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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Burger King*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*4/20/2004*	Analysis Year	*2004*
Analysis Time Period	*Exist Saturday PM*		

Project Description *Village Plaza No Build Analysis (Driveway A)*

East/West Street: *Elliott Rd* | North/South Street: *Burger King*

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)	*10*	*302*	*12*	*19*	*259*	*45*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*10*	*317*	*12*	*20*	*272*	*47*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*1*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*1*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*6*	*3*	*17*	*68*	*3*	*10*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*6*	*3*	*17*	*71*	*3*	*10*
Proportion of heavy vehicles, P_{HV}	*1*	*1*	*1*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
Volume, v (vph)	*10*	*20*		*26*			*84*	
Capacity, c_m (vph)	*1247*	*1236*		*528*			*368*	
v/c ratio	*0.01*	*0.02*		*0.05*			*0.23*	
Queue length (95%)	*0.02*	*0.05*		*0.15*			*0.87*	
Control Delay (s/veh)	*7.9*	*8.0*		*12.2*			*17.7*	

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LOS	A	A	B	C
Approach delay (s/veh)	–	–	12.2	17.7
Approach LOS	–	–	B	C

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Plaza*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*4/20/2004*	Analysis Year	*2004*
Analysis Time Period	*Exist Saturday PM*		

Project Description *Village Plaza No Build Analysis (Driveway B)*

East/West Street: *Elliott Rd* | North/South Street: *Plaza*

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	*35*	*239*	*0*	*0*	*203*	*70*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.95*	*0.95*	*0.90*	*0.90*
Hourly Flow Rate, HFR	*38*	*265*	*0*	*0*	*225*	*77*
Percent Heavy Vehicles	*1*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*77*	*0*	*59*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.90*	*0.95*	*0.90*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*85*	*0*	*65*
Percent Heavy Vehicles	*0*	*0*	*0*	*1*	*1*	*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*

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (vph)	*38*					*85*		*65*
C (m) (vph)	*1265*					*448*		*777*
v/c	*0.03*					*0.19*		*0.08*
95% queue length	*0.09*					*0.69*		*0.27*
Control Delay	*7.9*					*14.9*		*10.1*
LOS	*A*					*B*		*B*
Approach Delay	--	--				*12.8*		
Approach LOS	--	--				*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	5/5/2004
Analysis Time Period	Exist Saturday PM

Site Information

Intersection	Elliott Rd & Theater
Jurisdiction	Town of Chapel Hill
Analysis Year	2004

Project Description: Village Plaza No Build Analysis (Driveway C)

East/West Street: Elliott Rd | North/South Street: Theater

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	80	263	0	0	261	3
Peak-Hour Factor, PHF	0.90	0.90	0.95	0.95	0.90	0.90
Hourly Flow Rate, HFR	88	292	0	0	290	3
Percent Heavy Vehicles	1	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	8	0	40
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	0	8	0	44
Percent Heavy Vehicles	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	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LTR	
v (vph)	88						52	
C (m) (vph)	1274						637	
v/c	0.07						0.08	
95% queue length	0.22						0.27	
Control Delay	8.0						11.2	
LOS	A						B	
Approach Delay	--	--					11.2	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Elliott Rd & Red Hot Blue 2
Agency/Co.	PBS&J	Jurisdiction	Town of Chapel Hill
Date Performed	4/20/2004	Analysis Year	2004
Analysis Time Period	Exist Saturday PM		

Project Description: Village Plaza No Build Analysis (Driveway D)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 2

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	13	303	1	5	263	33
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	14	336	1	5	292	36
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	8	32	0	16
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	8	35	0	17
Percent Heavy Vehicles	1	1	1	1	1	1
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	14	5		8			52	
C (m) (vph)	1237	1228		708			426	
v/c	0.01	0.00		0.01			0.12	
95% queue length	0.03	0.01		0.03			0.41	
Control Delay	7.9	7.9		10.1			14.6	
LOS	A	A		B			B	
Approach Delay	--	--	10.1			14.6		
Approach LOS	--	--	B			B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*4/20/2004*
Analysis Time Period	*Exist Saturday PM*

Site Information

Intersection	*Elliott Rd & Red Hot Blue 1*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2004*

Project Description: *Village Plaza No Build Analysis (Driveway E)*

East/West Street: *Elliott Rd* | North/South Street: *Red Hot Blue 1*

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)	*24*	*251*	*0*	*0*	*237*	*42*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*25*	*264*	*0*	*0*	*249*	*44*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*66*	*0*	*20*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*69*	*0*	*21*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LTR*	
Volume, v (vph)	*25*						*90*	
Capacity, c_m (vph)	*1274*						*513*	
v/c ratio	*0.02*						*0.18*	
Queue length (95%)	*0.06*						*0.63*	

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Control Delay (s/veh)	7.9						13.5	
LOS	A						B	
Approach delay (s/veh)	--	--				13.5		
Approach LOS	--	--				B		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*4/20/2004*
Analysis Time Period	*Exist Saturday PM*

Site Information

Intersection	*Elliott Rd & Whole Foods #1*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2004*

