

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst		Intersection	03_CPA NB & SOUTH DRIVE
Agency/Co.	JMC	Jurisdiction	
Date Performed		Analysis Year	2009 BUILD
Analysis Time Period	HOLIDAY PEAK SATURDAY HOUR		

Project Description JMC JOB 2157 CROSS COUNTY SHOPPING CENTER	
East/West Street: SOUTH DRIVE	North/South Street: CENTRAL PARK AVENUE NB
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1036	1535			
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	1151	1705	0	0	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	0	0	0
Configuration		T	R			
Upstream Signal		0			0	
Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume						1310
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	0	0	0	1455
Percent Heavy Vehicles	0	0	0	0	0	2
Percent Grade (%)		0			4	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					<i>R</i>			
v (vph)					1455			
C (m) (vph)					517			
v/c					2.81			
95% queue length					121.73			
Control Delay					839.1			
LOS					<i>F</i>			
Approach Delay	--	--	839.1					
Approach LOS	--	--	<i>F</i>					

TWO-WAY STOP CONTROL SUMMARY						
General Information				Site Information		
Analyst	EPB			Intersection	10_VREDENBURGH & EAST DRIVE	
Agency/Co.	JMC			Jurisdiction		
Date Performed	4/15/2005			Analysis Year	2009 BUILD	
Analysis Time Period	HOLIDAY PEAK SATURDAY HOUR					
Project Description JMC JOB 2157 CROSS COUNTY SHOPPING CENTER						
East/West Street: VREDENBURGH AVE				North/South Street: EAST DRIVE		
Intersection Orientation: East-West				Study Period (hrs): 0.25		
Vehicle Volumes and Adjustments						
Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	272	541			780	50
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	302	601	0	0	866	55
Percent Heavy Vehicles	2	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration	LT	T			T	TR
Upstream Signal		0			0	
Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				36		604
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	0	40	0	671
Percent Heavy Vehicles	0	0	0	2	0	2
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	<i>LT</i>						<i>LR</i>	
v (vph)	<i>302</i>						<i>711</i>	
C (m) (vph)	<i>737</i>						<i>327</i>	
v/c	<i>0.41</i>						<i>2.17</i>	
95% queue length	<i>2.01</i>						<i>53.03</i>	
Control Delay	<i>13.2</i>						<i>564.1</i>	
LOS	<i>B</i>						<i>F</i>	
Approach Delay	--	--				<i>564.1</i>		
Approach LOS	--	--				<i>F</i>		

SHORT REPORT												
General Information						Site Information						
Analyst	EPB					Intersection	11_VREDENBURGH & XAVIER					
Agency or Co.	JMC					Area Type	All other areas					
Date Performed	4/12/2005					Jurisdiction						
Time Period	HOLIDAY PEAK SATURDAY HOUR					Analysis Year	2009 BUILD					
Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	0	0	0
Lane Group	L	T			TR						LR	
Volume (vph)	310	267			353	408				316		477
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	2
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0			2.0			2.0	
Ext. eff. green	2.0	2.0			2.0			2.0			2.0	
Arrival type	3	3			3			3			3	
Unit Extension	3.0	3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	3	0	0	0	0	0	0	0	0	0
Lane Width	10.0	11.0			12.0			11.0			11.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	1	N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0			0			0	
Unit Extension	3.0	3.0			3.0			3.0			3.0	
Phasing	EW Perm	EB Only	03		04		SB Only	06		07		08
Timing	G = 20.0	G = 16.0	G =		G =		G = 27.0	G =		G =		G =
	Y = 4	Y = 4	Y =		Y =		Y = 4	Y =		Y =		Y =
Duration of Analysis (hrs) = 0.25							Cycle Length C = 75.0					
Lane Group Capacity, Control Delay, and LOS Determination												
Adj. flow rate	EB			WB			NB			SB		
	344	297			845			0			881	
		1921										

Lane group cap.	537			914					584	
v/c ratio	0.64	0.15		0.92					1.51	
Green ratio	0.53	0.53		0.27			0.00		0.36	
Unif. delay d_1	21.3	8.9		26.8					24.0	
Delay factor k	0.22	0.11		0.44					0.50	
Increm. delay d_2	2.6	0.0		14.8					237.7	
PF factor	1.000	1.000		1.000					1.000	
Control delay	23.9	8.9		41.6					261.7	
Lane group LOS	C	A		D					F	
Apprch. delay	17.0			41.6			261.7			
Approach LOS	B			D			F			
Intersec. delay	116.8			Intersection LOS			F			

