
























I-85/I-385 Interchange Improvements























2035 No-Build AM

1: Woodruff Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	614	339	348	362	59	420	1317	261	263	1386	149
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	0.95		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	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.31	1.00		0.16	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	552	3255		285	3438	1538	197	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)	213	682	377	387	402	66	467	1463	290	292	1540	166
RTOR Reduction (vph)	0	30	0	0	0	54	0	0	74	0	0	53
Lane Group Flow (vph)	213	1029	0	387	402	12	467	1463	216	292	1540	113
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)	40.6	25.0		41.4	25.4	25.4	80.0	80.0	80.0	8.0	93.0	93.0
Effective Green, g (s)	40.6	25.0		41.4	25.4	25.4	80.0	80.0	80.0	8.0	93.0	93.0
Actuated g/C Ratio	0.27	0.17		0.28	0.17	0.17	0.53	0.53	0.53	0.05	0.62	0.62
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)	271	543		232	582	260	105	1834	820	178	2132	954
v/s Ratio Prot	0.08	c0.32		c0.18	0.12			0.43		c0.09	0.45	
v/s Ratio Perm	0.13			0.28		0.01	c2.37		0.14			0.07
v/c Ratio	0.79	1.90		1.67	0.69	0.05	4.45	0.80	0.26	1.64	0.72	0.12
Uniform Delay, d1	46.0	62.5		48.2	58.6	52.2	35.0	28.4	19.0	71.0	19.6	11.7
Progression Factor	1.00	1.00		1.02	0.74	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.1	409.7		317.2	4.4	0.2	1573.2	3.7	0.8	312.1	2.2	0.3
Delay (s)	61.1	472.2		366.5	47.9	51.3	1608.2	32.1	19.8	383.1	21.8	11.9
Level of Service	E	F		F	D	D	F	C	B	F	C	B
Approach Delay (s)		403.3			192.4			362.1			73.8	
Approach LOS		F			F			F			E	
Intersection Summary												
HCM Average Control Delay			256.7			HCM Level of Service				F		
HCM Volume to Capacity ratio			3.43									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				21.0		
Intersection Capacity Utilization			127.0%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

2: Woodruff Road & Costco Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	29	1186	40	90	888	46	40	2	86	12	2	18
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	1.00		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	3421		1719	3438	1538	1719	1544		1719	1810	1538
Flt Permitted	0.21	1.00		0.20	1.00	1.00	0.76	1.00		0.69	1.00	1.00
Satd. Flow (perm)	385	3421		361	3438	1538	1369	1544		1255	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)	32	1318	44	100	987	51	44	2	96	13	2	20
RTOR Reduction (vph)	0	3	0	0	0	22	0	86	0	0	0	17
Lane Group Flow (vph)	32	1359	0	100	987	29	44	12	0	13	2	3
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)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Effective Green, g (s)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Actuated g/C Ratio	0.72	0.72		0.57	0.57	0.57	0.11	0.11		0.11	0.11	0.17
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)	363	2463		206	1957	876	146	165		134	193	396
v/s Ratio Prot	0.01	c0.40			0.29			0.01			0.00	0.00
v/s Ratio Perm	0.06			0.28		0.02	c0.03			0.01		0.00
v/c Ratio	0.09	0.55		0.49	0.50	0.03	0.30	0.07		0.10	0.01	0.01
Uniform Delay, d1	4.2	4.9		9.6	9.8	7.1	30.9	30.2		30.2	30.0	25.8
Progression Factor	0.37	0.75		0.50	0.45	0.70	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1		6.8	0.8	0.1	2.8	0.5		0.8	0.1	0.0
Delay (s)	1.6	3.7		11.6	5.2	5.0	33.8	30.6		31.0	30.0	25.8
Level of Service	A	A		B	A	A	C	C		C	C	C
Approach Delay (s)		3.7			5.8			31.6			28.0	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			6.3			HCM Level of Service			A			
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			75.0			Sum of lost time (s)			13.0			
Intersection Capacity Utilization			84.2%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

