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1: Woodruff Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	320	47	125	633	393	36	469	110	451	469	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3372		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.22	1.00		0.51	1.00	1.00	0.46	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	396	3372		927	3438	1538	831	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	316	356	52	139	703	437	40	521	122	501	521	72
RTOR Reduction (vph)	0	16	0	0	0	311	0	0	102	0	0	44
Lane Group Flow (vph)	316	392	0	139	703	126	40	521	20	501	521	28
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	28.8	18.3		23.8	15.8	15.8	11.7	11.7	11.7	11.0	27.7	27.7
Effective Green, g (s)	28.8	18.3		23.8	15.8	15.8	11.7	11.7	11.7	11.0	27.7	27.7
Actuated g/C Ratio	0.41	0.26		0.34	0.23	0.23	0.17	0.17	0.17	0.16	0.40	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	361	882		406	776	347	139	575	257	524	1360	609
v/s Ratio Prot	c0.13	0.12		0.04	0.20			c0.15		c0.15	0.15	
v/s Ratio Perm	c0.23			0.08		0.08	0.05		0.01			0.02
v/c Ratio	0.88	0.45		0.34	0.91	0.36	0.29	0.91	0.08	0.96	0.38	0.05
Uniform Delay, d1	16.1	21.6		16.6	26.4	22.9	25.5	28.6	24.6	29.3	15.1	13.0
Progression Factor	1.00	1.00		0.40	0.73	1.87	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.2	0.9		0.6	12.5	1.2	5.1	20.4	0.6	28.6	0.8	0.1
Delay (s)	37.2	22.5		7.2	31.8	43.9	30.7	49.0	25.2	57.9	15.9	13.2
Level of Service	D	C		A	C	D	C	D	C	E	B	B
Approach Delay (s)		28.9			33.2			43.7			34.9	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM Average Control Delay			34.8			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			19.0			
Intersection Capacity Utilization			76.6%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build PM

2: Woodruff Road & Costco Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	13	769	85	189	1125	40	93	4	201	37	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3387		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.13	1.00		0.30	1.00	1.00	0.76	1.00		0.50	1.00	1.00
Satd. Flow (perm)	234	3387		546	3438	1538	1369	1543		905	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	854	94	210	1250	44	103	4	223	41	2	33
RTOR Reduction (vph)	0	12	0	0	0	20	0	197	0	0	0	27
Lane Group Flow (vph)	14	936	0	210	1250	24	103	30	0	41	2	6
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	49.0	49.0		37.7	37.7	37.7	8.0	8.0		8.0	8.0	12.8
Effective Green, g (s)	49.0	49.0		37.7	37.7	37.7	8.0	8.0		8.0	8.0	12.8
Actuated g/C Ratio	0.70	0.70		0.54	0.54	0.54	0.11	0.11		0.11	0.11	0.18
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	266	2371		294	1852	828	156	176		103	207	424
v/s Ratio Prot	0.00	c0.28			0.36			0.02			0.00	0.00
v/s Ratio Perm	0.03			c0.38		0.02	c0.08			0.05		0.00
v/c Ratio	0.05	0.39		0.71	0.67	0.03	0.66	0.17		0.40	0.01	0.01
Uniform Delay, d1	5.7	4.4		12.1	11.7	7.6	29.7	28.0		28.8	27.5	23.4
Progression Factor	0.13	0.20		0.77	0.60	0.51	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		13.3	1.9	0.1	14.2	1.1		6.1	0.0	0.0
Delay (s)	0.8	1.2		22.6	9.0	3.9	43.9	29.2		34.9	27.5	23.5
Level of Service	A	A		C	A	A	D	C		C	C	C
Approach Delay (s)		1.2			10.7			33.8			29.7	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay			10.7			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			19.5			
Intersection Capacity Utilization			91.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build PM

3: Green Heron Road & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	21	1	60	12	2	84	70	1347	11	2	971	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1609			1734	1538	1719	3434		1719	3438	1538
Flt Permitted		0.91			0.83	1.00	0.25	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1481			1497	1538	455	3434		257	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1	67	13	2	93	78	1497	12	2	1079	2
RTOR Reduction (vph)	0	58	0	0	0	83	0	1	0	0	0	1
Lane Group Flow (vph)	0	33	0	0	15	10	78	1508	0	2	1079	1
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.9			7.9	7.9	50.8	50.8		50.8	50.8	50.8
Effective Green, g (s)		7.9			7.9	7.9	50.8	50.8		50.8	50.8	50.8
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.73		0.73	0.73	0.73
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		167			169	174	330	2492		187	2495	1116
v/s Ratio Prot								c0.44			0.31	
v/s Ratio Perm		c0.02			0.01	0.01	0.17			0.01		0.00
v/c Ratio		0.20			0.09	0.06	0.24	0.61		0.01	0.43	0.00
Uniform Delay, d1		28.2			27.8	27.7	3.2	4.7		2.7	3.8	2.6
Progression Factor		1.00			1.00	1.00	0.64	0.73		0.44	0.61	0.33
Incremental Delay, d2		0.9			0.4	0.2	1.6	1.1		0.1	0.5	0.0
Delay (s)		29.1			28.2	28.0	3.7	4.5		1.2	2.8	0.9
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		29.1			28.0			4.5			2.8	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			5.5				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			70.0				Sum of lost time (s)			11.3		
Intersection Capacity Utilization			79.2%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2015 No-Build PM

4: Woodruff Industrial Lane & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	146	33	272	199	29	28	53	1291	75	219	800	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1568		1719	1676		1719	3410		1719	3321	
Flt Permitted	0.72	1.00		0.22	1.00		0.20	1.00		0.05	1.00	
Satd. Flow (perm)	1296	1568		391	1676		371	3410		98	3321	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	162	37	302	221	32	31	59	1434	83	243	889	262
RTOR Reduction (vph)	0	139	0	0	26	0	0	3	0	0	18	0
Lane Group Flow (vph)	162	200	0	221	37	0	59	1514	0	243	1133	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	27.5	15.5		33.5	18.5		72.7	67.6		91.5	80.4	
Effective Green, g (s)	27.5	15.5		33.5	18.5		72.7	67.6		91.5	80.4	
Actuated g/C Ratio	0.20	0.11		0.24	0.13		0.52	0.48		0.65	0.57	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	291	174		236	221		242	1647		271	1907	
v/s Ratio Prot	0.05	c0.13		c0.10	0.02		0.01	0.44		c0.11	0.34	
v/s Ratio Perm	0.06			c0.12			0.12			c0.47		
v/c Ratio	0.56	1.15		0.94	0.17		0.24	0.92		0.90	0.59	
Uniform Delay, d1	49.9	62.2		47.9	53.9		17.3	33.7		46.2	19.3	
Progression Factor	1.00	1.00		1.00	1.00		0.69	0.72		1.01	1.00	
Incremental Delay, d2	3.2	114.7		41.7	0.6		0.7	8.2		28.5	1.3	
Delay (s)	53.1	176.9		89.6	54.5		12.6	32.4		75.2	20.5	
Level of Service	D	F		F	D		B	C		E	C	
Approach Delay (s)		136.9			81.8			31.7			30.0	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM Average Control Delay			48.9			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)				24.0		
Intersection Capacity Utilization			99.8%			ICU Level of Service				F		
Analysis Period (min)			15									
c Critical Lane Group												












