The Seattle Department of Transportation

POLICY ON SCHOOL FLASHING BEACON SCHEDULES

SDOT
Seattle Department of Transportation

The Seattle Department of Transportation (SDOT) operates school zone flashing beacons at various public and private schools to indicate to drivers that the 20 mph school zone speed limit is in effect. To develop beacon schedules, SDOT uses information provided for every school by Seattle Public Schools, rather than information provided by some individual schools, in order to operate the flashing beacon system consistently across the city so that all students receive the same level of service.

Factors that determine flashing beacon schedules:

- School breakfast
- School start time
- School end time
- Early dismissal days
- No-school days

SDOT does not operate school beacons for the following events or activities:

- Before or after school programs
- Special school events
- Summer school

The following beacon schedule applies to all schools:

- **Morning.** The beacons flash from 40 minutes prior to school start time until 10 minutes after school start time, for a total of 50 minutes. This schedule provides for students arriving at school for breakfast, which is served 25 minutes before school starts. Beacons that serve private schools, which do not provide breakfast to students prior to school start time, flash from 30 minutes prior to school start time until 10 minutes after school start time.
- **Afternoon.** The beacons flash from 10 minutes prior to school end time until 30 minutes after school end time, for a total of 40 minutes.

These start and end times were developed based on national guidelines, a review of peer cities, field observations at Seattle schools, and coordination with school crossing guard schedules. *Figure 1* below shows the beacon flashing times in relation to school start and end times.

FIGURE 1 – SCHOOL FLASHING BEACON SCHEDULE

APPENDIX A:
Regulations, Guidelines, and Recommendations for Setting School Speed Zone Limit Times

The Manual on Uniform Traffic Control Devices (MUTC) outlines standards and guidance on the correct location and type of sign assembly for school speed zones, including flashing beacons that indicate when the reduced speed limit is in effect. The MUTCD does not provide standards or guidance on how to determine the times that flashing beacons are in operation.

Texas Administrative Code outlines procedures for establishing speed zones that the Texas Department of Transportation must follow. Administrative code 43.1.25B.25.22 recommends operating the beacons:

- From approximately 45 minutes before school opens until classes begin;
- From the beginning to the end of the lunch period; and
- For a 30 minute period beginning at the close of school.

The code also allows for flashing the beacons during school events that will cause an increase in car or pedestrian traffic around the school, if coordinated with the school district.

In 2009, the Texas Transportation Institute developed a study on Speeds in School Zones for the Texas Department of Transportation. The study involved reviewing existing practices and developing guidelines for establishing school zones.

One aspect of the study included a survey of practitioners and field research on school zone times across Texas. The survey of practitioners found that setting the time the school zone speed limit is in effect is an issue for about half of the survey respondents.

The researchers gathered field data at 24 school zones in Texas, including the number of minutes the beacons flash before and after the school bell and vehicle speeds in the school zone. Analysis of the speed data showed higher speeds the longer the time away from the start or end of school. After 20 minutes before or after school, vehicle speeds increase 1 MPH as time increases from the bell time. **This finding indicates that operating the flashing beacons for shorter periods of time may be more effective at reducing vehicle speeds.**

Based on these findings and other research, the study recommends operating the beacons:

- 30 minutes before start of school until 5 minutes after start of school;
- Beginning to end of the lunch period; and
- 5 minutes before end of school until 30 minutes after end of school.

APPENDIX B:
Peer Jurisdiction Flashing Beacon Policies

A review of flashing beacon schedules and policies of cities in Washington State and around the country is presented in Figure 2. The seventeen cities reviewed include jurisdictions using flashing beacons with and without photo enforcement.

Figure 2 includes information on the amount of time the beacons flash before and after school starts and ends, the total duration of operation during the morning and afternoon, whether or not the beacons flash for the lunch period, whether the beacons operate during summer, if the schedule accommodates for kindergarten, and other pertinent information.

The nine cities in Washington State varied in total duration of morning and afternoon operation from 30 minutes to 2.5 hours. Thirteen out of 17 cities operate their beacons for one hour or less each in the morning and afternoon.

Only two of the nine cities in Washington State operate beacons during the lunch period, while half of the cities outside of the state do so. Just three cities, Lynnwood, WA, Lakewood, WA, and San Antonio, TX, operate flashing beacons during the summer for summer school. Three cities, Lakewood, WA, Mason City, IA, and Anchorage, AK, operate beacons for special events after school. Seven of the 17 cities flash beacons for the kindergarten schedule in addition to the regular school schedule.

