



Kansas LTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Road & Bridge Agencies

Pedestrian Safety Issues in School Zones

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Tips for planning for school zone safety from the Association of Pedestrian and Bicycle Professionals.

When it comes to school zone safety, the greatest concern is the potential conflict between motor vehicles and school children or anyone else in the area, whether on foot or on bicycle. This article highlights some of the safety concerns common in school zones provided in a recent Webinar on the topic hosted by the Association of Pedestrian and Bicycle Professionals. It describes several safety strategies for assisting transportation planners and traffic engineers responsible for school site planning, design and school zone safety.

Common traffic-related issues around any school may include one or a combination of several of these:

- Congestion during the drop-off and pick-up times.
- Vehicles blocking thru lanes, bike lanes and crosswalks.
- Speeding.
- Lack of or undesirable locations of pedestrian crossings, or pedestrians not using the designated crosswalks.
- Illegal parking.
- Parking in a bus loading area.
- Parking across the street from school.
- Drop-off or pick-up in two or three adjacent lanes.
- Students walking between cars.
- Last minute drop-off rush.
- Parent arriving too early for pick-up.
- Not enough supervision / control.
- Lack of sidewalks.
- Neighborhood complaints.

Some other factors in addressing school safety issues are:

- Older school sites designed under old standards.
- Lack of guidance, as many jurisdictions do not have the expertise to address the safety issues.
- Undesirable school site and/or location where the school may be next to a major arterial.
- Competing interests such as funding vs. safety or time. constraints vs. selecting the right course of safety action.



Resources on School Zone Safety

MUTCD 2009 Edition, Part 7: Traffic Control for School Areas. <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part7.pdf>

Back to School: Safety tips for motorists. National Safety Council. http://www.nsc.org/safety_home/SafetyObservances/Documents/Back%20to%20School%202014/Back-to-School-Tips-for-Motorists.pdf

National Safe Routes to Schools Clearinghouse. University of North Carolina. <http://www.saferoutesinfo.org>

Traffic Operations and Safety at Schools: Recommended Guidelines. Texas A&M University. <http://d2dtl5nnlpr0r.cloudfront.net/tti.tamu.edu/documents/4286-2.pdf>

Tips for Driving Safely Through School Zones. Mississippi Walk to School Program. http://msdh.ms.gov/msdhsite/_static/resources/3873.pdf

- Barrier to destinations where sidewalks are not provided and/or safe crossings are not possible, etc.

Before you develop safety strategies

With the above in mind, the first step in developing a safety plan for a school zone is to engage the stakeholders



such as parents, school staff and/or board members, law enforcement personnel and neighbors in the decision-making process. One approach would be to form a multidisciplinary team to conduct a formal Road Safety Assessment (RSA) to address the safety concerns.

An RSA, as defined by FHWA, is a formal safety performance examination of roadway(s) or intersection(s) by an independent multidisciplinary team with safety as the primary focus. The team considers the safety of all road users—not just the motor vehicles—and reports on road safety issues and opportunities for safety improvements ranging from short-range, low-cost treatments to long-range, high-cost mitigation measures. As part of the RSA process:

- *Talk to those with safety concerns (i.e. school officials, parents, neighbors, police officers, etc.) and listen to complaints.*
- *Think cause and effect.* A problem at one location may be just a symptom of much bigger problem, and addressing the symptom might not be the best approach. Get out there and observe the condition in the field and look at the problem from big picture perspective. Treat every site individually and do not use a generic solution for each site with the same symptom.
- *Identify problems before developing solutions.*
- *Gather relevant information on school arrival and dismissal times, enrollment numbers, busing, open enrollments, special event schedules, crash data and traffic volumes on the adjacent street network.*
- *Perform field observations to review traffic patterns on- and off-site, focusing on student drop-off and pick-up, on-street parking, pedestrian and bicycle conflicts with motor vehicles, location of crosswalks, and signage.* A great way to log this information is to take photos or videotape the observations.

Tips for crafting strategies

With the stakeholders engaged and relevant data collected for the school zone, it's time to develop safety strategies. In doing so, focus on these tips:

- *Work with the school not to reinvent the wheel for school safety.* Share the experiences and lessons learned from other school sites, but keep in mind that one solution does not fit all situations.
- *Make sure that safety is the main focus and does not fall through the cracks, competing with other constraints such as budget, deadlines, etc.* Work with school to set up a mechanism for funding the mitigation measures.
- *Listen to complaints and be slow to speak.* Build relationships with those with safety concerns and have open communication with them.
- *Determine the source of safety concerns for all school-related traffic.* Experience has shown that the primary cause of vehicle-related issues is the drop-off and pick-up.
- *Look for opportunities to reduce conflicts between motor*



vehicles and pedestrians and bicycles. Less congestion means a more pedestrian and bicycle friendly environment. One strategy is to conduct a walkability study to ensure that there are sidewalks and marked crosswalks to/from school, and that they are continuous and connected with an acceptable level of service.

