current discharge patterns. It is also requested that the applicant diligently seek construction of the design alternative involving connection to the Township storm sewer system. This will involve obtaining an easement through the adjacent property in order to tie the overflow of the basins into an extension of the township storm sewer system in St. Georges Road. This shall be fully evaluated with the Preliminary Plans.

17. 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 does not adversely impact the adjacent properties. Diversion berms, stoned construction staging areas, and inlets/piping shall be provided in order to ensure acceptable conditions during the construction phase. This shall be fully evaluated during the Preliminary Plan.
18. Section 135-41.1(A)—Adequate water supply must be documented for the development. A letter from Aqua Pennsylvania must be submitted certifying adequate supply for the additional demand. This shall be submitted with the Preliminary Plan.
19. Section 135-16B(7) – Street names shall be clearly labeled on the Vicinity Plan on sheet No. 2. The names of property owners and the addresses of properties adjacent to the development and the possible storm sewer extension work in St. Georges Road shall also be provided on the plan.
20. Section 135-16B(15), 121-4A(2)—All roof drains must be directly connected to the stormwater facility. Details regarding the size, slope, and material shall be evaluated with the Preliminary Plan.
21. Section 135-16B(12), 121-15—The existing hydrological runoff classification shall be listed as Type B in order to be conservative in the development of the recharge requirements.
22. Section 135-27C(1)—The ultimate right-of-way for Glenn Road is fifty (50') feet. The additional five (5') feet of right-of-way shall be shown and the parking area shown outside the requested new right-of-way. It is requested to be offered for dedication to the township.
23. Section 135-19B(8)—Design protection must be provided for pedestrians crossing the proposed utility or driveway work via the public sidewalk on Montgomery Avenue during construction. The Traffic Safety Unit of the Lower Merion Police Department must also approve the final drive configuration/locations. These items shall be fully evaluated with the Preliminary Plans.

24. Section 135-19B(8) – The actual sight distances shall be shown at the full access drive on Glenn Road and the exit drive onto Montgomery Avenue. The desirable sight distance as specified by PaDot must be demonstrated to be provided.
25. Section 135-19B(8)—A traffic study shall be submitted with the Preliminary Plans that fully evaluates the proposed driveway access to Glenn Road and Montgomery Avenue. The level of service shall be evaluated. The effect on adjacent existing driveways shall be fully considered and evaluated. The developer shall also contact the Township Engineer's office to determine the intersections that will be requested to be evaluated with regard to traffic impact from the proposed development.
26. 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. This must be provided with the Preliminary Plans.
27. Section 135-40—A Planning Module or exemption must be approved by the City of Philadelphia and the DEP prior to recording the Final Plan.
28. Section 155-167.7(B)—Wooded lot calculations shall be shown on the plan and must be approved by the Township Arborist with the Preliminary Plans.

C. ENGINEERING COMMENTS

1. Erosion control measures shall be provided with the preliminary plans. The proposed construction access location shall be indicated. Details that conform to township standards shall be shown. Certification attesting to the completeness shall be provided on the Erosion Control Plan.
2. The width of the drive to Glenn Road and with Montgomery Avenue shall be dimensioned. New depressed granite curb shall be noted. The length of depressed curb shall be dimensioned on the plans.
3. The centerline striping at the drive access shall be further described as double yellow pavement markings. In order to encourage the indicated right-out-only movement, installation of a traffic island shall be investigated. The details shall be evaluated with the Preliminary Plan.
4. A Lighting Plan shall be submitted with the Preliminary Plan. The Director of Building and Planning must approve the lighting plan.
5. A full reveal and depressed granite curb and also a concrete curb detail shall be provided with the Preliminary Plans. The length of curb to be raised to full reveal shall be located and dimensioned on the plan.

6. The location, size, material, and slope of the proposed sanitary lateral shall be shown. The design must comply with township standards. Separate permits/approvals will be required.
7. The location of all proposed utility services shall be provided. This must be indicated on the Preliminary Plan.
8. A fill material and topsoil stockpile location shall be provided.
9. A note shall be added to the plan indicating that the Township Engineer shall be notified 48 hours prior to the installation of the seepage bed, storm sewer piping and prior to the start of earthmoving activities.
10. A Planting Plan must be approved by the Planning Department and the Township Arborist.
11. The Shade Tree Commission must approve the removal of any tree in the right-of-way. The street trees to be removed shall be shown on the proposed development plan in addition to the existing conditions plan.
12. Sidewalk and curb shall be noted on the plan to be repaired/replaced at the direction of the township.
13. Concrete aprons shall be labeled on the plans. Details of the concrete apron and sidewalk shall be provided. Details must conform to township standards. These shall be submitted with the Preliminary Plans.
14. Detectable warning surfaces shall be shown in the sidewalk at the crossings of the proposed driveways.
15. The mean grade of the proposed 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. This shall be fully evaluated with the Preliminary Plans.
16. The location of all existing storm sewers and structures shall be provided. The size, slope, and material of all storm sewers within two hundred (200') feet of the development or proposed work shall be indicated. The location of the recently installed storm sewer extension from the Suburban Square Development project shall also be shown. These shall be fully provided with the Preliminary Plans.
17. Adequate maneuverability for cars in the garage and for delivery/service vehicles shall be documented for the final paving/building layout. Maneuverability for trucks appears to be very tight. The radii at the driveway access/egress must be labeled on the plans and be

adequate for all permitted traffic movements. The width of the garage aisle shall be dimensioned on the plan. This shall be fully evaluated with the Preliminary Plans.

18. It is requested that the improvements at the property frontage/intersection of Glenn Road and Montgomery Avenue which the township agreed to with the North Ardmore Civic Association be performed as part of this development project. Details shall be fully evaluated with the Preliminary Plans.
19. A profile of the alternative storm pipe outflow connection to the storm sewer in St. Georges Road shall be provided in order to more fully demonstrate feasibility.
20. An As-Built Plan must be submitted following completion of the construction demonstrating compliance with building footprint square footage limitations.
21. 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
Momenee, Inc.