

## 1.0 INTRODUCTION

- 1.1 Schools are sometimes located near congested streets, and school enrollment boundaries sometimes require students to cross busy roads.
- 1.2 The purpose of this policy is to describe school area traffic control devices and methods utilized by the City of Lawrence.
- 1.3 Traffic control devices include school zones, reduced speed zones, school crosswalks, pedestrian hybrid beacons (PHB), Rectangular Rapid Flashing Beacons (RRFB), crossing guards and safe routes to school maps.
- 1.4 This policy conforms to the traffic control for school areas guidance published in the latest edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) by the Federal Highway Administration.
- 1.5 Each traffic control device and method described in this policy fulfills a specific function as related to traffic conditions. The type of traffic control device used must be related to vehicular volume and speed, street width, and the number of children utilizing a crossing location.
- 1.6 This policy applies uniformly to all schools with the exception of the use of crossing guards and school route plans, which apply only to elementary and middle schools.
- 1.7 This policy does not preclude the use of other traffic safety measures that can help calm traffic, reduce speeds, and help pedestrians cross roadways more easily, such as curb extensions, raised medians with a pedestrian refuge, lighting and enforcement of traffic laws.

## 2.0 ZONES

- 2.1 School zone
  - 2.1.1 A school zone is a designated roadway segment approaching, adjacent to, and beyond school buildings or grounds, or along which school related activities occur.
  - 2.1.2 School zones are created, upon approval by the City Engineer or designee, by posting School Zone (S1-1) signs and End School Zone (S5-2) signs identifying the school site or crossing.
  - 2.1.3 A School Zone Sign (S1-1, see Figure 1) may be provided on the approach of each street adjacent to a school and in advance of every marked school crosswalk that is not adjacent to a school.



Figure 1. School Zone Sign (S1-1)

- 2.1.4 An End School Zone Sign (S5-2, see Figure 2) may be installed, upon approval by the City Engineer or designee, at the end of a school zone.

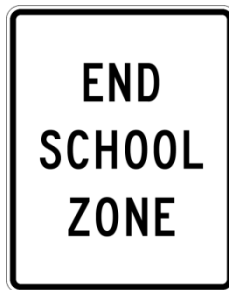


Figure 2. End School Zone Sign (S5-2)

- 2.1.5 School zone designations as identified on a map will be on file in the City Engineer's office. A copy of such map shall be available through the City Clerk's Office.
- 2.1.6 A school zone does not automatically qualify for a reduced speed limit.
- 2.2 Reduced speed zone
  - 2.2.1 A reduced speed zone is that portion of a street or highway located within a school zone that, at certain times of the day, is subject to a reduced speed limit of twenty (20) miles per hour or as otherwise specified in the Code of the City of Lawrence.
  - 2.2.2 The reduced speed zone shall normally be in effect for 45 minutes prior to the beginning of school and for 30 minutes after the end of school or as otherwise specified in the Code of the City of Lawrence.
  - 2.2.3 A reduced speed zone may be provided for each marked school crosswalk that is not controlled by a stop sign, traffic signal, or pedestrian hybrid beacon. A reduced speed zone may be established at other locations when justified by an engineering study.

2.2.4 Reduced speed zones shall typically begin and end approximately 200 feet in advance of the crosswalk.

2.2.5 A School Speed Limit Assembly (see Figure 3) or a School Speed Limit (S5-1) sign (see Figure 4) may be used to indicate the speed limit where a reduced speed zone has been established.



Figure 3. School Speed Limit Assembly



Figure 4. School Speed Limit (S5-1)

2.2.6 An End School Speed Limit (S5-3) sign (see Figure 5) may be used to indicate the end of the reduced speed zone.

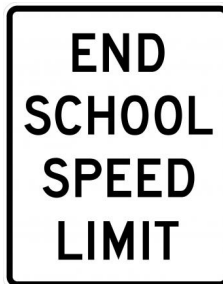


Figure 5. End School Speed Limit Sign (S5-3)

2.2.7 A listing of reduced speed zones and applicable time periods as identified on a map will be on file in the City Engineer's office. A copy of such map shall be available through the City Clerk's Office.

