



ST. CHARLES
SINCE 1834

AGENDA ITEM EXECUTIVE SUMMARY

Title: Discussion of Traffic Concerns Regarding Red Gate Road at St. Charles North High School

Presenter: Mark Koenen and Jim Lamkin

Please check appropriate box:

	Government Operations	X	Government Services 02.27.12			
	Planning & Development		City Council			
	Public Hearing					
Estimated Cost:	\$0	Budgeted:	<table style="display: inline-table; border: none;"> <tr> <td style="border: 1px solid black; width: 20px; text-align: center;">YES</td> <td style="border: 1px solid black; width: 20px; text-align: center;">X</td> <td style="border: 1px solid black; width: 20px; text-align: center;">NO</td> </tr> </table>	YES	X	NO
YES	X	NO				

Executive Summary:

Residents of the Rivers Edge Homeowners Association (HOA) have shared their concern regarding vehicular and pedestrian traffic at the intersection of Red Gate Road and River Ridge Drive/SCN High School. The concern is regarding the current traffic situation at the location and the potential impacts of additional traffic anticipated after the opening of the Red Gate Bridge. Joe Segobiano, representing the HOA, would like the city to address these traffic concerns.

In early 2011, Police and Public Works staff reviewed the traffic issues and developed 11 options (See Attachment A) that could be implemented to address specific traffic conditions. These concept options were shared with Mr. Segobiano and his traffic engineer from KLOA. Staff also met with representatives from District 303 to discuss these concept options and modifications within the school parking lot. We believe parking lot modifications would reduce traffic congestion at the Red Gate Rd/North High School intersection during peak hours.

In April 2011, a traffic signal warrant study was performed at the intersection of Red Gate Rd. and River Ridge Dr/SCN High School. The results of this study indicated that warrant for the installation of the traffic signals was not present.

Recently, the HOA entered into a contract with a traffic consultant, KLOA to independently evaluate the city-developed concept options. On January 17, 2012 the City received a copy of KLOA's evaluation (See Attachment B) which generally validated the findings of staff. The HOA study did identify traffic signals would be warranted in year 2030. Additionally, this study shared that traffic movements would be improved with east and west bound left turning lanes serving SCN High School and River Ridge Dr. (Options 2-4 of the staff study) and an east bound right turning lane serving SCN High School (Option 3 of the staff study). Lastly, the HOA study recommended an interim measure be implemented having a police officer present during the morning and afternoon peak hours to provide traffic control. (KLOA Traffic Study peak hours are 6:30 am to 7:30 am and 4:15 pm to 5:15 pm.)

Representatives from the Rivers Edge HOA would like to present their concerns to the committee for consideration.

Attachments: *(please list)*

- Exhibits A& B as noted above.
- Memorandum dated February 27, 2012

Recommendation / Suggested Action *(briefly explain):*

Staff recommends that the Government Services Committee discuss the matter, direct staff to continue with plans for discussions with School District 303 representatives, and report back to the Government Services Committee at a future date.

For office use only:

Agenda Item Number: 6.f



MEMORANDUM TO: Joe Segobiano
Silver Fox Rivers Edge HOA

FROM: Luay R. Aboona, PE
Principal

DATE: January 17, 2012

SUBJECT: Red Gate Road at River Ridge Drive
St. Charles, Illinois

As requested, Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) has conducted a traffic evaluation of the traffic operations at the intersection of Red Gate Road with River Ridge Drive and St. Charles North High School drive in St. Charles, Illinois. The purpose of the analyses is twofold.

- Evaluate existing operations
- Evaluate future operations with the opening of Red Gate Bridge between IL 31 and IL 25

Existing Conditions

Manual traffic counts were conducted by KLOA, Inc. at the subject intersection on Thursday, November 10, 2011 from 6:00 to 9:00 A.M. and 2:00 to 6:00 P.M. Summaries of the traffic counts are included in the Appendix. The results of the counts indicated the following.

- Peak hours of traffic occurred from 6:30 to 7:30 A.M. and 4:15 to 5:15 P.M.
- Pedestrians crossed Red Gate Road on the west leg with 13 in the morning peak hour and 29 in the evening peak hour.
- Approximately 59 buses entered and exited the access drive in the A.M. peak hour and 51 buses entered and exited in the P.M. peak hour.
- In the A.M. peak hour, over 70 percent of southbound traffic on River Ridge Drive proceeds straight into the school.
- Backups on Red Gate Road (both eastbound and westbound) were observed between 6:45 and 7:15 A.M.
- Up to ten vehicles leaving the school were observed backing up on the access drive between 7:00 and 7:30 A.M. and between 2:15 and 4:00 P.M.