3: Green Heron Road & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	6	2	42	2	2	10	14	909	73	87	1267	6
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		0.89			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1595			1765	1538	1719	3400		1719	3438	1538
Flt Permitted		0.96			0.85	1.00	0.17	1.00		0.25	1.00	1.00
Satd. Flow (perm)		1539			1544	1538	303	3400		453	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)	7	2	47	2	2	11	16	1010	81	97	1408	7
RTOR Reduction (vph)	0	42	0	0	0	10	0	8	0	0	0	2
Lane Group Flow (vph)	0	14	0	0	4	1	16	1083	0	97	1408	5
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)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Effective Green, g (s)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Actuated g/C Ratio		0.10			0.10	0.10	0.75	0.75		0.75	0.75	0.75
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)		152			152	152	227	2552		340	2581	1155
v/s Ratio Prot								0.32			c0.41	
v/s Ratio Perm		c0.01			0.00	0.00	0.05			0.21		0.00
v/c Ratio		0.09			0.03	0.01	0.07	0.42		0.29	0.55	0.00
Uniform Delay, d1		30.7			30.5	30.5	2.5	3.4		3.0	3.9	2.3
Progression Factor		1.00			1.00	1.00	0.38	0.59		0.79	0.85	0.97
Incremental Delay, d2		0.4			0.1	0.0	0.5	0.4		1.7	0.7	0.0
Delay (s)		31.1			30.7	30.5	1.4	2.5		4.1	4.0	2.3
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		31.1			30.6			2.5			4.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			4.1				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			75.0				Sum of lost time (s)			11.3		
Intersection Capacity Utilization			83.1%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2035 No-Build AM

4: Woodruff Industrial Lane & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	55	7	93	33	7	4	19	811	123	250	1301	56
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	0.86		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1558		1719	1719		1719	3370		1719	3417	
Flt Permitted	0.69	1.00		0.51	1.00		0.14	1.00		0.21	1.00	
Satd. Flow (perm)	1249	1558		921	1719		261	3370		381	3417	
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)	61	8	103	37	8	4	21	901	137	278	1446	62
RTOR Reduction (vph)	0	96	0	0	4	0	0	6	0	0	2	0
Lane Group Flow (vph)	61	15	0	37	8	0	21	1032	0	278	1506	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)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Effective Green, g (s)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Actuated g/C Ratio	0.10	0.07		0.09	0.06		0.66	0.63		0.78	0.71	
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)	148	105		112	107		210	2132		442	2442	
v/s Ratio Prot	c0.02	0.01		0.01	0.00		0.00	0.31		c0.07	c0.44	
v/s Ratio Perm	c0.03			0.02			0.06			c0.42		
v/c Ratio	0.41	0.14		0.33	0.08		0.10	0.48		0.63	0.62	
Uniform Delay, d1	62.3	65.9		62.9	66.3		9.7	14.6		8.6	10.9	
Progression Factor	1.00	1.00		1.00	1.00		0.54	0.46		0.98	0.90	
Incremental Delay, d2	2.9	1.0		2.7	0.5		0.3	0.7		2.8	1.0	
Delay (s)	65.3	66.9		65.7	66.8		5.5	7.4		11.3	10.8	
Level of Service	E	E		E	E		A	A		B	B	
Approach Delay (s)		66.3			65.9			7.4			10.9	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM Average Control Delay			13.7			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			67.7%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												












I-85/I-385 Interchange Improvements
2035 No-Build AM

5: I-85 SB Ramps & Woodruff Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	570	0	346	0	813	124	712	1261	0
Ideal Flow (vphpl)	1900	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	0.08	1.00	
Satd. Flow (perm)				3335		2707		3438	1538	150	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	0.90
Adj. Flow (vph)	0	0	0	633	0	384	0	903	138	791	1401	0
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	77	0	0	0
Lane Group Flow (vph)	0	0	0	633	0	258	0	903	61	791	1401	0
Turn Type				custom		custom			Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases				4		4			2		6	
Actuated Green, G (s)				28.0		28.0		41.7	41.7	110.9	110.9	
Effective Green, g (s)				28.0		28.0		41.7	41.7	110.9	110.9	
Actuated g/C Ratio				0.19		0.19		0.28	0.28	0.74	0.74	
Clearance Time (s)				5.0		5.0		6.3	6.3	6.5	6.1	
Vehicle Extension (s)				4.3		4.3		4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)				623		505		956	428	765	2542	
v/s Ratio Prot								0.26		c0.43	0.41	
v/s Ratio Perm				c0.19		0.10			0.04	c0.33		
v/c Ratio				1.02		0.51		0.94	0.14	1.03	0.55	
Uniform Delay, d1				61.0		54.8		53.0	40.7	39.0	8.6	
Progression Factor				1.00		1.00		0.47	0.26	0.87	0.82	
Incremental Delay, d2				40.1		1.3		17.1	0.6	36.1	0.6	
Delay (s)				101.1		56.2		42.0	11.4	70.2	7.7	
Level of Service				F		E		D	B	E	A	
Approach Delay (s)		0.0			84.2			37.9			30.2	
Approach LOS		A			F			D			C	
Intersection Summary												
HCM Average Control Delay			45.0			HCM Level of Service				D		
HCM Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			11.5			
Intersection Capacity Utilization			94.4%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM

