Appendix F

Traffic Analysis Capacity Calculations

TRAFFIC CAPACITY CALCULATIONS
APPENDIX F

BUILD CONDITION **Page**

IMPROVEMENT CONDITION

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*11/25/03*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Fair Street/ Dale Road*
Jurisdiction	*Town of Carmel*
Analysis Year	*Existing Condition*

Project Description *Gateway Summit-The Fairways*

East/West Street: *Fair Street* | North/South Street: *Dale Road*

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 (veh/h)	*87*	*305*	*0*	*0*	*327*	*232*
Peak-hour factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.83*	*0.83*
Hourly Flow Rate (veh/h)	*96*	*338*	*0*	*0*	*393*	*279*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*77*	*0*	*59*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.87*	*1.00*	*0.87*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*88*	*0*	*67*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*0*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*96*					*88*		*67*
Capacity, c_m (vph)	*923*					*223*		*549*
v/c ratio	*0.10*					*0.39*		*0.12*
Queue length (95%)	*0.35*					*1.77*		*0.41*
Control Delay (s/veh)	*9.4*					*31.3*		*12.5*
LOS	*A*					*D*		*B*
Approach delay (s/veh)	–	–				*23.2*		
Approach LOS	–	–				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*10/14/03*	Analysis Year	*Existing Condition*
Analysis Time Period	*PM Peak Hour*		

Project Description	*Gateway Summit-The Fairways*
East/West Street: *Church Street*	North/South Street: *US Route 6*
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	*245*	*638*	*0*	*0*	*478*	*6*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*260*	*678*	*0*	*0*	*519*	*6*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*231*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.80*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*288*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*260*							*288*
C (m) (vph)	*1042*							*557*
v/c	*0.25*							*0.52*
95% queue length	*0.99*							*2.95*
Control Delay	*9.6*							*18.2*
LOS	*A*							*C*
Approach Delay	--	--				*18.2*		
Approach LOS	--	--				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*11/9/03*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US Route 6/Site*
Jurisdiction	*Town of Carmel*
Analysis Year	*Existing Condition*

Project Description *Gateway Summit- The Fairways*

East/West Street: *US Route 6* | North/South Street: *Site*

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 (veh/h)	*1*	*773*	*0*	*0*	*601*	*1*
Peak-hour factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate (veh/h)	*1*	*858*	*0*	*0*	*646*	*1*
Proportion of heavy vehicles, P_{HV}	*0*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*1*	*0*	*1*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.25*	*1.00*	*0.25*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*4*	*0*	*4*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
Volume, v (vph)	*1*						*8*	
Capacity, c_m (vph)	*948*						*210*	
v/c ratio	*0.00*						*0.04*	
Queue length (95%)	*0.00*						*0.12*	
Control Delay (s/veh)	*8.8*						*22.8*	
LOS	*A*						*C*	
Approach delay (s/veh)	--	--				*22.8*		
Approach LOS	--	--				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/John Simpson
Agency/Co.	TMA	Jurisdiction	The Town of Carmel
Date Performed	10/9/03	Analysis Year	Existing Condition
Analysis Time Period	PM Peak Hour		

Project Description: Gateway Summit - The Fairways

East/West Street: Fair Street | North/South Street: John Simpson Road

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 (veh/h)	0	260	144	154	266	0
Peak-hour factor, PHF	1.00	0.84	0.84	0.77	0.77	1.00
Hourly Flow Rate (veh/h)	0	309	171	200	345	0
Proportion of heavy vehicles, P_{HV}	0	–	–	4	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	332	0	371	0	0	0
Peak-hour factor, PHF	0.90	1.00	0.90	1.00	1.00	1.00
Hourly Flow Rate (veh/h)	368	0	412	0	0	0
Proportion of heavy vehicles, P_{HV}	2	0	2	0	0	0
Percent grade (%)	-3			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
Volume, v (vph)		200	368		412			
Capacity, c_m (vph)		1072	181		655			
v/c ratio		0.19	2.03		0.63			
Queue length (95%)		0.68	28.26		4.44			
Control Delay (s/veh)		9.1	526.1		19.3			
LOS		A	F		C			
Approach delay (s/veh)	–	–	258.4					
Approach LOS	–	–	F					

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/6/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				277		95		644	283	54	370	
% Heavy vehicles, %HV				1		1		3	3	3	3	
Peak-hour factor, PHF				0.89		0.89		0.92	0.92	0.92	0.92	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		16.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				311		107		700	308		461	
Lane group capacity, c				407		339		1154	947		932	
v/c ratio, X				0.76		0.32		0.61	0.33		0.49	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				30.3		26.8		8.7	6.7		7.8	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.32		0.11		0.19	0.11		0.11	
Incremental delay, d_2				8.4		0.5		0.9	0.2		0.4	
Initial queue delay, d_3												
Control delay				38.7		27.4		9.6	6.9		8.2	
Lane group LOS				D		C		A	A		A	
Approach delay				35.8			8.8			8.2		
Approach LOS				D			A			A		
Intersection delay	14.6			X_c = 0.65			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	10/10/03	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				36		550		468	58	385	322	
% Heavy vehicles, %HV				2		2		3	3	4	4	
Peak-hour factor, PHF				0.90		0.90		0.91	0.91	0.87	0.87	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				40		611		514	64	443	370	
Lane group capacity, c				306		807		679	654	666	1322	
v/c ratio, X				0.13		0.76		0.76	0.10	0.67	0.28	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				34.4		18.4		27.6	20.6	13.0	4.9	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.11		0.31		0.31	0.11	0.24	0.11	
Incremental delay, d_2				0.2		4.2		4.9	0.1	2.5	0.1	
Initial queue delay, d_3												
Control delay				34.6		22.6		32.5	20.7	15.5	5.0	
Lane group LOS				C		C		C	C	B	A	
Approach delay				23.3			31.2			10.7		
Approach LOS				C			C			B		
Intersection delay	20.5			X_c = 0.76			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/8/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LT			LT		L	TR		L	T	R
Volume, V (vph)	275	69		137	46		46	400	109	86	443	131
% Heavy vehicles, %HV	3	3		2	2		2	2	2	1	1	1
Peak-hour factor, PHF	0.88	0.88		0.88	0.88		0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type, AT		3			3		3	3		3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000		1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		10	0		58
Lane width		16.0			16.0		10.0	14.0		13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0		0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	WB Only	03	04	NS Perm	06	07	08
Timing	G = 25.0	G = 15.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		391			208		52	568		98	503	83
Lane group capacity, c		556			341		172	746		144	735	1161
v/c ratio, X		0.70			0.61		0.30	0.76		0.68	0.68	0.07
Total green ratio, g/C		0.28			0.17		0.39	0.39		0.39	0.39	0.72
Uniform delay, d_1		29.2			34.8		19.0	23.9		22.9	22.9	3.7
Progression factor, PF		1.000			1.000		1.000	1.000		1.000	1.000	1.000
Delay calibration, k		0.27			0.20		0.11	0.31		0.25	0.25	0.11
Incremental delay, d_2		4.0			3.2		1.0	4.6		12.3	2.6	0.0
Initial queue delay, d_3												
Control delay		33.2			38.0		20.0	28.5		35.2	25.5	3.7
Lane group LOS		C			D		C	C		D	C	A
Approach delay	33.2			38.0			27.8			24.3		
Approach LOS	C			D			C			C		
Intersection delay	28.7			X_c = 0.71			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	10/12/03	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	182	614	5	136	544	328	7	138	146	193	58	68
% Heavy vehicles, %HV	2	2	2	4	4	4	3	3	3	4	4	4
Peak-hour factor, PHF	0.89	0.89	0.89	0.95	0.95	0.95	0.89	0.89	0.89	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 50.0	G = 10.0	G =	G =	G = 33.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	204	696		143	573	345		327		227	148	
Lane group capacity, c	375	905		267	742	631		441		335	609	
v/c ratio, X	0.54	0.77		0.54	0.77	0.55		0.74		0.68	0.24	
Total green ratio, g/C	0.54	0.42		0.54	0.42	0.42		0.28		0.38	0.38	
Uniform delay, d_1	37.6	30.0		44.7	30.1	26.4		39.6		42.8	25.8	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.14	0.32		0.14	0.32	0.15		0.30		0.25	0.11	
Incremental delay, d_2	1.6	4.1		2.1	5.1	1.0		6.6		5.4	0.2	
Initial queue delay, d_3												
Control delay	39.2	34.1		46.8	35.2	27.4		46.2		48.3	26.0	
Lane group LOS	D	C		D	D	C		D		D	C	
Approach delay	35.3			34.2			46.2			39.5		
Approach LOS	D			C			D			D		
Intersection delay	36.8			X_c = 0.00			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	10/15/03	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	650	305	7	1	330	147	2	18	2	103	2	695
% Heavy vehicles, %HV	3	3	3	6	6	6	14	14	14	2	2	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.81	0.81	0.81	0.39	0.39	0.39	0.91	0.91	0.91
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 30.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 95.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	670	321		1	407	181		56			115	764
Lane group capacity, c	778	1348		310	566	513		269			202	930
v/c ratio, X	0.86	0.24		0.00	0.72	0.35		0.21			0.57	0.82
Total green ratio, g/C	0.74	0.74		0.32	0.32	0.32		0.16			0.16	0.58
Uniform delay, d_1	16.2	4.0		22.3	28.8	25.0		34.8			37.0	16.1
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.39	0.11		0.11	0.28	0.11		0.11			0.16	0.36
Incremental delay, d_2	9.7	0.1		0.0	4.4	0.4		0.4			3.8	6.0
Initial queue delay, d_3												
Control delay	25.9	4.1		22.3	33.2	25.4		35.2			40.8	22.0
Lane group LOS	C	A		C	C	C		D			D	C
Approach delay	18.8			30.8			35.2			24.5		
Approach LOS	B			C			D			C		
Intersection delay	24.0			X_c = 0.79			Intersection LOS			C		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*11/25/03*
Analysis Time Period	*Saturday Peak Hour*

Site Information

Intersection	*Fair Street/ Dale Road*
Jurisdiction	*Town of Carmel*
Analysis Year	*Existing Condition*

Project Description *Gateway Summit-The Fairways*

East/West Street: *Fair Street* | North/South Street: *Dale Road*

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 (veh/h)	*65*	*214*	*0*	*0*	*212*	*101*
Peak-hour factor, PHF	*0.81*	*0.81*	*1.00*	*1.00*	*0.82*	*0.82*
Hourly Flow Rate (veh/h)	*80*	*264*	*0*	*0*	*258*	*123*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	*7*	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*109*	*0*	*81*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.83*	*1.00*	*0.83*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*131*	*0*	*97*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*0*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*80*					*131*		*97*
Capacity, c_m (vph)	*1189*					*358*		*723*
v/c ratio	*0.07*					*0.37*		*0.13*
Queue length (95%)	*0.22*					*1.64*		*0.46*
Control Delay (s/veh)	*8.2*					*20.7*		*10.7*
LOS	*A*					*C*		*B*
Approach delay (s/veh)	--	--				*16.5*		
Approach LOS	--	--				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*10/9/03*	Analysis Year	*Existing Condition*
Analysis Time Period	*Saturday Peak Hour*		