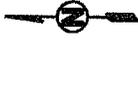
- The above noted backups were exacerbated by the short westbound left-turn lane and the lack of an eastbound right-turn lane causing stacked vehicles to block through traffic on Red Gate Road.
- Due to the low volume of through traffic on Red Gate, the backups noted above were not of long duration and were not continuous.

Figure 1 illustrates the existing peak hour traffic volumes as determined from the traffic counts at the intersection of Red Gate Road with River Ridge Drive and the school's access drive and from the previously prepared Intersection Design Study (IDS) for the intersection of IL 31 with Red Gate Road.

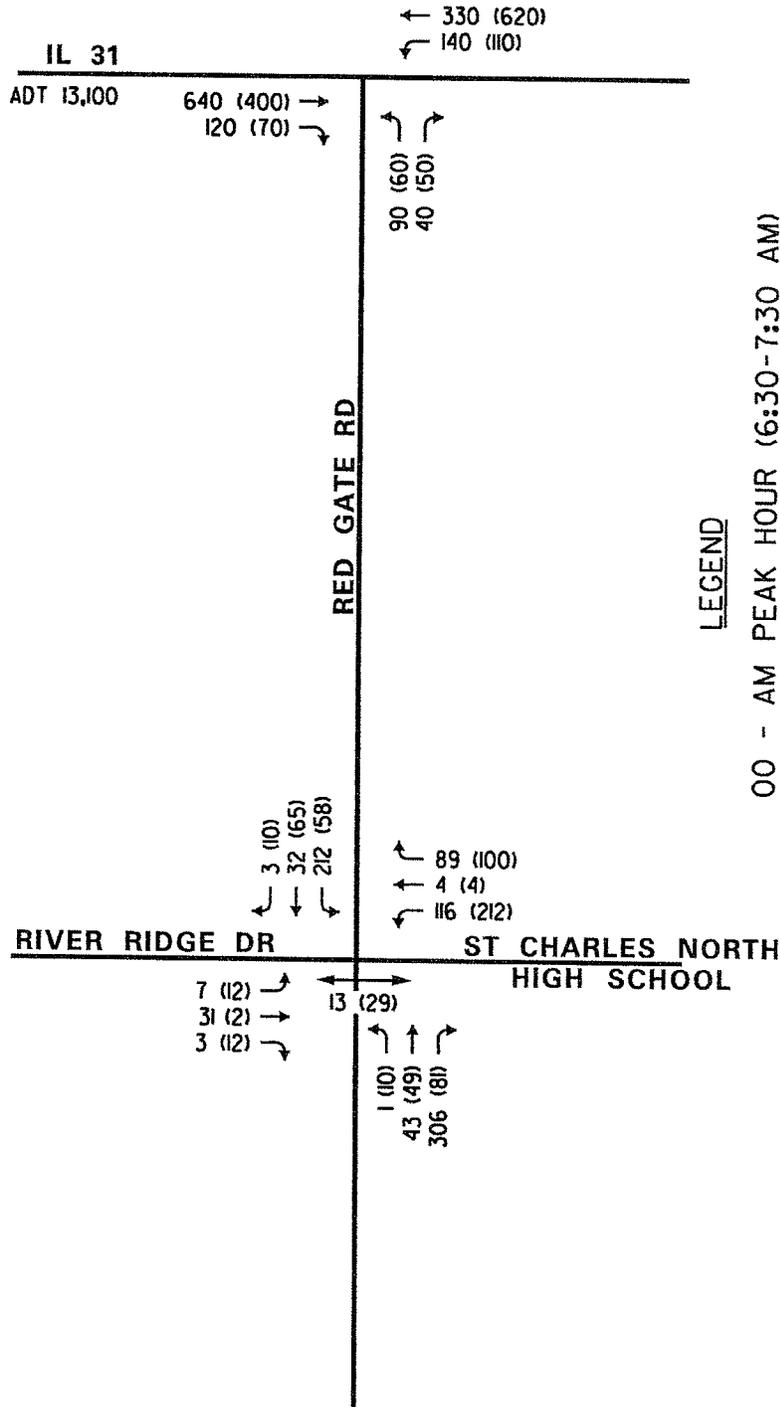
Future Conditions

In order to determine future increases in traffic on Red Gate Road, the IDS prepared as part of the Red Gate Bridge for the intersection of IL 31 and Red Gate Road was utilized. **Figure 2** is prepared illustrating 2030 traffic conditions. As can be seen, the through traffic on Red Gate Road will increase from 75 two-way trips in the A.M. peak hour to 439 two-way trips and from 114 two-way trips in the P.M. peak hour to 400 two-way trips. This significant increase in traffic will compound the existing traffic congestion and will make it unsafe for vehicles and pedestrians traversing the intersection of Red Gate Road with River Ridge Drive and the High School access drive. To mitigate these concerns, the following improvements are recommended.