### 3.0 SCHOOL CROSSINGS

3.1 Generally, school crossings are established based on SRTS Infrastructure Maps and are sited to take advantage of existing traffic controls such as traffic signals.

3.2 A marked crosswalk may be provided at crossings adjacent to school properties, and at other locations where the following minimum requirements are met: vehicles enter the crosswalk (without being required to stop) at a rate exceeding 150 vehicles per hour during any 5-minute increment of the morning or afternoon crossing period. Designated school crosswalks shall normally be limited to one per street per school when practical. Uncontrolled crosswalks (absence of stop sign, traffic

signal, pedestrian hybrid beacon, or adult crossing guard) may be marked if shown by a school route plan or, if a school route plan does not exist, it is not practical for children to use a marked crosswalk.

3.3 School crossings may be identified with the following pavement markings and signs:

3.3.1 Pavement markings

3.3.1.1 Crosswalk markings, if provided, are used to define the pedestrian path of travel across the roadway and alert drivers to the crosswalk location. Marked crosswalks should be designed in accordance with the *Manual of Uniform Traffic Control Devices (MUTCD)*.

3.3.1.2 Stop and Yield Lines

3.3.1.2.1 If used, stop lines shall consist of solid white lines extending across approach lanes to indicate the point at which the stop is required to be made, in compliance with a stop sign, traffic control signal, or a pedestrian hybrid beacon.

3.3.1.2.2 If used, yield lines shall consist of a row of solid white isosceles triangles pointing toward approaching vehicles extending across approach lanes to indicate the point at which the yield is required to be made.

3.3.2 Signs

3.3.2.1 School sign (S1-1, see Figure 6) may be placed approximately 200 feet in advance of the school crossing.

3.3.2.2 School crossing assembly (S1-1 with W16-7P) or other sign assemblies approved by MUTCD for use at school crossings may be placed at the school crossing.



Figure 6. School Crossing Assembly (School S1-1 with Diagonal Downward Arrow W16-7P)

- 3.4 In order to consider additional traffic control devices at a crossing, the number of children using a crossing during the crossing period must average at least 10 during either the morning or afternoon crossing period. The crossing periods to be studied shall be the 45 minutes prior to the beginning of school and the 30 minutes after school dismissal, in 5-minute increments. A minimum of 3 morning and 3 afternoon studies will be conducted to determine the average number of children.
- 3.5 Warning devices
- 3.5.1 Flashing Beacon
- 3.5.1.1 A flashing beacon may be provided for each marked school crosswalk in a reduced speed zone that is not protected by a stop sign or traffic signal, if the average number of students exceeds 40 and the available safe gaps in the traffic is greater than 1.5 per minute; or if the average number of students is 10 or greater and the available safe gaps in the traffic is 1.0-1.5 per minute.
- 3.5.1.2 Any beacons installed under this provision should be removed upon installation of a stop sign or traffic signal under other provisions of this policy.
- 3.6 Regulatory devices
- 3.6.1 A Stop Sign or Traffic Signal will only be provided in accordance with criteria established in the *Manual on Uniform Traffic Control Devices*, as published by the Federal Highway Administration, and adopted by the State of Kansas and the City of Lawrence.
- 3.6.2 Pedestrian Hybrid Beacons
- 3.6.2.1 A pedestrian hybrid beacon (PHB) is a special type of hybrid beacon used to warn and control traffic at an un-signalized location to assist pedestrians in crossing a street or highway at a marked crosswalk.
- 3.6.2.2 A pedestrian hybrid beacon is a signal to facilitate pedestrian crossings at a location that does not meet other traffic control warrants.
- 3.6.2.3 The need for a pedestrian hybrid beacon should be considered on the basis of an engineering study that considers traffic volumes, speeds, road widths, sight distances and gaps in traffic.

### 3.6.3 Rectangular Rapid Flashing Beacons (RRFB)

3.6.3.1 Rectangular Rapid Flash Beacons (RRFB) can enhance safety by reducing crashes between vehicles and pedestrians at unsignalized intersections and mid-block pedestrian crossings by increasing driver awareness of potential pedestrian conflicts.

