

David Woosley

From: jenandspencer@sunflower.com
Sent: Tuesday, May 03, 2005 2:28 AM
To: traffic@ci.lawrence.ks.us
Subject: request

To whom it may concern:

The residents of 7th and Alabama streets are requesting a review by the Traffic Commission of the intersection to determine if a 4-way stop could be placed there. This intersection consists of two residences, a nursery school, and a church, and for some time there has been concern that the parking situation gives no visibility to cross traffic. Also, since there are 4-way stop intersections both to the east and to the west of this intersection, drivers often get confused and either stop when they shouldn't or don't stop when they should. Considering the nursery school especially, it seems that a 4-way stop would make this intersection much safer.

If you have any questions, please contact Jennifer Sievers at 841-2015 or reply to this e-mail.

Thank you for your consideration,
The Residents at 7th and Alabama



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Alabama St

W 7th St

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Once the decision has been made to install two-way stop control, the decision regarding the appropriate street to stop should be based on engineering judgment. In most cases, the street carrying the lowest volume of traffic should be stopped.

A STOP sign should not be installed on the major street unless justified by a traffic engineering study.

Support:

The following are considerations that might influence the decision regarding the appropriate street upon which to install a STOP sign where two streets with relatively equal volumes and/or characteristics intersect:

- A. Stopping the direction that conflicts the most with established pedestrian crossing activity or school walking routes;
- B. Stopping the direction that has obscured vision, dips, or bumps that already require drivers to use lower operating speeds;
- C. Stopping the direction that has the longest distance of uninterrupted flow approaching the intersection; and
- D. Stopping the direction that has the best sight distance to conflicting traffic.

The use of the STOP sign at highway-railroad grade crossings is described in Section 8B.08. The use of the STOP sign at highway-light rail transit grade crossings is described in Section 10C.04.

Section 2B.06 STOP Sign Placement

Standard:

The STOP sign shall be installed on the right side of the approach to which it applies. When the STOP sign is installed at this required location and the sign visibility is restricted, a Stop Ahead sign (see Section 2C.29) shall be installed in advance of the STOP sign.

The STOP sign shall be located as close as practical to the intersection it regulates, while optimizing its visibility to the road user it is intended to regulate.

STOP signs and YIELD signs shall not be mounted on the same post.

Guidance:

Other than a DO NOT ENTER sign, no sign should be mounted back-to-back with a STOP sign in a manner that obscures the shape of the STOP sign.

Support:

Section 2A.16 contains additional information about separate and combined mounting of other signs with STOP signs.

Guidance:

Stop lines, when used to supplement a STOP sign, should be located at the point where the road user should stop (see Section 3B.16).

If only one STOP sign is installed on an approach, the STOP sign should not be placed on the far side of the intersection.

Where two roads intersect at an acute angle, the STOP sign should be positioned at an angle, or shielded, so that the legend is out of view of traffic to which it does not apply.

Where there is a marked crosswalk at the intersection, the STOP sign should be installed in advance of the crosswalk line nearest to the approaching traffic.

Option:

At wide-throat intersections or where two or more approach lanes of traffic exist on the signed approach, observance of the stop control may be improved by the installation of an additional STOP sign on the left side of the road and/or the use of a stop line. At channelized intersections, the additional STOP sign may be effectively placed on a channelizing island.

Support:

Figure 2A-2 shows examples of some typical placements of STOP signs.

Section 2B.07 Multiway Stop Applications

Support:

Multiway stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multiway stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multiway stop control is used where the volume of traffic on the intersecting roads is approximately equal.

The restrictions on the use of STOP signs described in Section 2B.05 also apply to multiway stop applications.

Guidance:

The decision to install multiway stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multiway STOP sign installation:

- A. Where traffic control signals are justified, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
- B. A crash problem, as indicated by 5 or more reported crashes in a 12-month period that are susceptible to correction by a multiway stop installation. Such crashes include right- and left-turn collisions as well as right-angle collisions.
- C. Minimum volumes:
 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day, and
 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, but
 3. If the 85th-percentile approach speed of the major-street traffic exceeds 65 km/h or exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the above values.
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Option:

Other criteria that may be considered in an engineering study include:

- A. The need to control left-turn conflicts;
- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to reasonably safely negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multiway stop control would improve traffic operational characteristics of the intersection.

Section 2B.08 YIELD Sign (R1-2)**Standard:**

The YIELD (R1-2) sign (see Figure 2B-1) shall be a downward-pointing equilateral triangle with a wide red border and the legend YIELD in red on a white background.

Support:

The YIELD sign assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need to slow down or stop when necessary to avoid interfering with conflicting traffic.

Section 2B.09 YIELD Sign Applications**Option:**

YIELD signs may be used instead of STOP signs if engineering judgment indicates that one or more of the following conditions exist:

- A. When the ability to see all potentially conflicting traffic is sufficient to allow a road user traveling at the posted speed, the 85th-percentile speed, or the statutory speed to pass through the intersection or to stop in a reasonably safe manner.
- B. If controlling a merge-type movement on the entering roadway where acceleration geometry and/or sight distance is not adequate for merging traffic operation.
- C. The second crossroad of a divided highway, where the median width at the intersection is 9 m (30 ft) or greater. In this case, a STOP sign may be installed at the entrance to the first roadway of a divided highway, and a YIELD sign may be installed at the entrance to the second roadway.
- D. An intersection where a special problem exists and where engineering judgment indicates the problem to be susceptible to correction by the use of the YIELD sign.

Standard:

A YIELD (R1-2) sign shall be used to assign right-of-way at the entrance to a roundabout intersection.



Multiway Stop Warrant Worksheet

Date: 12 May 2005

Location: 7th Street & Alabama Street

Time Period	7th Street						Alabama Street						Grand Total
		EB			WB	Total		NB			SB	Total	
12-01		13			8	21		2			2	4	25
01-02		4			7	11		0			0	0	11
02-03		2			4	6		0			0	0	6
03-04		0			3	3		1			1	2	5
04-05		1			0	1		0			1	1	2
05-06		1			2	3		1			1	2	5
06-07		7			2	9		6			2	8	17
07-08		21			25	46		4			12	16	62
08-09		15			26	41		7			5	12	53
09-10		22			18	40		9			17	26	66
10-11		28			25	53		11			6	17	70
11-12		31			28	59		11			13	24	83
12-01		41			40	81		10			13	23	104
01-02		30			27	57		12			10	22	79
02-03		40			29	69		5			9	14	83
03-04		46			42	88		8			20	28	116
04-05		53			57	110		6			19	25	135
05-06		32			57	89		13			19	32	121
06-07		24			29	53		11			18	29	82
07-08		22			19	41		10			16	26	67
08-09		18			23	41		5			18	23	64
09-10		23			15	38		12			10	22	60
10-11		8			19	27		3			4	7	34
11-12		7			7	14		2			3	5	19
Totals	0	489	0	0	512	1001	0	149	0	0	219	368	1369

The Manual on Uniform Traffic Control Devices (MUTCD) requires an average of **300** vehicles per hour entering the intersection from the main street for each of 8 hours of a day, and an average of **200** entering from the minor street during the same 8 hours.

Average entering volume on main street for 8 highest hours = **76**

Average minor street volume for same 8 hours = **25**