1. Red Gate Road is improved with the bridge opening to provide a three-lane cross-section between IL 31 and River Ridge Drive to allow for a fully improved westbound left-turn lane (Option #2 on City of St. Charles June 22,2011 plans).
2. An eastbound left-turn lane is provided on Red Gate Road (Option #4).
3. An eastbound right-turn lane is provided on Red Gate Road (Option #3).
4. A traffic signal is provided based on the peak hour warrant being met in the morning peak hour. (See MUTCD Figure 4C-3 in the Appendix.)
5. Until a signal is warranted at this location and considering the future significant increases in traffic due to the bridge opening and, in order to provide safe access for residents, students and motoring public, we recommend as an interim measure that an off duty police officer be provided during the A.M. and P.M. peak hours to assist in the movement of traffic through this intersection.



NOT TO SCALE



LEGEND

- 00 - AM PEAK HOUR (6:30-7:30 AM)
- (00) - PM PEAK HOUR (4:15-5:15 PM)
- 00 (00) - PEDESTRIAN VOLUME

PROJECT NO: II-119



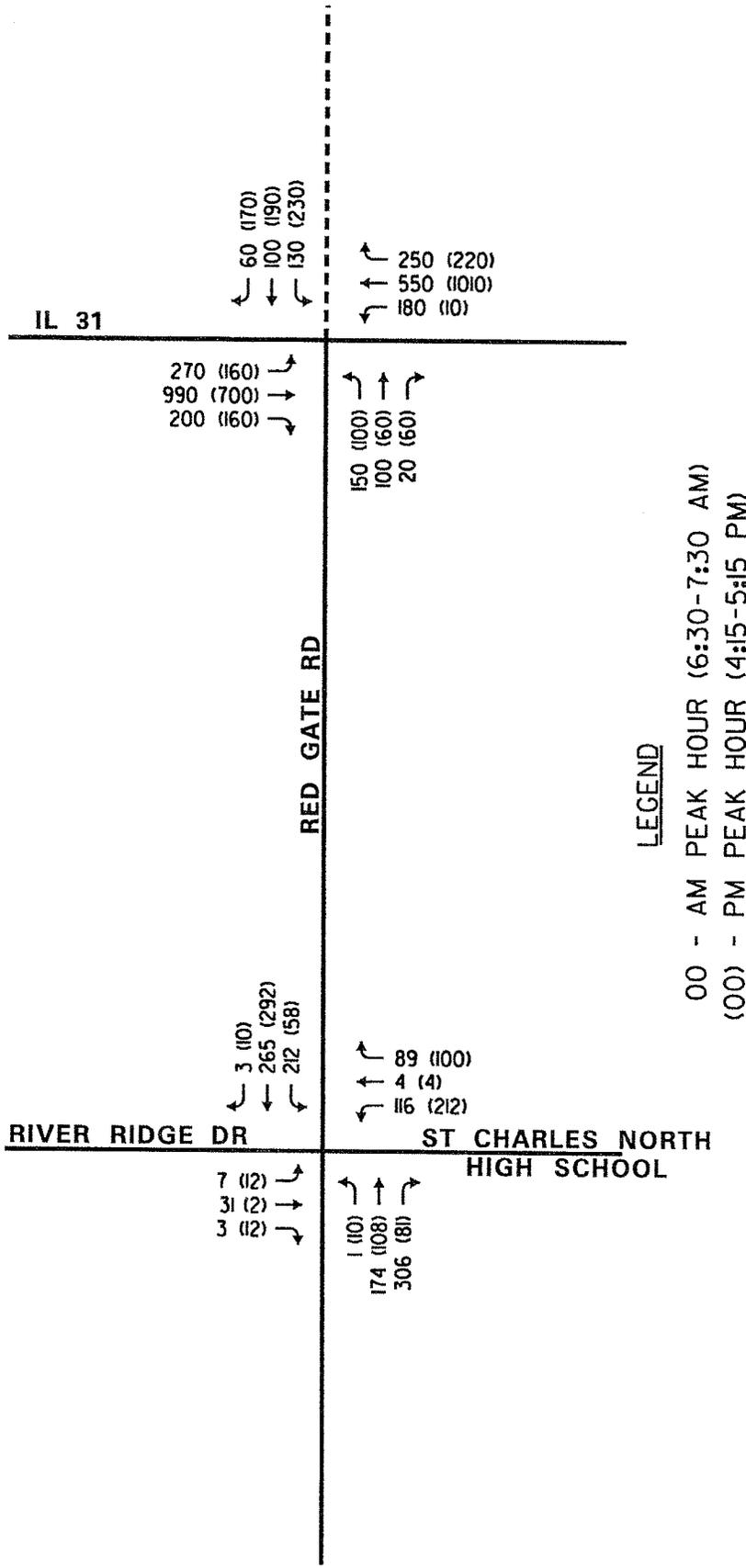
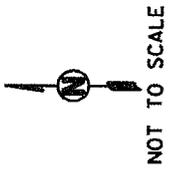
FIGURE NO: 1