SHORT REPORT												
General Information						Site Information						
Analyst	EPB					Intersection	13_KIMBALL & SITE					
Agency or Co.	JMC					Area Type	DRIVEWAY					
Date Performed	4/12/2005					Jurisdiction	All other areas					
Time Period	HOLIDAY PEAK SATURDAY HOUR					Analysis Year	2009 BUILD					
Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	0	0	0	0	1	0	0	1	0
Lane Group		LR						LT			TR	
Volume (vph)	199		196				154	489			542	206
% Heavy veh	2	0	2	0	0	0	2	2	0	0	2	2
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A)	A		A				A	A			A	A
Startup lost time		2.0			2.0			2.0			2.0	
Ext. eff. green		2.0			2.0			2.0			2.0	
Arrival type		3			3			3			3	
Unit Extension		3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		16.0			12.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	1	N	N	0	N
Parking/hr												
Bus stops/hr		0			0			0			0	
Unit Extension		3.0			3.0			3.0			3.0	
Phasing	EB Only	02	03	04	NS Perm	06	07	08				
Timing	G = 16.0	G =	G =	G =	G = 61.0	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 85.0					
Lane Group Capacity, Control Delay, and LOS Determination												
Adj. flow rate	EB			WB			NB			SB		
		439			0			714			831	
											1459	

Lane group cap.	362					945			
v/c ratio	1.21					0.76			0.57
Green ratio	0.19			0.00		0.72			0.72
Unif. delay d_1	34.5					7.4			5.7
Delay factor k	0.50					0.31			0.16
Increm. delay d_2	118.6					3.5			0.5
PF factor	1.000					1.000			1.000
Control delay	153.1					10.9			6.3
Lane group LOS	F					B			A
Apprch. delay	153.1					10.9			6.3
Approach LOS	F					B			A
Intersec. delay	40.4					Intersection LOS			D

SHORT REPORT												
General Information						Site Information						
Analyst	EPB					Intersection	14_KIMBALL & NORTH					
Agency or Co.	JMC						DRIVE					
Date Performed	4/15/2005					Area Type	All other areas					
Time Period	HOLIDAY PEAK SATURDAY					Jurisdiction						
	HOUR					Analysis Year	2009 BUILD					
Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	0	2	0	0	2	0
Lane Group	L		R					LT			TR	
Volume (vph)	781		82				25	664			666	1863
% Heavy veh	2	0	2	0	0	0	2	2	0	0	2	2
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A)	A		A				A	A			A	A
Startup lost time	2.0	2.0	2.0		2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0		2.0			2.0			2.0	
Arrival type	3	3	3		3			3			3	
Unit Extension	3.0	3.0	3.0		3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	16.0	12.0		12.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	1	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0		0			0			0	
Unit Extension	3.0	3.0	3.0		3.0			3.0			3.0	
Phasing	EB Only	02	03	04	NS Perm	06	07	08				
Timing	G = 41.0	G =	G =	G =	G = 51.0	G =	G =	G =				
	Y = 4	Y =	Y =	Y =	Y = 4	Y =	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 100.0					
Lane Group Capacity, Control Delay, and LOS Determination												
Adj. flow rate	EB			WB			NB			SB		
	868	0	91		0			766			2810	

Lane group cap.	726		649				1427			1823		
v/c ratio	1.20		0.14				0.54			1.54		
Green ratio	0.41	0.00	0.41		0.00		0.51			0.51		
Unif. delay d_1	29.5		18.5				16.5			24.5		
Delay factor k	0.50		0.11				0.14			0.50		
Increm. delay d_2	101.2		0.1				0.4			246.4		
PF factor	1.000		1.000				1.000			1.000		
Control delay	130.7		18.6				16.9			270.9		
Lane group LOS	F		B				B			F		
Apprch. delay	120.1						16.9	270.9				
Approach LOS	F						B	F				
Intersec. delay	196.1			Intersection LOS						F		