Project Description *Village Plaza No Build Analysis (Driveway F)*

East/West Street: *Elliott Rd* | North/South Street: *Whole Foods #1*

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)	*123*	*192*	*12*	*8*	*174*	*75*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*129*	*202*	*12*	*8*	*183*	*78*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*1*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*1*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*15*	*2*	*7*	*76*	*2*	*153*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*15*	*2*	*7*	*80*	*2*	*161*
Proportion of heavy vehicles, P_{HV}	*1*	*1*	*1*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration		*LTR*		*LT*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*		*LT*		*R*
Volume, v (vph)	*129*	*8*		*24*		*82*		*161*
Capacity, c_m (vph)	*1309*	*1359*		*297*		*317*		*820*
v/c ratio	*0.10*	*0.01*		*0.08*		*0.26*		*0.20*
Queue length (95%)	*0.33*	*0.02*		*0.26*		*1.01*		*0.73*

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Control Delay (s/veh)	8.1	7.7		18.2		20.3		10.5
LOS	A	A		C		C		B
Approach delay (s/veh)	–	–	18.2			13.8		
Approach LOS	–	–	C			B		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Franklin St & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Exist Saturday PM	Analysis Year	2004
		Project ID	Village Plaza No Build Analysis

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	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume, V (vph)	39	57	26	154	91	97	20	680	185	85	622	42
% Heavy vehicles, %HV	1	1	1	1	1	1	1	1	1	1	1	1
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	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	12.0	12.0		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	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	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 9.0	G = 18.5	G =	G =	G = 14.0	G = 44.5	G =	G =
	Y = 6	Y = 6.5	Y =	Y =	Y = 6	Y = 5.5	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	41	87		162	198		21	911		89	699	
Lane group capacity, c	274	270		347	261		204	1252		347	1282	
v/c ratio, X	0.15	0.32		0.47	0.76		0.10	0.73		0.26	0.55	

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Total green ratio, g/C	0.30	0.17		0.30	0.17		0.13	0.40		0.59	0.40	
Uniform delay, d_1	27.9	40.2		29.8	43.6		42.4	27.6		13.0	25.0	
Progression factor, PF	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Delay calibration, k	0.11	0.11		0.11	0.31		0.11	0.29		0.11	0.15	
Incremental delay, d_2	0.3	0.7		1.0	12.2		0.2	2.2		0.4	0.5	
Initial queue delay, d_3												
Control delay	28.2	40.9		30.8	55.8		42.7	29.8		13.4	25.5	
Lane group LOS	C	D		C	E		D	C		B	C	
Approach delay	36.8			44.5			30.1			24.1		
Approach LOS	D			D			C			C		
Intersection delay	30.7			X_c = 0.72			Intersection LOS			C		

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INTERSECTION ANALYSES

2006 BACKGROUND CONDITIONS

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	US 15-501 & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Friday PM	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	0	0	0	1	2	0	1	2	1
Lane group	L		R				L	T		L	T	R
Volume, V (vph)	159		303				313	1672		21	1662	197
% Heavy vehicles, %HV	1		1				1	1		1	1	1
Peak-hour factor, PHF	0.95		0.95				0.95	0.95		0.95	0.95	0.95
Pretimed (P) or actuated (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	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		30	0			0			0		20
Lane width	12.0		12.0				12.0	12.0		12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N		N	N	0	N	N	0	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	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 26.0	G =	G =	G =	G = 9.0	G = 25.0	G = 82.0	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y = 6	Y =

Duration of Analysis, T = 0.25 | Cycle Length, C = 160.0

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	167		287				329	1760		22	1749	186
Lane group capacity, c	260		644				400	2139		90	1639	733
v/c ratio, X	0.64		0.45				0.82	0.82		0.24	1.07	0.25
Total green ratio, g/C	0.16		0.45				0.25	0.67		0.06	0.51	0.51

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Uniform delay, d_1	62.7		30.3				56.6	19.5		72.2	39.0	21.9
Progression factor, PF	1.000		1.000				1.000	1.000		1.000	1.000	1.000
Delay calibration, k	0.22		0.11				0.36	0.36		0.11	0.50	0.11
Incremental delay, d_2	5.3		0.5				13.0	2.7		1.4	42.6	0.2
Initial queue delay, d_3												
Control delay	68.0		30.8				69.6	22.3		73.7	81.6	22.0
Lane group LOS	E		C				E	C		E	F	C
Approach delay	44.5						29.7			75.8		
Approach LOS	D						C			E		
Intersection delay	51.3			X_c = 0.93			Intersection LOS			D		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Burger King*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*4/20/2004*	Analysis Year	*2006*
Analysis Time Period	*Friday PM*		

Project Description *Village Plaza No Build Analysis (Driveway A)*

East/West Street: *Elliott Rd* | North/South Street: *Burger King*

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)	*40*	*400*	*113*	*29*	*464*	*16*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*42*	*421*	*118*	*30*	*488*	*16*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*1*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*1*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*69*	*1*	*42*	*21*	*1*	*22*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*72*	*1*	*44*	*22*	*1*	*23*
Proportion of heavy vehicles, P_{HV}	*1*	*1*	*1*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
Volume, v (vph)	*42*	*30*		*117*			*46*	
Capacity, c_m (vph)	*1069*	*1034*		*227*			*246*	
v/c ratio	*0.04*	*0.03*		*0.52*			*0.19*	
Queue length (95%)	*0.12*	*0.09*		*2.67*			*0.67*	
Control Delay (s/veh)	*8.5*	*8.6*		*36.6*			*23.0*	