EXISTING TRAFFIC VOLUMES

TITLE:

RED GATE RD/
RIVER RIDGE DR
ST CHARLES, ILLINOIS

PROJECT:



PROJECT:	TITLE:	PROJECT NO:	11-119
RED GATE RD/ RIVER RIDGE DR ST CHARLES, ILLINOIS	YEAR 2030 PROJECTED VOLUMES	KLOAN	
		FIGURE NO:	2

Appendix

St. Charles, IL Weather: Cold and light rain sprinkles
 Red Gate Rd and River Ridge Dr and Acc to St Charles HS
 Thursday November 10, 2011 All Vehicles exc. school buses

11/15/11
 09:39:00

URNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 1 redgate/river/hs													
Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	0	1	0	2	5	0	0	1	8	8	0	25
615	2	0	2	0	3	10	1	0	0	15	12	0	45
630	0	0	1	0	13	28	8	0	7	36	15	0	108
645	0	1	2	1	5	47	15	1	22	103	10	0	207
700	2	25	1	1	8	107	44	1	33	124	7	0	353
715	1	4	3	1	3	16	17	2	36	22	9	1	115
730	1	0	1	0	10	4	5	0	3	6	25	0	55
745	0	0	4	0	12	9	2	0	4	22	31	2	86
800	1	0	2	7	14	25	5	0	10	59	20	2	145
815	2	0	2	2	6	6	2	0	4	5	23	1	53
830	1	0	3	0	19	1	0	0	0	7	16	0	47
845	2	0	0	0	13	3	2	0	1	6	20	0	47
1400	0	0	1	0	8	16	4	0	16	21	9	2	77
1415	3	0	2	2	10	15	38	1	86	30	10	3	200
1430	3	1	3	2	13	15	21	2	49	17	11	1	138
1445	6	1	5	3	28	11	12	0	33	16	11	3	129
1500	0	0	4	3	12	15	17	1	27	15	16	3	113
1515	3	0	1	1	19	14	13	0	22	16	17	1	107
1530	1	0	4	2	17	11	19	1	26	19	16	1	117
1545	2	0	6	1	13	14	6	3	28	22	15	1	111
1600	2	0	2	3	15	11	8	1	35	17	14	3	111
1615	3	0	1	2	27	4	4	0	7	10	20	3	81
1630	2	0	3	3	25	9	7	0	11	1	23	1	85
1645	0	1	0	2	21	15	3	0	7	18	18	4	89
1700	0	1	0	1	24	24	6	1	17	34	22	3	133
1715	0	0	1	2	34	18	5	0	11	36	18	2	127
1730	3	0	2	5	23	15	16	0	36	30	10	1	141
1745	0	0	2	3	19	10	6	0	20	22	25	0	107
Total	40	34	59	47	416	478	286	14	552	737	451	38	3152

St. Charles, IL Weather: Cold and light rain sprinkles
 Red Gate Rd and River Ridge Dr and Acc to St Charles HS
 Thursday November 10, 2011 School Busses Only