3.6.3.2 In March 2018, the Federal Highway Administration issued [new interim approval for the RRFB](#).

3.6.3.2.1 An RRFB shall only be installed to function as a pedestrian-actuated conspicuity enhancement.

3.6.3.2.2 An RRFB shall only be used to supplement a post-mounted W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign with a diagonal downward arrow (W16-7P) plaque, or an overhead-mounted W11-2, S1-1, or W11-15 crossing warning sign, located at or immediately adjacent to an uncontrolled marked crosswalk.

3.6.3.2.3 Except for crosswalks across the approach to or egress from a roundabout, an RRFB shall not be used for crosswalks across approaches controlled by YIELD signs, STOP signs, traffic control signals, or pedestrian hybrid beacons.

3.6.3.2.4 In the event sight distance approaching the crosswalk at which RRFBs are used is less than deemed necessary by the engineer, an additional RRFB may be installed on that approach in advance of the crosswalk, as a pedestrian-actuated conspicuity enhancement to supplement a W11-2 (Pedestrian), S1-1 (School), or W11-15 (Trail) crossing warning sign with an AHEAD (W16-9P) or distance (W16-2P or W16-2aP) plaque. If an additional RRFB is installed on the approach in advance of the crosswalk, it shall be supplemental to and not a replacement for the RRFBs at the crosswalk itself.



Figure 7. Rectangular Rapid Flashing Beacons (RRFB)

#### 4.0 ADULT CROSSING GUARDS

- 4.1 Adult crossing guards are used to provide adequate gaps in traffic at school crossing locations serving elementary and middle school students, and to assist elementary and middle school students in crossing a street or highway.
- 4.2 Adult crossing guards are used in the following situations: when adequate gaps in traffic are infrequent for students to cross; at complicated intersections with frequent vehicle turning movements; at wide street or highway crossings; and where vehicular speeds are high.
- 4.3 An adult crossing guard may be provided if any of the following minimum conditions are met:
  - 4.3.1 At an uncontrolled crosswalk if:
    - 4.3.1.1 the average number of students exceeds 40 and the available safe gaps in the traffic is 1.0-1.5 per minute; or
    - 4.3.1.2 the average number of students is 10 or greater and
      - 4.3.1.2.1 the speed limit on the street is over 35mph, or
      - 4.3.1.2.2 the street is marked for more than 3 lanes of traffic, or
      - 4.3.1.2.3 the product of the crossing time (in seconds) and the speed limit for approaching traffic (in feet per second) is equal to or larger than the measured sight distance, or
      - 4.3.1.2.4 the available safe gaps in the traffic is less than 1.0 per minute.

- 4.3.2 At a crosswalk controlled by a Stop Sign (not an all-way stop), Traffic Signal, or a pedestrian hybrid beacon if the average number of students is 30 or greater; and
  - 4.3.2.1 the street is marked for 4 lanes or more lanes of traffic and vehicles enter the crosswalk without being required to stop at a rate exceeding 150 vehicles per hour during any 5-minute increment of the morning or afternoon crossing period; or
  - 4.3.2.2 the street is marked for less than 4 lanes of traffic and vehicles enter the crosswalk without being required to stop at a rate exceeding 300 vehicles per hour during any 5-minute increment of the morning or afternoon crossing period.
- 4.3.3 At a crosswalk at an All-Way Stop if the average number of students is 10 or greater and the all-way stop is warranted by vehicle volume during the crossing period.
- 4.4 Crossing guards will only be on placed on designated SRTS Routes.
- 4.5 Evaluation of existing crossing guard locations will occur at least once every five years to ensure locations meet warrants. If the built environment changes or specific concerns have developed between the five-year evaluation cycle, the location will be evaluated. Municipal Services and Operations will conduct the process, in coordination with the SRTS Working group, and with consideration for budget and school year impacts.
  - 4.5.1 Locations with existing crossing guards that meet 80% of the warrant shall continue to be maintained with crossing guards for the current year and be re-evaluated in the following year. If a location fails to meet the full warrant for two consecutive years, the crossing guard shall be removed.
  - 4.5.2 Locations with existing crossing guards that do not meet 80% of the warrant shall be removed immediately.
- 4.6 New crossing guard locations can be requested in writing to the Municipal Services and Operations Department. The requests will be reviewed and recommended for evaluation by the SRTS Working Group. Once data is collected and the location is evaluated, the SRTS Working Group will review the results and recommend crossing guard placement.



