



ALBERT FEDERICO CONSULTING, LLC

Traffic Engineering and Mobility Solutions

133 Rutgers Avenue
Swarthmore, PA 19081

September 16, 2021

via email only

Maggie Dobbs, AICP
Director of Planning & Zoning
1039 Wilmington Pike
West Chester, PA 19382

Re: Stokes Estate (Fox Clearing, LLC)
Conditional Use - Traffic Review
Westtown Township, Chester County

Ms. Dobbs:

As requested, a technical review of the following materials has been completed relative to the Westtown Township Zoning Ordinance as well as reasonable and customary standards of Traffic Engineering practice:

- Comment Response Letter, prepared by DL Howell, dated August 27, 2021
- Conditional Use Plan for Stokes Estate, prepared by DL Howell, revised August 31, 2021

The applicant is proposing to develop sixty-eight residential dwelling units immediately south of Shiloh Hill Drive (TR 559) and east of Shiloh Road (TR 626). Vehicular access is proposed via a new street connection to Shiloh Road and an extension of Little Shiloh Road (TR 367). On-site circulation is proposed via new internal streets and sidewalks. The plan also includes four cul-de-sacs.

Please note that this review should be considered preliminary and subject to change based on the submission of revised materials to address the comments presented herein.

The following comments are offered for the Township's consideration:

1. Conditional Use Plan
 - a. Additional information should be submitted to demonstrate that:
 - i. PennDOT stopping sight distances are provided at the intersections of Shiloh Road at Road "A", and Shiloh Hill Drive at Little Shiloh Road. This should include design assumptions, consideration of vehicles turning left into the site and vertical profiles of Shiloh Road and Little Shiloh Road. *{§149-908C}*

The comment remains outstanding. The submitted Sight Distance exhibits should be revised to:

- 1) Clearly indicate the source of the survey.**
- 2) Ensure stationing is consistent between the plan and profiles.**

Exhibit B-15 PMM 11/10/2021



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3) Amend the table to include sight distances from PA 67 §441.8(h)(1).

4) Provide additional information regarding the obstruction to the right of Road A (approximate STA 5+30).

The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.

- ii. Code compliant access can be provided from the Vanscovich property (Parcel 67-20-20.6) to the proposed Shiloh Hill Drive extension. *{§170-513E}*

The comment remains outstanding. The Applicant has requested to address this at Land Development. The Applicant must provide a driveway to Shiloh Hill Drive for the Vanscovich property that complies all applicable codes.
- iii. **The Applicant must provide an access to the Galilea property (Parcel 67-2-8) that complies all applicable codes. *{§170-513E}***
- b. A continuous collector street and trails shall be developed as part of the development to provide internal through connection as required by the Board of Supervisors. *{§170-503C(3)}*
 - i. As submitted, Road "A", "B" and "C" (aka Shiloh Hill Drive extension) do not provide a continuous collector street.

The comment has been resolved.
 - ii. The site is proximate to several proposed trails and a recommended bike route. Consideration should be given to future connectivity.

The comment remains outstanding. The Applicant has stated a willingness to discuss the issue further. It is recommended that the Board considers requiring easements to provide a future connection to proposed trails to the east and south of the property as illustrated in the Trails and Bikeways Map of the Township Comprehensive Plan.
- c. The following issues may be addressed at Land Development but are noted here as the resolution could impact the overall number of proposed dwellings:
 - i. The Applicant should confirm that Road B is the same or greater width than Shiloh Hill Drive. *{§149-901B}*

The comment has been resolved.
 - ii. Cul-de-sac's "A" and "C" do not meet the required minimum length. *{§149-901F}*

The comment has been resolved.
 - iii. The internal streets are designed to Minor Road standards. *{§149-903A.3}*

The comment has been resolved.
 - iv. The cul-de-sac right-of-way and turnaround cartway paving do not meet the required minimum radii. *{§149-903A.4}*

The comment has been resolved.



