

January 23, 2023

Leicester Planning Board
Town of Leicester
3 Washburn Square
Leicester, Massachusetts 01524

Re: Skyview Estates
Major Site Plan Review & Special Permit

To the Board:

We are in receipt of the following in association with the above referenced project:

- Plans entitled "SITE PLANS FOR SKYVIEW ESTATES, MAIN STREET, LEICESTER, MA 01611", 31 sheets, dated 09-01-2022 with revision date of 12-05-2022, by Allen & Major Associates, Inc. of Woburn, Massachusetts.
- Bound document entitled "Drainage Report, Skyview Estates, Leicester, MA" dated 09-01-2022, with revision date of 12-02-2022 prepared by Allen & Major Associates, Inc. of Woburn MA.
- Application for Site Plan Review & Special Permit, dated Dec 15, 2022.
- Letter addressed to Alaa M. Abusalah, dated December 2, 2022, providing a project narrative.

Plans identify the following waiver requests, from Leicester Subdivision Regulations. Our comments on requested waivers follow:

1. Waive §V, A, 1, f to permit roadway centerline radius of curvature of 135 feet and 120 feet. Minimum radius of curvature is 200 feet.

On a local development road, curve radii of 120 feet and 135 feet can be negotiated by vehicles, and will not impede public safety vehicles, but may be perceived as inconvenient for some drivers. We do not object to the requested waivers. See note below.

The radius of curvature of Skyview Drive from STA 11+29.41 to STA 11+50.18 is 120 feet. There is room to accommodate an expansion of the radius of curvature in this area. Leicester Planning Board may wish to require the Engineer make reasonable efforts to minimize the relief requested, before considering a waiver.

2. Waive §V, A, 3, a, to permit a road slope of 12%. Maximum permitted road slope is 10%.

Skyview Drive has a maximum road slope of 11.65%, and the Emergency Access Road has a slope of 12.00%. It is the opinion of this office that this road slope is within the limits of safe roadway design. If Leicester Planning Board grants this waiver, it is recommended that the waiver specify the proposed road slopes and locations.

3. Waive §VI, B, 1, a, to permit HDPE drain pipe. Reinforced concrete pipe (RCP) drains are required.

The use of HDPE pipe as drainage culvert has been permitted and even requested by Leicester Highway Department in the past. This product is long-lived and performs well, if correctly installed. We do not object to this requested waiver.

A waiver should specify double wall HDPE pipe, with smooth interior.

4. Waive §VI, C, 4 to permit flow velocities in drains of 11.92 and 14.0 feet per second. Required storm flow velocity is between 2 and 10 feet per second.

The primary concern with high-velocity flow is long-term erosive damage to drainage structures, however, on these plans the likelihood of damage to infrastructure is low. We do not object to this requested waiver.

5. Waive §VI, E, 3, to permit coachlamps at the end of each driveway in lieu of streetlights. §VI, E, 3 specifies streetlights at specific locations.

The proposed coachlamps will provide a light post at the end of each driveway, and a separate streetlight at the intersection of Main Street and Skyview Drive. We defer to Leicester Planning Board on this request.

6. Waive §VI, L to permit street trees on one side of the roadway. Street trees are required on both sides of the road.

We defer to Leicester Planning Board on this non-engineering related request. See Comment 13 below.

7. Waive §VI, G, 1 to permit sidewalks on one side of the roadway.
Sidewalks are required on both sides of the roadway.

We defer to Leicester Planning Board on this non-engineering related request.

Pertaining to the submitted plan package, Michael Malynowski, Senior Project Manager for Allen & Major Associates, Inc indicates that the drainage system design has not been revised over development plans most recently submitted, however, with the reduction of the number of dwelling units onsite, impervious areas in the current plan will be slightly less than previously assessed. On that basis, the anticipated rates of stormwater runoff will be reduced by some degree. Based on Mr Malynowski's assertion, we have not re-reviewed the hydrology analysis.

Our comments on the current plan follow:

1. **Resolved.** The detail for the Emergency Access Cross-Section (Detail 1, Sheet C-202) has been to reflect the cross-pitched grading shown on plan.
2. **Resolved.** On the Emergency Access Road, drainage swales extending from STA 5+00 terminate at approximately STA 4+ 50. It may be expected that the discharge from the swales will pass overland toward private properties. The swales should be continued to connect to swales at STA 3+50, to ensure the continuity of the drainage in the area.
3. **No Further Comment.** Plans call for underdrains to run to "daylight". It is recommended that underdrains discharge into the proposed system of drains. The Engineer declined to make the change, as the groundwater flow would reduce capacity of the drainage system.
4. **No Further Comment.** On Skyview Drive STA 22+50 +/-, the termination of Skyview Drive appears to be intended to accommodate a

future roadway extension. Any intention to expand the roadway in the future for any reason should be articulated to Leicester Planning Board. Engineer indicates that there is no intention to extend the roadway, and a proposal to do so would require refiling for amended permits.

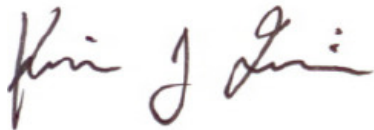
5. **Resolved.** The cover sheet for the plans has been revised to identify the dates of printing and applications.
6. **No Further Comment.** The Engineer has documented that percent impervious area proposed within Water Resources Protection Overlay District (WRPOD), 14.69%, is below the percentage threshold, however, the supplemental hydrology report indicates that impervious area in excess of 85,000 square feet is proposed. The WRPOD bylaw identifies that Special Permit is required for projects which propose “more than 15% impervious or 2,500 square feet”.

The reconfigured project appears to be subject to Special Permit.

We remain at the service of Leicester Planning Board on this project, and would be pleased to comment on any changes to the plans which are subsequently made.

Please contact this office should you have questions.

Sincerely,
QUINN ENGINEERING, INC.

A handwritten signature in dark ink, appearing to read "Kevin J. Quinn".

Kevin J. Quinn, P.E.
President