

TRAFFIC STUDY

# CLOSING OF HARKER AVENUE AT-GRADE RAILROAD CROSSING

Berlin Borough  
Camden County, New Jersey



## Prepared For:

**Borough of Berlin**  
59 South White Horse Pike  
Berlin, NJ 08009

March 2023  
BBGEX23002



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## **INTRODUCTION**

The following report examines the impact of the closing of the at-grade railroad crossing on Harker Avenue in Berlin Borough, NJ.

In an Initiation of Proceedings Letter was issued by the NJDOT on November 29, 2022 stating their intent to pursue the elimination of the at-grade crossing on Harker Avenue. The at-grade crossing tracks are owned by NJ Transit, which operates the Atlantic City Rail Line with 24 commuter trains per day on the tracks. The justification for closing of the Harker Avenue at-grade crossing identified in the Memorandum of Record is “safety”.

Harker Avenue is residential two-way lane traffic roadway under the jurisdiction of Berlin Borough with no sidewalk access, no roadway shoulders and a posted 25 mph speed limit. Harker Avenue is crossed at-grade by a single (1) rail track alignment on which NJ Transit operates the Atlantic City Rail Line passenger commuter train. Harker Avenue is a north/south roadway between South White Horse Pike (Route 30) and Route 73 SB. There are 13 homes, a U.S Post office, and several businesses located on Harker Avenue. The West Berlin Bus Service is a business on Harker Avenue that has facilities on each side of the at-grade crossing.

The existing at-grade crossing at Harker Avenue and area that would be impacted by the proposed closure are illustrated in **Figure 1**.

## **DATA COLLECTION**

Peak hour traffic counts were performed at the at-grade crossing of Harker Avenue on Tuesday March 14, 2023. The counts indicate crossing volumes of 63 and 220 during the AM and PM peak hours, respectively. Based on the peak hour counts, the Average Daily Traffic (ADT) of Harker Road is estimated to be approximately 1,500 vehicles per day.

The peak hour traffic counts are provided in **Appendix A**.

## **CRITERIA FOR CONSIDERING CLOSURE**

Within the Federal Highway Administration’s (FHWA) Grade Crossing Handbook (3<sup>rd</sup> Edition), criteria for considering the removal of at-grade crossings are identified.

The handbook indicates that an at-grade crossing should be considered for closure whenever one or more of the following applies:

- An engineering study determines a nearby crossing provides acceptable alternate vehicular and pedestrian access;
- If an engineering study determines any of the following apply:
  - Average Annual Daily Traffic (AADT) less than 1,000
  - Acceptable alternate access across the rail line exists within one (1) mile measured along the track
  - The median trip length normally made over the subject crossing would not increase by more than 2.5 miles

Upon the identification of a crossing for consideration of closure, the FHWA Grade Crossing Handbook emphasizes the importance of considering the impact of the closure and whether the potential benefits of the closure outweigh the adverse travel costs incurred by users having to cross the tracks at another location.

In the case of the Harker Avenue at-grade crossing, the NJDOT determined the primary benefit derived from the closure of the crossing is the elimination of potential train/vehicle conflict. However, the impact of the closing represents a hardship to the adjacent homes and businesses.

## **CRASH DATA**

A request for crash data was made to the Berlin Borough Police Department and no information related to crashes at or near the at-grade railroad crossing on Harker Avenue was provided. There is no indication that there is a safety issue with the existing crossing.

## **IMPACTS OF AT-GRADE CROSSING CLOSURE**

The closure of the Harker Avenue at-grade crossing will eliminate a direct access between the properties on either side of the crossing and will have a significant impact on the West Berlin Bus Service which has facilities on Harker Avenue on both sides of the tracks.

Closing the at-grade crossing at Harker Avenue will divert approximately 1500 vehicles per day to the adjacent crossings on Cross Keys Road and E. Taunton Avenue.

It is anticipated that most crossings would be diverted to the Cross Keys Road crossing with some using the E. Taunton Avenue at-grade crossing. The southbound crossings originating in the neighborhood north of the crossing will be required to divert Cross Keys Road via Wright Avenue. The southbound crossings originating on Route 73 SB will either divert to Cross Keys Road or utilize the East Taunton Avenue crossing, depending on the destination. Southbound crossing with destinations on Harker Avenue that utilize the Cross Keys Road crossing will have to make a left on White Horse Pike, pass Harker Avenue (no left turns allowed), turn left on E. Broad Street, and finally turn left on Haines Avenue to reach Harker Avenue. The average southbound diversion necessary to access Harker Avenue south of the crossing represents an additional 3/4-mile trip with additional delays at three traffic signals. For the West Berlin Bus Service, it represents an increase in distance for a southbound crossing from approximately 400' to approximately 1 mile.