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LOS	A	A	E	C
Approach delay (s/veh)	–	–	36.6	23.0
Approach LOS	–	–	E	C

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Elliott Rd & Plaza
Agency/Co.	PBS&J	Jurisdiction	Town of Chapel Hill
Date Performed	4/20/2004	Analysis Year	2006
Analysis Time Period	Friday PM		

Project Description: Village Plaza No Build Analysis (Driveway B)

East/West Street: Elliott Rd | North/South Street: Plaza

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)	25	470	0	0	479	68
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	26	494	0	0	504	71
Proportion of heavy vehicles, P_{HV}	1	–	–	0	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				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	69	0	33
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	72	0	34
Proportion of heavy vehicles, P_{HV}	0	0	0	1	1	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	L					L		R
Volume, v (vph)	26					72		34
Capacity, c_m (vph)	1003					234		544
v/c ratio	0.03					0.31		0.06
Queue length (95%)	0.08					1.26		0.20
Control Delay (s/veh)	8.7					27.1		12.1

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LOS	A				D		B
Approach delay (s/veh)	–	–			22.3		
Approach LOS	–	–			C		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Elliott Rd & Theater
Agency/Co.	PBS&J	Jurisdiction	Town of Chapel Hill
Date Performed	5/5/2004	Analysis Year	2006
Analysis Time Period	Friday PM		

Project Description: Village Plaza No Build Analysis (Driveway C)

East/West Street: Elliott Rd | North/South Street: Theater

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)	63	467	0	0	498	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	66	491	0	0	524	10
Proportion of heavy vehicles, P_{HV}	1	–	–	0	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				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	6	0	43
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	6	0	45
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	0	1	0
Configuration					LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LTR	
Volume, v (vph)	66						51	
Capacity, c_m (vph)	1039						461	
v/c ratio	0.06						0.11	
Queue length (95%)	0.20						0.37	
Control Delay (s/veh)	8.7						13.8	

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LOS	A			B	
Approach delay (s/veh)	–	–		13.8	
Approach LOS	–	–		B	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Friday PM

Site Information

Intersection	Elliott Rd & Red Hot Blue 2
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway D)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 2

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)	19	432	9	42	469	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	20	454	9	44	493	31
Proportion of heavy vehicles, P_{HV}	1	–	–	1	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		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)	25	0	42	57	0	29
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	26	0	44	60	0	30
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
Volume, v (vph)	20	44		70			90	
Capacity, c_m (vph)	1048	1104		309			216	
v/c ratio	0.02	0.04		0.23			0.42	
Queue length (95%)	0.06	0.12		0.85			1.91	

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Control Delay (s/veh)	8.5	8.4		20.0			33.1	
LOS	A	A		C			D	
Approach delay (s/veh)	--	--	20.0			33.1		
Approach LOS	--	--	C			D		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Friday PM

Site Information

Intersection	Elliott Rd & Red Hot Blue 1
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway E)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 1

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)	45	374	0	0	461	61
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	47	393	0	0	485	64
Proportion of heavy vehicles, P_{HV}	1	–	–	0	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				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	86	0	29
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	90	0	30
Proportion of heavy vehicles, P_{HV}	0	0	0	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LTR	
Volume, v (vph)	47						120	
Capacity, c_m (vph)	1026						297	
v/c ratio	0.05						0.40	
Queue length (95%)	0.14						1.88	

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Control Delay (s/veh)	8.7						25.1	
LOS	A						D	
Approach delay (s/veh)	--	--				25.1		
Approach LOS	--	--				D		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Friday PM

Site Information

Intersection	Elliott Rd & Whole Foods #1
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway F)

East/West Street: Elliott Rd | North/South Street: Whole Foods #1

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)	212	304	84	17	378	96
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	223	320	88	17	397	101
Proportion of heavy vehicles, P_{HV}	1	--	--	1	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	71	7	54	60	3	206
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	74	7	56	63	3	216
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	1
Configuration		LTR		LT		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR		LT		R
Volume, v (vph)	223	17		137		66		216
Capacity, c_m (vph)	1071	1162		106		100		613
v/c ratio	0.21	0.01		1.29		0.66		0.35
Queue length (95%)	0.78	0.04		9.36		3.28		1.58

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Control Delay (s/veh)	9.2	8.1		259.9		93.1		14.0
LOS	A	A		F		F		B
Approach delay (s/veh)	--	--	259.9			32.5		
Approach LOS	--	--	F			D		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Franklin St & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Friday PM	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume, V (vph)	73	48	58	297	181	177	115	1031	371	182	830	134
% Heavy vehicles, %HV	1	1	1	1	1	1	1	1	1	1	1	1
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	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	12.0	12.0		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	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	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 9.0	G = 18.5	G =	G =	G = 14.0	G = 44.5	G =	G =
	Y = 6	Y = 6.5	Y =	Y =	Y = 6	Y = 5.5	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	77	112		313	377		121	1476		192	1015	
Lane group capacity, c	196	260		342	262		204	1242		269	1267	
v/c ratio, X	0.39	0.43		0.92	1.44		0.59	1.19		0.71	0.80	