Project Description	*Gateway Summit-The Fairways*
East/West Street: *Church Street*	North/South Street: *US Route 6*
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	*161*	*538*	*0*	*0*	*546*	*6*
Peak-Hour Factor, PHF	*0.97*	*0.97*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR	*165*	*554*	*0*	*0*	*587*	*6*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*296*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.93*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*318*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*165*							*318*
C (m) (vph)	*983*							*510*
v/c	*0.17*							*0.62*
95% queue length	*0.60*							*4.22*
Control Delay	*9.4*							*23.0*
LOS	*A*							*C*
Approach Delay	--	--				*23.0*		
Approach LOS	--	--				*C*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Site
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	7/9/04	Analysis Year	Existing Condition
Analysis Time Period	Saturday Peak Hour		

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	1	732	0	0	629	1
Peak-hour factor, PHF	0.93	0.93	1.00	1.00	0.89	0.89
Hourly Flow Rate (veh/h)	1	787	0	0	706	1
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	1	0	1
Peak-hour factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate (veh/h)	0	0	0	4	0	4
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
Volume, v (vph)	1						8	
Capacity, c_m (vph)	901						209	
v/c ratio	0.00						0.04	
Queue length (95%)	0.00						0.12	
Control Delay (s/veh)	9.0						22.9	
LOS	A						C	
Approach delay (s/veh)	--	--				22.9		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/John Simpson
Agency/Co.	TMA	Jurisdiction	The Town of Carmel
Date Performed	11/25/03	Analysis Year	Existing Condition
Analysis Time Period	Saturday Peak Hour		

Project Description: Gateway Summit - The Fairways

East/West Street: Fair Street | North/South Street: John Simpson Road

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 (veh/h)	0	130	210	176	112	0
Peak-hour factor, PHF	1.00	0.83	0.83	0.82	0.82	1.00
Hourly Flow Rate (veh/h)	0	156	253	214	136	0
Proportion of heavy vehicles, P_{HV}	0	--	--	5	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	195	0	139	0	0	0
Peak-hour factor, PHF	0.88	1.00	0.88	1.00	1.00	1.00
Hourly Flow Rate (veh/h)	221	0	157	0	0	0
Proportion of heavy vehicles, P_{HV}	2	0	2	0	0	0
Percent grade (%)	-3			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
Volume, v (vph)		214	221		157			
Capacity, c_m (vph)		1134	270		757			
v/c ratio		0.19	0.82		0.21			
Queue length (95%)		0.69	6.54		0.78			
Control Delay (s/veh)		8.9	58.6		11.0			
LOS		A	F		B			
Approach delay (s/veh)	--	--	38.8					
Approach LOS	--	--	E					

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	10/14/03	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				213		94		562	214	53	544	
% Heavy vehicles, %HV				0		0		3	3	3	3	
Peak-hour factor, PHF				0.86		0.86		0.94	0.94	0.93	0.93	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		16.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis, T = 0.25 | Cycle Length, C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				248		109		598	228		642	
Lane group capacity, c				411		342		1154	947		987	
v/c ratio, X				0.60		0.32		0.52	0.24		0.65	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				29.0		26.9		8.0	6.3		9.1	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.19		0.11		0.12	0.11		0.23	
Incremental delay, d_2				2.5		0.5		0.4	0.1		1.5	
Initial queue delay, d_3												
Control delay				31.5		27.4		8.4	6.4		10.7	
Lane group LOS				C		C		A	A		B	
Approach delay				30.2			7.8			10.7		
Approach LOS				C			A			B		
Intersection delay	13.2			X_c = 0.64			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	10/10/03	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				79		504		318	64	535	339	
% Heavy vehicles, %HV				2		2		5	5	2	2	
Peak-hour factor, PHF				0.81		0.81		0.90	0.90	0.90	0.90	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				98		622		353	71	594	377	
Lane group capacity, c				306		807		666	642	762	1348	
v/c ratio, X				0.32		0.77		0.53	0.11	0.78	0.28	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				35.7		18.7		24.7	20.7	9.9	4.9	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.11		0.32		0.13	0.11	0.33	0.11	
Incremental delay, d_2				0.6		4.6		0.8	0.1	5.2	0.1	
Initial queue delay, d_3												
Control delay				36.3		23.3		25.5	20.8	15.1	5.0	
Lane group LOS				D		C		C	C	B	A	
Approach delay				25.1			24.7			11.2		
Approach LOS				C			C			B		
Intersection delay	18.6			X_c = 0.67			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LT			LT		L	TR		L	T	R
Volume, V (vph)	122	59		210	52		32	432	138	89	457	140
% Heavy vehicles, %HV	2	2		1	1		1	1	1	2	2	2
Peak-hour factor, PHF	0.93	0.93		0.91	0.91		0.95	0.95	0.95	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type, AT		3			3		3	3		3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000		1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		11	0		42
Lane width		16.0			16.0		10.0	14.0		13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0		0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	WB Only	03	04	NS Perm	SB Only	07	08
Timing	G = 16.0	G = 20.0	G =	G =	G = 31.0	G = 3.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		194			288		34	589		101	519	111
Lane group capacity, c		361			458		141	664		249	811	1061
v/c ratio, X		0.54			0.63		0.24	0.89		0.41	0.64	0.10
Total green ratio, g/C		0.18			0.22		0.34	0.34		0.43	0.43	0.67
Uniform delay, d_1		33.6			31.6		21.1	27.8		34.3	20.0	5.4
Progression factor, PF		1.000			1.000		1.000	1.000		1.000	1.000	1.000
Delay calibration, k		0.14			0.21		0.11	0.41		0.11	0.22	0.11
Incremental delay, d_2		1.6			2.8		0.9	13.8		1.1	1.7	0.0
Initial queue delay, d_3												
Control delay		35.2			34.4		22.0	41.6		35.3	21.7	5.4
Lane group LOS		D			C		C	D		D	C	A
Approach delay	35.2			34.4			40.6			21.1		
Approach LOS	D			C			D			C		
Intersection delay	31.3			X_c = 0.00			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/2/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	106	615	11	96	550	174	11	43	94	194	36	68
% Heavy vehicles, %HV	2	2	2	2	2	2	2	2	2	1	1	2
Peak-hour factor, PHF	0.90	0.90	0.90	0.81	0.81	0.81	0.82	0.82	0.82	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 60.0	G = 10.0	G =	G =	G = 23.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	118	695		119	679	215		180		204	110	
Lane group capacity, c	400	1085		369	908	772		299		331	475	
v/c ratio, X	0.29	0.64		0.32	0.75	0.28		0.60		0.62	0.23	
Total green ratio, g/C	0.63	0.50		0.63	0.50	0.50		0.19		0.29	0.29	
Uniform delay, d_1	28.8	22.1		30.3	24.0	17.4		44.3		43.9	32.3	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.11	0.22		0.11	0.30	0.11		0.19		0.20	0.11	
Incremental delay, d_2	0.4	1.3		0.5	3.5	0.2		3.4		3.4	0.3	
Initial queue delay, d_3												
Control delay	29.2	23.4		30.8	27.4	17.6		47.7		47.3	32.5	
Lane group LOS	C	C		C	C	B		D		D	C	
Approach delay	24.2			25.7			47.7			42.1		
Approach LOS	C			C			D			D		
Intersection delay	29.1			X_c = 0.00			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/9/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Existing Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	679	224	0	1	233	81	3	2	0	72	4	584
% Heavy vehicles, %HV	1	1	1	3	3	3	0	0	0	2	2	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.63	0.63	0.63	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 25.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	763	252		1	274	95		8			90	687
Lane group capacity, c	887	1352		299	513	464		292			223	982
v/c ratio, X	0.86	0.19		0.00	0.53	0.20		0.03			0.40	0.70
Total green ratio, g/C	0.72	0.72		0.28	0.28	0.28		0.17			0.17	0.61
Uniform delay, d_1	10.9	4.0		23.5	27.6	24.9		31.4			33.5	11.9
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.39	0.11		0.11	0.14	0.11		0.11			0.11	0.27
Incremental delay, d_2	8.6	0.1		0.0	1.1	0.2		0.0			1.2	2.2
Initial queue delay, d_3												
Control delay	19.5	4.1		23.5	28.7	25.1		31.4			34.7	14.1
Lane group LOS	B	A		C	C	C		C			C	B
Approach delay	15.6			27.7			31.4			16.5		
Approach LOS	B			C			C			B		
Intersection delay	18.1			X_c = 0.73			Intersection LOS			B		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Fair Street/ Dale Road*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*7/9/04*	Analysis Year	*No Build Condition*
Analysis Time Period	*PM Peak Hour*		

Project Description *Gateway Summit-The Fairways*

East/West Street: *Fair Street* | North/South Street: *Dale Road*

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 (veh/h)	*112*	*355*	*0*	*0*	*367*	*301*
Peak-hour factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.83*	*0.83*
Hourly Flow Rate (veh/h)	*124*	*394*	*0*	*0*	*442*	*362*
Proportion of heavy vehicles, P_{HV}	*1*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*118*	*0*	*77*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.87*	*1.00*	*0.87*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*135*	*0*	*88*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*0*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*124*					*135*		*88*
Capacity, c_m (vph)	*825*					*160*		*488*
v/c ratio	*0.15*					*0.84*		*0.18*
Queue length (95%)	*0.53*					*5.72*		*0.65*
Control Delay (s/veh)	*10.1*					*91.2*		*14.0*
LOS	*B*					*F*		*B*
Approach delay (s/veh)	--	--				*60.8*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*7/9/04*	Analysis Year	*No Build Condition*
Analysis Time Period	*PM Peak Hour*		

Project Description	*Gateway Summit-The Fairways*
East/West Street: *Church Street*	North/South Street: *US Route 6*
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	*282*	*955*	*0*	*0*	*753*	*7*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*300*	*1015*	*0*	*0*	*818*	*7*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*265*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.80*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*331*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*300*							*331*
C (m) (vph)	*805*							*376*
v/c	*0.37*							*0.88*
95% queue length	*1.73*							*8.68*
Control Delay	*12.1*							*54.9*
LOS	*B*							*F*
Approach Delay	--	--				*54.9*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Site
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	7/9/04	Analysis Year	No Build Condition
Analysis Time Period	PM Peak Hour		