11/15/11
 09:42:58

URNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 2 red/river/hs/bus													
Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT										
600	0	0	0	0	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0	0	0	0	0
630	0	0	0	0	1	1	1	0	0	0	1	0	4
645	0	0	0	0	0	9	2	0	5	14	1	0	31
700	0	0	0	0	0	4	1	0	11	5	0	0	21
715	0	1	0	0	2	0	1	0	2	2	0	0	8
730	0	0	1	0	0	0	0	0	0	0	2	1	4
745	0	0	0	0	0	0	0	0	1	1	2	0	4
800	1	0	0	0	3	3	0	0	0	0	1	0	8
815	0	0	1	0	0	1	0	0	0	0	0	0	2
830	0	0	0	0	0	1	0	0	0	1	1	0	3
845	0	0	0	0	0	1	0	0	0	1	0	0	2

1400	0	0	0	0	0	4	0	0	0	12	0	0	16
1415	0	0	1	0	0	0	0	0	0	2	1	0	4
1430	0	0	0	0	0	0	11	0	16	0	0	0	27
1445	0	0	0	0	0	2	1	0	1	1	0	0	5
1500	0	0	0	0	2	0	0	0	0	0	0	0	2
1515	0	0	1	0	0	0	1	0	0	0	3	0	5
1530	0	0	1	0	0	0	0	0	0	0	0	1	2
1545	0	0	0	0	1	0	0	0	0	0	2	0	3
1600	0	0	0	0	1	0	0	0	0	0	0	0	1
1615	0	0	0	0	1	0	1	0	0	1	0	0	3
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1730	0	0	0	0	0	0	1	0	0	0	0	0	1
1745	0	0	0	0	0	1	0	0	0	0	0	0	1
====	====	====	====	====	====	====	====	====	====	====	====	====	====
Total	1	1	5	0	11	27	20	0	36	40	14	2	157

St. Charles, IL Weather: Cold and light rain sprinkles
 Red Gate Rd and River Ridge Dr and Acc to St Charles HS
 Thursday November 10, 2011 Pedestrians Only

11/15/11
 09:44:53

URNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 3 red/river/acc/hs/peds													
Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT										
600	0	0	0	0	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0	0	1	0	1
645	0	0	0	0	0	0	0	0	0	0	3	0	3
700	0	0	0	0	0	0	0	0	0	0	9	0	9
715	0	0	0	0	0	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	0	0	0	0	1	0	1
745	0	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	1	0	1
815	0	0	0	0	0	0	0	0	0	0	0	0	0
830	0	0	0	0	0	0	0	0	0	0	0	0	0
845	0	0	0	0	0	0	0	0	0	0	0	0	0

1400	0	0	0	0	0	0	0	0	0	0	0	0	0
1415	0	0	0	0	0	0	0	0	0	0	21	0	21
1430	0	0	0	0	0	0	0	0	0	0	8	0	8
1445	0	0	0	0	0	0	0	2	0	0	0	0	2
1500	0	0	0	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	1	0	1
1545	0	0	0	0	0	0	0	0	0	0	1	0	1
1600	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	2	0	2
1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1745	0	0	0	0	0	0	0	0	0	0	0	0	0
===== Total	0	0	0	0	0	0	0	2	0	0	48	0	50

St. Charles, IL Weather: Cold and light rain sprinkles
 Red Gate Rd and River Ridge Dr and Acc to St Charles HS
 Thursday November 10, 2011 All Vehicles exc. school buses

