## NORTH LAWRENCE IMPROVEMENT ASSOCIATION item2\_tsc\_7.2.07

#### LAWRENCE, KANSAS

Traffic Safety Commission
Lawrence KS

MAY 29 2007 PUBLIC WORKS

May 23, 2007

Dear Sir,

The North Lawrence Improvement Association and residents of North Lawrence are requesting a four way stop at 7th and Lyons. There is a two way stop on Lyons and no stop signs North and South on North 7th Street. Lyons Park and Baseball fields are at  $7^{\rm th}$  and Lyons. Ball games are played in the summer months, which brings a concern, because traffic is very heavy making it difficult for children to cross North 7th street. At this time there are no stop signs on North  $7^{\rm th}$  street from  $7^{\rm th}$  and Locust all the way to 24 Highway. Normal traffic speed is 40-50 miles per hour on North 7<sup>th</sup>. We feel there needs to be a 4 way stop here to slow the traffic and make it safer for the children.

Sincerely,

Ted Boyle

President

North Lawrence Improvement Ass.

cc. City Commission

#### **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:**

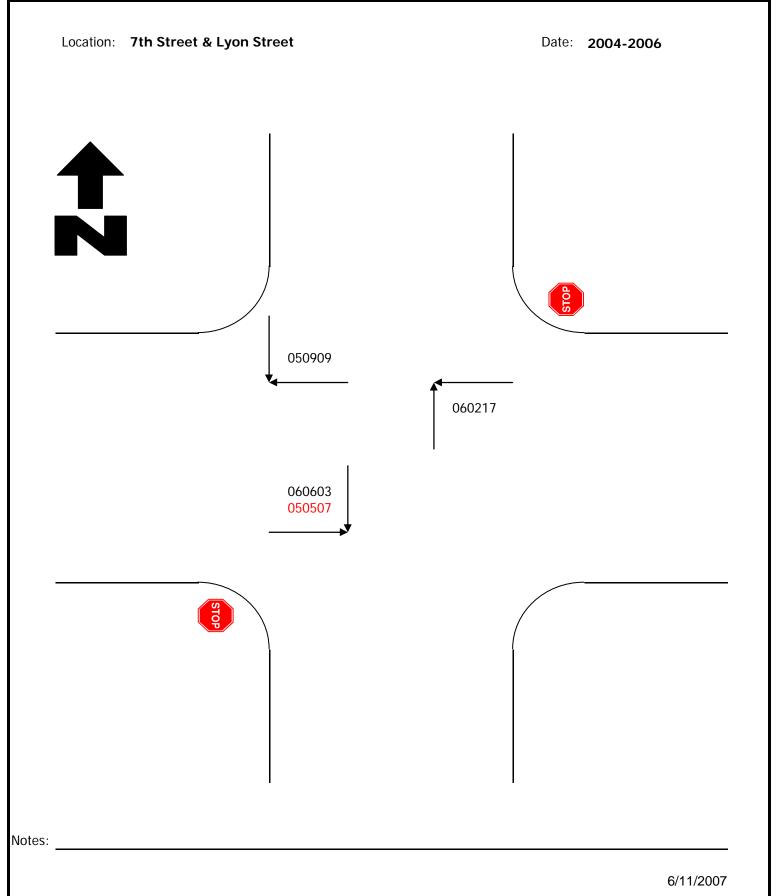
Other criteria that may be considered in an engineering study include:

- 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.



# City of Lawrence, Kansas Traffic Engineering Division Crash Diagram







#### City of Lawrence, Kansas Traffic Engineering Division

item2 tsc 7.2,27



### **ALL WAY** Stop Warrant Worksheet

Location: 7th Street & Lyon Street Date: June 2007

Time	7th Street								Lyon Street						
Period	NBLL	NB	NBRL	SBLL	SB	SBRL	Total	EBLL	EB	EBRL	WBLL	WB	WBRL	Total	Total
12-01		3			5		8		2			5		7	15
01-02		5			2		7		2			6		8	15
02-03		5			1		6		2			2		4	10
03-04		0			0		0		3			1		4	4
04-05		0			1		1		0			2		2	3
05-06		2			12		14		4			3		7	21
06-07		5			31		36		12			18		30	66
07-08		40			79		119		36			17		53	172
08-09		28			64		92		26			29		55	147
09-10		26			40		66		29			25		54	120
10-11		27			40		67		38			24		62	129
11-12		32			53		85		42			19		61	146
12-01		40			51		91		49			33		82	173
01-02		25			41		66		37			13		50	116
02-03		40			50		90		36			18		54	144
03-04		40			48		88		43			36		79	167
04-05		43			55		98		55			36		91	189
05-06		62			83		145		62			16		78	223
06-07		27			43		70		31			25		56	126
07-08		34			31		65		45			22		67	132
08-09		24			34		58		40			15		55	113
09-10		20			28		48		32			7		39	87
10-11		9			17		26		17			6		23	49
11-12		3			7		10		8			3		11	21
Totals	0	540	0	0	816	0	1356	0	651	0	0	381	0	1032	2388

The Manual on Uniform Traffic Control Devices (MUTCD) requies 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 = 101

> > Average minor street volume for same 8 hours = 69

> > > 6/7/2007