Requests for new crossing guards will be evaluated against the warrants based on potential crossings. If the potential crossings meet warrants, a guard will be placed for one school year and actual counts will be taken while school is in session and the guard is in place. If the actual counts meet warrants, the guard will be maintained. If the actual counts do not meet warrants, the guard will be removed at the end of the school year.

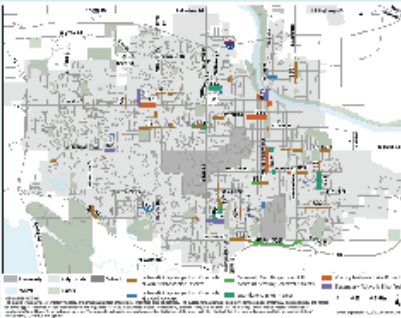
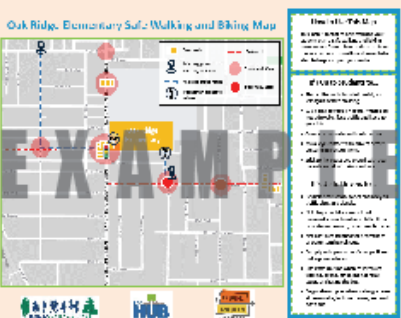
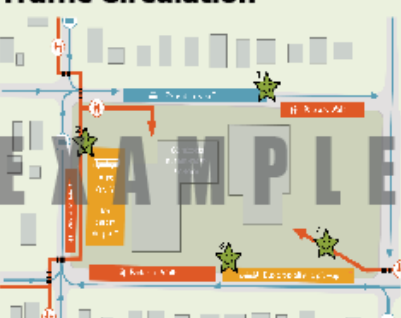
Potential crossings will be calculated based on the most recent geocoded student address information provided by USD 497 and the pedestrian model routing that will use the sidewalk network to assess routes students would use to get to their assigned school. The number of students that the model reports as using the segment where the adult crossing guard is requested will be recorded as the potential crossing number.

Recommendations to add crossing guards will be considered by the City Commission prior to the beginning of the following school year. Requested locations shall be evaluated no more than once every five years.

- 4.7 When feasible, City staff will provide coverage for adult crossing guard absences at the discretion of Division and Department heads with available staff. Ongoing City programs and operations may not always allow for coverage of unplanned adult crossing guard absences. In the event that City staff cannot provide coverage for an unplanned adult crossing guard absence, City staff will notify staff from the affected school.

5.0 SAFE ROUTE TO SCHOOL MAPS

5.1 The Safe Routes to School Planning process completed in 2020 determined three separate maps are needed to serve different functions. The distinctions are described below.

	Elements	Use	Developer	Updates
<p><b>Infrastructure</b></p>  <p>Located: <a href="http://lawrenceks.org/safe-routes">lawrenceks.org/safe-routes</a></p>	<ul style="list-style-type: none"> <li>Establishes routes</li> <li>Existing crossing guards</li> <li>Streets</li> <li>Existing sidewalks</li> <li>Designated school zones</li> <li>Posted speed limits</li> <li>Existing bike facilities</li> <li>Project listings - separate from the map</li> </ul>	<p>City infrastructure planning – determine sidewalk/bike gap projects</p>	<p>SRTS Working Group with USD 497 input</p>	<p>Routes planning &amp; evaluation every 5 years except as necessary due to school boundary change or request from USD 497. The map may be updated to reflect the actual environment (built projects, crossing improvements, etc.) in the intervening years.</p>
<p><b>Encouragement*</b></p>  <p>Located: <a href="http://beactivesaferoutes.com">beactivesaferoutes.com</a></p>	<ul style="list-style-type: none"> <li>Simple walking/biking route map for students and parents</li> <li>Shows existing infrastructure (sidewalk, crossings, etc)</li> <li>Includes safety user information, student bus pass info, nearest bus stop on middle school maps</li> </ul>	<p>Schools and parents walking and biking to/from school</p>	<p>SRTS Working Group</p>	<p>As necessary, based on known changes to the built environment or items shown on the map.</p>
<p><b>Traffic Circulation</b></p>  <p>Located: <a href="http://beactivesaferoutes.com">beactivesaferoutes.com</a> &amp; USD 497 student handbooks and/or websites</p>	<ul style="list-style-type: none"> <li>Entrances to school</li> <li>Drop off/pick up</li> <li>No parking zones</li> <li>ADA entrances</li> <li>Bus pick up/drop off</li> <li>Crosswalks</li> <li>Bike racks</li> <li>Written traffic procedure if applicable</li> </ul>	<p>Schools and parents for drop off/pick up procedures</p>	<p>USD 497 with City's technical guidance upon request</p>	<p>As necessary, based on known changes to the built environment or items shown on the map.</p>