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	1	1021	0	0	828	1
Peak-hour factor, PHF	0.90	0.90	1.00	1.00	0.93	0.93
Hourly Flow Rate (veh/h)	1	1134	0	0	890	1
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	1	0	1
Peak-hour factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate (veh/h)	0	0	0	4	0	4
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
Volume, v (vph)	1						8	
Capacity, c_m (vph)	769						108	
v/c ratio	0.00						0.07	
Queue length (95%)	0.00						0.24	
Control Delay (s/veh)	9.7						41.0	
LOS	A						E	
Approach delay (s/veh)	--	--				41.0		
Approach LOS	--	--				E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/6/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway - Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume, V (vph)		306	192	196	299		415		447			
% Heavy vehicles, %HV		0	0	2	2		1		1			
Peak-hour factor, PHF		0.83	0.83	0.82	0.82		0.88		0.88			
Pretimed (P) or actuated (A)		P	P	P	P		P		P			
Start-up lost time, l_1		2.0	2.0	2.0	2.0		2.0		2.0			
Extension of effective green, e		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type, AT		3	3	3	3		3		3			
Unit extension, UE		3.0	3.0	3.0	3.0		3.0		3.0			
Filtering/metering, I		1.000	1.000	1.000	1.000		1.000	1.000	1.000			
Initial unmet demand, Q_b		0.0	0.0	0.0	0.0		0.0		0.0			
Ped / Bike / RTOR volumes	0		0				0		0	0		
Lane width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N_m												
Buses stopping, N_B		0	0	0	0		0		0			
Min. time for pedestrians, G_p	3.2						3.2			3.2		

Phasing	EW Perm	WB Only	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 5.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis, T = 0.25 — Cycle Length, C = 60.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		369	231	239	365		472		508			
Lane group capacity, c		633	1211	500	932		596		800			
v/c ratio, X		0.58	0.19	0.48	0.39		0.79		0.63			
Total green ratio, g/C		0.33	0.75	0.50	0.50		0.33		0.50			
Uniform delay, d_1		16.5	2.2	15.6	9.3		18.1		11.0			
Progression factor, PF		1.000	1.000	1.000	1.000		1.000		1.000			
Delay calibration, k		0.50	0.50	0.50	0.50		0.50		0.50			
Incremental delay, d_2		3.9	0.4	3.3	1.2		10.4		3.8			
Initial queue delay, d_3												
Control delay		20.4	2.5	18.9	10.6		28.5		14.8			
Lane group LOS		C	A	B	B		C		B			
Approach delay	13.5			13.9			21.4					
Approach LOS	B			B			C					
Intersection delay	17.2			X_c = 0.00			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/9/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				337		117		847	346	75	554	
% Heavy vehicles, %HV				1		1		3	3	3	3	
Peak-hour factor, PHF				0.89		0.89		0.92	0.92	0.92	0.92	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		16.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				379		131		921	376		684	
Lane group capacity, c				407		339		1154	947		848	
v/c ratio, X				0.93		0.39		0.80	0.40		0.81	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				31.8		27.3		10.9	7.1		11.1	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.45		0.11		0.34	0.11		0.35	
Incremental delay, d_2				28.0		0.7		4.0	0.3		5.8	
Initial queue delay, d_3												
Control delay				59.9		28.1		15.0	7.4		16.9	
Lane group LOS				E		C		B	A		B	
Approach delay				51.7			12.8			16.9		
Approach LOS				D			B			B		
Intersection delay	21.9			X_c = 0.84			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/14/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				148		754		563	160	557	411	
% Heavy vehicles, %HV				2		2		3	3	4	4	
Peak-hour factor, PHF				0.90		0.90		0.91	0.91	0.87	0.87	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis, T = 0.25 | Cycle Length, C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				164		838		619	176	640	472	
Lane group capacity, c				306		807		679	654	625	1322	
v/c ratio, X				0.54		1.04		0.91	0.27	1.02	0.36	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				37.2		23.5		29.9	22.0	25.4	5.3	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.14		0.50		0.43	0.11	0.50	0.11	
Incremental delay, d_2				1.9		42.1		16.6	0.2	42.2	0.2	
Initial queue delay, d_3												
Control delay				39.1		65.6		46.6	22.3	67.6	5.4	
Lane group LOS				D		E		D	C	E	A	
Approach delay				61.2			41.2			41.2		
Approach LOS				E			D			D		
Intersection delay	48.1			X_c = 1.08			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/8/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	1	1	1	1
Lane group		LT			LT		L	T	R	L	T	R
Volume, V (vph)	382	127		307	104		72	432	171	208	467	203
% Heavy vehicles, %HV	3	3		2	2		2	2	2	1	1	1
Peak-hour factor, PHF	0.88	0.88		0.88	0.88		0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		50	0		58
Lane width		16.0			16.0		10.0	14.0	12.0	13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	WB Only	03	04	NS Perm	Excl. Left	07	08
Timing	G = 25.0	G = 20.0	G =	G =	G = 30.0	G = 5.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		578			467		82	491	138	236	531	165
Lane group capacity, c		501			409		236	593	473	269	567	884
v/c ratio, X		1.15			1.14		0.35	0.83	0.29	0.88	0.94	0.19
Total green ratio, g/C		0.25			0.20		0.40	0.30	0.30	0.40	0.30	0.55
Uniform delay, d_1		37.5			40.0		38.1	32.6	26.9	41.2	34.1	11.3
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.50			0.50		0.11	0.37	0.11	0.40	0.45	0.11
Incremental delay, d_2		89.9			89.2		0.9	9.5	0.3	26.2	23.3	0.1
Initial queue delay, d_3												
Control delay		127.4			129.2		39.0	42.1	27.2	67.4	57.3	11.4
Lane group LOS		F			F		D	D	C	E	E	B
Approach delay	127.4			129.2			38.9			51.7		
Approach LOS	F			F			D			D		
Intersection delay	78.1			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/10/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	229	818	6	172	745	405	8	166	179	240	70	95
% Heavy vehicles, %HV	2	2	2	4	4	4	3	3	3	4	4	4
Peak-hour factor, PHF	0.89	0.89	0.89	0.95	0.95	0.95	0.89	0.89	0.89	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 50.0	G = 10.0	G =	G =	G = 33.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	257	926		181	784	426		397		282	194	
Lane group capacity, c	282	905		265	742	631		440		301	605	
v/c ratio, X	0.91	1.02		0.68	1.06	0.68		0.90		0.94	0.32	
Total green ratio, g/C	0.54	0.42		0.54	0.42	0.42		0.28		0.38	0.38	
Uniform delay, d_1	49.6	35.0		47.6	35.0	28.4		41.9		47.8	26.6	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.43	0.50		0.25	0.50	0.25		0.42		0.45	0.11	
Incremental delay, d_2	31.6	35.9		7.1	49.0	2.9		21.5		35.5	0.3	
Initial queue delay, d_3												
Control delay	81.2	70.9		54.7	84.0	31.3		63.4		83.4	26.9	
Lane group LOS	F	E		D	F	C		E		F	C	
Approach delay	73.2			64.0			63.4			60.4		
Approach LOS	E			E			E			E		
Intersection delay	66.6			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/5/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	840	400	8	1	429	186	2	20	2	150	2	911
% Heavy vehicles, %HV	3	3	3	6	6	6	14	14	14	2	2	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.81	0.81	0.81	0.39	0.39	0.39	0.91	0.91	0.91
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 30.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 95.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	866	420		1	530	230		61			167	1001
Lane group capacity, c	697	1348		283	566	513		252			203	930
v/c ratio, X	1.24	0.31		0.00	0.94	0.45		0.24			0.82	1.08
Total green ratio, g/C	0.74	0.74		0.32	0.32	0.32		0.16			0.16	0.58
Uniform delay, d_1	25.0	4.3		22.3	31.6	25.9		35.0			38.7	20.0
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.45	0.11		0.11			0.36	0.50
Incremental delay, d_2	121.0	0.1		0.0	23.3	0.6		0.5			23.1	52.3
Initial queue delay, d_3												
Control delay	146.1	4.4		22.3	54.8	26.5		35.5			61.8	72.3
Lane group LOS	F	A		C	D	C		D			E	E
Approach delay	99.8			46.2			35.5			70.8		
Approach LOS	F			D			D			E		
Intersection delay	75.8			X_c = 1.93			Intersection LOS			E		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/ Dale Road
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	7/9/04	Analysis Year	No Build Condition
Analysis Time Period	Saturday Peak Hour		

Project Description: Gateway Summit-The Fairways

East/West Street: Fair Street | North/South Street: Dale Road

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 (veh/h)	80	247	0	0	253	146
Peak-hour factor, PHF	0.81	0.81	1.00	1.00	0.82	0.82
Hourly Flow Rate (veh/h)	98	304	0	0	308	178
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	140	0	96
Peak-hour factor, PHF	1.00	1.00	1.00	0.83	1.00	0.83
Hourly Flow Rate (veh/h)	0	0	0	168	0	115
Proportion of heavy vehicles, P_{HV}	0	0	0	1	0	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	98					168		115
Capacity, c_m (vph)	1087					284		655
v/c ratio	0.09					0.59		0.18
Queue length (95%)	0.30					3.50		0.63
Control Delay (s/veh)	8.6					34.5		11.7
LOS	A					D		B
Approach delay (s/veh)	--	--				25.2		
Approach LOS	--	--				D		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*7/9/04*	Analysis Year	*No Build Condition*
Analysis Time Period	*Saturday Peak Hour*		

Project Description	*Gateway Summit-The Fairways*
East/West Street: *Church Street*	North/South Street: *US Route 6*
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	*185*	*806*	*0*	*0*	*829*	*7*
Peak-Hour Factor, PHF	*0.97*	*0.97*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR	*190*	*830*	*0*	*0*	*891*	*7*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*334*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.93*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*359*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*190*							*359*
C (m) (vph)	*756*							*342*
v/c	*0.25*							*1.05*
95% queue length	*0.99*							*12.71*
Control Delay	*11.4*							*98.1*
LOS	*B*							*F*
Approach Delay	--	--				*98.1*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JAG
Agency/Co.	TMA
Date Performed	7/9/04
Analysis Time Period	Saturday Peak Hour

Site Information

Intersection	US Route 6/Site
Jurisdiction	Town of Carmel
Analysis Year	No Build Condition