I-85/I-385 Interchange Improvements
2015 No-Build PM

5: I-85 SB Ramps & Woodruff Road

											
Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	336	0	205	0	1490	272	653	1051	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.06	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	104	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	373	0	228	0	1656	302	726	1168	0	0	0
RTOR Reduction (vph)	0	0	207	0	0	98	0	0	0	0	0
Lane Group Flow (vph)	373	0	21	0	1656	204	726	1168	0	0	0
Turn Type	custom		custom		Perm		pm+pt				
Protected Phases					2		1		6		
Permitted Phases	4		4		2		6				
Actuated Green, G (s)	13.0		13.0		62.7		115.9		115.9		
Effective Green, g (s)	13.0		13.0		62.7		115.9		115.9		
Actuated g/C Ratio	0.09		0.09		0.45		0.83		0.83		
Clearance Time (s)	5.0		5.0		6.3		6.5		6.1		
Vehicle Extension (s)	4.3		4.3		4.3		4.3		4.3		
Lane Grp Cap (vph)	310		251		1540		623		2846		
v/s Ratio Prot					0.48		c0.39		0.34		
v/s Ratio Perm	c0.11		0.01				0.13		c0.58		
v/c Ratio	1.20		0.08		1.08		0.30		1.17		
Uniform Delay, d1	63.5		58.1		38.6		24.6		42.7		
Progression Factor	1.00		1.00		0.62		0.35		0.84		
Incremental Delay, d2	118.1		0.2		39.1		0.4		87.9		
Delay (s)	181.6		58.3		63.0		9.1		123.7		
Level of Service	F		E		E		A		F		
Approach Delay (s)	134.8				54.7				49.4		
Approach LOS	F				D				D		
Intersection Summary											
HCM Average Control Delay			63.3		HCM Level of Service		E				
HCM Volume to Capacity ratio			1.14								
Actuated Cycle Length (s)			140.0		Sum of lost time (s)		11.5				
Intersection Capacity Utilization			100.6%		ICU Level of Service		G				
Analysis Period (min)			15								
c Critical Lane Group											

I-85/I-385 Interchange Improvements
2015 No-Build PM

6: I-85 NB Ramps & Woodruff Road

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	500	582	839	987	0	1204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	647	932	1097	0	1338
RTOR Reduction (vph)	0	350	0	471	0	0
Lane Group Flow (vph)	556	297	932	626	0	1338
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	29.4	29.4	79.5	79.5		98.5
Effective Green, g (s)	29.4	29.4	79.5	79.5		91.5
Actuated g/C Ratio	0.21	0.21	0.57	0.57		0.65
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	700	568	1952	873		2247
v/s Ratio Prot	c0.17	0.11	0.27			c0.39
v/s Ratio Perm				c0.41		
v/c Ratio	0.79	0.52	0.48	0.72		0.60
Uniform Delay, d1	52.4	49.1	17.9	22.0		13.8
Progression Factor	1.00	1.00	0.71	11.75		1.34
Incremental Delay, d2	6.8	1.3	0.1	0.5		0.3
Delay (s)	59.2	50.4	12.8	259.4		18.7
Level of Service	E	D	B	F		B
Approach Delay (s)	54.4		146.1			18.7
Approach LOS	D		F			B
Intersection Summary						
HCM Average Control Delay			84.7		HCM Level of Service	F
HCM Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	18.6
Intersection Capacity Utilization			66.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

I-85/I-385 Interchange Improvements
2015 No-Build PM

























7: Carolina Point Pkwy & Woodruff Road



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations	↰↰	↰	↰↰	↰	↰	↰↰
Volume (vph)	207	73	1328	93	18	2052
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.16	1.00
Satd. Flow (perm)	3335	1538	3438	1538	288	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	81	1476	103	20	2280
RTOR Reduction (vph)	0	74	0	18	0	0
Lane Group Flow (vph)	230	7	1476	85	20	2280
Turn Type		Prot		Perm	Perm	
Protected Phases	4	4	2 3 6			2 3 6
Permitted Phases	4			2 3 6	2 3 6	
Actuated Green, G (s)	12.0	12.0	115.4	115.4	115.4	115.4
Effective Green, g (s)	12.0	12.0	115.4	115.4	115.4	115.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	286	132	2834	1268	237	2834
v/s Ratio Prot	c0.07	0.00	0.43			c0.66
v/s Ratio Perm				0.06	0.07	
v/c Ratio	0.80	0.05	0.52	0.07	0.08	0.80
Uniform Delay, d1	62.8	58.8	3.8	2.3	2.3	6.4
Progression Factor	1.00	1.00	0.25	0.01	0.61	0.97
Incremental Delay, d2	16.2	0.3	0.2	0.0	0.0	0.2
Delay (s)	79.1	59.0	1.2	0.0	1.4	6.4
Level of Service	E	E	A	A	A	A
Approach Delay (s)	73.9		1.1			6.4
Approach LOS	E		A			A
Intersection Summary						
HCM Average Control Delay			9.4		HCM Level of Service	A
HCM Volume to Capacity ratio			0.81			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			73.9%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

I-85/I-385 Interchange Improvements
2015 No-Build PM

8: Woodruff Road & Market Point Drive
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	925	56	76	1648	163	130	29	75	236	29	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	467	1028	62	84	1831	181	144	32	83	262	32	324
RTOR Reduction (vph)	0	0	22	0	0	53	0	0	70	0	0	217
Lane Group Flow (vph)	467	1028	40	84	1831	128	144	32	13	262	32	107
Turn Type	Prot	pm+ov		Prot	Perm		Prot	pm+ov		Prot	Perm	
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.5	78.7	90.7	13.5	72.7	72.7	12.0	8.9	22.4	15.1	12.0	12.0
Effective Green, g (s)	19.5	78.7	90.7	13.5	72.7	72.7	12.0	8.9	22.4	15.1	12.0	12.0
Actuated g/C Ratio	0.14	0.56	0.65	0.10	0.52	0.52	0.09	0.06	0.16	0.11	0.09	0.09
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	465	1933	996	166	1785	799	147	115	246	360	295	132
v/s Ratio Prot	c0.14	0.30	0.00	0.05	c0.53		c0.08	0.02	0.01	0.08	0.01	
v/s Ratio Perm			0.02			0.08			0.00			c0.07
v/c Ratio	1.00	0.53	0.04	0.51	1.03	0.16	0.98	0.28	0.05	0.73	0.11	0.81
Uniform Delay, d1	60.2	19.1	8.9	60.1	33.6	17.6	63.9	62.5	49.8	60.5	59.1	62.9
Progression Factor	1.20	1.02	1.74	0.69	0.44	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.9	0.9	0.0	1.8	21.5	0.2	67.6	2.1	0.1	7.9	0.3	32.4
Delay (s)	112.3	20.5	15.5	43.3	36.4	5.8	131.5	64.6	50.0	68.4	59.3	95.3
Level of Service	F	C	B	D	D	A	F	E	D	E	E	F
Approach Delay (s)		47.8			34.1			97.1			82.0	
Approach LOS		D			C			F			F	

