

AGENDA: TSC 6/1/15

ITEM NO. 3: Consider request to establish a MULTI-WAY STOP on Overland Drive at the Free State High School East Driveway, at the Free State High School West Driveway, and at Champion Lane.

Staff Report:

1. Criteria for application of MULTI-WAY STOP locations are found in the *Manual on Uniform Traffic Control Devices*, as published by the Federal Highway Administration.
2. None of the criteria is currently met for any of the locations requested; in addition, two (2) of the locations requested are private driveways, not public streets.
3. There have been two (2) reported crashes in this area during the past three (3) years; one (1) eastbound and one (1) westbound; both were rear-end crashes, each involving three (3) vehicles.
4. It should be noted, that although the out-of-pocket cost to the city for a single stop sign is approximately \$75, the actual costs to motorists due to increased operating expenses can be significant. Adding three (3) stop locations along Overland Drive could cost motorists approximately \$115,000-\$187,000 per year under the current volume of traffic of approximately 10,300 vehicles per day. This does not include other costs; and, does not include the negative effect on quality of life from increased pollution from vehicle exhaust, brake dust and tire particles.

MINUTES: TSC 6/1/15

ITEM NO. 3:

Consider request to establish a MULTI-WAY STOP on Overland Drive at the Free State High School East Driveway, at the Free State High School West Driveway, and at Champion Lane.

Woosley reviewed the information provided in the staff report.

Public Comments:

None.

Commission Discussion:

None.

MOTION BY COMMISSIONER DEVLIN, SECOND BY COMMISSIONER HOSKINSON, TO RECOMMEND DENYING THE REQUEST TO ESTABLISH A MULTI-WAY STOP ON OVERLAND DRIVE AT THE FREE STATE HIGH SCHOOL EAST DRIVEWAY, AT THE FREE STATE HIGH SCHOOL WEST DRIVEWAY, AND AT CHAMPION LANE; THE MOTION CARRIED, 7-0.

David Woosley

From: Anderson, Christopher William <cwanderson@ku.edu>
Sent: Monday, May 04, 2015 9:42 AM
To: rdoll@usd497.org; ewest@usd497.org; David Woosley; David Woosley; Todd Lohman
Subject: Unsafe traffic at Free State High School

Dr. Doll, Dr. West, Mr. Woosley, Mr. Lohman, et al.,

My son John is now finishing up his 10th grade year at FSHS, and my wife and I are completing our second year of school drop off and pick up. Next fall my son will probably be driving himself -- and his younger brother -- to school at Free State.

For some time now I have observed the traffic around the beginning and end of the day at FSHS, which is unavoidably congested as everyone tries to arrive and leave at the same time. Congestion is unavoidable, but lack of safety is not. Unfortunately, around Free State there appears to be an over-reliance on driver attentiveness, courtesy, and respect for basic traffic rules as opposed to physical road, surface, and signage features that promote traffic flow and safety.

Frankly, given the age and experience of the many student drivers I think that reliance on the human factor is not wise. For example, I routinely observe student drivers departing the north parking lot on its north side and speeding through the T-intersection there in spite of the stop signs indicating a three-way stop. Twice in last year student drivers nearly T-boned my car -- both times when my then-5-year-old daughter was a passenger -- when they did not respect that stop signage. I have also witnessed drivers "gunning it" against cross traffic to exit at the T-intersected main entrances and exits to campus.

Even parents do dumb things -- sometimes merely annoying things such as insisting on a left turn east off campus onto Overland Drive against heavy westbound cross traffic, backing up departing traffic. A similar situation happens in the morning when someone insists on a lefthand turn off Overland Drive north onto Folks Road. Sometimes, however, parents do things that I consider to be downright hazardous. Road surface and signage features would be very helpful in reducing these hazards.