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	1	955	0	0	848	1
Peak-hour factor, PHF	0.93	0.93	1.00	1.00	0.89	0.89
Hourly Flow Rate (veh/h)	1	1026	0	0	952	1
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	1	0	1
Peak-hour factor, PHF	1.00	1.00	1.00	0.25	1.00	0.25
Hourly Flow Rate (veh/h)	0	0	0	4	0	4
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
Volume, v (vph)	1						8	
Capacity, c_m (vph)	729						113	
v/c ratio	0.00						0.07	
Queue length (95%)	0.00						0.22	
Control Delay (s/veh)	9.9						39.3	
LOS	A						E	
Approach delay (s/veh)	--	--				39.3		
Approach LOS	--	--				E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair St./John Simpson Rd.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/6/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume, V (vph)		151	256	217	131		261		178			
% Heavy vehicles, %HV		4	4	4	4		2		2			
Peak-hour factor, PHF		0.84	0.84	0.77	0.77		0.90		0.90			
Pretimed (P) or actuated (A)		P	P	P	P		P		P			
Start-up lost time, l_1		2.0	2.0	2.0	2.0		2.0		2.0			
Extension of effective green, e		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type, AT		3	3	3	3		3		3			
Unit extension, UE		3.0	3.0	3.0	3.0		3.0		3.0			
Filtering/metering, I		1.000	1.000	1.000	1.000		1.000	1.000	1.000			
Initial unmet demand, Q_b		0.0	0.0	0.0	0.0		0.0		0.0			
Ped / Bike / RTOR volumes	0		0				0		0	0		
Lane width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N_m												
Buses stopping, N_B		0	0	0	0		0		0			
Min. time for pedestrians, G_p	3.2						3.2			3.2		

Phasing	EW Perm	WB Only	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 5.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		180	305	282	170		290		198			
Lane group capacity, c		609	1165	634	914		590		792			
v/c ratio, X		0.30	0.26	0.44	0.19		0.49		0.25			
Total green ratio, g/C		0.33	0.75	0.50	0.50		0.33		0.50			
Uniform delay, d_1		14.8	2.3	11.5	8.3		15.9		8.6			
Progression factor, PF		1.000	1.000	1.000	1.000		1.000		1.000			
Delay calibration, k		0.50	0.50	0.50	0.50		0.50		0.50			
Incremental delay, d_2		1.2	0.5	2.3	0.4		2.9		0.8			
Initial queue delay, d_3												
Control delay		16.0	2.9	13.8	8.7		18.9		9.3			
Lane group LOS		B	A	B	A		B		A			
Approach delay	7.8			11.9			15.0					
Approach LOS	A			B			B					
Intersection delay	11.5			X_c = 0.00			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/9/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				260		116		740	261	72	717	
% Heavy vehicles, %HV				0		0		3	3	3	3	
Peak-hour factor, PHF				0.86		0.86		0.94	0.94	0.93	0.93	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		16.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				302		135		787	278		848	
Lane group capacity, c				411		342		1154	947		946	
v/c ratio, X				0.73		0.39		0.68	0.29		0.90	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				30.0		27.4		9.5	6.5		12.6	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.29		0.11		0.25	0.11		0.42	
Incremental delay, d_2				6.7		0.8		1.7	0.2		11.1	
Initial queue delay, d_3												
Control delay				36.8		28.2		11.1	6.7		23.7	
Lane group LOS				D		C		B	A		C	
Approach delay				34.1			10.0			23.7		
Approach LOS				C			A			C		
Intersection delay	19.4			X_c = 0.85			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/10/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_l	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				181		680		390	176	718	411	
% Heavy vehicles, %HV				2		2		5	5	2	2	
Peak-hour factor, PHF				0.81		0.81		0.90	0.90	0.90	0.90	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				223		840		433	196	798	457	
Lane group capacity, c				306		807		666	642	718	1348	
v/c ratio, X				0.73		1.04		0.65	0.31	1.11	0.34	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				38.7		23.5		26.1	22.4	19.8	5.2	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.29		0.50		0.23	0.11	0.50	0.11	
Incremental delay, d_2				8.5		42.8		2.2	0.3	68.5	0.2	
Initial queue delay, d_3												
Control delay				47.2		66.3		28.4	22.6	88.3	5.3	
Lane group LOS				D		E		C	C	F	A	
Approach delay				62.3			26.6			58.1		
Approach LOS				E			C			E		
Intersection delay	52.9			X_c = 1.20			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/8/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	1	1	1	1
Lane group		LT			LT		L	T	R	L	T	R
Volume, V (vph)	175	117		395	106		59	441	207	216	459	200
% Heavy vehicles, %HV	2	2		1	1		1	1	1	2	2	2
Peak-hour factor, PHF	0.93	0.93		0.91	0.91		0.95	0.95	0.95	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		60	0		60
Lane width		16.0			16.0		10.0	14.0	12.0	13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p		3.2			3.2			3.2			3.2	

Phasing	EB Only	WB Only	03	04	NS Perm	Excl. Left	07	08
Timing	G = 14.0	G = 23.0	G =	G =	G = 38.0	G = 5.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		314			550		62	464	155	245	522	159
Lane group capacity, c		286			474		311	759	1050	390	711	827
v/c ratio, X		1.10			1.16		0.20	0.61	0.15	0.63	0.73	0.19
Total green ratio, g/C		0.14			0.23		0.48	0.38	0.66	0.48	0.38	0.52
Uniform delay, d_1		43.0			38.5		28.3	25.0	6.4	31.5	26.7	12.8
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.50			0.50		0.11	0.20	0.11	0.21	0.29	0.11
Incremental delay, d_2		82.0			93.4		0.3	1.5	0.1	3.2	4.0	0.1
Initial queue delay, d_3												
Control delay		125.0			131.9		28.6	26.5	6.5	34.7	30.6	12.9
Lane group LOS		F			F		C	C	A	C	C	B
Approach delay	125.0			131.9			22.1			28.7		
Approach LOS	F			F			C			C		
Intersection delay	62.1			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/2/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	138	805	12	116	739	229	12	56	114	237	44	97
% Heavy vehicles, %HV	2	2	2	2	2	2	2	2	2	1	1	2
Peak-hour factor, PHF	0.90	0.90	0.90	0.81	0.81	0.81	0.82	0.82	0.82	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 60.0	G = 10.0	G =	G =	G = 23.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	153	907		143	912	283		222		249	148	
Lane group capacity, c	282	1085		269	908	772		299		302	472	
v/c ratio, X	0.54	0.84		0.53	1.00	0.37		0.74		0.82	0.31	
Total green ratio, g/C	0.63	0.50		0.63	0.50	0.50		0.19		0.29	0.29	
Uniform delay, d_1	46.4	25.8		46.3	30.0	18.4		45.7		47.5	33.1	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.14	0.37		0.13	0.50	0.11		0.30		0.36	0.11	
Incremental delay, d_2	2.1	5.8		2.0	30.9	0.3		9.6		16.8	0.4	
Initial queue delay, d_3												
Control delay	48.5	31.6		48.4	60.9	18.7		55.3		64.3	33.5	
Lane group LOS	D	C		D	E	B		E		E	C	
Approach delay	34.0			50.7			55.3			52.8		
Approach LOS	C			D			E			D		
Intersection delay	45.4			X_c = 0.00			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	7/5/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	No Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	852	304	0	1	323	120	3	2	0	111	4	758
% Heavy vehicles, %HV	1	1	1	3	3	3	0	0	0	2	2	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.63	0.63	0.63	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 25.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	957	342		1	380	141		8			136	892
Lane group capacity, c	805	1352		275	513	464		287			222	982
v/c ratio, X	1.19	0.25		0.00	0.74	0.30		0.03			0.61	0.91
Total green ratio, g/C	0.72	0.72		0.28	0.28	0.28		0.17			0.17	0.61
Uniform delay, d_1	19.3	4.2		23.5	29.6	25.6		31.4			34.8	15.3
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.30	0.11		0.11			0.20	0.43
Incremental delay, d_2	97.3	0.1		0.0	5.7	0.4		0.0			4.9	12.0
Initial queue delay, d_3												
Control delay	116.5	4.3		23.5	35.2	26.0		31.4			39.7	27.3
Lane group LOS	F	A		C	D	C		C			D	C
Approach delay	87.0			32.7			31.4			29.0		
Approach LOS	F			C			C			C		
Intersection delay	56.1			X_c = 1.34			Intersection LOS			E		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/ Dale Road
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	8/26/04	Analysis Year	Build Condition
Analysis Time Period	PM Peak Hour		

Project Description *Gateway Summit-The Fairways*

East/West Street: *Fair Street* | North/South Street: *Dale Road*

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 (veh/h)	113	365	0	0	383	305
Peak-hour factor, PHF	0.90	0.90	1.00	1.00	0.83	0.83
Hourly Flow Rate (veh/h)	125	405	0	0	461	367
Proportion of heavy vehicles, P_{HV}	1	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	122	0	78
Peak-hour factor, PHF	1.00	1.00	1.00	0.87	1.00	0.87
Hourly Flow Rate (veh/h)	0	0	0	140	0	89
Proportion of heavy vehicles, P_{HV}	0	0	0	1	0	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	125					140		89
Capacity, c_m (vph)	808					151		475
v/c ratio	0.15					0.93		0.19
Queue length (95%)	0.55					6.59		0.68
Control Delay (s/veh)	10.3					113.5		14.3
LOS	B					F		B
Approach delay (s/veh)	--	--				75.0		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*8/26/04*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*Access*
Jurisdiction	*Town of Carmel*
Analysis Year	*Build Condition*

Project Description *Gateways - Fairways*

East/West Street: *Fair Street*

North/South Street: *Fairways Access*

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 (veh/h)	*0*	*467*	*11*	*17*	*444*	*0*
Peak-hour factor, PHF	*1.00*	*0.90*	*0.90*	*0.83*	*0.83*	*1.00*
Hourly Flow Rate (veh/h)	*0*	*518*	*12*	*20*	*534*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*7*	*0*	*11*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.90*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate (veh/h)	*7*	*0*	*12*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
Volume, v (vph)		*20*		*19*				
Capacity, c_m (vph)		*1048*		*368*				
v/c ratio		*0.02*		*0.05*				
Queue length (95%)		*0.06*		*0.16*				
Control Delay (s/veh)		*8.5*		*15.3*				
LOS		*A*		*C*				
Approach delay (s/veh)	--	--	*15.3*					
Approach LOS	--	--	*C*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*8/26/04*	Analysis Year	*Build Condition*
Analysis Time Period	*PM Peak Hour*		

Project Description	*Gateway Summit-The Fairways*
East/West Street: *Church Street*	North/South Street: *US Route 6*
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	*328*	*1016*	*0*	*0*	*821*	*7*
Peak-Hour Factor, PHF	*0.94*	*0.94*	*1.00*	*1.00*	*0.92*	*0.92*
Hourly Flow Rate, HFR	*348*	*1080*	*0*	*0*	*892*	*7*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*273*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.80*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*341*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*348*							*341*
C (m) (vph)	*756*							*341*
v/c	*0.46*							*1.00*
95% queue length	*2.44*							*11.31*
Control Delay	*13.8*							*84.5*
LOS	*B*							*F*
Approach Delay	--	--				*84.5*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Site (west)
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	8/26/04	Analysis Year	Build Condition
Analysis Time Period	PM Peak Hour		