Intersection Summary

HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			


















I-85/I-385 Interchange Improvements
2015 No-Build PM

9: Woodruff Road & Garlington Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	872	182	168	1439	164	266	150	119	336	277	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1690		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.18	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	321	3438	1538	3335	1690		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	202	969	202	187	1599	182	296	167	132	373	308	202
RTOR Reduction (vph)	0	0	109	0	0	61	0	21	0	0	0	0
Lane Group Flow (vph)	202	969	93	187	1599	121	296	278	0	373	308	202
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	9.6	64.5	64.5	80.9	67.9	67.9	13.4	24.0		16.8	27.4	140.0
Effective Green, g (s)	9.6	64.5	64.5	80.9	67.9	67.9	13.4	24.0		16.8	27.4	140.0
Actuated g/C Ratio	0.07	0.46	0.46	0.58	0.49	0.49	0.10	0.17		0.12	0.20	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	229	1584	709	315	1667	746	319	290		400	354	1538
v/s Ratio Prot	c0.06	0.28		0.06	c0.47		0.09	c0.16		c0.11	c0.17	
v/s Ratio Perm			0.06	0.29		0.08						0.13
v/c Ratio	0.88	0.61	0.13	0.59	0.96	0.16	0.93	0.96		0.93	0.87	0.13
Uniform Delay, d1	64.6	28.3	21.7	18.0	34.7	20.1	62.8	57.5		61.0	54.6	0.0
Progression Factor	1.27	0.72	0.74	0.89	0.40	0.19	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	27.6	1.5	0.3	3.1	12.4	0.4	32.5	41.8		29.0	20.9	0.2
Delay (s)	109.8	21.9	16.5	19.1	26.3	4.1	95.4	99.3		90.0	75.5	0.2
Level of Service	F	C	B	B	C	A	F	F		F	E	A
Approach Delay (s)		34.0			23.6			97.4			64.4	
Approach LOS		C			C			F			E	
Intersection Summary												
HCM Average Control Delay			43.1			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)				26.9		
Intersection Capacity Utilization			87.8%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2015 No-Build PM

10: Woodruff Road & I-385 SB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	889	438	183	1348	0	0	0	0	696	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3268		1719	3438					3335		1538
Flt Permitted		1.00		0.06	1.00					0.95		1.00
Satd. Flow (perm)		3268		101	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	988	487	203	1498	0	0	0	0	773	0	470
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1433	0	203	1498	0	0	0	0	773	0	470
Turn Type			pm+pt							Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		70.4		92.1	92.1					35.6		140.0
Effective Green, g (s)		70.4		92.1	92.1					35.6		140.0
Actuated g/C Ratio		0.50		0.66	0.66					0.25		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1643		241	2262					848		1538
v/s Ratio Prot		0.44		c0.09	0.44					c0.23		
v/s Ratio Perm				c0.46								0.31
v/c Ratio		0.87		0.84	0.66					0.91		0.31
Uniform Delay, d1		30.8		42.8	14.5					50.7		0.0
Progression Factor		0.65		1.56	0.85					1.04		1.00
Incremental Delay, d2		4.7		2.7	0.1					14.2		0.5
Delay (s)		24.7		69.4	12.4					66.8		0.5
Level of Service		C		E	B					E		A
Approach Delay (s)		24.7			19.2			0.0			41.7	
Approach LOS		C			B			A			D	
Intersection Summary												
HCM Average Control Delay			27.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			12.3			
Intersection Capacity Utilization			110.9%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build PM

11: Woodruff Road & I-385 NB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	482	1103	0	0	995	649	536	0	253	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	145	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	536	1226	0	0	1106	721	596	0	281	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	350	0	0	51	0	0	0
Lane Group Flow (vph)	536	1226	0	0	1106	371	596	0	230	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	84.9	84.9			43.9	43.9	44.0		44.0			
Effective Green, g (s)	84.9	84.9			43.9	43.9	44.0		44.0			
Actuated g/C Ratio	0.61	0.61			0.31	0.31	0.31		0.31			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	480	2085			1078	482	540		483			
v/s Ratio Prot	c0.28	0.36			0.32		c0.35					
v/s Ratio Perm	c0.40					0.24			0.15			
v/c Ratio	1.12	0.59			1.03	0.77	1.10		0.48			
Uniform Delay, d1	44.5	16.9			48.1	43.5	48.0		38.7			
Progression Factor	1.10	1.20			0.67	0.84	1.00		1.00			
Incremental Delay, d2	65.3	0.5			26.9	6.2	70.2		1.2			
Delay (s)	114.2	20.8			59.0	42.7	118.2		39.9			
Level of Service	F	C			E	D	F		D			
Approach Delay (s)		49.2			52.5			93.1			0.0	
Approach LOS		D			D			F			A	
Intersection Summary												
HCM Average Control Delay		59.2			HCM Level of Service			E				
HCM Volume to Capacity ratio		1.08										
Actuated Cycle Length (s)		140.0			Sum of lost time (s)			11.1				
Intersection Capacity Utilization		110.9%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2015 No-Build PM

12: Woodruff Road & Commercial Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	1142	45	10	1323	55	209	19	10	94	12	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3419		1719	3418		1719	1716		1719	1564	
Flt Permitted	0.05	1.00		0.19	1.00		0.33	1.00		0.74	1.00	
Satd. Flow (perm)	93	3419		352	3418		589	1716		1332	1564	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	1269	50	11	1470	61	232	21	11	104	13	124
RTOR Reduction (vph)	0	2	0	0	2	0	0	8	0	0	111	0
Lane Group Flow (vph)	188	1317	0	11	1529	0	232	24	0	104	26	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	92.1	92.1		72.3	72.3		37.0	37.0		14.6	14.6	
Effective Green, g (s)	92.1	92.1		72.3	72.3		37.0	37.0		14.6	14.6	
Actuated g/C Ratio	0.66	0.66		0.52	0.52		0.26	0.26		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	230	2249		182	1765		294	454		139	163	
v/s Ratio Prot	c0.08	0.39			c0.45		c0.10	0.01			0.02	
v/s Ratio Perm	0.45			0.03			c0.11			0.08		
v/c Ratio	0.82	0.59		0.06	0.87		0.79	0.05		0.75	0.16	
Uniform Delay, d1	43.2	13.3		16.9	29.6		44.3	38.4		60.9	57.1	
Progression Factor	1.47	0.73		1.00	0.99		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.9	0.9		0.5	4.4		14.3	0.1		21.4	0.7	
Delay (s)	81.6	10.7		17.4	33.8		58.5	38.5		82.3	57.8	
Level of Service	F	B		B	C		E	D		F	E	
Approach Delay (s)		19.6			33.7			56.1			68.4	
Approach LOS		B			C			E			E	
Intersection Summary												
HCM Average Control Delay			31.7			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			16.1			
Intersection Capacity Utilization			84.7%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2015 No-Build PM