Particularly dangerous, in my view, is the lack of any traffic stoppage or traffic calming devices on Overland Drive, that between Folks Road and Wakarusa Drive runs unimpeded past four T-intersections -- the southeast entrance to the campus, the south entrance to the campus, Champions Lane, and the southwest entrance to the campus (I'm not counting the two semi-private drives into multifamily housing buildings just west of Folks Road). I've seen a lot of hazardous situations and near misses along Overland Drive, especially involving cars that stop along that road to drop off students and the following cars and cross-traffic cars that often swerve around the curbside vehicles and even the students crossing or walking along Overland Drive.

This morning my son was crossing the crosswalk at the T-intersection of Champions Lane and Overland Drive -- in a marked and signed pedestrian crossing -- and was nearly hit by an inattentive parent driver in a gold Lexus crossover vehicle going west at 30 mph. If my son had been only one or two paces ahead I would be at the emergency room right now hoping for the best and preparing for the worst. If I had been able to catch up with that vehicle, which I fell behind and lost in the neighborhoods west of

Wakarusa, I would have had an very animated discussion with its driver this morning. Instead, I write to you.

I request

1. That three-way stop signs, pavement stop lines, and traffic calming devices such as speed bumps be installed along Overland Drive at three of the T-intersections fronting Free State High School , i.e., the southeast and southwest entry/exit points to campus and the intersection with Champions Lane where there is a crosswalk. In my opinion, there is no good reason to allow unimpeded 25(+) mph east-west traffic for the entire length of the often heavily traveled Overland Drive.
2. That stop signs, pavement stop lines, speedbumps, and crosswalks (current formal crosswalks as well as informal but frequently utilized foot pathways) around the interior campus roads be inspected, repaired, and made prominently more visible. In addition to the existing signed intersections and crosswalks there should be a prominent crosswalk and speed bumps on the road west of campus at the location where students frequently cross to the athletic fields.
3. That traffic safety, driver attentiveness, rules of the road, and courtesy be prominent features of student and parent back-to-school materials and orientations at the start of both the fall and spring semesters.

My son experienced a near miss this morning at Free State High School due to an unsafe road and an inattentive parent driver. This wasn't our first near miss, and I am sure that our experiences are not isolated. Please take steps so that we can make the way to school a safer one at Free State.

Christopher Anderson
1032 Andover St.
Lawrence, KS 66049
email: cwanderson@ku.edu
cell: 785-393-1797

David Woosley

From: Rick Doll [<mailto:RDoll@usd497.org>]

Sent: Monday, May 04, 2015 3:11 PM

To: Anderson, Christopher William; Ed West; David Woosley; David Woosley; Todd Lohman

Cc: Kyle Hayden

Subject: RE: Unsafe traffic at Free State High School

Thank you for expressing your concern and I am thankful that your son was not injured. Safety is our highest priority and traffic around all of our schools is a challenge.

With the construction project at FSHS we are planning several changes to the traffic pattern. We will be happy to consider you thoughtful suggestions in that process.

Section 2B.06 STOP Sign Applications

Guidance:

- 01 *At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09).*
- 02 *The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:*
- A. *The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
 - B. *A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
 - C. *Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Support:

- 03 The use of STOP signs at grade crossings is described in Sections 8B.04 and 8B.05.

Section 2B.07 Multi-Way Stop Applications

Support:

- 01 Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.
- 02 The restrictions on the use of STOP signs described in Section 2B.04 also apply to multi-way stop applications.

Guidance:

- 03 *The decision to install multi-way stop control should be based on an engineering study.*
- 04 *The following criteria should be considered in the engineering study for a multi-way STOP sign installation:*
- A. *Where traffic control signals are justified, the multi-way 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. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn 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 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
 - 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:

- 05 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 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 multi-way stop control would improve traffic operational characteristics of the intersection.



