



October 25, 2024

Ms. Mary Aversa, Borough Manager
Ambler Borough
131 Rosemary Avenue
Ambler, PA 19002

RE: **Traffic Calming Evaluation**
Butler Avenue (Between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue)
Ambler Borough, Montgomery County, PA
Project No. 314175-01-001

Dear Ms. Aversa:

Pursuant to your request, Bowman Consulting Group (Bowman) has completed a review of the traffic data collected on Butler Avenue, between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue by our office and the Borough Police Department to evaluate potential traffic calming measures on Butler Avenue that may be considered for implementation by the Borough.

EXISTING CONDITIONS

Butler Avenue traverses residential and commercial areas in the Borough between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue, and generally provides a 34-foot foot cartway width between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue that allows for one travel lane in each direction. Parking is permitted along both sides of Butler Avenue between Woodland Avenue and approximately 200 feet to the west of Bethlehem Pike (S.R. 2018). The grade of Butler Avenue is generally level from Bethlehem Pike (S.R. 2018) to Rosemont Avenue but has steep grades leading downward heading westbound and upward heading eastbound between Rosemont Avenue and Hendricks Street. The posted speed limit along Butler Avenue is 25 miles per hour between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue. Sidewalk is located along both sides of Butler Avenue, and designated pedestrian crossings are located at the intersections of Hendricks Street and Park Avenue/Race Street.

CRASH ANALYSIS

Reportable crash data for the most recent, complete five-year period (January 1, 2019, to December 31, 2023) was obtained from PennDOT and the Ambler Borough Police Department to evaluate the crash history along Butler Avenue between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue. This information is confidential pursuant to 75 Pa. C.S. 3754 and 23 U.S.C. 409 and may not be published, reproduced, released, or discussed without the written permission of the PA Department of Transportation.

Table 1 provides a summary of the number of crashes per year along Butler Avenue within the study area.

Table 1 – Crash Summary

Year					Total	Average per Year
2019	2020	2021	2022	2023		
3	1	2	1	4	11	2.2

Based on information provided in Table 1, there were a total of 11 reportable crashes within the study area from January 1, 2019, to December 31, 2023. The crash data provided by the Ambler Borough Police Department indicated there were a total of 11 non reportable crashes during the same five-year period that involved vehicles traveling along Butler Avenue and striking vehicles parked along the northern and southern sides of Butler Avenue within the study limits.

TRAFFIC CALMING

PennDOT Publication 383: Pennsylvania's Traffic Calming Handbook provides guidelines and criteria for when traffic calming measures should be considered for further study and implemented on public roads. As a minimum requirement, the average daily traffic (ADT) for the road should exceed 1,000 vehicles per day or the peak hour volume should exceed 100 vehicles. Our office collected traffic volume and speed data on Butler Avenue between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue. The summary data reports are provided in **Attachment A**. The traffic volume data collected by our office resulted in an ADT of approximately 13,000 vehicles per day, and a peak hourly volume of 1,133 vehicles for Butler Avenue to the east of Race Street/Park Avenue.

When speeding is a primary concern for a road, PennDOT recommends that the 85th percentile speed should exceed 10 miles per hour over the posted speed limit before traffic calming is considered by the municipality. The 85th percentile speed is the speed at or below which 85 percent of the motorists on a street are traveling. This speed is often used as a measure of the upper limit of reasonable speeds for prevailing conditions. As mentioned previously, the posted speed limit along Butler Avenue between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue is 25 miles per hour. The speed data collected by our office resulted in an overall 85th percentile speed of 31 miles per hour for vehicles traveling eastbound and 30 miles per hour for vehicles traveling westbound along Butler Avenue to the east of Race Street/Park Avenue. Speed data was also collected along Butler Avenue to the east of Rosemont Avenue which resulted in an overall 85th percentile speed of 27 miles per hour for vehicles traveling eastbound and 28 miles per hour for vehicles traveling westbound at this location. Although the 85th percentile speeds on Butler Avenue do not exceed 10 miles per hour over the post speed limit, the Borough should consider additional measures as needed to maintain the speeds near the posted speed limit, enhance pedestrian facilities, and manage on-street parking.

POTENTIAL IMPROVEMENTS

Based on the existing geometry of the roadway and the traffic volume and speed data collected along Butler Avenue, potential and feasible improvements were evaluated to help calm traffic, enhance pedestrian facilities, and manage on-street parking along Butler Avenue between Bethlehem Pike (S.R. 2018) and Race Street/Park Avenue. It should be noted that the roadway grades are not conducive for the use of physical vertical deflection measures to slow vehicles on flatter grades, such as speed humps. Given this constraint and the roadway geometry, we offer the following potential improvements for the Borough to consider implementing on Butler Avenue which are also depicted and noted on the attached exhibit.