13: Woodruff Road & Smith Hines Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1173	63	60	1209	1	169	1	133	5	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1719	3412		1719	3438			1656			1633	
Flt Permitted	0.13	1.00		0.13	1.00			0.82			0.89	
Satd. Flow (perm)	242	3412		231	3438			1390			1475	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	1303	70	67	1343	1	188	1	148	6	1	11
RTOR Reduction (vph)	0	5	0	0	0	0	0	31	0	0	8	0
Lane Group Flow (vph)	11	1368	0	67	1344	0	0	306	0	0	10	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.6	39.6		39.9	39.9			19.1			19.1	
Effective Green, g (s)	39.6	39.6		39.9	39.9			19.1			19.1	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.27			0.27	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	137	1930		132	1960			379			402	
v/s Ratio Prot	c0.40			0.39								
v/s Ratio Perm	0.05			0.29				c0.22			0.01	
v/c Ratio	0.08	0.71		0.51	0.69			0.81			0.02	
Uniform Delay, d1	6.9	11.0		9.1	10.6			23.7			18.6	
Progression Factor	0.56	0.86		0.95	0.97			1.00			1.00	
Incremental Delay, d2	0.9	1.8		1.3	0.2			13.0			0.0	
Delay (s)	4.8	11.3		9.9	10.5			36.7			18.7	
Level of Service	A	B		A	B			D			B	
Approach Delay (s)	11.3			10.5				36.7			18.7	
Approach LOS	B			B				D			B	
Intersection Summary												
HCM Average Control Delay			13.7	HCM Level of Service			B					
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			70.0	Sum of lost time (s)			11.3					
Intersection Capacity Utilization			83.3%	ICU Level of Service			E					
Analysis Period (min)			15									
c Critical Lane Group												






















I-85/I-385 Interchange Improvements
2015 No-Build PM

14: Woodruff Road & Walmart Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	1558	137	22	2324	43	372	7	6	39	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1683			1650	
Flt Permitted	0.04	1.00		0.06	1.00		0.70	1.00			0.86	
Satd. Flow (perm)	81	3396		104	3429		1264	1683			1455	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1731	152	24	2582	48	413	8	7	43	1	41
RTOR Reduction (vph)	0	5	0	0	1	0	0	5	0	0	24	0
Lane Group Flow (vph)	24	1878	0	24	2629	0	413	10	0	0	61	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	92.7	92.7		83.4	83.4		36.0	36.0			36.0	
Effective Green, g (s)	92.7	92.7		83.4	83.4		36.0	36.0			36.0	
Actuated g/C Ratio	0.66	0.66		0.60	0.60		0.26	0.26			0.26	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	89	2249		62	2043		325	433			374	
v/s Ratio Prot	0.01	c0.55			c0.77			0.01				
v/s Ratio Perm	0.17			0.23			c0.33				0.04	
v/c Ratio	0.27	0.84		0.39	1.29		1.27	0.02			0.16	
Uniform Delay, d1	34.7	17.9		14.9	28.3		52.0	38.9			40.3	
Progression Factor	0.63	0.58		0.78	0.67		1.00	1.00			1.00	
Incremental Delay, d2	2.2	3.3		14.1	132.2		143.9	0.0			0.3	
Delay (s)	24.1	13.6		25.8	151.1		195.9	38.9			40.7	
Level of Service	C	B		C	F		F	D			D	
Approach Delay (s)		13.8			150.0			190.4			40.7	
Approach LOS		B			F			F			D	
Intersection Summary												
HCM Average Control Delay			100.4			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.30									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			17.6			
Intersection Capacity Utilization			102.3%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2015 No-Build PM

15: Woodruff Road & Verdin Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	1900	43	63	1229	74	255	205	125	54	218	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1691	
Flt Permitted	0.11	1.00		0.05	1.00		0.14	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	201	3427		84	3409		248	1810	1538	1115	1691	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	2111	48	70	1366	82	283	228	139	60	242	187
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	6	0	20	0
Lane Group Flow (vph)	112	2158	0	70	1445	0	283	228	133	60	409	0
Turn Type	Perm			Perm			pm+pt			Perm	Perm	
Protected Phases	2			6			3		8		4	
Permitted Phases	2			6			8		8		4	
Actuated Green, G (s)	85.7	85.7		85.7	85.7		43.0	43.0	43.0	23.8	23.8	
Effective Green, g (s)	85.7	85.7		85.7	85.7		43.0	43.0	43.0	23.8	23.8	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.31	0.31	0.31	0.17	0.17	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	123	2098		51	2087		221	556	472	190	287	
v/s Ratio Prot		0.63			0.42		c0.13	0.13			0.24	
v/s Ratio Perm	0.56			c0.83			c0.27		0.09	0.05		
v/c Ratio	0.91	1.03		1.37	0.69		1.28	0.41	0.28	0.32	1.43	
Uniform Delay, d1	23.8	27.1		27.1	18.3		41.9	38.4	36.8	51.0	58.1	
Progression Factor	0.37	0.37		1.47	1.47		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.5	25.0		211.5	0.8		156.3	0.8	0.5	1.5	210.5	
Delay (s)	59.3	34.9		251.4	27.6		198.1	39.2	37.3	52.5	268.6	
Level of Service	E	C		F	C		F	D	D	D	F	
Approach Delay (s)		36.1			37.9			108.0			242.1	
Approach LOS		D			D			F			F	
Intersection Summary												
HCM Average Control Delay	66.6			HCM Level of Service			E					
HCM Volume to Capacity ratio	1.31											
Actuated Cycle Length (s)	140.0			Sum of lost time (s)			11.5					
Intersection Capacity Utilization	133.5%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2015 No-Build PM