6: I-85 NB Ramps & Woodruff Road

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	489	816	1128	255	0	1484
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)	543	907	1253	283	0	1649
RTOR Reduction (vph)	0	264	0	107	0	0
Lane Group Flow (vph)	543	643	1253	176	0	1649
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	26.4	26.4	93.5	93.5		111.5
Effective Green, g (s)	26.4	26.4	93.5	93.5		104.5
Actuated g/C Ratio	0.18	0.18	0.62	0.62		0.70
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)	587	476	2143	959		2395
v/s Ratio Prot	0.16	c0.24	0.36			c0.48
v/s Ratio Perm				0.11		
v/c Ratio	0.93	1.35	0.58	0.18		0.69
Uniform Delay, d1	60.8	61.8	16.7	12.0		13.3
Progression Factor	1.00	1.00	0.28	0.38		1.07
Incremental Delay, d2	21.0	171.6	0.3	0.1		0.4
Delay (s)	81.8	233.4	5.0	4.7		14.7
Level of Service	F	F	A	A		B
Approach Delay (s)	176.6		5.0			14.7
Approach LOS	F		A			B
Intersection Summary						
HCM Average Control Delay			62.1		HCM Level of Service	E
HCM Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			150.0		Sum of lost time (s)	18.6
Intersection Capacity Utilization			69.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

I-85/I-385 Interchange Improvements
2035 No-Build AM

























7: Carolina Point Pkwy & Woodruff Road



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations	↰↰	↰	↰↰	↰	↰	↰↰
Volume (vph)	176	139	1683	261	196	2279
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	0.10	1.00
Satd. Flow (perm)	3335	1538	3438	1538	177	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	196	154	1870	290	218	2532
RTOR Reduction (vph)	0	51	0	46	0	0
Lane Group Flow (vph)	196	103	1870	244	218	2532
Turn Type	Perm		Perm		Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	11.0	11.0	126.4	126.4	126.4	126.4
Effective Green, g (s)	11.0	11.0	126.4	126.4	126.4	126.4
Actuated g/C Ratio	0.07	0.07	0.84	0.84	0.84	0.84
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	245	113	2897	1296	149	2897
v/s Ratio Prot	0.06		0.54			0.74
v/s Ratio Perm		c0.07		0.16	c1.23	
v/c Ratio	0.80	0.91	0.65	0.19	1.46	0.87
Uniform Delay, d1	68.4	69.0	4.1	2.2	11.8	7.0
Progression Factor	1.00	1.00	0.57	1.26	0.91	0.54
Incremental Delay, d2	18.2	58.7	0.3	0.1	211.8	0.3
Delay (s)	86.6	127.8	2.6	2.8	222.5	4.1
Level of Service	F	F	A	A	F	A
Approach Delay (s)	104.7		2.6			21.4
Approach LOS	F		A			C
Intersection Summary						
HCM Average Control Delay			19.3		HCM Level of Service	B
HCM Volume to Capacity ratio			1.43			
Actuated Cycle Length (s)			150.0		Sum of lost time (s)	13.5
Intersection Capacity Utilization			79.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						
























I-85/I-385 Interchange Improvements
2035 No-Build AM

8: Woodruff Road & Market Point Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	258	1417	147	34	2178	86	100	2	48	39	2	197
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)	287	1574	163	38	2420	96	111	2	53	43	2	219
RTOR Reduction (vph)	0	0	43	0	0	20	0	0	46	0	0	123
Lane Group Flow (vph)	287	1574	120	38	2420	76	111	2	7	43	2	96
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)	11.9	99.8	109.0	9.0	96.9	96.9	9.2	12.0	21.0	5.4	8.2	8.2
Effective Green, g (s)	11.9	99.8	109.0	9.0	96.9	96.9	9.2	12.0	21.0	5.4	8.2	8.2
Actuated g/C Ratio	0.08	0.67	0.73	0.06	0.65	0.65	0.06	0.08	0.14	0.04	0.05	0.05
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)	265	2287	1118	103	2221	994	105	145	215	120	188	84
v/s Ratio Prot	c0.09	0.46	0.01	0.02	c0.70		c0.06	0.00	c0.00	0.01	0.00	
v/s Ratio Perm			0.07			0.05			0.00			c0.06
v/c Ratio	1.08	0.69	0.11	0.37	1.09	0.08	1.06	0.01	0.03	0.36	0.01	1.14
Uniform Delay, d1	69.0	15.5	6.1	67.8	26.5	9.9	70.4	63.6	55.7	70.6	67.1	70.9
Progression Factor	0.96	1.00	2.18	0.75	0.55	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	71.3	1.3	0.0	1.4	44.0	0.1	104.1	0.1	0.1	2.9	0.0	142.4
Delay (s)	137.8	16.8	13.3	52.0	58.5	7.0	174.5	63.6	55.8	73.5	67.1	213.3
Level of Service	F	B	B	D	E	A	F	E	E	E	E	F
Approach Delay (s)		33.7			56.5			135.3			189.4	
Approach LOS		C			E			F			F	
Intersection Summary												
HCM Average Control Delay			56.9			HCM Level of Service			E			
HCM Volume to Capacity ratio			1.14									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			29.9			
Intersection Capacity Utilization			94.8%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2035 No-Build AM