Source: The information is from [Safe Routes to School Plan](#) on page 33.

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- 5.2 A **SRTS Infrastructure Maps** were created for each school serving elementary to middle school students. The map will promote uniformity in the use of school area traffic controls.
- 5.2.1 The SRTS Infrastructure Map shows established routes, existing crossing guards, streets, existing sidewalks, designated school zones, posted speed limits, and existing bike facilities.
- 5.2.2 The SRTS Working Group shall discuss requested changes to the SRTS Infrastructure maps, prior to implementation. The Multi-Modal Transportation Commission will make the a recommendation to the City Commission about routes taking into consideration the SRTS Working Group’s recommendation.
- 5.2.3 SRTS Infrastructure maps will be updated with built environment changes and any approved route changes by the end of June so they can be made public.
- 5.2.4 The SRTS Infrastructure Maps will be publicly available at <https://lawrenceks.org/safe-routes>.
- 5.3 A **SRTS Encouragement Map** is available for each school serving elementary to middle school students.
- 5.3.1 The map will include simple walking/biking routes, showing existing infrastructure (sidewalks, crossings, etc), and include safety user information, student bus pass info, and nearest bus stop on middle school maps.
- 5.3.2 The SRTS Working Group will update the SRTS Encouragement Maps based on built environment improvements by the end of June.
- 5.3.3 The SRTS Encouragement Maps will be publicly available at [beactivesaferoutes.com](http://beactivesaferoutes.com), which is maintained by Lawrence-Douglas County Public Health, and <https://lawrenceks.org/safe-routes>.
- 5.4 A **SRTS Circulation Map** is available for each school serving elementary to middle school students.
- 5.4.1 The SRTS Circulation Map will include entrances to school, personal vehicle drop off/pick up locations, no parking area, ADA entrances, bus pick/off drop off areas, crosswalks, and any written traffic procedures (if applicable).
- 5.4.2 Site-specific information will be provided by the school district in coordination with the City to the SRTS Working Group.

5.4.3 The SRTS Circulation Maps will be publicly available at [beactivesaferoutes.com](http://beactivesaferoutes.com), which is maintained by Lawrence-Douglas County Public Health, and <https://lawrenceks.org/safe-routes>.

5.4.4 The original version of the SRTS Circulation Maps, being developed in 2021, document existing conditions. SRTS Circulation Maps will be updated annually based on built environment and site changes.

## 6.0 REQUESTS

6.1 All requests for school area traffic control must be submitted to Municipal Services and Operations in coordination with the Site Council or a USD 497 representative and evaluated by the SRTS Working Group.

6.2 The City will implement school area traffic control that meets the policy and warrants, as funding is available.

## 7.0 NOTIFICATION

7.1 The City of Lawrence will notify affected schools, school districts, residents and/or property owners in accordance with the Community Engagement Plan.

## 8.0 SRTS Working Group

8.1 To formalize Safe Routes to School operations a SRTS Working Group exists between USD 497 and the City. The Working Group should have staff representation, at a minimum, from the City, USD 497, Lawrence-Douglas County Metropolitan Planning Organization, and Lawrence-Douglas County Public Health.

8.2 The City will form and provide the staff support to the SRTS Working Group.

8.3 The SRTS Working Group will be the point of contact for SRTS questions from parents, promoting walking and biking to school days, communicating with Schools, and assist in developing the SRTS Circulation and Encouragement Maps. Members of the SRTS Working Group have varying responsibilities in this process coordinated by the Working Group.

This SRTS Working Group will develop out of the Memorandum of Understanding between the City of Lawrence and the Unified School District Number 497.