Short-term Improvements

The following pavement markings and signs should be considered along Butler Avenue for traffic calming and enhancing existing pedestrian crossings:

- Replace the existing painted 25 MPH pavement marking legends on Butler Avenue in the westbound direction to the east of Rosemont Avenue and in the eastbound direction to the west of Race

Street/Park Avenue with thermoplastic markings to increase visibility and extend the life of the markings.

- Consider the installation of transverse rumble bars on Butler Avenue near the existing speed limit pavement marking legends referenced above. A product called a Thermoplastic In-Lane Rumble Bar on the market today provides a visual, audible, and vibratory awareness to alert drivers to further help reduce speeds. The speed bars are designed to create noise primarily for the driver and not the nearby residences.
- Replace the three existing painted continental crosswalks along Butler Avenue between Race Street/Park Avenue and Hendricks Street with thermoplastic crosswalk markings to increase visibility and extend the life of the markings. Install “Pedestrian Crossing” warning signs (W11-2) with a downward arrow sign (W16-7P) to the east and west of the crosswalks located along Butler Avenue between Race Street/Park Avenue and Hendricks Street.
- Install a “PED XING AHEAD” pavement marking legend on eastbound Butler Avenue in advance of the crosswalk to the west of Park Avenue and on westbound Butler Avenue in advance of the crosswalk approaching from the east on Butler Avenue.

The existing 34-foot curbed cross section within the study limits does not provide sufficient width for parking to occur on both sides of the street and two-way traffic to simultaneously occur on Butler Avenue. The Borough should consider the following changes to Butler Avenue to permit on-street parking on the south side of Butler Avenue and prohibit parking on the north side:

- Shift the existing double yellow line on Butler Avenue approximately four (4) feet to the north.
- Add a white lane marking on the north side of Butler Avenue resulting in a 12-foot through lane and 4-foot buffer area between the travel lane and sidewalk for westbound Butler Avenue.
- The shifting of the double yellow line and addition of the white lane marking noted above will result in the prohibition of on-street parking on the north side of Butler Avenue. The Borough should post “No Parking” signs along the north side of Butler Avenue in accordance with the most recent editions of PennDOT Publication 236: Handbook of Approved Signs and the Manual on Uniform Traffic Control Devices (MUTCD).
- Use pavement markings to create an 8-foot on-street parking lane on the south side of Butler Avenue. The creation of the on-street parking lane and shifting of the double yellow line noted above will result in a 12-foot travel lane for eastbound Butler Avenue.
- As depicted on the attached exhibit, the pavement markings for the on-street parking lane must include the required transition tapers to the west of Park Avenue in advance of the parking lane and to the east of 356 East Butler Avenue where the lane ends. In addition, the pavement markings for the parking lane must include the appropriate buffers to prohibit parking near crosswalks, driveways, and street intersections in order to maintain sight lines for pedestrians and vehicles. Parking should be prohibited on the south side of Butler Avenue directly across from Hendricks Street and Rosemont Avenue.
- The borough should determine whether pavement markings delineating parking stalls are desirable to enhance the use of the parking lane.

Long-term Improvements

The following improvements should be considered by the Borough after the implementation of the short-term improvements identified above. These improvements will require further engineering evaluations to determine the feasibility and most appropriate location of the improvements.

- Provide a designated pedestrian crossing on Butler Avenue in the area of Rosemont Avenue or Woodland Avenue. The pedestrian crossing should be provided with a continental crosswalk and pedestrian warning signs and must include ADA curb ramps. An engineering evaluation should be completed to determine a feasible and appropriate location for the pedestrian crossing.
- Provide a Rectangular Rapid Flashing Beacon (RRFB) at one of the existing designated pedestrian crossings located between Park Avenue/Race Street and Hendricks Street. An engineering evaluation must be completed to determine a feasible appropriate location and conceptual design of the RRFB. It is noted that the existing emergency services flashing device would need to be considered in the engineering evaluation.
- Provide additional street lighting as needed on Butler Avenue. Pedestal street lighting currently exists along Butler Avenue on both sides of the street between Bethlehem Pike (S.R. 2018) and Park Avenue/Race Street. The Borough should evaluate whether supplemental lighting could be installed at designated pedestrian crossings.

We trust that this letter provides the Borough with the requested information regarding the current traffic conditions, as well as the evaluation of potential improvements to further evaluate along Butler Avenue.

If the Borough would like to pursue any of these improvements further, Bowman can provide additional services that may be required including additional engineering evaluations, conceptual plans, pavement marking/construction plans, permitting, etc. If you have any questions, or require further clarification, please contact me.

Sincerely,



Chad Dixon, AICP, PP
Senior Project Manager

CED/BMJ/AV

cc: Chief Jeffrey Borkowski, Ambler Borough Police Department
Officer Nicholas Nasobkow, Ambler Borough Police Department

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