16: Woodruff Road & Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1683	117	371	1179	18	186	19	458	311	388	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Flt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1754	
Flt Permitted		0.92		0.06	1.00			0.16	1.00	0.52	1.00	
Satd. Flow (perm)		3116		115	3430			291	1538	949	1754	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	1870	130	412	1310	20	207	21	509	346	431	112
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	1	0	7	0
Lane Group Flow (vph)	0	2018	0	412	1329	0	0	228	508	346	536	0
Turn Type	Perm			pm+pt			Perm		pm+ov		Perm	
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		56.7		76.7	76.7			52.0	65.7	52.0	52.0	
Effective Green, g (s)		56.7		76.7	76.7			52.0	65.7	52.0	52.0	
Actuated g/C Ratio		0.41		0.55	0.55			0.37	0.47	0.37	0.37	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1262		220	1879			108	722	352	651	
v/s Ratio Prot				c0.18	0.39				0.07		0.31	
v/s Ratio Perm		0.65		c0.84				c0.78	0.26	0.36		
v/c Ratio		1.60		1.87	0.71			2.11	0.70	0.98	0.82	
Uniform Delay, d1		41.6		46.2	23.4			44.0	29.4	43.6	39.8	
Progression Factor		0.54		1.17	1.17			1.00	1.00	1.00	1.00	
Incremental Delay, d2		270.8		403.6	1.5			529.9	3.5	43.3	8.9	
Delay (s)		293.3		457.6	28.7			573.9	32.9	86.8	48.8	
Level of Service		F		F	C			F	C	F	D	
Approach Delay (s)		293.3			130.1			200.3			63.6	
Approach LOS		F			F			F			E	
Intersection Summary												
HCM Average Control Delay			190.0			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.92									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			11.3			
Intersection Capacity Utilization			140.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2015 No-Build PM

17: Woodruff Road & Bell Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	2403	110	37	1732	11	147	1	40	15	1	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1692			1600	
Flt Permitted	0.07	1.00		0.04	1.00			0.67			0.94	
Satd. Flow (perm)	128	3416		68	3435			1184			1516	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	2670	122	41	1924	12	163	1	44	17	1	69
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	29	0
Lane Group Flow (vph)	74	2790	0	41	1936	0	0	201	0	0	58	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	105.8	105.8		105.8	105.8			22.6			22.6	
Effective Green, g (s)	105.8	105.8		105.8	105.8			22.6			22.6	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	97	2582		51	2596			191			245	
v/s Ratio Prot	c0.82			0.56								
v/s Ratio Perm	0.58			0.60				c0.17			0.04	
v/c Ratio	0.76	1.08		0.80	0.75			1.05			0.24	
Uniform Delay, d1	9.9	17.1		10.6	9.6			58.7			51.2	
Progression Factor	0.61	0.65		1.50	1.59			1.00			1.00	
Incremental Delay, d2	5.1	37.0		71.6	1.8			80.1			0.8	
Delay (s)	11.1	48.1		87.6	17.0			138.8			52.0	
Level of Service	B	D		F	B			F			D	
Approach Delay (s)	47.1			18.5				138.8			52.0	
Approach LOS	D			B				F			D	
Intersection Summary												
HCM Average Control Delay	39.9			HCM Level of Service			D					
HCM Volume to Capacity ratio	1.08											
Actuated Cycle Length (s)	140.0			Sum of lost time (s)			11.6					
Intersection Capacity Utilization	96.9%			ICU Level of Service			F					
Analysis Period (min)	15											
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build PM

18: Woodruff Road & SC 14
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	1291	363	100	853	74	186	276	54	202	412	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.12	1.00	1.00	0.07	1.00		0.11	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	214	3438	1538	129	3397		201	1810	1538	581	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	1434	403	111	948	82	207	307	60	224	458	130
RTOR Reduction (vph)	0	0	48	0	5	0	0	0	35	0	0	40
Lane Group Flow (vph)	174	1434	355	111	1025	0	207	307	25	224	458	90
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	74.3	62.1	76.1	62.5	56.2		50.0	36.0	42.3	48.0	35.0	47.2
Effective Green, g (s)	74.3	62.1	76.1	62.5	56.2		50.0	36.0	42.3	48.0	35.0	47.2
Actuated g/C Ratio	0.53	0.44	0.54	0.45	0.40		0.36	0.26	0.30	0.34	0.25	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	245	1525	836	129	1364		224	465	465	305	453	519
v/s Ratio Prot	c0.06	c0.42	0.04	0.04	0.30		c0.09	0.17	0.00	0.07	c0.25	0.02
v/s Ratio Perm	0.32		0.19	0.35			0.24		0.01	0.18		0.04
v/c Ratio	0.71	0.94	0.42	0.86	0.75		0.92	0.66	0.05	0.73	1.01	0.17
Uniform Delay, d1	24.1	37.2	19.0	31.4	35.9		37.8	46.5	34.7	36.6	52.5	32.7
Progression Factor	0.83	0.58	0.92	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.6	0.0	42.2	3.9		40.3	4.1	0.1	9.7	45.1	0.3
Delay (s)	21.0	23.0	17.5	73.7	39.8		78.0	50.6	34.7	46.3	97.6	32.9
Level of Service	C	C	B	E	D		E	D	C	D	F	C
Approach Delay (s)		21.8			43.1			58.8			73.1	
Approach LOS		C			D			E			E	

Intersection Summary

HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

I-85/I-385 Interchange Improvements
2015 No-Build PM

19: E Parkins Mill Road & US 276

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	120	67	102	72	83	156	1167	198	85	1455	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1276	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	133	74	113	80	92	173	1297	220	94	1617	260
RTOR Reduction (vph)	0	67	0	0	0	82	0	0	104	0	0	137
Lane Group Flow (vph)	120	140	0	113	80	10	173	1297	116	94	1617	123
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Effective Green, g (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Actuated g/C Ratio	0.14	0.10		0.05	0.11	0.11	0.15	0.53	0.53	0.06	0.44	0.44
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	193	317		167	195	165	254	2606	811	208	2186	681
v/s Ratio Prot	0.02	0.04		c0.03	0.04		c0.10	0.26		0.03	c0.33	
v/s Ratio Perm	c0.06					0.01			0.08			0.08
v/c Ratio	0.62	0.44		0.68	0.41	0.06	0.68	0.50	0.14	0.45	0.74	0.18
Uniform Delay, d1	32.1	34.0		37.4	33.3	32.1	32.3	12.1	9.7	36.2	18.5	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.07	1.10	2.12	1.00	1.00	1.00
Incremental Delay, d2	7.4	2.0		11.8	2.8	0.3	5.9	0.5	0.3	2.5	2.3	0.6
Delay (s)	39.5	36.0		49.2	36.2	32.4	40.6	13.8	20.7	38.6	20.8	14.1
Level of Service	D	D		D	D	C	D	B	C	D	C	B
Approach Delay (s)		37.3			40.1			17.5			20.7	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM Average Control Delay			22.0			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)			19.0			
Intersection Capacity Utilization			64.4%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build PM

