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	56	1068	0	0	917	24
Peak-hour factor, PHF	0.90	0.90	1.00	1.00	0.93	0.93
Hourly Flow Rate (veh/h)	62	1186	0	0	986	25
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	27	0	55
Peak-hour factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate (veh/h)	0	0	0	28	0	57
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
Volume, v (vph)	62						85	
Capacity, c_m (vph)	694						94	
v/c ratio	0.09						0.90	
Queue length (95%)	0.29						5.11	
Control Delay (s/veh)	10.7						148.4	
LOS	B						F	
Approach delay (s/veh)	--	--				148.4		
Approach LOS	--	--				F		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair St./John Simpson Rd.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume, V (vph)		308	204	209	302		432		460			
% Heavy vehicles, %HV		0	0	2	2		1		1			
Peak-hour factor, PHF		0.83	0.83	0.82	0.82		0.88		0.88			
Pretimed (P) or actuated (A)		P	P	P	P		P		P			
Start-up lost time, l_1		2.0	2.0	2.0	2.0		2.0		2.0			
Extension of effective green, e		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type, AT		3	3	3	3		3		3			
Unit extension, UE		3.0	3.0	3.0	3.0		3.0		3.0			
Filtering/metering, I		1.000	1.000	1.000	1.000		1.000	1.000	1.000			
Initial unmet demand, Q_b		0.0	0.0	0.0	0.0		0.0		0.0			
Ped / Bike / RTOR volumes	0		0				0		0	0		
Lane width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N_m												
Buses stopping, N_B		0	0	0	0		0		0			
Min. time for pedestrians, G_p	3.2						3.2			3.2		

Phasing	EW Perm	WB Only	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 5.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		371	246	255	368		491		523			
Lane group capacity, c		633	1211	498	932		596		800			
v/c ratio, X		0.59	0.20	0.51	0.39		0.82		0.65			
Total green ratio, g/C		0.33	0.75	0.50	0.50		0.33		0.50			
Uniform delay, d_1		16.6	2.2	16.0	9.3		18.4		11.1			
Progression factor, PF		1.000	1.000	1.000	1.000		1.000		1.000			
Delay calibration, k		0.50	0.50	0.50	0.50		0.50		0.50			
Incremental delay, d_2		3.9	0.4	3.7	1.3		12.2		4.1			
Initial queue delay, d_3												
Control delay		20.5	2.6	19.7	10.6		30.6		15.3			
Lane group LOS		C	A	B	B		C		B			
Approach delay	13.4			14.3			22.7					
Approach LOS	B			B			C					
Intersection delay	17.8			X_c = 0.00			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				340		120		866	351	80	571	
% Heavy vehicles, %HV				1		1		3	3	3	3	
Peak-hour factor, PHF				0.89		0.89		0.92	0.92	0.92	0.92	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		14.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				382		135		941	382		708	
Lane group capacity, c				407		339		1154	947		773	
v/c ratio, X				0.94		0.40		0.82	0.40		0.92	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				31.9		27.4		11.2	7.2		13.0	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.45		0.11		0.36	0.11		0.43	
Incremental delay, d_2				29.5		0.8		4.6	0.3		15.6	
Initial queue delay, d_3												
Control delay				61.4		28.2		15.9	7.4		28.6	
Lane group LOS				E		C		B	A		C	
Approach delay				52.8			13.4			28.6		
Approach LOS				D			B			C		
Intersection delay	25.6			X_c = 0.92			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				170		793		566	195	590	413	
% Heavy vehicles, %HV				2		2		3	3	4	4	
Peak-hour factor, PHF				0.90		0.90		0.91	0.91	0.87	0.87	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				189		881		622	214	678	475	
Lane group capacity, c				306		807		679	654	624	1322	
v/c ratio, X				0.62		1.09		0.92	0.33	1.09	0.36	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				37.8		23.5		30.0	22.6	25.5	5.3	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.20		0.50		0.43	0.11	0.50	0.11	
Incremental delay, d_2				3.8		59.6		17.3	0.3	61.8	0.2	
Initial queue delay, d_3												
Control delay				41.6		83.1		47.3	22.9	87.2	5.5	
Lane group LOS				D		F		D	C	F	A	
Approach delay				75.8			41.0			53.5		
Approach LOS				E			D			D		
Intersection delay	57.9			X_c = 1.26			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Main Access
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway -Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_l	1	1	0	0	1	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume, V (vph)	67	1028			836	61				69		105
% Heavy vehicles, %HV	3	3			2	2				0		0
Peak-hour factor, PHF	0.92	0.92			0.97	0.97				0.95		0.95
Pretimed (P) or actuated (A)	A	A			A	A				A		A
Start-up lost time, l_1	2.0	2.0			2.0					2.0		2.0
Extension of effective green, e	2.0	2.0			2.0					2.0		2.0
Arrival type, AT	3	3			3					3		3
Unit extension, UE	3.0	3.0			3.0					3.0		3.0
Filtering/metering, I	1.000	1.000			1.000					1.000	1.000	1.000
Initial unmet demand, Q_b	0.0	0.0			0.0					0.0		0.0
Ped / Bike / RTOR volumes				0		0	0			0		0
Lane width	12.0	12.0			12.0					12.0		12.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0			0					0		0
Min. time for pedestrians, G_p				3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	SB Only	06	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	73	1117			925					73		111
Lane group capacity, c	324	1230			1231					301		269
v/c ratio, X	0.23	0.91			0.75					0.24		0.41
Total green ratio, g/C	0.67	0.67			0.67					0.17		0.17
Uniform delay, d_1	3.9	8.4			6.7					21.7		22.4
Progression factor, PF	1.000	1.000			1.000					1.000		1.000
Delay calibration, k	0.11	0.43			0.31					0.11		0.11
Incremental delay, d_2	0.4	10.0			2.6					0.4		1.0
Initial queue delay, d_3												
Control delay	4.3	18.4			9.3					22.1		23.4
Lane group LOS	A	B			A					C		C
Approach delay	17.6			9.3						22.9		
Approach LOS	B			A						C		
Intersection delay	14.7			X_c = 0.81			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	1	1	1	1
Lane group		LT			LT		L	T	R	L	T	R
Volume, V (vph)	382	127		310	104		84	539	173	208	544	203
% Heavy vehicles, %HV	3	3		2	2		2	2	2	1	1	1
Peak-hour factor, PHF	0.88	0.88		0.88	0.88		0.88	0.88	0.88	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		50	0		58
Lane width		16.0			16.0		10.0	14.0	12.0	13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	WB Only	03	04	NS Perm	Excl. Left	07	08
Timing	G = 25.0	G = 20.0	G =	G =	G = 30.0	G = 5.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		578			470		95	613	140	236	618	165
Lane group capacity, c		501			409		236	593	473	264	567	884
v/c ratio, X		1.15			1.15		0.40	1.03	0.30	0.89	1.09	0.19
Total green ratio, g/C		0.25			0.20		0.40	0.30	0.30	0.40	0.30	0.55
Uniform delay, d_1		37.5			40.0		39.1	35.0	26.9	42.2	35.0	11.3
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.50			0.50		0.11	0.50	0.11	0.42	0.50	0.11
Incremental delay, d_2		89.9			91.9		1.1	45.9	0.4	29.6	64.6	0.1
Initial queue delay, d_3												
Control delay		127.4			131.9		40.3	80.9	27.2	71.8	99.6	11.4
Lane group LOS		F			F		D	F	C	E	F	B
Approach delay	127.4			131.9			67.5			78.9		
Approach LOS	F			F			E			E		
Intersection delay	93.7			X_c = 0.00			Intersection LOS			F		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	248	875	6	172	795	415	8	167	179	246	70	114
% Heavy vehicles, %HV	2	2	2	4	4	4	3	3	3	4	4	4
Peak-hour factor, PHF	0.89	0.89	0.89	0.95	0.95	0.95	0.89	0.89	0.89	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 50.0	G = 10.0	G =	G =	G = 33.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	279	990		181	837	437		398		289	216	
Lane group capacity, c	282	905		265	742	631		440		300	601	
v/c ratio, X	0.99	1.09		0.68	1.13	0.69		0.90		0.96	0.36	
Total green ratio, g/C	0.54	0.42		0.54	0.42	0.42		0.28		0.38	0.38	
Uniform delay, d_1	50.3	35.0		47.6	35.0	28.7		42.0		48.1	27.1	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.49	0.50		0.25	0.50	0.26		0.43		0.47	0.11	
Incremental delay, d_2	50.5	58.9		7.1	74.2	3.3		21.9		42.0	0.4	
Initial queue delay, d_3												
Control delay	100.8	93.9		54.7	109.2	32.0		63.8		90.1	27.5	
Lane group LOS	F	F		D	F	C		E		F	C	
Approach delay	95.4			79.2			63.8			63.3		
Approach LOS	F			E			E			E		
Intersection delay	81.0			X_c = 0.00			Intersection LOS			F		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	878	425	8	1	451	186	2	20	2	150	2	949
% Heavy vehicles, %HV	3	3	3	6	6	6	14	14	14	2	2	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.81	0.81	0.81	0.39	0.39	0.39	0.91	0.91	0.91
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 30.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 95.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	905	446		1	557	230		61			167	1043
Lane group capacity, c	697	1348		276	566	513		252			203	930
v/c ratio, X	1.30	0.33		0.00	0.98	0.45		0.24			0.82	1.12
Total green ratio, g/C	0.74	0.74		0.32	0.32	0.32		0.16			0.16	0.58
Uniform delay, d_1	25.2	4.3		22.3	32.3	25.9		35.0			38.7	20.0
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.49	0.11		0.11			0.36	0.50
Incremental delay, d_2	144.7	0.1		0.0	33.7	0.6		0.5			23.1	68.9
Initial queue delay, d_3												
Control delay	169.9	4.5		22.3	65.9	26.5		35.5			61.8	88.9
Lane group LOS	F	A		C	E	C		D			E	F
Approach delay	115.3			54.4			35.5			85.1		
Approach LOS	F			D			D			F		
Intersection delay	89.1			X_c = 2.16			Intersection LOS			F		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*8/26/04*
Analysis Time Period	*Saturday Peak Hour*

Site Information

Intersection	*Fair Street/ Dale Road*
Jurisdiction	*Town of Carmel*
Analysis Year	*Build Condition Proposed*

Project Description *Gateway Summit-The Fairways*

East/West Street: *Fair Street* | North/South Street: *Dale Road*

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 (veh/h)	*81*	*260*	*0*	*0*	*266*	*149*
Peak-hour factor, PHF	*0.81*	*0.81*	*1.00*	*1.00*	*0.82*	*0.82*
Hourly Flow Rate (veh/h)	*99*	*320*	*0*	*0*	*324*	*181*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*144*	*0*	*97*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.83*	*1.00*	*0.83*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*173*	*0*	*116*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*0*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*99*					*173*		*116*
Capacity, c_m (vph)	*1070*					*270*		*640*
v/c ratio	*0.09*					*0.64*		*0.18*
Queue length (95%)	*0.31*					*4.02*		*0.66*
Control Delay (s/veh)	*8.7*					*39.4*		*11.9*
LOS	*A*					*E*		*B*
Approach delay (s/veh)	--	--				*28.3*		
Approach LOS	--	--				*D*		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Access*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*8/26/04*	Analysis Year	*Build Condition*
Analysis Time Period	*Saturday Peak Hour*		