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Total green ratio, g/C	0.30	0.17		0.30	0.17		0.13	0.40		0.59	0.40	
Uniform delay, d_1	29.9	41.0		38.5	45.8		45.3	32.8		29.1	28.9	
Progression factor, PF	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Delay calibration, k	0.11	0.11		0.43	0.50		0.18	0.50		0.28	0.34	
Incremental delay, d_2	1.3	1.1		28.3	217.9		4.6	93.1		8.7	3.8	
Initial queue delay, d_3												
Control delay	31.2	42.2		66.8	263.7		49.9	125.9		37.7	32.6	
Lane group LOS	C	D		E	F		D	F		D	C	
Approach delay	37.7			174.4			120.1			33.5		
Approach LOS	D			F			F			C		
Intersection delay	97.6			X_c = 1.04			Intersection LOS			F		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	US 15-501 & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Saturday Noon	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	0	0	0	1	2	0	1	2	1
Lane group	L		R				L	T		L	T	R
Volume, V (vph)	152		338				301	1492		20	1290	237
% Heavy vehicles, %HV	1		1				1	1		1	1	1
Peak-hour factor, PHF	0.95		0.95				0.95	0.95		0.95	0.95	0.95
Pretimed (P) or actuated (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	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		34	0			0			0		24
Lane width	12.0		12.0				12.0	12.0		12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N		N	N	0	N	N	0	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	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 28.0	G =	G =	G =	G = 9.0	G = 24.0	G = 71.0	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y = 6	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 150.0		

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	160		320				317	1571		21	1358	224
Lane group capacity, c	298		696				416	2025		96	1514	677
v/c ratio, X	0.54		0.46				0.76	0.78		0.22	0.90	0.33
Total green ratio, g/C	0.19		0.49				0.26	0.63		0.06	0.47	0.47

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Uniform delay, d_1	55.1		25.5				51.2	19.8		67.2	36.2	24.7
Progression factor, PF	1.000		1.000				1.000	1.000		1.000	1.000	1.000
Delay calibration, k	0.14		0.11				0.31	0.33		0.11	0.42	0.11
Incremental delay, d_2	1.9		0.5				8.1	2.0		1.2	7.5	0.3
Initial queue delay, d_3												
Control delay	57.1		25.9				59.3	21.8		68.3	43.6	25.0
Lane group LOS	E		C				E	C		E	D	C
Approach delay	36.3						28.1			41.3		
Approach LOS	D						C			D		
Intersection delay	34.4			X_c = 0.79			Intersection LOS			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Elliott Rd & Burger King
Agency/Co.	PBS&J	Jurisdiction	Town of Chapel Hill
Date Performed	4/20/2004	Analysis Year	2006
Analysis Time Period	Saturday Noon		

Project Description: Village Plaza No Build Analysis (Driveway A)

East/West Street: Elliott Rd | North/South Street: Burger King

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)	25	351	19	51	398	88
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	26	369	20	53	418	92
Proportion of heavy vehicles, P_{HV}	1	–	–	1	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			1	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	19	2	57	82	5	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	20	2	60	86	5	31
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
Volume, v (vph)	26	53		82			122	
Capacity, c_m (vph)	1063	1175		404			223	
v/c ratio	0.02	0.05		0.20			0.55	
Queue length (95%)	0.08	0.14		0.75			2.94	
Control Delay (s/veh)	8.5	8.2		16.2			39.1	

366

LOS	A	A	C	E
Approach delay (s/veh)	–	–	16.2	39.1
Approach LOS	–	–	C	E

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Plaza*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*4/20/2004*	Analysis Year	*2006*
Analysis Time Period	*Saturday Noon*		

Project Description *Village Plaza No Build Analysis (Driveway B)*

East/West Street: *Elliott Rd* | North/South Street: *Plaza*

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)	*35*	*329*	*0*	*0*	*354*	*87*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*36*	*346*	*0*	*0*	*372*	*91*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*60*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*81*	*0*	*63*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*1*	*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	*L*					*L*		*R*
Volume, v (vph)	*36*					*81*		*63*
Capacity, c_m (vph)	*1104*					*328*		*637*
v/c ratio	*0.03*					*0.25*		*0.10*
Queue length (95%)	*0.10*					*0.95*		*0.33*
Control Delay (s/veh)	*8.4*					*19.5*		*11.3*

368

LOS	A				C	B
Approach delay (s/veh)	--	--			15.9	
Approach LOS	--	--			C	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Theater*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*5/5/2004*	Analysis Year	*2006*
Analysis Time Period	*Saturday Noon*		

Project Description *Village Plaza No Build Analysis (Driveway C)*

East/West Street: *Elliott Rd*	North/South Street: *Theater*
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)	*92*	*350*	*0*	*0*	*407*	*7*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*96*	*368*	*0*	*0*	*428*	*7*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*12*	*0*	*57*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*12*	*0*	*60*
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*	*0*	*1*	*0*
Configuration					*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LTR*	
Volume, v (vph)	*96*						*72*	
Capacity, c_m (vph)	*1130*						*501*	
v/c ratio	*0.08*						*0.14*	
Queue length (95%)	*0.28*						*0.50*	
Control Delay (s/veh)	*8.5*						*13.4*	

370

LOS	A				B	
Approach delay (s/veh)	–	–			13.4	
Approach LOS	–	–			B	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Saturday Noon

Site Information

Intersection	Elliott Rd & Red Hot Blue 2
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway D)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 2

