



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEMORANDUM

Date: April 8, 2016

To: Mark Lucas, P.E.
East Bradford Township Engineer

From: Amy Kaminski, P.E., PTOE
G&A Transportation Services Manager

cc: Mandie Cantlin, Assistant Township Manager
Matthew E. Shinton, G&A E.I.T.

Reference: Conditional Use and Sketch Plan Review 3
TPN 51-7-115, 51-7-135, and 51-7-136
945 Tigue Road (T-359)
East Bradford Township, Chester County

G&A No. 15-10030

Mark,

Pursuant to your request, Gilmore & Associates, Inc. has completed a transportation review for the Conditional Use at 945 Tigue Road in East Bradford Township, Chester County. Presently, the three referenced parcels comprised of 86 acres are zoned R-2, R-3, and R-4. The applicant proposes to develop the site for 90 new units with 1 existing dwelling unit for a total of 91 residential dwelling units as follows: 26 single-family detached dwelling units and 64 carriage homes/townhouses and one existing single-family detached dwelling unit. Access for the proposed development will occur via a new single access road on Lenape Road (S.R. 0052) and two access roads to Tigue Road (T-359). The conditional use hearing is continued on April 12, 2016.

I. Reviewed Materials

Transportation Impact Study Supplement for Tigue Property Residential Development, prepared for Toll Brothers, prepared by McMahon Associates, dated March 31, 2016.

II. Review Comments

- A. §95-17.K - The Board may require the developer to make improvements to existing abutting streets or roads as may be needed to provide safe and convenient access to the proposed development and to accommodate the increased traffic resulting from the development. This section of the ordinance allows the Board to require construction of auxiliary turn lanes if warranted. Upon review of the traffic count

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65 E. Butler Avenue | Suite 100 | New Britain, PA 18901
Phone: 215-345-4330 | Fax: 215-345-8606

information provided by the applicant, a 125' left turn lane is warranted for the existing and build conditions on the southbound approach of Lenape Road (S.R. 0052) at Tigie Road. We recommend the Township consider the construction of the southbound left-turn lane as a condition of approval. Considering the applicant's parcels are located within the right of way at northeast and southeast quadrant of the intersection, this improvement would be considered an onsite improvement.

- B. The Transportation Impact Study Supplement included an argument against the installation of a traffic signal at the intersection of Lenape Road and Tigie Road for the following reasons:
1. The Lenape Road and Tigie Road traffic counts were obtained while Birmingham Road to the south was closed resulting in a more conservative traffic volumes in the traffic signal warrant analysis.
 2. In the future, Tigie Road may become a cul-de-sac just west of New Street and a traffic signal will no longer be required/warranted at Lenape Road and Tigie Road.
 3. The signal warrant analysis utilizing the more conservative traffic volumes only satisfies the peak hour warrant analysis. Based on our experience, PennDOT will not approve a signal based on only signal warrant.

Based on the above discussion, we agree with the reasoning against installing a traffic signal at the intersection of Lenape Road and Tigie Road.

- C. The Applicant shall revise the Residential Condominium/Townhouse, Land Use Code: 230 trip generation to follow the guidelines presented in the *Trip Generation Handbook, 2nd edition*, Chapter 3. The fitted curve equation should be utilized in lieu of the average rate based on the guidance presented. The appropriate trip generation yields 36 weekday morning and 42 weekday afternoon peak hour trips.
- D. Revise the *Existing Roadway Characteristics* presented in the January 2016 Transportation Impact Study to include average daily traffic volumes for Tigie Road (T-359). If data is not available via PennDOT's iTMS system the Applicant shall conduct Automatic Traffic Recorder (ATR) Counts for Tigie Road (T-359) to determine the average daily volumes.
- E. The Applicant should revise the trip distribution to account for all site traffic to utilize Lenape Road (S.R. 0052) in the anticipation that Tigie Road (T-359) will be converted to a cul-de-sac as proposed in the East Bradford Township 2004 Comprehensive plan. Site traffic entering or exiting the development via Tigie Road (T-359) should be accounted for at the intersection of Lenape Road (S.R. 0052) and Tigie Road (T-359).
- F. Utilizing the applicant's traffic count information, we reviewed the southbound Lenape Road (S.R. 0052) left turn lane warrant analysis based on PennDOT Publication 46 for the southbound approach of Lenape Road (S.R. 0052) at Tigie Road and determined a 125' left turn lane is warranted for the existing and build

conditions. Given the applicant's parcel is located on the northeast quadrant of the intersection this improvement is considered an onsite improvement and we recommend the Township consider this a condition of approval.