Project Description *Gateways - Fairways*

East/West Street: *Fair Street* | North/South Street: *Fairways Access*

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 (veh/h)	*0*	*327*	*9*	*14*	*349*	*0*
Peak-hour factor, PHF	*1.00*	*0.90*	*0.90*	*0.83*	*0.83*	*1.00*
Hourly Flow Rate (veh/h)	*0*	*363*	*10*	*16*	*420*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*9*	*0*	*14*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.90*	*1.00*	*0.90*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate (veh/h)	*10*	*0*	*15*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
Volume, v (vph)		*16*		*25*				
Capacity, c_m (vph)		*1197*		*488*				
v/c ratio		*0.01*		*0.05*				
Queue length (95%)		*0.04*		*0.16*				
Control Delay (s/veh)		*8.0*		*12.8*				
LOS		*A*		*B*				
Approach delay (s/veh)	–	–	*12.8*					
Approach LOS	–	–	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*JAG*	Intersection	*Church Street and US Route 6*
Agency/Co.	*TMA*	Jurisdiction	*Town of Carmel*
Date Performed	*8/26/04*	Analysis Year	*Build Condition*
Analysis Time Period	*Saturday Peak Hour*		

Project Description *Gateway Summit-The Fairways*

East/West Street: *Church Street* | North/South Street: *US Route 6*

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	*220*	*863*	*0*	*0*	*930*	*7*
Peak-Hour Factor, PHF	*0.97*	*0.97*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate, HFR	*226*	*889*	*0*	*0*	*999*	*7*
Percent Heavy Vehicles	*2*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*0*	*0*	*346*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*0.93*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*0*	*0*	*372*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*1*
Percent Grade (%)		*0*			*-6*	
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	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*							*R*
v (vph)	*226*							*372*
C (m) (vph)	*689*							*296*
v/c	*0.33*							*1.26*
95% queue length	*1.43*							*17.48*
Control Delay	*12.8*							*176.0*
LOS	*B*							*F*
Approach Delay	--	--				*176.0*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	JAG
Agency/Co.	TMA
Date Performed	8/26/04
Analysis Time Period	Saturday Peak Hour

Site Information

Intersection	US Route 6/Site (west)
Jurisdiction	Town of Carmel
Analysis Year	Build Condition

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	79	1014	0	0	905	34
Peak-hour factor, PHF	0.93	0.93	1.00	1.00	0.89	0.89
Hourly Flow Rate (veh/h)	84	1090	0	0	1016	38
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	32	0	64
Peak-hour factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate (veh/h)	0	0	0	33	0	67
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration					LR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
Volume, v (vph)	84						100	
Capacity, c_m (vph)	668						91	
v/c ratio	0.13						1.10	
Queue length (95%)	0.43						6.71	
Control Delay (s/veh)	11.2						208.4	
LOS	B						F	
Approach delay (s/veh)	--	--				208.4		
Approach LOS	--	--				F		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair St./John Simpson Rd.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume, V (vph)		153	271	232	133		275		192			
% Heavy vehicles, %HV		4	4	4	4		2		2			
Peak-hour factor, PHF		0.84	0.84	0.77	0.77		0.90		0.90			
Pretimed (P) or actuated (A)		P	P	P	P		P		P			
Start-up lost time, l_1		2.0	2.0	2.0	2.0		2.0		2.0			
Extension of effective green, e		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type, AT		3	3	3	3		3		3			
Unit extension, UE		3.0	3.0	3.0	3.0		3.0		3.0			
Filtering/metering, I		1.000	1.000	1.000	1.000		1.000	1.000	1.000			
Initial unmet demand, Q_b		0.0	0.0	0.0	0.0		0.0		0.0			
Ped / Bike / RTOR volumes	0		0				0		0	0		
Lane width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N		N
Parking maneuvers, N_m												
Buses stopping, N_B		0	0	0	0		0		0			
Min. time for pedestrians, G_p	3.2						3.2			3.2		

Phasing	EW Perm	WB Only	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 5.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		182	323	301	173		306		213			
Lane group capacity, c		609	1165	632	914		590		792			
v/c ratio, X		0.30	0.28	0.48	0.19		0.52		0.27			
Total green ratio, g/C		0.33	0.75	0.50	0.50		0.33		0.50			
Uniform delay, d_1		14.8	2.4	11.8	8.3		16.1		8.7			
Progression factor, PF		1.000	1.000	1.000	1.000		1.000		1.000			
Delay calibration, k		0.50	0.50	0.50	0.50		0.50		0.50			
Incremental delay, d_2		1.3	0.6	2.6	0.5		3.2		0.8			
Initial queue delay, d_3												
Control delay		16.1	3.0	14.4	8.7		19.4		9.5			
Lane group LOS		B	A	B	A		B		A			
Approach delay	7.7			12.3			15.3					
Approach LOS	A			B			B					
Intersection delay	11.8			X_c = 0.00			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	NYS Route 52/Fair Street
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	0	1	0
Lane group				L		R		T	R		LT	
Volume, V (vph)				264		120		759	261	72	739	
% Heavy vehicles, %HV				0		0		3	3	3	3	
Peak-hour factor, PHF				0.86		0.86		0.94	0.94	0.93	0.93	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0		2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0		2.0	
Arrival type, AT				3		3		3	3		3	
Unit extension, UE				3.0		3.0		3.0	3.0		3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000		1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0		0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		9.0		11.0	10.0		16.0	
Parking / Grade / Parking	N		N	N	0	N	N	0	N	N	0	Y
Parking maneuvers, N_m												20
Buses stopping, N_B				0		0		0	0		0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	NS Perm	06	07	08
Timing	G = 20.0	G =	G =	G =	G = 55.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				307		140		807	278		872	
Lane group capacity, c				411		342		1154	947		946	
v/c ratio, X				0.75		0.41		0.70	0.29		0.92	
Total green ratio, g/C				0.24		0.24		0.65	0.65		0.65	
Uniform delay, d_1				30.2		27.5		9.7	6.5		13.1	
Progression factor, PF				1.000		1.000		1.000	1.000		1.000	
Delay calibration, k				0.30		0.11		0.27	0.11		0.44	
Incremental delay, d_2				7.4		0.8		1.9	0.2		14.1	
Initial queue delay, d_3												
Control delay				37.5		28.3		11.6	6.7		27.2	
Lane group LOS				D		C		B	A		C	
Approach delay				34.6			10.3			27.2		
Approach LOS				C			B			C		
Intersection delay	21.0			X_c = 0.88			Intersection LOS			C		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/27/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				200		718		392	224	761	443	
% Heavy vehicles, %HV				2		2		5	5	2	2	
Peak-hour factor, PHF				0.81		0.81		0.90	0.90	0.90	0.90	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 30.0	G = 37.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				247		886		436	249	846	492	
Lane group capacity, c				306		807		666	642	716	1348	
v/c ratio, X				0.81		1.10		0.65	0.39	1.18	0.36	
Total green ratio, g/C				0.18		0.53		0.37	0.37	0.72	0.72	
Uniform delay, d_1				39.3		23.5		26.2	23.2	19.9	5.3	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.35		0.50		0.23	0.11	0.50	0.11	
Incremental delay, d_2				14.7		61.9		2.3	0.4	95.7	0.2	
Initial queue delay, d_3												
Control delay				54.1		85.4		28.5	23.6	115.6	5.5	
Lane group LOS				D		F		C	C	F	A	
Approach delay				78.5			26.7			75.1		
Approach LOS				E			C			E		
Intersection delay	65.8			X_c = 1.34			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Main Access
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway -Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	0	1	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume, V (vph)	81	965			864	67				62		75
% Heavy vehicles, %HV	0	0			1	1				0		0
Peak-hour factor, PHF	0.98	0.98			0.94	0.94				0.95		0.95
Pretimed (P) or actuated (A)	A	A			A	A				A		A
Start-up lost time, l_1	2.0	2.0			2.0					2.0		2.0
Extension of effective green, e	2.0	2.0			2.0					2.0		2.0
Arrival type, AT	3	3			3					3		3
Unit extension, UE	3.0	3.0			3.0					3.0		3.0
Filtering/metering, I	1.000	1.000			1.000					1.000	1.000	1.000
Initial unmet demand, Q_b	0.0	0.0			0.0					0.0		0.0
Ped / Bike / RTOR volumes				0		0	0			0		0
Lane width	11.0	12.0			12.0					12.0		12.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0			0					0		0
Min. time for pedestrians, G_p				3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	SB Only	06	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	83	985			990					65		79
Lane group capacity, c	297	1267			1242					301		269
v/c ratio, X	0.28	0.78			0.80					0.22		0.29
Total green ratio, g/C	0.67	0.67			0.67					0.17		0.17
Uniform delay, d_1	4.1	6.9			7.1					21.6		21.9
Progression factor, PF	1.000	1.000			1.000					1.000		1.000
Delay calibration, k	0.11	0.33			0.34					0.11		0.11
Incremental delay, d_2	0.5	3.1			3.7					0.4		0.6
Initial queue delay, d_3												
Control delay	4.6	10.1			10.9					22.0		22.5
Lane group LOS	A	B			B					C		C
Approach delay	9.6			10.9						22.3		
Approach LOS	A			B						C		
Intersection delay	11.0			X_c = 0.70			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Stoneleigh Ave.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	1	1	1	1	1	1
Lane group		LT			LT		L	T	R	L	T	R
Volume, V (vph)	175	117		397	106		69	532	209	216	562	201
% Heavy vehicles, %HV	2	2		1	1		1	1	1	2	2	2
Peak-hour factor, PHF	0.93	0.93		0.91	0.91		0.95	0.95	0.95	0.88	0.88	0.88
Pretimed (P) or actuated (A)	A	A		A	A		A	A	A	A	A	A
Start-up lost time, l_1		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e		2.0			2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT		3			3		3	3	3	3	3	3
Unit extension, UE		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0			0			0		60	0		60
Lane width		16.0			16.0		10.0	14.0	12.0	13.0	12.0	12.0
Parking / Grade / Parking	N	1	N	N	-1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0		0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	WB Only	03	04	NS Perm	Excl. Left	07	08
Timing	G = 14.0	G = 23.0	G =	G =	G = 38.0	G = 5.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		314			552		73	560	157	245	639	160
Lane group capacity, c		286			474		238	759	1050	316	711	827
v/c ratio, X		1.10			1.16		0.31	0.74	0.15	0.78	0.90	0.19
Total green ratio, g/C		0.14			0.23		0.48	0.38	0.66	0.48	0.38	0.52
Uniform delay, d_1		43.0			38.5		36.3	26.7	6.4	37.5	29.2	12.8
Progression factor, PF		1.000			1.000		1.000	1.000	1.000	1.000	1.000	1.000
Delay calibration, k		0.50			0.50		0.11	0.30	0.11	0.32	0.42	0.11
Incremental delay, d_2		82.0			95.0		0.7	3.8	0.1	11.5	14.4	0.1
Initial queue delay, d_3												
Control delay		125.0			133.5		37.0	30.5	6.5	48.9	43.6	12.9
Lane group LOS		F			F		D	C	A	D	D	B
Approach delay	125.0			133.5			26.3			40.1		
Approach LOS	F			F			C			D		
Intersection delay	65.1			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	157	858	12	116	801	238	12	56	114	246	44	118
% Heavy vehicles, %HV	2	2	2	2	2	2	2	2	2	1	1	2
Peak-hour factor, PHF	0.90	0.90	0.90	0.81	0.81	0.81	0.82	0.82	0.82	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 60.0	G = 10.0	G =	G =	G = 23.0	G = 7.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	174	966		143	989	294		222		259	170	
Lane group capacity, c	282	1085		269	908	772		298		302	469	
v/c ratio, X	0.62	0.89		0.53	1.09	0.38		0.74		0.86	0.36	
Total green ratio, g/C	0.63	0.50		0.63	0.50	0.50		0.19		0.29	0.29	
Uniform delay, d_1	47.0	27.0		46.3	30.0	18.5		45.7		47.8	33.7	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.20	0.41		0.13	0.50	0.11		0.30		0.39	0.11	
Incremental delay, d_2	4.0	9.4		2.0	57.1	0.3		9.8		21.0	0.5	
Initial queue delay, d_3												
Control delay	51.0	36.4		48.4	87.1	18.8		55.5		68.9	34.1	
Lane group LOS	D	D		D	F	B		E		E	C	
Approach delay	38.6			69.2			55.5			55.1		
Approach LOS	D			E			E			E		
Intersection delay	55.5			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Build Condition
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	890	328	0	1	350	120	3	2	0	111	4	802
% Heavy vehicles, %HV	1	1	1	3	3	3	0	0	0	2	2	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.63	0.63	0.63	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	06	07	08
Timing	G = 35.0	G = 25.0	G =	G =	G = 15.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis, T = 0.25 | Cycle Length, C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	1000	369		1	412	141		8			136	944
Lane group capacity, c	781	1352		268	513	464		287			222	982
v/c ratio, X	1.28	0.27		0.00	0.80	0.30		0.03			0.61	0.96
Total green ratio, g/C	0.72	0.72		0.28	0.28	0.28		0.17			0.17	0.61
Uniform delay, d_1	20.6	4.3		23.5	30.2	25.6		31.4			34.8	16.5
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.35	0.11		0.11			0.20	0.47
Incremental delay, d_2	136.0	0.1		0.0	9.0	0.4		0.0			4.9	19.9
Initial queue delay, d_3												
Control delay	156.6	4.4		23.5	39.2	26.0		31.4			39.7	36.4
Lane group LOS	F	A		C	D	C		C			D	D
Approach delay	115.6			35.8			31.4			36.9		
Approach LOS	F			D			C			D		
Intersection delay	72.4			X_c = 1.67			Intersection LOS			E		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*8/26/04*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US Route 6/Site (west)*
Jurisdiction	*Town of Carmel*
Analysis Year	*Build Condition 2 exiting lane*