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)	7	360	3	15	430	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	7	378	3	15	452	21
Proportion of heavy vehicles, P_{HV}	1	--	--	1	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		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)	5	0	10	71	0	41
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	5	0	10	74	0	43
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
Volume, v (vph)	7	15		15			117	
Capacity, c_m (vph)	1094	1183		414			326	
v/c ratio	0.01	0.01		0.04			0.36	
Queue length (95%)	0.02	0.04		0.11			1.58	

372

Control Delay (s/veh)	8.3	8.1		14.0			22.1	
LOS	A	A		B			C	
Approach delay (s/veh)	–	–	14.0			22.1		
Approach LOS	–	–	B			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*4/20/2004*
Analysis Time Period	*Saturday Noon*

Site Information

Intersection	*Elliott Rd & Red Hot Blue 1*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2006*

Project Description *Village Plaza No Build Analysis (Driveway E)*

East/West Street: *Elliott Rd* | North/South Street: *Red Hot Blue 1*

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)	*46*	*280*	*0*	*0*	*380*	*96*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*48*	*294*	*0*	*0*	*400*	*101*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*90*	*0*	*54*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*94*	*0*	*56*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LTR*	
Volume, v (vph)	*48*						*150*	
Capacity, c_m (vph)	*1068*						*391*	
v/c ratio	*0.04*						*0.38*	
Queue length (95%)	*0.14*						*1.76*	

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Control Delay (s/veh)	8.5						19.8	
LOS	A						C	
Approach delay (s/veh)	--	--				19.8		
Approach LOS	--	--				C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Saturday Noon

Site Information

Intersection	Elliott Rd & Whole Foods #1
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway F)

East/West Street: Elliott Rd | North/South Street: Whole Foods #1

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)	272	241	24	3	291	139
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	286	253	25	3	306	146
Proportion of heavy vehicles, P_{HV}	1	–	–	1	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		1			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	14	3	18	68	0	199
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	14	3	18	71	0	209
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	1
Configuration		LTR		LT		R

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR		LT		R
Volume, v (vph)	286	3		35		71		209
Capacity, c_m (vph)	1114	1291		147		121		670
v/c ratio	0.26	0.00		0.24		0.59		0.31
Queue length (95%)	1.03	0.01		0.88		2.91		1.33

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Control Delay (s/veh)	9.3	7.8		37.0		70.2		12.8
LOS	A	A		E		F		B
Approach delay (s/veh)	–	–	37.0			27.4		
Approach LOS	–	–	E			D		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Franklin St & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Saturday Noon	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume, V (vph)	106	78	27	233	101	170	38	812	333	126	763	61
% Heavy vehicles, %HV	1	1	1	1	1	1	1	1	1	1	1	1
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	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	12.0	12.0		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	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	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 9.0	G = 18.5	G =	G =	G = 14.0	G = 44.5	G =	G =
	Y = 6	Y = 6.5	Y =	Y =	Y = 6	Y = 5.5	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	112	110		245	285		40	1206		133	867	
Lane group capacity, c	204	272		342	256		204	1237		269	1280	
v/c ratio, X	0.55	0.40		0.72	1.11		0.20	0.97		0.49	0.68	

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Total green ratio, g/C	0.30	0.17		0.30	0.17		0.13	0.40		0.59	0.40	
Uniform delay, d_1	30.1	40.8		35.1	45.8		43.0	32.2		18.5	26.9	
Progression factor, PF	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
Delay calibration, k	0.15	0.11		0.28	0.50		0.11	0.48		0.11	0.25	
Incremental delay, d_2	3.1	1.0		7.0	90.1		0.5	19.8		1.4	1.5	
Initial queue delay, d_3												
Control delay	33.2	41.8		42.1	135.8		43.4	52.0		19.9	28.3	
Lane group LOS	C	D		D	F		D	D		B	C	
Approach delay	37.5			92.5			51.7			27.2		
Approach LOS	D			F			D			C		
Intersection delay	49.7			X_c = 0.93			Intersection LOS			D		

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HCS2000™ DETAILED REPORT

General Information

Analyst	Erin Harrington	Intersection	US 15-501 [illegible]
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of C[illegible]
Time Period	Saturday PM	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	0	0	0	1	2	0	1	2	1
Lane group	L		R				L	T		L	T	R
Volume, V (vph)	97		306				208	1120		20	1093	128
% Heavy vehicles, %HV	1		1				1	1		1	1	1
Peak-hour factor, PHF	0.95		0.95				0.95	0.95		0.95	0.95	0.95
Pretimed (P) or actuated (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	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		31	0			0			0		13
Lane width	12.0		12.0				12.0	12.0		12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N		N	N	0	N	N	0	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	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 28.0	G =	G =	G =	G = 9.0	G = 24.0	G = 71.0	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y = 6	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 150.0		

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	102		289				219	1179		21	1151	121
Lane group capacity, c	298		696				416	2025		96	1514	677
v/c ratio, X	0.34		0.42				0.53	0.58		0.22	0.76	0.18
Total green ratio, g/C	0.19		0.49				0.26	0.63		0.06	0.47	0.47

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Uniform delay, d_1	53.0		24.8				47.6	16.0		67.2	32.5	22.7
[illegible] factor, PF												
[illegible] calibration, k			0.7[illegible]				[illegible]	[illegible]		[illegible]		
[illegible]ental delay, d_2	[illegible]		0.4				1.2	[illegible]		[illegible]	2.3	
Initial queue delay, d_3												
Control delay	53.7		25.2				48.8	16.4		68.3	34.8	22.9
Lane group LOS	D		C				D	B		E	C	C
Approach delay	32.6						21.5			34.2		
Approach LOS	C						C			C		
Intersection delay	28.2			X_c = 0.59			Intersection LOS			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Saturday PM