- *Provide clear and reasonable traffic control.* Do not over-sign as it leads to non-compliance.
- *Design so that traffic and parking rules can*

be reasonably followed. In many instances, on-street parking is prohibited adjacent to schools. Field observations have shown that many parents disobey the “no parking” signs and park in these areas to pick up and drop off their children—a behavior that has been proven to be unavoidable in many instances, regardless of the restriction. Evaluate the need for these parking restrictions and work with local agencies to eliminate them, if feasible, and allow on-street parking. Another example of this issue—having to do with pedestrian activity—is in the sidebar on the next page about Peoria, Arizona.

- *Separate the bus loading areas from street traffic.* Make sure the bus loading area is long enough to accommodate all buses serving the site during the drop-off and pick-up times.
- *Install traffic calming devices on street(s) adjacent to school site if speeding is an issue.* Examples of such devices are refuge islands (staggered or straight), radar feedback speed limit signs, narrower lanes, pedestrian hybrid beacons, curb bulb-outs, and mini roundabouts.
- *Provide “out of the box” options to invalidate any excuses for taking unsafe actions.* Some strategies here include staggered start and dismissal times, early start and after school activities, on-site drop-off and pick-up areas, remote off-site locations for drop-off and pick-up, and engaging parents, teachers, and perhaps responsible students in assisting children during drop-off and pick-up times.
- *Develop outreach programs through public service announcements, police departments and driver’s licensing to educate the public on safety-related issues in school zones.*

Conclusion

In addressing school zone safety, it is important to involve all stakeholders (school district, parents, neighbors and city) in the process from the beginning, and listen to their concerns, using every opportunity to educate them on mitigation possibilities. Remember, every case is different and one solution does not fit all. Try to balance traffic control remedies with human behavior. Consider all road users and make safety the priority. Keep in mind that some low-cost innovative safety treatments (e.g. marking, signing) can be very effective in improving safety. Solutions aren't always costly. ■

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Case Study: Peoria High School, Arizona

This school is at the intersection of an arterial street (4-lane, divided with a center two-way left-turn lane) and collector street. The primary safety concern was that a large number of students (80 to 100 daily) cross the arterial at midblock to get to the food establishments across the street from high school during their breaks. Other concerns included narrow and poor sidewalks on both sides of the arterial, unsafe behaviors by both pedestrians and motorists, and American Disability Act (ADA) noncompliance issues.

Midblock crossing concerns persisted regardless of efforts by the city to install signs to prohibit midblock crossing and direct pedestrians to the nearby traffic signal with designated crosswalks (600 ft. away). Police education efforts also failed to change the students' behaviors; the students preferred the most direct path to the food establishments.

Finally, there was a “moment of clarity” and the city decided that they needed to evaluate the situation yet again and, this time, instead of telling students to not cross at midblock, to accommodate them by providing a midblock crossing with a staggered raised refuge island. The sidewalks on both sides of the arterial were also widened and retrofitted to comply with ADA requirements. In response to a request from the city manager, the original design of the refuge island was enhanced aesthetically by adding landscape features on both ends of the island. The result was well received by all stakeholders and improved safety significantly.

Some of the lessons learned by the public agency included:

- Observe and document reported concerns.
- Balance traffic control with human behavior.
- Accommodate all modes of transportation appropriately.
- Use opportunities to address multiple concerns.
- Don't neglect aesthetics.

Source: School Site Planning, Design, and Transportation. ITE Informational Report, June 2013.



A midblock crosswalk was designed to accommodate students crossing an arterial to get to food establishments. Students were not using the pedestrian crossing 600 ft. away.



Before and after: Landscaping was added to crossing refuge.



Before and after: Sidewalk obstructed by pole was re-aligned.



Sources:

- Best Planning and Engineering Practices for School Zones. Association of Pedestrian and Bicycle Professionals (APBP) Webinar, May 2014. <http://www.apbp.org/?page=Webinars>.
- School Site Planning, Design, and Transportation. ITE Informational Report, June 2013. Available at <http://www.ite.org>.