The anticipated peak hour traffic diversions are illustrated on **Figure 2**.

A letter from owner of the West Berlin Bus Service is in **Appendix B**.

The closing of the Harker Avenue crossing and diversion of traffic as noted above is anticipated to have a significant impact on the current traffic conditions on Cross Keys Road, particularly at the signalized intersection of Cross Keys Road and White Horse Pike, and to contribute to increased delay and queueing during peak periods.

**Pedestrian Traffic**

The NJDOT Memorandum of Record calls for the termination of Harker Avenue at the at-grade crossing on both sides of the tracks and the installation of fencing to prevent pedestrians from crossing the tracks.

Pedestrian destinations in the area include numerous commercial businesses within the Borough on White Horse Pike and NJ Transit bus stops at Cross Keys Road and White Horse Pike. Pedestrians from the properties on Harker needing to cross the tracks will be diverted up to 0.25 miles to the at-grade crossing on Cross Keys Road. At an average walking speed of 4 feet per second that equates to an up to an additional 5 ½ minutes to reach destinations.

**Emergency Vehicle Routing and Response Time**

The Berlin Fire Company No.1 (Station 21-1) is located at 221 South White Horse Pike, approximately 0.6 miles south of the Harker at-grade crossing. Closure of the Harker Avenue at-grade crossing will eliminate the direct connection between White Horse Pike and the neighborhood north of the Harker Avenue crossing. This will result in increased emergency response times and reduce options available to emergency vehicles in the challenging task of navigating the neighborhood’s narrow streets.

Drive times for the existing and alternative response routes to/from the intersection of Harker Avenue and White Horse Pike and the intersection of Harker Avenue and Atlantic Avenue for fire apparatus and support vehicles were estimated. The Berlin Fire Company operates a 2009 Pierce Velocity Heavy Rescue vehicle and a 2002 Pierce Dash 2000 Pumper.

The Fire Department response routes are illustrated in **Figure 3**.

The rerouting of the emergency vehicles from Berlin Fire Company No.1 will cause a response time increase of approximately 24 seconds, a 20% increase, for fire apparatus. Where seconds count, the closing of this crossing reduces safety and increases Fire Department response.

The results of the estimated response times are summarized in **Table 1**.

**TABLE 1**  
**SIMULATED IMPACT TO FIRE RESPONSE TIME**  
**(FIRE STATION TO HARKER AVENUE)**

Route	Distance	Support Vehicle		Fire Apparatus	
		Time	Change	Time	Change
Existing - via Harker Avenue Crossing	3,215 ft	100 sec.	-	119 sec.	-
Alternative – via Washington Avenue Crossing and Route 73 Southbound	3,865 ft	121 sec.	+21 sec.	143 sec.	+24 sec.

## **CONCLUSION**

A summary of the findings of the report is presented below:

- No crash records were provided indicating that there is a safety issue at or immediately adjacent to the Harker Avenue at-grade crossing.
- Closing the at-grade crossing at Harker Avenue will divert approximately 1500 vehicles per day to the adjacent crossings on Cross Keys Road and E. Taunton Avenue and anticipated to contribute to increased delay and queueing at the signalized intersection of Cross Keys Road and White Horse Pike during peak periods.
- Closing the Harker Avenue at-grade crossing will divert pedestrians approximately 0.25 miles to the at-grade crossing on Cross Keys Road.
- Closing the Harker Avenue at-grade crossing will negatively impact Fire Department response times for the properties on Harker Avenue north of the railroad crossing (+24 seconds).
- Closing the Harker Avenue at-grade crossing will reduce options available to emergency vehicles in the challenging task of navigating the neighborhood's narrow streets.

When considering a crossing for closure, the benefits of the closure should outweigh the costs incurred by users having to cross the tracks at another location. In this case, the primary justification of the of the closure according to NJDOT is safety, but there is no history of crashes at or near the Harker Avenue at-grade crossing to indicate a safety problem exists.

Impacts incurred by the closing the Harker Avenue at-grade crossing include an increase in emergency response times to the area and a direct impact to a business with facilities located on both sides of the crossing.

We conclude that there are safety concerns with the proposed closing related to the increased fire department response time to properties located on Harker Avenue north of the crossing. In addition, the closure will result in significant costs being incurred by the West Berlin Bus Service with facilities located on both sides of the crossing. The additional safety concerns and the added costs outweigh the perceived benefit derived from the proposed closing of the Harker Avenue at-grade crossing.