Site Information

Intersection	Elliott Rd & Burger King
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway A)

East/West Street: Elliott Rd | North/South Street: Burger King

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)	10	314	12	20	269	47
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	10	330	12	21	283	49
Proportion of heavy vehicles, P_{HV}	1	–	–	1	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			1	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	6	3	18	71	3	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	6	3	18	74	3	10
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)	0			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
Volume, v (vph)	10	21		27			87	
Capacity, c_m (vph)	1234	1223		518			351	
v/c ratio	0.01	0.02		0.05			0.25	
Queue length (95%)	0.02	0.05		0.16			0.96	
Control Delay (s/veh)	7.9	8.0		12.3			18.6	

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LOS	A	A	B	C
Approach delay (s/veh)	–	–	12.3	18.6
Approach LOS	–	–	B	C

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Plaza*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*4/20/2004*	Analysis Year	*2006*
Analysis Time Period	*Saturday PM*		

Project Description *Village Plaza No Build Analysis (Driveway B)*

East/West Street: *Elliott Rd* | North/South Street: *Plaza*

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	*36*	*249*	*0*	*0*	*211*	*73*
Peak-Hour Factor, PHF	*0.90*	*0.90*	*0.95*	*0.95*	*0.90*	*0.90*
Hourly Flow Rate, HFR	*40*	*276*	*0*	*0*	*234*	*81*
Percent Heavy Vehicles	*1*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	*0*	*0*	*0*	*80*	*0*	*61*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.90*	*0.95*	*0.90*
Hourly Flow Rate, HFR	*0*	*0*	*0*	*88*	*0*	*67*
Percent Heavy Vehicles	*0*	*0*	*0*	*1*	*1*	*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*

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*					*L*		*R*
v (vph)	*40*					*88*		*67*
C (m) (vph)	*1251*					*433*		*767*
v/c	*0.03*					*0.20*		*0.09*
95% queue length	*0.10*					*0.75*		*0.29*
Control Delay	*8.0*					*15.4*		*10.1*
LOS	*A*					*C*		*B*
Approach Delay	--	--				*13.1*		
Approach LOS	--	--				*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	5/5/2004
Analysis Time Period	Saturday PM

Site Information

Intersection	Elliott Rd & Theater
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway C)

East/West Street: Elliott Rd | North/South Street: Theater

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	83	274	0	0	271	3
Peak-Hour Factor, PHF	0.90	0.90	0.95	0.95	0.90	0.90
Hourly Flow Rate, HFR	92	304	0	0	301	3
Percent Heavy Vehicles	1	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	8	0	42
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	0	8	0	46
Percent Heavy Vehicles	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	0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LTR	
v (vph)	92						54	
C (m) (vph)	1263						627	
v/c	0.07						0.09	
95% queue length	0.24						0.28	
Control Delay	8.1						11.3	
LOS	A						B	
Approach Delay	--	--					11.3	
Approach LOS	--	--					B	

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Saturday PM

Site Information

Intersection	Elliott Rd & Red Hot Blue 2
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway D)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 2

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	14	315	1	5	274	34
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	15	350	1	5	304	37
Percent Heavy Vehicles	1	--	--	1	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	8	33	0	17
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Hourly Flow Rate, HFR	0	0	8	36	0	18
Percent Heavy Vehicles	1	1	1	1	1	1
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	15	5		8			54	
C (m) (vph)	1224	1213		696			412	
v/c	0.01	0.00		0.01			0.13	
95% queue length	0.04	0.01		0.03			0.45	
Control Delay	8.0	8.0		10.2			15.1	
LOS	A	A		B			C	
Approach Delay	--	--	10.2			15.1		
Approach LOS	--	--	B			C		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	Erin Harrington
Agency/Co.	PBS&J
Date Performed	4/20/2004
Analysis Time Period	Saturday PM

Site Information

Intersection	Elliott Rd & Red Hot Blue 1
Jurisdiction	Town of Chapel Hill
Analysis Year	2006

Project Description: Village Plaza No Build Analysis (Driveway E)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 1

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)	25	261	0	0	246	44
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	26	274	0	0	258	46
Proportion of heavy vehicles, P_{HV}	1	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T				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	69	0	21
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	72	0	22
Proportion of heavy vehicles, P_{HV}	0	0	0	1	1	1
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	1	0
Configuration					LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L						LTR	
Volume, v (vph)	26						94	
Capacity, c_m (vph)	1263						499	
v/c ratio	0.02						0.19	
Queue length (95%)	0.06						0.69	

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Control Delay (s/veh)	7.9						13.9	
LOS	A						B	
Approach delay (s/veh)	--	--				13.9		
Approach LOS	--	--				B		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*4/20/2004*
Analysis Time Period	*Saturday PM*

Site Information

Intersection	*Elliott Rd & Whole Foods #1*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2006*