20: Duvall Drive & US 276



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	393	152	1254	370	142	1128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4771		1719	4940
Flt Permitted	0.95	1.00	1.00		0.21	1.00
Satd. Flow (perm)	1719	1538	4771		387	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	437	169	1393	411	158	1253
RTOR Reduction (vph)	0	15	133	0	0	0
Lane Group Flow (vph)	437	154	1671	0	158	1253
Turn Type	Perm			Perm		
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	9.0	9.0	18.7		18.7	18.7
Effective Green, g (s)	9.0	9.0	18.7		18.7	18.7
Actuated g/C Ratio	0.22	0.22	0.47		0.47	0.47
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	387	346	2230		181	2309
v/s Ratio Prot	c0.25		0.35			0.25
v/s Ratio Perm		0.10			c0.41	
v/c Ratio	1.13	0.45	0.75		0.87	0.54
Uniform Delay, d1	15.5	13.4	8.7		9.6	7.6
Progression Factor	1.00	1.00	0.85		1.00	1.00
Incremental Delay, d2	85.7	1.8	1.6		40.1	0.9
Delay (s)	101.2	15.2	9.0		49.7	8.5
Level of Service	F	B	A		D	A
Approach Delay (s)	77.2		9.0			13.1
Approach LOS	E		A			B
Intersection Summary						
HCM Average Control Delay			21.4		HCM Level of Service	C
HCM Volume to Capacity ratio			0.96			
Actuated Cycle Length (s)			40.0		Sum of lost time (s)	12.3
Intersection Capacity Utilization			83.1%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						





















I-85/I-385 Interchange Improvements
2015 No-Build PM

23: US 276 & Millennium Blvd

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	93	1766	117	31	1289	10	88	53	68	62	21	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3148		1719	1810	2707
Flt Permitted	0.11	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.75	1.00	1.00
Satd. Flow (perm)	191	3438	1538	125	3438	1538	3335	3148		1366	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	1962	130	34	1432	11	98	59	76	69	23	56
RTOR Reduction (vph)	0	0	48	0	0	5	0	69	0	0	0	50
Lane Group Flow (vph)	103	1962	82	34	1432	6	98	66	0	69	23	6
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	66.7	60.4	60.4	61.6	58.1	58.1	8.0	8.6		10.0	5.3	11.6
Effective Green, g (s)	66.7	60.4	60.4	61.6	58.1	58.1	8.0	8.6		10.0	5.3	11.6
Actuated g/C Ratio	0.67	0.60	0.60	0.61	0.58	0.58	0.08	0.09		0.10	0.05	0.12
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	223	2072	927	133	1993	892	266	270		153	96	313
v/s Ratio Prot	c0.03	c0.57		0.01	0.42		c0.03	c0.02		0.02	0.01	0.00
v/s Ratio Perm	0.28		0.05	0.15		0.00				c0.02		0.00
v/c Ratio	0.46	0.95	0.09	0.26	0.72	0.01	0.37	0.24		0.45	0.24	0.02
Uniform Delay, d1	10.9	18.4	8.3	18.2	15.2	8.9	43.7	42.8		42.3	45.5	39.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	10.2	0.1	1.6	1.5	0.0	1.4	1.5		3.3	4.0	0.0
Delay (s)	13.3	28.6	8.4	19.9	16.7	8.9	45.1	44.2		45.6	49.5	39.3
Level of Service	B	C	A	B	B	A	D	D		D	D	D
Approach Delay (s)		26.7			16.7			44.6			43.8	
Approach LOS		C			B			D			D	
Intersection Summary												
HCM Average Control Delay			24.7			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			100.2			Sum of lost time (s)				26.0		
Intersection Capacity Utilization			80.1%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build PM

24: Pelham Road & The Parkway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	803	675	0	928	733	0	0	0	287	474	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	227	892	750	0	1031	814	0	0	0	319	527	318
RTOR Reduction (vph)	0	0	68	0	0	10	0	0	0	0	0	152
Lane Group Flow (vph)	227	892	682	0	1031	804	0	0	0	319	527	166
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Effective Green, g (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Actuated g/C Ratio	0.09	0.56	0.56		0.41	0.75				0.34	0.34	0.34
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	309	1910	854		1410	1159				591	622	529
v/s Ratio Prot	0.07	0.26			0.30	0.24					c0.29	
v/s Ratio Perm			c0.44			0.28				0.19		0.11
v/c Ratio	0.73	0.47	0.80		0.73	0.69				0.54	0.85	0.31
Uniform Delay, d1	48.6	14.7	19.5		27.3	7.0				29.1	33.4	26.6
Progression Factor	1.00	1.00	1.00		0.63	0.80				1.00	1.00	1.00
Incremental Delay, d2	9.6	0.8	7.7		2.4	1.5				1.4	11.0	0.5
Delay (s)	58.2	15.5	27.3		19.6	7.1				30.5	44.4	27.1
Level of Service	E	B	C		B	A				C	D	C
Approach Delay (s)		25.4			14.1			0.0			35.9	
Approach LOS		C			B			A			D	
Intersection Summary												
HCM Average Control Delay			23.6			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)				11.1		
Intersection Capacity Utilization			106.5%			ICU Level of Service				G		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build PM







25: Pelham Road & I-85 SB off ramp



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑↑
Volume (vph)	0	1090	1350	0	446	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1211	1500	0	496	346
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	1211	1500	0	496	320
Turn Type					Perm	
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		61.6	61.6		37.5	37.5
Effective Green, g (s)		61.6	61.6		37.5	37.5
Actuated g/C Ratio		0.56	0.56		0.34	0.34
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1925	1925		586	923
v/s Ratio Prot		0.35	c0.44		c0.29	
v/s Ratio Perm						0.12
v/c Ratio		0.63	0.78		0.85	0.35
Uniform Delay, d1		16.4	18.9		33.6	27.1
Progression Factor		0.86	1.01		1.00	1.00
Incremental Delay, d2		1.4	2.3		11.5	0.4
Delay (s)		15.6	21.3		45.1	27.5
Level of Service		B	C		D	C
Approach Delay (s)		15.6	21.3		37.9	
Approach LOS		B	C		D	
Intersection Summary						
HCM Average Control Delay			23.3		HCM Level of Service	C
HCM Volume to Capacity ratio			0.80			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.9
Intersection Capacity Utilization			104.6%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						




















I-85/I-385 Interchange Improvements
2015 No-Build PM

26: Pelham Road & I-85 NB off ramp

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	↗
Volume (vph)	557	0	0	621	1329	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	619	0	0	690	1477	813
RTOR Reduction (vph)	0	0	0	0	0	21
Lane Group Flow (vph)	619	0	0	690	1477	792
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	31.8			31.8	67.4	67.4
Effective Green, g (s)	31.8			31.8	67.4	67.4
Actuated g/C Ratio	0.29			0.29	0.61	0.61
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	994			994	2043	942
v/s Ratio Prot	0.18			c0.20	0.44	
v/s Ratio Perm						c0.52
v/c Ratio	0.62			0.69	0.72	0.84
Uniform Delay, d1	33.9			34.8	14.8	17.0
Progression Factor	0.70			0.84	1.00	1.00
Incremental Delay, d2	2.2			3.2	1.4	7.3
Delay (s)	26.1			32.5	16.2	24.3
Level of Service	C			C	B	C
Approach Delay (s)	26.1			32.5	19.1	
Approach LOS	C			C	B	
Intersection Summary						
HCM Average Control Delay			22.9		HCM Level of Service	C
HCM Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			135.4%		ICU Level of Service	H
Analysis Period (min)			15			
c Critical Lane Group						




