11/15/11
 09:39:00

URNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 1 redgate/river/hs													
Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	2	1	6	1	23	90	24	1	30	162	45	0	385
615	4	26	6	2	29	192	68	2	62	278	44	0	713
630	3	30	7	3	29	198	84	4	98	285	41	1	783
645	4	30	7	3	26	174	81	4	94	255	51	1	730
700	4	29	9	2	33	136	68	3	76	174	72	3	609
715	3	4	10	8	39	54	29	2	53	109	85	5	401
730	4	0	9	9	42	44	14	0	21	92	99	5	339
745	4	0	11	9	51	41	9	0	18	93	90	5	331
800	6	0	7	9	52	35	9	0	15	77	79	3	292
815	5	0	5	2	38	10	4	0	5	18	59	1	147*
830	3	0	3	0	32	4	2	0	1	13	36	0	94*
845	2	0	0	0	13	3	2	0	1	6	20	0	47*
1400	12	2	11	7	59	57	75	3	184	84	41	9	544
1415	12	2	14	10	63	56	88	4	195	78	48	10	580
1430	12	2	13	9	72	55	63	3	131	64	55	8	487
1445	10	1	14	9	76	51	61	2	108	66	60	8	466
1500	6	0	15	7	61	54	55	5	103	72	64	6	448
1515	8	0	13	7	64	50	46	5	111	74	62	6	446
1530	8	0	13	8	72	40	37	5	96	68	65	8	420
1545	9	0	12	9	80	38	25	4	81	50	72	8	388
1600	7	1	6	10	88	39	22	1	60	46	75	11	366
1615	5	2	4	8	97	52	20	1	42	63	83	11	388
1630	2	2	4	8	104	66	21	1	46	89	81	10	434
1645	3	2	3	10	102	72	30	1	71	118	68	10	490
1700	3	1	5	11	100	67	33	1	84	122	75	6	508
1715	3	0	5	10	76	43	27	0	67	88	53	3	375*
1730	3	0	4	8	42	25	22	0	56	52	35	1	248*
1745	0	0	2	3	19	10	6	0	20	22	25	0	107*

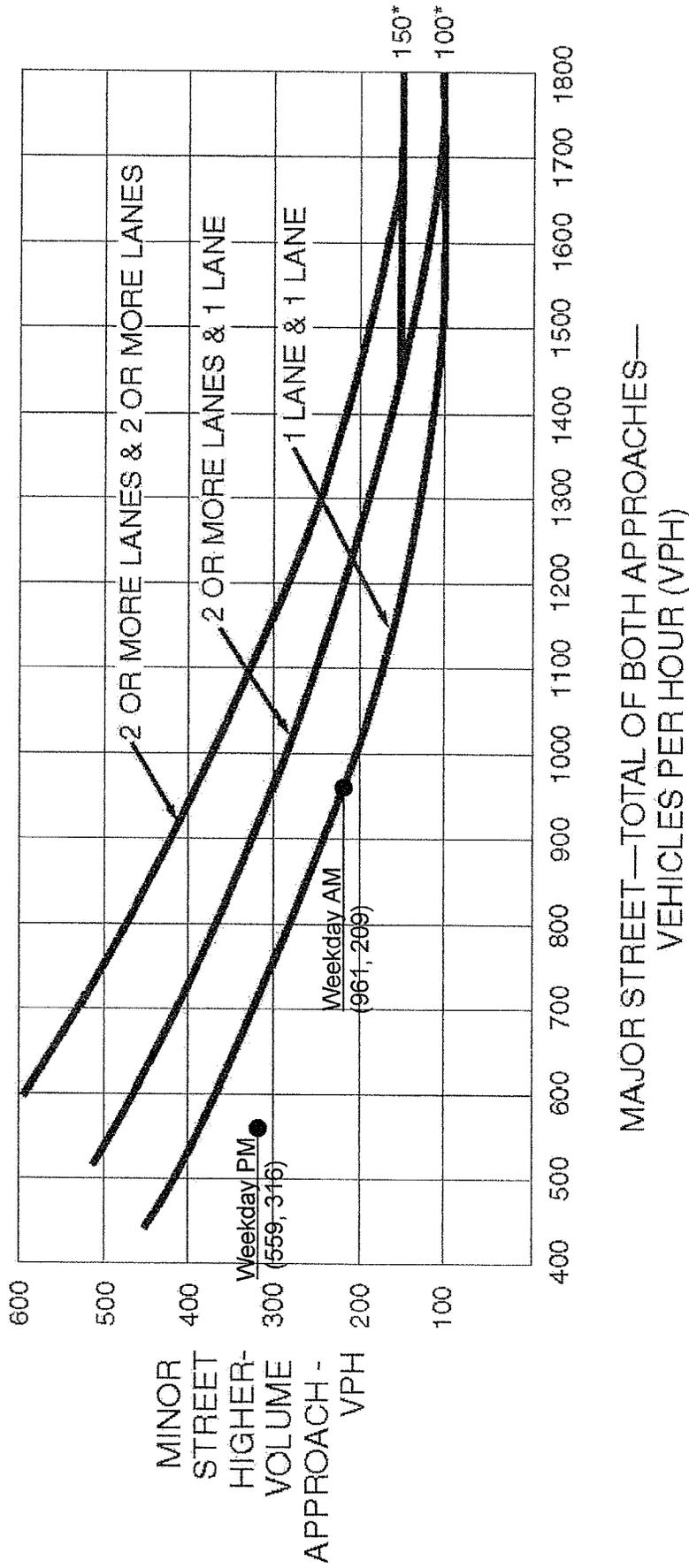
St. Charles, IL Weather: Cold and light rain sprinkles
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11/15/11
 09:42:58