Project Description *Village Plaza No Build Analysis (Driveway F)*

East/West Street: *Elliott Rd* | North/South Street: *Whole Foods #1*

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)	*128*	*200*	*12*	*8*	*181*	*78*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*134*	*210*	*12*	*8*	*190*	*82*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*1*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*1*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*16*	*2*	*7*	*79*	*2*	*159*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*16*	*2*	*7*	*83*	*2*	*167*
Proportion of heavy vehicles, P_{HV}	*1*	*1*	*1*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration		*LTR*		*LT*		*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*		*LT*		*R*
Volume, v (vph)	*134*	*8*		*25*		*85*		*167*
Capacity, c_m (vph)	*1297*	*1349*		*278*		*303*		*811*
v/c ratio	*0.10*	*0.01*		*0.09*		*0.28*		*0.21*
Queue length (95%)	*0.34*	*0.02*		*0.29*		*1.12*		*0.77*

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Control Delay (s/veh)	8.1	7.7		19.2		21.4		10.6
LOS	A	A		C		C		B
Approach delay (s/veh)	–	–	19.2			14.3		
Approach LOS	–	–	C			B		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Franklin St / [illegible] Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	4/20/2004	Jurisdiction	Town of Chapel Hill
Time Period	Saturday PM	Analysis Year	2006
		Project ID	Village Plaza No Build Analysis

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	0	1	2	0	1	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume, V (vph)	41	59	27	160	95	101	21	707	192	88	647	44
% Heavy vehicles, %HV	1	1	1	1	1	1	1	1	1	1	1	1
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	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	12.0	12.0		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	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	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 9.0	G = 18.5	G =	G =	G = 14.0	G = 44.5	G =	G =
	Y = 6	Y = 6.5	Y =	Y =	Y = 6	Y = 5.5	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	43	90		168	206		22	946		93	727	
Lane group capacity, c	267	270		346	261		204	1252		336	1282	
v/c ratio, X	0.16	0.33		0.49	0.79		0.11	0.76		0.28	0.57	

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Total green ratio, g/C	0.30	0.17		0.30	0.17		0.13	0.40		0.59	0.40	
Uniform delay, d_1	28.9	18.3		29.9	42.9		42.5	28.1		13.4	25.3	
Progression factor, PF	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	[illegible]	
Delay calibration, k	0.11	0.11		0.11	0.34		0.11	0.37		0.11	0.16	
Incremental delay, d_2	0.3	0.7		1.1	15.0		0.2	2.7		0.5	0.6	
Initial queue delay, d_3												
Control delay	28.3	41.0		31.0	58.9		42.7	30.8		13.8	25.9	
Lane group LOS	C	D		C	E		D	C		B	C	
Approach delay	36.9			46.4			31.0			24.5		
Approach LOS	D			D			C			C		
Intersection delay	31.6			X_c = 0.74			Intersection LOS			C		

INTERSECTION ANALYSES

SCENARIO 1 CONDITIONS

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	Erin Harrington	Intersection	US 15-501 & Elliott Rd
Agency or Co.	PBS&J	Area Type	All other areas
Date Performed	5/6/2004	Jurisdiction	Town of Chapel Hill
Time Period	Friday PM	Analysis Year	2006
		Project ID	Village Plaza Option 1 Analysis

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	0	1	0	0	0	1	2	0	1	2	1
Lane group	L		R				L	T		L	T	R
Volume, V (vph)	173		335				361	1672		21	1662	217
% Heavy vehicles, %HV	1		1				1	1		1	1	1
Peak-hour factor, PHF	0.95		0.95				0.95	0.95		0.95	0.95	0.95
Pretimed (P) or actuated (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	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		30	0			0			0		20
Lane width	12.0		12.0				12.0	12.0		12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N		N	N	0	N	N	0	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	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 26.0	G =	G =	G =	G = 9.0	G = 25.0	G = 82.0	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y =	Y = 6	Y =
Duration of Analysis, T = 0.25						Cycle Length, C = 160.0		

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		321				380	1760		22	1749	207
Lane group capacity, c	260		644				400	2139		90	1639	733
v/c ratio, X	0.70		0.50				0.95	0.82		0.24	1.07	0.28
Total green ratio, g/C	0.16		0.45				0.25	0.67		0.06	0.51	0.51

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Uniform delay, d_1	63.3		31.2				59.0	19.5		72.2	39.0	22.2
Progression factor, PF	1.000		1.000				1.000	1.000		1.000	1.000	1.000
Delay calibration, k	0.27		0.11				0.46	0.36		0.11	0.50	0.11
Incremental delay, d_2	8.1		0.6				32.3	2.7		1.4	42.6	0.2
Initial queue delay, d_3												
Control delay	71.4		31.8				91.4	22.3		73.7	81.6	22.4
Lane group LOS	E		C				F	C		E	F	C
Approach delay	46.1						34.5			75.3		
Approach LOS	D						C			E		
Intersection delay	53.2			X_c = 0.97			Intersection LOS			D		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*5/6/2004*
Analysis Time Period	*Friday PM*

Site Information

Intersection	*Elliott Rd & Burger King*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2006*