Six jurisdictions (Bellevue, WA, Issaquah, WA, Lakewood, WA, Boulder, CO, Anchorage, AK, and Miami-Dade County, FL) flash beacons early before school starts to accommodate for school breakfast served to students.

Jurisdiction	State	Number of locations	Fixed speed cameras	Before school starts	After school starts	Total Duration - AM	Lunch	Before school ends	After school ends	Total Duration - PM	Flash in Summer	Flash for School Events	Flash for Kinder-garten	Note
Bellevue	WA	12	Yes	30	10	40 mins	No	10	30	40 mins	No	No	Yes	Schedule accommodates school breakfast.
Issaquah	WA	2	Yes	30	10	40 mins	No	10	30	40 mins	No	No	Yes	Schedule accommodates school breakfast.
Lynnwood	WA	3	Yes	60	30	1.5 hrs	No	30	60	1.5 hrs	No	No	No	
Des Moines	WA	3	Yes	35	5	40 mins	No	15	15	30 mins	No	No	No	
Renton	WA	9	Yes	30	30	1 hr	Yes	30	30	1 hr	Yes	No	No	
Lake Forest Park	WA	3	Yes	7 AM	9:30 AM	2.5 hrs	No	2 PM	4:30 PM	2.5 hrs	No	No	No	
Lakewood	WA	14	Yes			45 mins	Yes			45 mins	Yes	Yes	Yes	Schedule accommodates school breakfast.
Mountlake Terrace	WA	2	No	30	20	50 mins	No	10	30	40 mins	No	No	Yes	
Spokane Valley	WA	18	No	30	0	30 mins	No	0	30	30 mins	No	No	Yes	Corresponds to crossing guard schedule.
Portland	OR	64	No	45	15	1 hr	No	15	45	1 hr	No	No	Yes	
Boulder	CO	32	No	30	10	40 mins	Yes	5	30	35 mins	No	No	Yes	Schedule accommodates school breakfast at some schools.
Missoula	MT	3	No	7:30 AM	9 AM	2.5 hrs	Yes	3 PM	4:15 PM	1.25 hrs	No	No	No	
Mason City	IA	2	No			45 mins	Yes			45 mins	No	Yes	No	
San Antonio	TX	480	No	7 AM	9 AM	2 hrs	No	2 PM	4 PM	2 hrs	Yes	No	No	
Anchorage	AK	43	No	30	10	40 mins	Yes	10	30	40 mins	No	Yes	No	Schedule accommodates school breakfast.
Miami-Dade County	FL	340	No	20-30	5-15	25-45 mins	No	5-15	20-30	25-45 mins	No	No	No	Schedule accommodates school breakfast. Schedule always begins and ends on the quarter hour.
Raleigh	NC	5	No	30	15	45 mins	No	15	30	45 mins	No	No	No	

FIGURE 2 – FLASHING BEACON SCHEDULE POLICIES BY JURISDICTION

APPENDIX C:
Seattle School Zone Observations

During May and June, 2014, observations were made of the dismissal activity patterns in the school zones of eight Seattle Public Schools and one private school. The findings are presented in Figure 3 below.

On average, dismissal activity started 11 minutes before the end-of-day bell and continued for 29 minutes, for a total activity time of 40 minutes.

The number of minutes before the bell that dismissal activity started ranged from 5 minutes to 15 minutes. The number of minutes after the bell that dismissal activity lasted ranged from 10 minutes to 40 minutes.

School	Dismissal Activity Starts - Minutes Before Bell	Dismissal Activity Ends - Minutes After Bell	Total Activity Time
Olympic View Elementary School	5	40	45
Bailey Gatzert Elementary School	10	30	40
Dearborn Park Elementary School	15	30	45
Gatewood Elementary School	5	30	35
Thurgood Marshall Elementary School	10	30	40
Eckstein Middle School	15	25	40
Broadview-Thomson Elementary School	15	25	40
Holy Family School	8	10	18
Roxhill Elementary School	15	40	55
Average	**11**	**29**	**40**

APPENDIX D:
Seattle Public Schools Adult Crossing Guard Schedules

The Seattle Public Schools operates a program of adult crossing guards who help children safely cross the street at key arterials near schools. The program currently employs adult crossing guards at nearly 100 intersections throughout the city.

The crossing guards are typically at their post 30 minutes prior to the start of school in the morning and for 30 minutes after school ends in the afternoon.

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