Project Description *Gateway Summit- The Fairways*

East/West Street: *US Route 6* | North/South Street: *Site*

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 (veh/h)	*56*	*1068*	*0*	*0*	*917*	*24*
Peak-hour factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate (veh/h)	*62*	*1186*	*0*	*0*	*986*	*25*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*27*	*0*	*55*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*28*	*0*	*57*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*62*					*28*		*57*
Capacity, c_m (vph)	*694*					*39*		*299*
v/c ratio	*0.09*					*0.72*		*0.19*
Queue length (95%)	*0.29*					*2.63*		*0.69*
Control Delay (s/veh)	*10.7*					*217.8*		*19.9*
LOS	*B*					*F*		*C*
Approach delay (s/veh)	--	--				*85.1*		
Approach LOS	--	--				*F*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*JAG*
Agency/Co.	*TMA*
Date Performed	*8/26/04*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*US Route 6/Site (west)*
Jurisdiction	*Town of Carmel*
Analysis Year	*Build Condition 2 exiting lane*

Project Description *Gateway Summit- The Fairways*

East/West Street: *US Route 6* | North/South Street: *Site*

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 (veh/h)	*56*	*1068*	*0*	*0*	*917*	*24*
Peak-hour factor, PHF	*0.90*	*0.90*	*1.00*	*1.00*	*0.93*	*0.93*
Hourly Flow Rate (veh/h)	*62*	*1186*	*0*	*0*	*986*	*25*
Proportion of heavy vehicles, P_{HV}	*0*	--	--	*0*	--	--
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*27*	*0*	*55*
Peak-hour factor, PHF	*1.00*	*1.00*	*1.00*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*28*	*0*	*57*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*					*L*		*R*
Volume, v (vph)	*62*					*28*		*57*
Capacity, c_m (vph)	*694*					*39*		*299*
v/c ratio	*0.09*					*0.72*		*0.19*
Queue length (95%)	*0.29*					*2.63*		*0.69*
Control Delay (s/veh)	*10.7*					*217.8*		*19.9*
LOS	*B*					*F*		*C*
Approach delay (s/veh)	--	--				*85.1*		
Approach LOS	--	--				*F*		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build diverted trips
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				170		793		566	295	590	413	
% Heavy vehicles, %HV				2		2		3	3	4	4	
Peak-hour factor, PHF				0.90		0.90		0.91	0.91	0.87	0.87	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 15.0	G =	G =	G =	G = 37.0	G = 33.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				189		881		622	324	678	475	
Lane group capacity, c				255		868		606	583	697	1377	
v/c ratio, X				0.74		1.01		1.03	0.56	0.97	0.34	
Total green ratio, g/C				0.15		0.57		0.33	0.33	0.75	0.75	
Uniform delay, d_1				40.6		21.5		33.5	27.5	25.8	4.2	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.30		0.50		0.50	0.15	0.48	0.11	
Incremental delay, d_2				11.0		34.3		43.5	1.2	27.3	0.2	
Initial queue delay, d_3												
Control delay				51.7		55.8		77.0	28.7	53.1	4.4	
Lane group LOS				D		E		E	C	D	A	
Approach delay				55.1			60.4			33.0		
Approach LOS				E			E			C		
Intersection delay	48.7			X_c = 1.02			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/ Hill and Dale Rd.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	PM Peak Hour	Analysis Year	Build with Signal
		Project ID	Gateway - Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	0	0	0	1	0	1
Lane group		LT			TR					L		R
Volume, V (vph)	113	365			383	305				122		78
% Heavy vehicles, %HV	1	1			0	0				1		1
Peak-hour factor, PHF	0.90	0.90			0.83	0.83				0.87		0.87
Pretimed (P) or actuated (A)	P	P			P	P				A		A
Start-up lost time, l_1		2.0			2.0					2.0		2.0
Extension of effective green, e		2.0			2.0					2.0		2.0
Arrival type, AT		3			3					3		3
Unit extension, UE		3.0			3.0					3.0		3.0
Filtering/metering, I		1.000			1.000					1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0					0.0		0.0
Ped / Bike / RTOR volumes				0		0	0			0		0
Lane width		11.0			11.0					12.0		13.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0					0		0
Min. time for pedestrians, G_p				3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	SB Only	06	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		532			828					140		90
Lane group capacity, c		829			1151					298		275
v/c ratio, X		0.64			0.72					0.47		0.33
Total green ratio, g/C		0.67			0.67					0.17		0.17
Uniform delay, d_1		5.8			6.4					22.6		22.0
Progression factor, PF		1.000			1.000					1.000		1.000
Delay calibration, k		0.50			0.50					0.11		0.11
Incremental delay, d_2		3.8			3.9					1.2		0.7
Initial queue delay, d_3												
Control delay		9.6			10.3					23.8		22.7
Lane group LOS		A			B					C		C
Approach delay	9.6			10.3						23.4		
Approach LOS	A			B						C		
Intersection delay	12.0			X_c = 0.67			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Build Condition retiming
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	248	875	6	172	795	415	8	167	179	246	70	114
% Heavy vehicles, %HV	2	2	2	4	4	4	3	3	3	4	4	4
Peak-hour factor, PHF	0.89	0.89	0.89	0.95	0.95	0.95	0.89	0.89	0.89	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 44.0	G = 8.0	G =	G =	G = 22.0	G = 6.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 100.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	279	990		181	837	437		398		289	216	
Lane group capacity, c	303	956		285	784	666		352		261	529	
v/c ratio, X	0.92	1.04		0.64	1.07	0.66		1.13		1.11	0.41	
Total green ratio, g/C	0.57	0.44		0.57	0.44	0.44		0.22		0.33	0.33	
Uniform delay, d_1	40.7	28.0		38.6	28.0	22.0		39.0		42.3	25.9	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.44	0.50		0.22	0.50	0.23		0.50		0.50	0.11	
Incremental delay, d_2	31.9	38.7		4.6	51.7	2.4		88.3		87.5	0.5	
Initial queue delay, d_3												
Control delay	72.7	66.7		43.2	79.7	24.4		127.3		129.9	26.5	
Lane group LOS	E	E		D	E	C		F		F	C	
Approach delay	68.0			58.6			127.3			85.6		
Approach LOS	E			E			F			F		
Intersection delay	73.2			X_c = 0.00			Intersection LOS			E		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	PM Peak Hour	Analysis Year	Build Condition retiming
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	878	425	8	1	451	186	2	20	2	150	2	949
% Heavy vehicles, %HV	3	3	3	6	6	6	14	14	14	2	2	2
Peak-hour factor, PHF	0.97	0.97	0.97	0.81	0.81	0.81	0.39	0.39	0.39	0.91	0.91	0.91
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	NS Perm	SB Only	07	08
Timing	G = 56.0	G = 33.0	G =	G =	G = 7.0	G = 4.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	905	446		1	557	230		61			167	1043
Lane group capacity, c	847	1434		240	493	501		60			204	1031
v/c ratio, X	1.07	0.31		0.00	1.13	0.46		1.02			0.82	1.01
Total green ratio, g/C	0.78	0.78		0.28	0.28	0.31		0.06			0.13	0.64
Uniform delay, d_1	28.1	3.7		31.6	43.5	33.4		56.5			50.6	21.5
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.50	0.11		0.50			0.36	0.50
Incremental delay, d_2	50.9	0.1		0.0	81.3	0.7		121.0			22.4	30.9
Initial queue delay, d_3												
Control delay	79.0	3.8		31.6	124.8	34.1		177.5			73.0	52.4
Lane group LOS	E	A		C	F	C		F			E	D
Approach delay	54.2			98.2			177.5			55.3		
Approach LOS	D			F			F			E		
Intersection delay	66.9			X_c = 1.34			Intersection LOS			E		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Site (west)
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	8/26/04	Analysis Year	Build Condition
Analysis Time Period	Saturday Peak Hour		