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 2 red/river/hs/bus													
Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT										
600	0	0	0	0	1	10	3	0	5	14	2	0	35
615	0	0	0	0	1	14	4	0	16	19	2	0	56
630	0	1	0	0	3	14	5	0	18	21	2	0	64
645	0	1	1	0	2	13	4	0	18	21	3	1	64
700	0	1	1	0	2	4	2	0	14	8	4	1	37
715	1	1	1	0	5	3	1	0	3	3	5	1	24
730	1	0	2	0	3	4	0	0	1	1	5	1	18
745	1	0	1	0	3	5	0	0	1	2	4	0	17
800	1	0	1	0	3	6	0	0	0	2	2	0	15
815	0	0	1	0	0	3	0	0	0	2	1	0	7*
830	0	0	0	0	0	2	0	0	0	2	1	0	5*
845	0	0	0	0	0	1	0	0	0	1	0	0	2*
1400	0	0	1	0	0	6	12	0	17	15	1	0	52
1415	0	0	1	0	2	2	12	0	17	3	1	0	38
1430	0	0	1	0	2	2	13	0	17	1	3	0	39
1445	0	0	2	0	2	2	2	0	1	1	3	1	14
1500	0	0	2	0	3	0	1	0	0	0	5	1	12
1515	0	0	2	0	2	0	1	0	0	0	5	1	11
1530	0	0	1	0	3	0	1	0	0	1	2	1	9
1545	0	0	0	0	3	0	1	0	0	1	2	0	7
1600	0	0	0	0	2	0	1	0	0	1	0	0	4
1615	0	0	0	0	1	0	1	0	0	1	0	0	3
1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	1	0	0	0	0	0	1
1700	0	0	0	0	0	1	1	0	0	0	0	0	2
1715	0	0	0	0	0	1	1	0	0	0	0	0	2*
1730	0	0	0	0	0	1	1	0	0	0	0	0	2*
1745	0	0	0	0	0	1	0	0	0	0	0	0	1*

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.



Memo

Date: February 27, 2012

To: Mayor and City Council

From: Mark Koenen and Jim Lamkin

RE: KLOA Traffic Study

The purpose of this memo is to address the City's position on future conditions as outlined in the January 17, 2012 KLOA Traffic Study:

KLOA Condition 1 & 2:

Red Gate Road is improved with the bridge opening to provide a three-lane cross-section between IL 31 and River Ridge Drive to allow for a fully improved westbound left-turn lane (Option #2 on City of St. Charles June 22, 2011 plans).

An eastbound left-turn lane is provided on Red Gate Road (Option #4).

City's position:

Roadway striping will be completed by the city during the summer months of 2012. This is when we typically contract for other roadway striping throughout the city and we will ensure it is incorporated into that contract, or the contract related to construction of the bridge.

KLOA Condition 3:

An eastbound right-turn lane is provided on Red Gate Road (Option #3).

City's position:

A right turn lane from eastbound Red Gate Road into North High School is something that city staff plans to discuss further with District 303, since they are a key stakeholder, control the land that is required, and implementation would certainly impact the school.

KLOA Condition 4:

A traffic signal is provided based on the peak hour warrant being met in the morning peak hour. (See MUTCD Figure 4C-3 in the Appendix.)

City's position:

Traffic signals will be considered for implementation in the future, when warrants are satisfied.

KLOA Condition 5:

Until a signal is warranted at this location and considering the future significant increases in traffic due to the bridge opening and, in order to provide safe access for residents, students and motoring public, we recommend as an interim measure that an off duty police officer be provided during the A.M. and P.M. peak hours to assist in the movement of traffic through this intersection.

City's position:

This item is contrary to the city's policy in that crossing guards or other traffic control personnel are not assigned to high schools. City staff intends to discuss this matter with school district administration to determine if a crossing guard is necessary and how that service could be funded.