City of Lawrence, Kansas
Traffic Engineering Division



Stop Warrant Worksheet



Date: May 12-13, 2015

Location: Overland Drive & Champion Lane

Time Period	Overland Drive							Champion Lane							Grand Total
	EBLL	EB	EBRL	WBLL	WB	WBRL	Total	NBLL	NB	NBRL	SBLL	SB	SBRL	Total	
12-01		4			3		7		0					0	7
01-02		2			3		5		0					0	5
02-03		3			1		4		0					0	4
03-04		0			1		1		0					0	1
04-05		1			5		6		0					0	6
05-06		14			41		55		0					0	55
06-07		91			44		135		1					1	136
07-08		205			134		339		11					11	350
08-09		142			66		208		7					7	215
09-10		97			54		151		2					2	153
10-11		68			47		115		1					1	116
11-12		120			100		220		3					3	223
12-01		141			86		227		4					4	231
01-02		102			85		187		2					2	189
02-03		101			81		182		20					20	202
03-04		190			142		332		5					5	337
04-05		164			118		282		5					5	287
05-06		265			163		428		7					7	435
06-07		102			104		206		9					9	215
07-08		128			69		197		7					7	204
08-09		156			81		237		13					13	250
09-10		65			34		99		3					3	102
10-11		22			26		48		0					0	48
11-12		9			3		12		0					0	12
Totals	0	2192	0	0	1491	0	3683	0	100	0	0	0	0	100	3783

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 = **280**

Average minor street volume for same 8 hours = **6**



City of Lawrence, Kansas
Traffic Engineering Division



Stop Warrant Worksheet



Date: May 12-13, 2015

Location: Overland Drive & FSHS East Drive

Time Period	Overland Drive							Free State High School East Drive							Grand Total
	EBLL	EB	EBRL	WBLL	WB	WBRL	Total	NBLL	NB	NBRL	SBLL	SB	SBRL	Total	
12-01		2			6		8					0		0	8
01-02		0			4		4					0		0	4
02-03		0			2		2					0		0	2
03-04		0			0		0					0		0	0
04-05		7			1		8					0		0	8
05-06		17			13		30					1		1	31
06-07		61			80		141					1		1	142
07-08		182			152		334					14		14	348
08-09		68			134		202					26		26	228
09-10		49			90		139					31		31	170
10-11		39			71		110					29		29	139
11-12		68			124		192					77		77	269
12-01		61			163		224					55		55	279
01-02		62			102		164					73		73	237
02-03		62			111		173					108		108	281
03-04		89			203		292					138		138	430
04-05		109			167		276					46		46	322
05-06		124			252		376					24		24	400
06-07		74			125		199					19		19	218
07-08		37			137		174					13		13	187
08-09		29			173		202					117		117	319
09-10		21			74		95					27		27	122
10-11		7			26		33					32		32	65
11-12		0			9		9					4		4	13
Totals	0	1168	0	0	2219	0	3387	0	0	0	0	835	0	835	4222

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 = **254**

Average minor street volume for same 8 hours = **67**



City of Lawrence, Kansas
Traffic Engineering Division



Stop Warrant Worksheet



Date: May 12-13, 2015

Location: Overland Drive & FSHS West Drive

Time Period	Overland Drive							Free State High School West Drive							Grand Total
	EBLL	EB	EBRL	WBLL	WB	WBRL	Total	NBLL	NB	NBRL	SBLL	SB	SBRL	Total	
12-01		3			2		5					1		1	6
01-02		2			4		6					0		0	6
02-03		3			2		5					0		0	5
03-04		0			1		1					0		0	1
04-05		4			8		12					1		1	13
05-06		31			36		67					10		10	77
06-07		89			44		133					78		78	211
07-08		244			142		386					241		241	627
08-09		117			67		184					106		106	290
09-10		78			55		133					78		78	211
10-11		56			48		104					58		58	162
11-12		109			91		200					107		107	307
12-01		115			82		197					96		96	293
01-02		73			78		151					95		95	246
02-03		89			63		152					104		104	256
03-04		137			116		253					223		223	476
04-05		116			126		242					162		162	404
05-06		191			175		366					189		189	555
06-07		119			98		217					99		99	316
07-08		81			75		156					120		120	276
08-09		55			66		121					206		206	327
09-10		39			35		74					62		62	136
10-11		25			22		47					8		8	55
11-12		8			3		11					7		7	18
Totals	0	1784	0	0	1439	0	3223	0	0	0	0	2051	0	2051	5274

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 = **256**

Average minor street volume for same 8 hours = **153**