Office of Transportation and Infrastructure Systems

Memorandum

March 10, 2025

Automated Speed Enforcement (ASE) School Zone Prioritization

This memo outlines the process undertaken by the City of Philadelphia to set up a pilot program for automated speed enforcement in school zones.

As outlined in the June 2024 report, "Automated Speed Enforcement Expansion 2024: Corridor Scoring and Methodology" (available at https://visionzerophl.com/plans-and-reports/ase-report-2024/), HB 1284 was signed into law in December 2023 to renew and expand Philadelphia's automated speed enforcement program. Part of the bill authorizes the City to initiate a pilot program for automated speed enforcement in school zones, permitting the system to operate in up to five designated school zones at a time. The law requires that the school zones are selected in consultation with the Pennsylvania Department of Transportation (PennDOT).

The City of Philadelphia's Office of Transportation and Infrastructure Systems (OTIS) worked with stakeholders including the School District of Philadelphia, the Philadelphia Parking Authority, PennDOT, the Streets Department, and the Mayor's Office to develop the prioritization process outlined in this document. The goal of the pilot program is to target the treatment to the schools with the greatest crash experience linked to speeding, as well as to demonstrate the effectiveness of the speed cameras to improve safety around schools in varying contexts across the city.

While only five school zones may be enforced with speed cameras at any one time, through the stakeholder engagement process, the City elected to permit seven locations in the initial pilot with the expectation that the cameras will be moved after they have been installed and evaluated at the first five locations. The seven school zones selected for the pilot are:
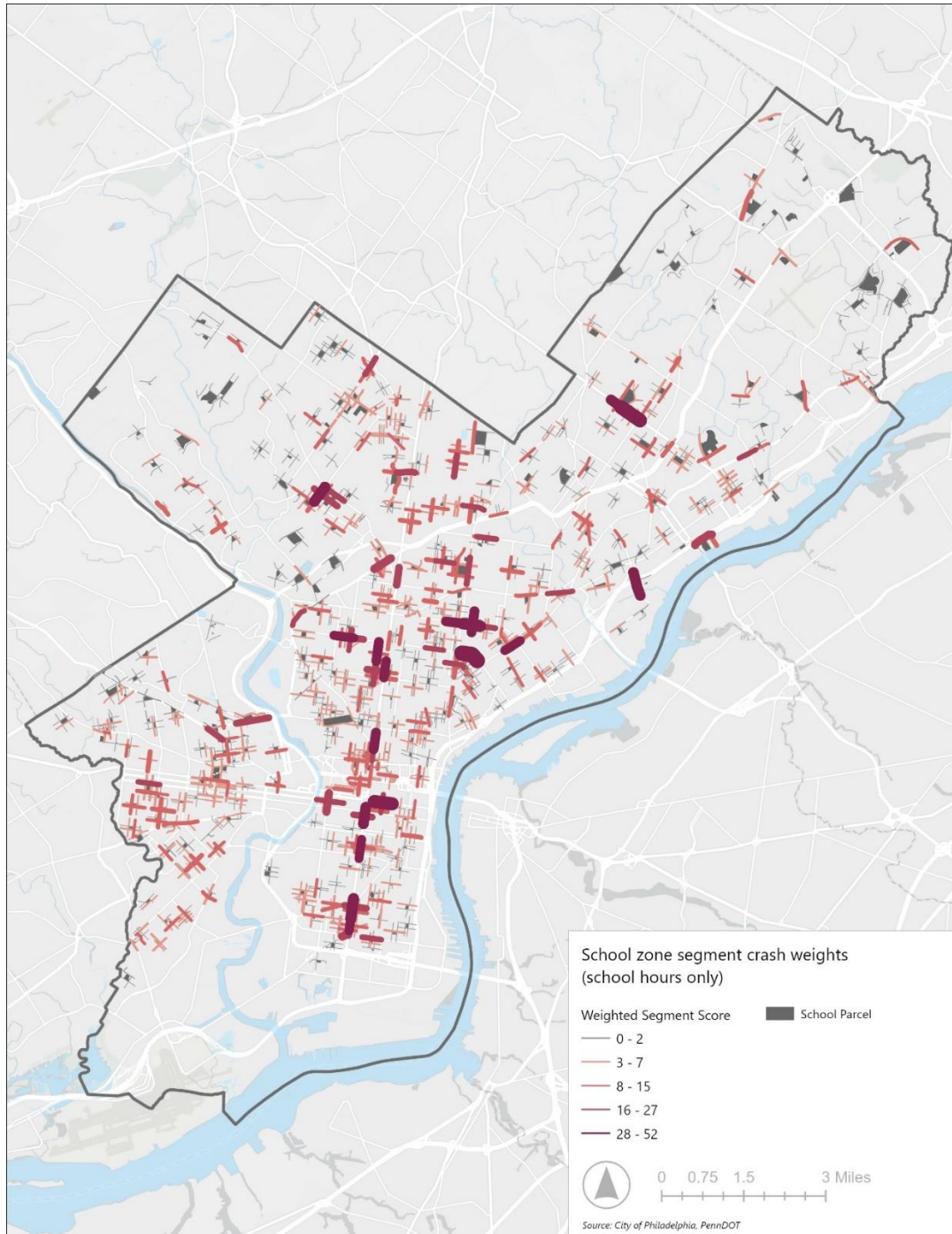
1. **Visitation B.V.M. School** zone on East Lehigh Avenue between B Street and Kensington Avenue.
2. **John B. Stetson Middle School** zone on East Allegheny Avenue between A Street and B Street.
3. **KIPP North Philadelphia Charter School** zone on 16th Street between Cumberland Street and Huntingdon Street.
4. **Widener Memorial School** zone on West Olney Avenue between Broad Street and 16th Street.
5. **Northeast High School** zone on Cottman Avenue between Algon Avenue and Glendale Avenue.
6. **High School of the Future** school zone on West Girard Avenue between 39th Street and 40th Street.
7. **William L. Sayre High School** zone on Walnut Street between 58th Street and 59th Street.