Project Description *Village Plaza Option 1 Analysis (Driveway A)*

East/West Street: *Elliott Rd* | North/South Street: *Burger King*

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)	*40*	*443*	*113*	*29*	*529*	*20*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*42*	*466*	*118*	*30*	*556*	*21*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*1*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*1*	*1*	*0*
Configuration	*L*		*TR*	*L*		*TR*
Upstream Signal		*0*			*1*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*69*	*1*	*42*	*24*	*1*	*22*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*72*	*1*	*44*	*25*	*1*	*23*
Proportion of heavy vehicles, P_{HV}	*1*	*1*	*1*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*L*		*LTR*			*LTR*	
Volume, v (vph)	*42*	*30*		*117*			*49*	
Capacity, c_m (vph)	*1006*	*996*		*191*			*201*	
v/c ratio	*0.04*	*0.03*		*0.61*			*0.24*	
Queue length (95%)	*0.13*	*0.09*		*3.45*			*0.92*	
Control Delay (s/veh)	*8.7*	*8.7*		*49.8*			*28.6*	

396

LOS	A	A	E	D
Approach delay (s/veh)	--	--	49.8	28.6
Approach LOS	--	--	E	D

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*Erin Harrington*	Intersection	*Elliott Rd & Plaza*
Agency/Co.	*PBS&J*	Jurisdiction	*Town of Chapel Hill*
Date Performed	*5/6/2004*	Analysis Year	*2006*
Analysis Time Period	*Friday PM*		

Project Description *Village Plaza Option 1 Analysis (Driveway B)*

East/West Street: *Elliott Rd*	North/South Street: *Plaza*
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)	*33*	*499*	*0*	*0*	*523*	*88*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*34*	*525*	*0*	*0*	*550*	*92*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*82*	*0*	*39*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*86*	*0*	*41*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*1*	*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	*L*					*L*		*R*
Volume, v (vph)	*34*					*86*		*41*
Capacity, c_m (vph)	*947*					*201*		*505*
v/c ratio	*0.04*					*0.43*		*0.08*
Queue length (95%)	*0.11*					*1.97*		*0.26*
Control Delay (s/veh)	*8.9*					*35.7*		*12.8*

398

LOS	A				E		B
Approach delay (s/veh)	–	–			28.3		
Approach LOS	–	–			D		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	
Date Performed	*5/6/2004*
Analysis Time Period	*Friday PM*

Site Information

Intersection	*Elliott Rd & Theater*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2006*

Project Description *Village Plaza Option 1 Analysis (Driveway C)*

East/West Street: *Elliott Rd* | North/South Street: *Theater*

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)	*98*	*482*	*0*	*0*	*513*	*45*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*103*	*507*	*0*	*0*	*540*	*47*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*29*	*0*	*66*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*30*	*0*	*69*
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	*L*					*L*		*R*
Volume, v (vph)	*103*					*30*		*69*
Capacity, c_m (vph)	*993*					*166*		*527*
v/c ratio	*0.10*					*0.18*		*0.13*
Queue length (95%)	*0.35*					*0.64*		*0.45*
Control Delay (s/veh)	*9.0*					*31.4*		*12.9*

400

LOS	A					D		B
Approach delay (s/veh)	–	–				18.5		
Approach LOS	–	–				C		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Erin Harrington	Intersection	Elliott Rd & Red Hot Blue 2
Agency/Co.	PBS&J	Jurisdiction	Town of Chapel Hill
Date Performed	5/6/2004	Analysis Year	2006
Analysis Time Period	Friday PM		

Project Description: Village Plaza Option 1 Analysis (Driveway D)

East/West Street: Elliott Rd | North/South Street: Red Hot Blue 2

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)	39	477	9	42	500	37
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	41	502	9	44	526	38
Proportion of heavy vehicles, P_{HV}	1	–	–	1	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		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)	25	0	42	62	0	43
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	26	0	44	65	0	45
Proportion of heavy vehicles, P_{HV}	1	1	1	1	1	1
Percent grade (%)	0			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
Volume, v (vph)	41	44		70			110	
Capacity, c_m (vph)	1013	1059		254			191	
v/c ratio	0.04	0.04		0.28			0.58	
Queue length (95%)	0.13	0.13		1.09			3.12	

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Control Delay (s/veh)	8.7	8.5		24.5			46.7	
LOS	A	A		C			E	
Approach delay (s/veh)	–	–	24.5			46.7		
Approach LOS	–	–	C			E		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*Erin Harrington*
Agency/Co.	*PBS&J*
Date Performed	*5/6/2004*
Analysis Time Period	*Friday PM*

Site Information

Intersection	*Elliott Rd & Red Hot Blue 1*
Jurisdiction	*Town of Chapel Hill*
Analysis Year	*2006*

Project Description *Village Plaza Option 1 Analysis (Driveway E)*

East/West Street: *Elliott Rd* | North/South Street: *Red Hot Blue 1*

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)	*50*	*437*	*0*	*0*	*504*	*64*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*52*	*460*	*0*	*0*	*530*	*67*
Proportion of heavy vehicles, P_{HV}	*1*	–	–	*0*	–	–
Median type	*Undivided*					
RT Channelized?			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*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*	*88*	*0*	*33*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*92*	*0*	*34*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*1*	*1*	*1*
Percent grade (%)		*0*			*0*	
Flared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*1*	*0*
Configuration					*LTR*	

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*						*LTR*	
Volume, v (vph)	*52*						*126*	
Capacity, c_m (vph)	*985*						*256*	
v/c ratio	*0.05*						*0.49*	
Queue length (95%)	*0.17*						*2.52*	

404

Control Delay (s/veh)	8.9						32.0	
LOS	A						D	
Approach delay (s/veh)	–	–				32.0		
Approach LOS	–	–				D		