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	79	1014	0	0	905	34
Peak-hour factor, PHF	0.93	0.93	1.00	1.00	0.89	0.89
Hourly Flow Rate (veh/h)	84	1090	0	0	1016	38
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	32	0	64
Peak-hour factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate (veh/h)	0	0	0	33	0	67
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	84					33		67
Capacity, c_m (vph)	668					38		284
v/c ratio	0.13					0.87		0.24
Queue length (95%)	0.43					3.22		0.90
Control Delay (s/veh)	11.2					264.8		21.5
LOS	B					F		C
Approach delay (s/veh)	--	--				101.8		
Approach LOS	--	--				F		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/Site (west)
Agency/Co.	TMA	Jurisdiction	Town of Carmel
Date Performed	8/26/04	Analysis Year	Build Condition 2 exit lanes
Analysis Time Period	Saturday Peak Hour		

Project Description: Gateway Summit- The Fairways

East/West Street: US Route 6 | North/South Street: Site

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 (veh/h)	79	1014	0	0	905	34
Peak-hour factor, PHF	0.93	0.93	1.00	1.00	0.89	0.89
Hourly Flow Rate (veh/h)	84	1090	0	0	1016	38
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	32	0	64
Peak-hour factor, PHF	1.00	1.00	1.00	0.95	1.00	0.95
Hourly Flow Rate (veh/h)	0	0	0	33	0	67
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	84					33		67
Capacity, c_m (vph)	668					38		284
v/c ratio	0.13					0.87		0.24
Queue length (95%)	0.43					3.22		0.90
Control Delay (s/veh)	11.2					264.8		21.5
LOS	B					F		C
Approach delay (s/veh)	--	--				101.8		
Approach LOS	--	--				F		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 52
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build Condition diversion
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	0	0	1	0	1	0	1	1	1	1	0
Lane group				L		R		T	R	L	T	
Volume, V (vph)				200		718		392	434	761	443	
% Heavy vehicles, %HV				2		2		5	5	2	2	
Peak-hour factor, PHF				0.81		0.81		0.90	0.90	0.90	0.90	
Pretimed (P) or actuated (A)				A		A		A	A	A	A	
Start-up lost time, l_1				2.0		2.0		2.0	2.0	2.0	2.0	
Extension of effective green, e				2.0		2.0		2.0	2.0	2.0	2.0	
Arrival type, AT				3		3		3	3	3	3	
Unit extension, UE				3.0		3.0		3.0	3.0	3.0	3.0	
Filtering/metering, I				1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Initial unmet demand, Q_b				0.0		0.0		0.0	0.0	0.0	0.0	
Ped / Bike / RTOR volumes	0			0		0	0		0			
Lane width				11.0		11.0		12.0	16.0	11.0	12.0	
Parking / Grade / Parking	N		N	N	1	N	N	1	N	N	-1	N
Parking maneuvers, N_m												
Buses stopping, N_B				0		0		0	0	0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2					

Phasing	WB Only	02	03	04	SB Only	NS Perm	07	08
Timing	G = 18.0	G =	G =	G =	G = 42.0	G = 25.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis, T = 0.25 | Cycle Length, C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v				247		886		436	482	846	492	
Lane group capacity, c				306		990		450	832	794	1348	
v/c ratio, X				0.81		0.89		0.97	0.58	1.07	0.36	
Total green ratio, g/C				0.18		0.65		0.25	0.48	0.72	0.72	
Uniform delay, d_1				39.3		14.6		37.1	18.7	24.3	5.3	
Progression factor, PF				1.000		1.000		1.000	1.000	1.000	1.000	
Delay calibration, k				0.35		0.42		0.48	0.17	0.50	0.11	
Incremental delay, d_2				14.7		10.6		34.3	1.0	50.8	0.2	
Initial queue delay, d_3												
Control delay				54.1		25.2		71.4	19.7	75.1	5.5	
Lane group LOS				D		C		E	B	E	A	
Approach delay				31.5			44.3			49.5		
Approach LOS				C			D			D		
Intersection delay	42.1			X_c = 1.15			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Fair Street/ Hill and Dale Rd.
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Carmel
Time Period	Saturday Peak Hour	Analysis Year	Build with Signal
		Project ID	Gateway - Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	0	1	0	0	1	0	0	0	0	1	0	1
Lane group		LT			TR					L		R
Volume, V (vph)	81	260			266	149				144		97
% Heavy vehicles, %HV	0	0			1	1				1		1
Peak-hour factor, PHF	0.81	0.81			0.82	0.82				0.83		0.83
Pretimed (P) or actuated (A)	P	P			P	P				A		A
Start-up lost time, l_1		2.0			2.0					2.0		2.0
Extension of effective green, e		2.0			2.0					2.0		2.0
Arrival type, AT		3			3					3		3
Unit extension, UE		3.0			3.0					3.0		3.0
Filtering/metering, I		1.000			1.000					1.000	1.000	1.000
Initial unmet demand, Q_b		0.0			0.0					0.0		0.0
Ped / Bike / RTOR volumes				0		0	0			0		0
Lane width		11.0			11.0					12.0		13.0
Parking / Grade / Parking	N	0	N	N	0	N	N		N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B		0			0					0		0
Min. time for pedestrians, G_p				3.2			3.2			3.2		

Phasing	EW Perm	02	03	04	SB Only	06	07	08
Timing	G = 40.0	G =	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 60.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v		421			506					173		117
Lane group capacity, c		986			1153					298		275
v/c ratio, X		0.43			0.44					0.58		0.43
Total green ratio, g/C		0.67			0.67					0.17		0.17
Uniform delay, d_1		4.7			4.7					23.1		22.4
Progression factor, PF		1.000			1.000					1.000		1.000
Delay calibration, k		0.50			0.50					0.17		0.11
Incremental delay, d_2		1.4			1.2					2.8		1.1
Initial queue delay, d_3												
Control delay		6.0			5.9					25.9		23.5
Lane group LOS		A			A					C		C
Approach delay	6.0			5.9						24.9		
Approach LOS	A			A						C		
Intersection delay	10.5			X_c = 0.47			Intersection LOS			B		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	Rt 6/John Simpson Road
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Build Condition retiming
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	1	1	0
Lane group	L	TR		L	T	R		LTR		L	TR	
Volume, V (vph)	157	858	12	116	801	238	12	56	114	246	44	118
% Heavy vehicles, %HV	2	2	2	2	2	2	2	2	2	1	1	2
Peak-hour factor, PHF	0.90	0.90	0.90	0.81	0.81	0.81	0.82	0.82	0.82	0.95	0.95	0.95
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0		2.0	2.0	
Arrival type, AT	3	3		3	3	3		3		3	3	
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	16.0		11.0	12.0	12.0		11.0		11.0	11.0	
Parking / Grade / Parking	N	-6	N	N	5	N	N	6	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0		0	0	
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EW Perm	Excl. Left	03	04	NS Perm	SB Only	07	08
Timing	G = 47.0	G = 3.0	G =	G =	G = 16.0	G = 3.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 89.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	174	966		143	989	294		222		259	170	
Lane group capacity, c	241	1146		231	959	815		276		282	434	
v/c ratio, X	0.72	0.84		0.62	1.03	0.36		0.80		0.92	0.39	
Total green ratio, g/C	0.62	0.53		0.62	0.53	0.53		0.18		0.27	0.27	
Uniform delay, d_1	36.8	17.9		36.3	21.0	12.2		35.0		36.7	26.5	
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000		1.000	1.000	
Delay calibration, k	0.28	0.38		0.20	0.50	0.11		0.35		0.44	0.11	
Incremental delay, d_2	10.2	5.9		5.0	37.4	0.3		15.8		33.0	0.6	
Initial queue delay, d_3												
Control delay	47.0	23.7		41.3	58.4	12.5		50.8		69.7	27.1	
Lane group LOS	D	C		D	E	B		D		E	C	
Approach delay	27.3			47.2			50.8			52.8		
Approach LOS	C			D			D			D		
Intersection delay	41.1			X_c = 0.00			Intersection LOS			D		

HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	JAG	Intersection	US Route 6/ NYS Route 312
Agency or Co.	TMA	Area Type	All other areas
Date Performed	8/26/04	Jurisdiction	Town of Southeast
Time Period	Saturday Peak Hour	Analysis Year	Build Condition with retiming
		Project ID	Gateway Summit - The Fairways

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	0	1	1	1	0	1	0	0	1	1
Lane group	L	TR		L	T	R		LTR			LT	R
Volume, V (vph)	890	328	0	1	350	120	3	2	0	111	4	802
% Heavy vehicles, %HV	1	1	1	3	3	3	0	0	0	2	2	2
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.63	0.63	0.63	0.85	0.85	0.85
Pretimed (P) or actuated (A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time, l_1	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Extension of effective green, e	2.0	2.0		2.0	2.0	2.0		2.0			2.0	2.0
Arrival type, AT	3	3		3	3	3		3			3	3
Unit extension, UE	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Filtering/metering, I	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Initial unmet demand, Q_b	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Ped / Bike / RTOR volumes	0		0	0		0	0		0	0		0
Lane width	11.0	12.0		11.0	12.0	14.0		14.0			11.0	12.0
Parking / Grade / Parking	N	1	N	N	0	N	N	1	N	N	-3	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0		0	0	0		0			0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	EB Only	EW Perm	03	04	SB Only	NS Perm	07	08
Timing	G = 55.0	G = 26.0	G =	G =	G = 5.0	G = 4.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 110.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	1000	369		1	412	141		8			136	944
Lane group capacity, c	926	1464		228	436	547		60			185	1081
v/c ratio, X	1.08	0.25		0.00	0.94	0.26		0.13			0.74	0.87
Total green ratio, g/C	0.78	0.78		0.24	0.24	0.33		0.04			0.13	0.67
Uniform delay, d_1	23.7	3.3		32.1	41.3	27.2		51.3			46.2	14.3
Progression factor, PF	1.000	1.000		1.000	1.000	1.000		1.000			1.000	1.000
Delay calibration, k	0.50	0.11		0.11	0.46	0.11		0.11			0.29	0.40
Incremental delay, d_2	53.6	0.1		0.0	29.5	0.3		1.0			14.2	8.1
Initial queue delay, d_3												
Control delay	77.2	3.4		32.1	70.8	27.4		52.3			60.4	22.3
Lane group LOS	E	A		C	E	C		D			E	C
Approach delay	57.3			59.7			52.3			27.1		
Approach LOS	E			E			D			C		
Intersection delay	46.9			X_c = 1.31			Intersection LOS			D		