I-85/I-385 Interchange Improvements
2015 No-Build PM

27: Pelham Road & Boland Court

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	855	378	310	1157	20	220	17	294	27	13	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3280		1719	3429			1729	1538		1672	
Flt Permitted	0.21	1.00		0.08	1.00			0.73	1.00		0.70	
Satd. Flow (perm)	381	3280		136	3429			1316	1538		1189	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	950	420	344	1286	22	244	19	327	30	14	33
RTOR Reduction (vph)	0	45	0	0	1	0	0	0	253	0	25	0
Lane Group Flow (vph)	62	1325	0	344	1307	0	0	263	74	0	52	0
Turn Type	Perm			pm+pt			Perm			Perm		Perm
Protected Phases		2		1	6			8				4
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Effective Green, g (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Actuated g/C Ratio	0.42	0.42		0.66	0.66			0.23	0.23		0.23	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	161	1390		360	2248			298	348		269	
v/s Ratio Prot		0.40		c0.16	0.38							
v/s Ratio Perm	0.16			c0.46				c0.20	0.05		0.04	
v/c Ratio	0.39	0.95		0.96	0.58			0.88	0.21		0.19	
Uniform Delay, d1	21.8	30.6		35.1	10.5			41.1	34.6		34.4	
Progression Factor	0.73	0.67		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	4.5	11.3		36.0	1.1			25.8	0.5		0.6	
Delay (s)	20.5	31.9		71.1	11.7			66.9	35.1		35.0	
Level of Service	C	C		E	B			E	D		C	
Approach Delay (s)		31.4			24.0			49.3			35.0	
Approach LOS		C			C			D			C	
Intersection Summary												
HCM Average Control Delay			31.0			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			89.1%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2015 No-Build PM

28: Forsythia Dr & E Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	0	4	34	0	99	7	674	17	79	991	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3425		1719	3429	
Flt Permitted		0.53	1.00		0.91		0.24	1.00		0.36	1.00	
Satd. Flow (perm)		965	1538		1478		429	3425		649	3429	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	0	4	38	0	110	8	749	19	88	1101	19
RTOR Reduction (vph)	0	0	4	0	98	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	13	0	0	50	0	8	767	0	88	1119	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Effective Green, g (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Actuated g/C Ratio		0.11	0.11		0.11		0.76	0.76		0.76	0.76	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		106	169		163		325	2592		491	2595	
v/s Ratio Prot								0.22			c0.33	
v/s Ratio Perm		0.01	0.00		c0.03		0.02			0.14		
v/c Ratio		0.12	0.00		0.31		0.02	0.30		0.18	0.43	
Uniform Delay, d1		36.1	35.7		36.9		2.7	3.4		3.1	4.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.38	0.41	
Incremental Delay, d2		0.8	0.0		1.7		0.1	0.3		0.7	0.5	
Delay (s)		37.0	35.7		38.6		2.9	3.7		1.9	2.1	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		36.7			38.6			3.7			2.0	
Approach LOS		D			D			A			A	
Intersection Summary												
HCM Average Control Delay		5.4		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.42										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				12.0				
Intersection Capacity Utilization		60.9%		ICU Level of Service				B				
Analysis Period (min)		15										
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2015 No-Build PM

30: E Butler Road & I-385 SB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	730	75	388	663	0	412	0	419	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Flt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3390		1719	3438			1719	1538			
Flt Permitted		1.00		0.12	1.00			0.95	1.00			
Satd. Flow (perm)		3390		226	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	811	83	431	737	0	458	0	466	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	141	0	0	0
Lane Group Flow (vph)	0	885	0	431	737	0	0	458	325	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		26.0		51.6	51.6			26.4	26.4			
Effective Green, g (s)		26.0		51.6	51.6			26.4	26.4			
Actuated g/C Ratio		0.29		0.57	0.57			0.29	0.29			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		979		455	1971			504	451			
v/s Ratio Prot				c0.21	0.21							
v/s Ratio Perm		0.26		c0.34				0.27	0.21			
v/c Ratio		0.90		0.95	0.37			0.91	0.72			
Uniform Delay, d1		30.8		24.8	10.4			30.6	28.5			
Progression Factor		0.89		0.50	0.78			1.00	1.00			
Incremental Delay, d2		13.0		25.4	0.4			20.6	6.2			
Delay (s)		40.5		37.9	8.5			51.3	34.7			
Level of Service		D		D	A			D	C			
Approach Delay (s)		40.5			19.3			42.9			0.0	
Approach LOS		D			B			D			A	
Intersection Summary												
HCM Average Control Delay			33.0			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			81.9%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2015 No-Build PM

31: I-385 NB Ramps & E Butler Road

											
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations											
Volume (vph)	0	0	268	874	0	0	1009	756	42	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			6.0	6.0			6.0	6.0	6.0		6.0
Lane Util. Factor			1.00	0.95			0.95	1.00	1.00		1.00
Frt			1.00	1.00			1.00	0.85	1.00		0.85
Flt Protected			0.95	1.00			1.00	1.00	0.95		1.00
Satd. Flow (prot)			1719	3438			3438	1538	1719		1538
Flt Permitted			0.16	1.00			1.00	1.00	0.95		1.00
Satd. Flow (perm)			281	3438			3438	1538	1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	298	971	0	0	1121	840	47	0	244
RTOR Reduction (vph)	0	0	0	0	0	0	0	317	0	0	149
Lane Group Flow (vph)	0	0	298	971	0	0	1121	523	47	0	95
Turn Type			pm+pt				custom		custom		custom
Protected Phases			5	2							8
Permitted Phases			2				6	6	8		
Actuated Green, G (s)			66.6	66.6			47.4	47.4	11.4		11.4
Effective Green, g (s)			66.6	66.6			47.4	47.4	11.4		11.4
Actuated g/C Ratio			0.74	0.74			0.53	0.53	0.13		0.13
Clearance Time (s)			6.0	6.0			6.0	6.0	6.0		6.0
Vehicle Extension (s)			4.3	4.3			4.3	4.3	4.3		4.3
Lane Grp Cap (vph)			419	2544			1811	810	218		195
v/s Ratio Prot			c0.10	0.28							c0.06
v/s Ratio Perm			c0.42				0.33	0.34	0.03		
v/c Ratio			0.71	0.38			0.62	0.65	0.22		0.49
Uniform Delay, d1			11.4	4.2			15.0	15.3	35.3		36.6
Progression Factor			0.57	0.39			1.00	1.00	1.00		1.00
Incremental Delay, d2			2.7	0.2			1.6	4.0	0.8		3.0
Delay (s)			9.1	1.8			16.6	19.2	36.1		39.6
Level of Service			A	A			B	B	D		D
Approach Delay (s)	0.0			3.6			17.7			39.0	
Approach LOS	A			A			B			D	
Intersection Summary											
HCM Average Control Delay			14.4		HCM Level of Service				B		
HCM Volume to Capacity ratio			0.65								
Actuated Cycle Length (s)			90.0		Sum of lost time (s)				12.0		
Intersection Capacity Utilization			81.9%		ICU Level of Service				D		
Analysis Period (min)			15								
c Critical Lane Group											




