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- v. Shiloh Road is classified as a Collector; the Board may require dedication of an additional five feet of right way along the site frontage. *{§149-903C.1}*
The comment remains outstanding. It is recommended that the Board considers requiring a perpetual offer of dedication of Right-of-Way along the Shiloh Road frontage.
- vi. A number of the vertical curves along the proposed internal streets do not provide the required minimum sight distance. *{§149-906A}*
The comment remains outstanding. The minimum Rate of Vertical Curvature for sag curves along Minor Roads is 37.0. The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.
- vii. The internal streets do not appear to provide the required level areas approaching intersections. *{§149-907E}*
The comment remains outstanding. The grade of Road "C" exceeds 2% approaching Road "A". The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.
- viii. Road "B" does not meet the minimum block length between "C" and "D". *{§149-913B}*
The comment remains outstanding. The block of Road "A" between Roads "B" and "C" is less than 500 feet. The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.
- ix. The Applicant should confirm that adequate sight distance can be provided for the driveway accessing Lot 68. *{§149-915.K5}*
The comment has been resolved.
- x. The Applicant should provide confirmation that the proposed grading of the internal streets will permit the construction of crosswalks in accordance with applicable accessibility standards. *{§149-916B}*
The comment remains outstanding. The centerline grade of Road "C" at Road "A" exceeds the permitted cross-slope for an accessible crossing. The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.
- xi. The centerline grade of Road "A" exceeds 7% in several locations. Grades between 7% and 10% require the recommendation of the Township Engineer and Board approval. Based on the submitted materials the steeper grades are not recommended. *{§149-904B}*
- xii. Road "A" is proposed to be constructed with a minimum (150') horizontal radius and significant sag vertical curve, including approach grades at or exceeding 7%. Sharp horizontal curvature should not be introduced near the bottom of a steep grade approaching or near the low point of a pronounced sag vertical curve.



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- xiii. **The block of Road "A" between Roads "B" and "C" does not provide sufficient depth for two tiers of lots. Layouts with a single tier of lots is subject to Board approval. The Applicant should provide additional information supporting the proposed block layout. {§149-913G}**
- xiv. **The Applicant should confirm that compliant driveways can be provided for Lots 14, 15, 47 and 50. {§149-915C}**
- xv. **The Applicant should confirm that providing adequate sight distance does not unduly impact the building envelope of Lot 67.**

2. Traffic Impact Study

- a. The study should address sight distance at the intersection of Shiloh Hill Drive at Little Shiloh Road. {§149-804A(2)d}

The comment remains outstanding. The applicant must meet this code requirement or request a waiver. Based on the submitted materials a waiver would not be supported.

- b. The future condition analyses assume the traffic signal at Shiloh Road/Westtown-Thornton Road and Street Road is re-timed, reducing green times along Street Road (a PennDOT designated Critical Corridor) in favor of the minor approaches.

The comment remains outstanding. It is recommended that the Board consider a condition requiring the Applicant to contribute to the re-timing of the signal as assumed in the Study.

- c. The following issues may be addressed at Land Development:

- i. Traffic counts must be completed between April and November. {§149-804A(3)g} *There is no objection to the Applicant requesting a Waiver.*

The comment remains outstanding. The Applicant has indicated that a waiver will be requested during Land Development. Consistent with PennDOT SOL 494-20-04, projects analyzed using adjusted traffic volumes should be reevaluated after all of the Governor's restrictions are lifted. New traffic counts should be completed at the intersections of Shiloh Road/Westtown-Thornton Road and Shiloh Road/Hunt Drive while school is in session.

- ii. Additional information should be provided regarding the distribution of project traffic, specifically the significant skew towards the Shiloh Road access and lack of traffic assigned to Oakbourne Road and north Westtown Road. {§149-804A(6)}

This comment has been resolved.

3. Additional items

- a. **The number of accesses was discussed at length during the September 8th Planning Commission meeting. From a transportation perspective two accesses are preferred due to improved resident mobility, community connectivity and emergency service response. If a determination were made to limit the property to a single public access, then the extension of an existing public road (Shiloh Hill Drive) would be preferred over a new connection to a more heavily traveled road (Shiloh Road).**



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With respect to the subject Conditional Use Application, the burden of proof shall be upon the applicant to prove to the satisfaction of the Board of Supervisors, by credible evidence, that the use will not result in or substantially add to a significant traffic hazard or significant traffic congestion. The peak traffic generated by the development shall be accommodated in a safe and efficient manner. Such analysis shall consider any improvements to streets that the applicant is committed to complete or fund. {§170-2009.D(1)(h)}

Based on the preceding, the Applicant has not demonstrated compliance with the conditional use criteria in §170-2009.D(1)(h).

Please do not hesitate to contact me at 610.608.4336 or albert@federico-consulting.com should you have any questions or require additional information.

Sincerely,

Albert Federico, P.E., PTOE



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