Scoring

Corridor score calculation is based on 5 points for each crash where someone was killed or seriously injured (KSI), 3 points for each pedestrian involved crash, and 1 point for speeding related crash.

Figure 1 shows a summary map of the scoring of all school zone corridors within Philadelphia.

Figure 1: Scores of all school zones, school hour crashes only

School zone segment crash weights
(school hours only)

Weighted Segment Score   School Parcel

— 0 - 2
— 3 - 7
— 8 - 15
— 16 - 27
— 28 - 52

0   0.75   1.5   3 Miles

Source: City of Philadelphia, PennDOT

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Automated Speed Enforcement (ASE) School Zone Methodology

Spatial Analysis

- School zone corridor segments were selected from PennDOT's roadway network data, called the RMSADMIN street centerline file. A combination of an 800ft service area analysis and a segment centroid selection around City of Philadelphia school parcels file was used to approximate the legal definition of a school zone around each school in the city. The selection workflow in ArcGIS Pro included:
    1. School parcel polygons were simplified to their point vertices. Those vertices were then snapped to the nearest road segment.
    2. The Network Analysis tool was used to select portions of road segment within 800 ft of the snapped school parcel vertices.
    3. Road segments were selected that had their centroid within 50 ft of a school parcel. The segments were then trimmed using an 800ft buffer around the school parcels.
    4. The segments selected using network analysis and centroid proximity were combined into one polyline file.
    5. The 800ft school parcel buffers were used to assign school name and information to each segment.
    6. Interstate road segments were filtered out ("MAINT_FUNC" A and F in the RMSADMIN file)
- PennDOT recorded crashes from 2019-2023 were summarized within 50 ft of school zone segments
    1. Crashes were filtered to include only those that occurred during school hour, which were considered weekdays, between 7am and 4pm ("DAY_OF_WEEK" is not equal to 1 or 7 and "HOUR_OF_DAY" is greater than 6 and less than 16).
    2. Interstate crashes were filtered out of the data set ("INTERSTATE" is not equal to 1)

Data Cleaning

- When possible, segments were manually added when there were clear segments adjacent to schools that were not selected, or road segments near schools with school zone flashers that should reasonably be considered part of the school zone.
- Segments were manually deleted when they did not clearly include school frontages or were discontinuous from other properly selected road segments.
- Segments were manually added where school zone flashers exist and are assigned to a school, but weren't associated with school zones, based on the spatial analysis process. This included where schools were more than 800 feet away from school zone or where school zone flashers were not located on school frontage roads

- Around 7% of school zone flashers in the data set had no corresponding parcel in the school parcel data set. These school flashers were manually deselected and do not have school zones attached to them.
- Confirmed that longer school zone corridors are not skewing the ranking results. The highest scores are clustered around corridor lengths between 1,800 - 2,200 feet. Corridor lengths higher than 2,200 feet are in the bottom half of school zone corridor schools citywide.