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 515 GROVE STREET  
 HADDON HEIGHTS, NJ

## HARKER AVENUE AT-GRADE CROSSING

Berlin Borough, New Jersey

**FIGURE 1**  
 Study Area





NOT TO SCALE

## HARKER AVENUE AT-GRADE CROSSING

Berlin Borough, New Jersey

**FIGURE 2**  
COMMUTER PEAK HOUR  
TRAFFIC DIVERSIONS

**LEGEND:**

-  NB TRAFFIC DIVERSION
-  SB TRAFFIC DIVERSION

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NOT TO SCALE

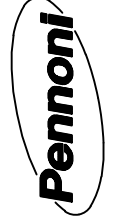
**FIGURE 3**  
EMERGENCY SERVICES  
RESPONSE ROUTES TO  
AFFECTED AREA NORTH  
NORTH OF TRACKS

**HARKER AVENUE  
AT-GRADE CROSSING**  
Berlin Borough, New Jersey

**LEGEND:**

- EXISTING RESPONSE ROUTE
- DIVERTED RESPONSE ROUTE

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# APPENDIX A

## TRAFFIC COUNT DATA

Peak Hour Traffic Counts  
 Tuesday, March 14, 2023

Harker Avenue							
Start Time	Direction		Total	Breakdown			Peds
	Northbound	Southbound		Cars	Buses	Trucks	
7:00 AM	7	11	18	13	5	0	3
7:15 AM	4	8	12	11	1	0	0
7:30 AM	5	8	13	13	0	0	0
7:45 AM	5	11	16	15	1	0	0
8:00 AM	4	9	13	13	0	0	0
8:15 AM	8	13	21	18	1	2	0
8:30 AM	7	10	17	16	1	0	1
8:45 AM	8	12	20	16	3	1	1
<b>AM Total</b>	<b>48</b>	<b>82</b>	<b>130</b>	<b>115</b>	<b>12</b>	<b>3</b>	<b>5</b>
BREAK							
4:00 PM	17	44	61	60	1	0	Peds
4:15 PM	16	41	57	57	0	0	0
4:30 PM	17	37	54	53	1	0	3
4:45 PM	12	36	48	48	0	0	2
5:00 PM	15	24	39	39	0	0	0
5:15 PM	11	25	36	35	0	1	2
5:30 PM	10	34	44	44	0	0	2
5:45 PM	11	20	31	31	0	0	0
<b>PM Total</b>	<b>109</b>	<b>261</b>	<b>370</b>	<b>367</b>	<b>2</b>	<b>1</b>	<b>9</b>
<b>Grand Total</b>	<b>157</b>	<b>343</b>	<b>500</b>	<b>482</b>	<b>14</b>	<b>4</b>	<b>14</b>

AM Peak Hour (8-9 AM)	27	44	71	63	5	3
PM Peak Hour (4-5 PM)	62	158	220	218	2	0

# APPENDIX B

## CORRESPONDENCE

B1 - West Berlin Bus Service

**WEST BERLIN BUS SERVICE**  
3 HAINES AVE BERLIN, NJ 08009  
18 HARKER AVE BERLIN, NJ 08009  
856-767-0793

To Commissioner, NJ Department of Transportation,

As the owner of West Berlin Bus Service I am concerned with the pending closure of the Harker Ave railroad crossing. Based on the outdoor meeting that took place on December 19<sup>th</sup>, 2022 it is my understanding that the railroad crossing will be closed completely and fenced off from the ability to walk through.

This is troublesome for our business and the 200 special needs students we serve. Since there has been no clear answer on timeline from the State, our business is completely in the dark on when/if this closure will take place (I asked the representative at the meeting for a timeline and he stated, "I don't know."). Without the ability to properly plan, our operations will be greatly affected when a final decision has been made and/if closure construction starts. With over 55 employees using both our 3 Haines Ave *and* 18 Harker location, it will become difficult to continue with our current operations, therefore unfortunately having an adverse effect on the community we serve. The railroad closure will cause delays in our student transportation and will likely result in downsizing of the company (loss of employees)

I am asking for the Harker Ave closure to be reconsidered. Additionally, I am asking for communication from the State on definitive plans and a clear timeline on this process for West Berlin Bus Service (and our customers) to plan effectively.

Thank you.



-Vincent Marziano

Managing Partner

West Berlin Bus Service