I-85/I-385 Interchange Improvements
2015 No-Build PM

34: Frontage Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	12	366	592	50	54	174	1224	189	13	950	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1546		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.10	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1719	1546		1633	1649	1538	172	3438	1538	201	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	13	407	658	56	60	193	1360	210	14	1056	28
RTOR Reduction (vph)	0	130	0	0	0	20	0	0	106	0	2	0
Lane Group Flow (vph)	28	290	0	355	359	40	193	1360	104	14	1082	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Effective Green, g (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Actuated g/C Ratio	0.16	0.16		0.21	0.21	0.21	0.46	0.46	0.46	0.33	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	281	253		341	345	322	206	1594	713	66	1121	
v/s Ratio Prot	0.02	c0.19		0.22	c0.22		0.08	c0.40			0.32	
v/s Ratio Perm						0.03	c0.36		0.07	0.07		
v/c Ratio	0.10	1.14		1.04	1.04	0.12	0.94	0.85	0.15	0.21	0.97	
Uniform Delay, d1	39.1	46.0		43.5	43.5	35.3	27.3	26.2	17.0	26.7	36.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.93	1.01	1.00	1.00	
Incremental Delay, d2	0.3	101.2		59.8	59.4	0.4	39.7	4.9	0.3	7.2	19.7	
Delay (s)	39.4	147.2		103.3	102.9	35.7	61.0	29.3	17.5	33.9	56.1	
Level of Service	D	F		F	F	D	E	C	B	C	E	
Approach Delay (s)		140.4			97.9			31.3			55.8	
Approach LOS		F			F			C			E	
Intersection Summary												
HCM Average Control Delay			62.5			HCM Level of Service			E			
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			115.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												













I-85/I-385 Interchange Improvements
2015 No-Build PM

35: I-385 NB Ramps & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	426	0	470	333	1117	0	0	1416	492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	473	0	522	370	1241	0	0	1573	547
RTOR Reduction (vph)	0	0	0	0	0	156	0	0	0	0	0	234
Lane Group Flow (vph)	0	0	0	236	237	366	370	1241	0	0	1573	313
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Effective Green, g (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Actuated g/C Ratio				0.18	0.18	0.18	0.13	0.71			0.53	0.53
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				288	288	477	446	2457			1810	810
v/s Ratio Prot							c0.11	0.36			c0.46	
v/s Ratio Perm				0.14	0.15	0.14						0.20
v/c Ratio				0.82	0.82	0.77	0.83	0.51			0.87	0.39
Uniform Delay, d1				43.6	43.6	43.2	46.4	7.0			22.7	15.5
Progression Factor				1.00	1.00	1.00	1.18	0.52			0.69	1.10
Incremental Delay, d2				18.3	18.8	8.5	5.6	0.3			0.6	0.1
Delay (s)				61.9	62.4	51.6	60.3	3.9			16.2	17.2
Level of Service				E	E	D	E	A			B	B
Approach Delay (s)		0.0			56.6			16.9			16.5	
Approach LOS		A			E			B			B	
Intersection Summary												
HCM Average Control Delay			25.1			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			112.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2015 No-Build PM

36: Roper Mountain Road & I-385 SB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑↑	↑	↑	↑↑		↑	↑	↑↑			
Volume (vph)	0	1010	663	1133	709	0	440	0	331	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Flt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.15	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	275	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1122	737	1259	788	0	489	0	368	0	0	0
RTOR Reduction (vph)	0	0	172	0	0	0	0	0	328	0	0	0
Lane Group Flow (vph)	0	1122	565	1259	788	0	244	245	40	0	0	0
Turn Type		Perm		pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Effective Green, g (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Actuated g/C Ratio		0.32	0.32	0.78	0.78		0.11	0.11	0.11			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1599	498	796	2675		177	177	293			
v/s Ratio Prot		0.23		c0.64	0.23							
v/s Ratio Perm			0.37	c0.60			0.15	0.15	0.01			
v/c Ratio		0.70	1.13	1.58	0.29		1.38	1.38	0.14			
Uniform Delay, d1		32.6	37.2	22.2	3.5		49.0	49.0	44.4			
Progression Factor		0.58	0.37	0.67	0.83		1.00	1.00	1.00			
Incremental Delay, d2		1.7	75.6	264.7	0.1		201.6	203.9	0.4			
Delay (s)		20.6	89.3	279.5	3.1		250.7	253.0	44.8			
Level of Service		C	F	F	A		F	F	D			
Approach Delay (s)		47.8			173.1			162.9			0.0	
Approach LOS		D			F			F			A	
Intersection Summary												
HCM Average Control Delay			122.4			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.52									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			11.9			
Intersection Capacity Utilization			112.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2015 No-Build PM

37: Roper Mountain Road & Congaree Road

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	104	1041	1	6	659	375	625	1	322	4	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3436	1538	1719	1539			1740	1538
Flt Permitted	0.18	1.00			0.94	1.00	0.75	1.00			0.86	1.00
Satd. Flow (perm)	323	4939			3225	1538	1365	1539			1554	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	1157	1	7	732	417	694	1	358	4	1	8
RTOR Reduction (vph)	0	0	0	0	0	290	0	82	0	0	0	4
Lane Group Flow (vph)	116	1158	0	0	739	127	694	277	0	0	5	4
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Effective Green, g (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Actuated g/C Ratio	0.40	0.40			0.31	0.31	0.49	0.49			0.49	0.49
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	181	1958			985	470	669	754			761	754
v/s Ratio Prot	0.02	c0.23						0.18				
v/s Ratio Perm	0.23				c0.23	0.08	c0.51				0.00	0.00
v/c Ratio	0.64	0.59			0.75	0.27	1.04	0.37			0.01	0.01
Uniform Delay, d1	25.7	26.2			34.4	28.9	28.1	17.5			14.4	14.3
Progression Factor	1.00	1.00			1.18	2.71	1.00	1.00			1.00	1.00
Incremental Delay, d2	8.9	1.3			4.9	1.3	44.8	0.6			0.0	0.0
Delay (s)	34.6	27.5			45.5	79.6	72.9	18.1			14.4	14.3
Level of Service	C	C			D	E	E	B			B	B
Approach Delay (s)		28.1			57.8			54.2			14.4	
Approach LOS		C			E			D			B	
Intersection Summary												
HCM Average Control Delay			45.7		HCM Level of Service			D				
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			110.0		Sum of lost time (s)			18.9				
Intersection Capacity Utilization			107.0%		ICU Level of Service			G				
Analysis Period (min)			15									
c Critical Lane Group												