9: Woodruff Road & Garlington Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	314	1024	166	147	1539	661	360	346	94	199	160	399
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	0.97		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	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	249	3438	1538	3335	1752		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)	349	1138	184	163	1710	734	400	384	104	221	178	443
RTOR Reduction (vph)	0	0	79	0	0	137	0	7	0	0	0	0
Lane Group Flow (vph)	349	1138	105	163	1710	597	400	481	0	221	178	443
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)	14.8	71.2	71.2	81.4	68.9	68.9	21.0	35.8		8.8	23.6	150.0
Effective Green, g (s)	14.8	71.2	71.2	81.4	68.9	68.9	21.0	35.8		8.8	23.6	150.0
Actuated g/C Ratio	0.10	0.47	0.47	0.54	0.46	0.46	0.14	0.24		0.06	0.16	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)	329	1632	730	258	1579	706	467	418		196	285	1538
v/s Ratio Prot	c0.10	0.33		0.05	c0.50		0.12	c0.27		c0.07	0.10	
v/s Ratio Perm			0.07	0.29		0.39						c0.29
v/c Ratio	1.06	0.70	0.14	0.63	1.08	0.85	0.86	1.15		1.13	0.62	0.29
Uniform Delay, d1	67.6	30.9	22.2	22.3	40.5	35.9	63.0	57.1		70.6	59.1	0.0
Progression Factor	1.24	0.57	0.33	1.64	0.41	0.11	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	59.7	1.9	0.3	3.0	43.6	6.3	15.1	92.2		102.7	5.1	0.5
Delay (s)	143.8	19.5	7.7	39.6	60.3	10.3	78.1	149.3		173.3	64.2	0.5
Level of Service	F	B	A	D	E	B	E	F		F	E	A
Approach Delay (s)		44.1			45.0			117.2			59.3	
Approach LOS		D			D			F			E	
Intersection Summary												
HCM Average Control Delay			57.4			HCM Level of Service				E		
HCM Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			21.7			
Intersection Capacity Utilization			99.2%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

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	1105	212	91	1642	0	0	0	0	1184	0	705
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		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3355		1719	3438					3335		1538
Flt Permitted		1.00		0.05	1.00					0.95		1.00
Satd. Flow (perm)		3355		99	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	1228	236	101	1824	0	0	0	0	1316	0	783
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1453	0	101	1824	0	0	0	0	1316	0	783
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		66.2		79.4	79.4					58.3		150.0
Effective Green, g (s)		66.2		79.4	79.4					58.3		150.0
Actuated g/C Ratio		0.44		0.53	0.53					0.39		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)		1481		124	1820					1296		1538
v/s Ratio Prot		0.43		0.04	c0.53					c0.39		
v/s Ratio Perm				0.39								0.51
v/c Ratio		0.98		0.81	1.00					1.02		0.51
Uniform Delay, d1		41.3		33.5	35.3					45.9		0.0
Progression Factor		0.63		2.02	0.91					1.00		1.00
Incremental Delay, d2		14.0		4.1	6.8					28.9		1.2
Delay (s)		39.8		71.7	39.1					74.8		1.2
Level of Service		D		E	D					E		A
Approach Delay (s)		39.8			40.8			0.0			47.4	
Approach LOS		D			D			A			D	
Intersection Summary												
HCM Average Control Delay			43.0			HCM Level of Service				D		
HCM Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				12.3		
Intersection Capacity Utilization			171.4%			ICU Level of Service				H		
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

11: Woodruff Road & I-385 NB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (vph)	861	1428	0	0	989	903	744	0	361	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)	151	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)	957	1587	0	0	1099	1003	827	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	389	0	0	26	0	0	0
Lane Group Flow (vph)	957	1587	0	0	1099	614	827	0	375	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)	94.9	94.9			41.9	41.9	44.0		44.0			
Effective Green, g (s)	94.9	94.9			41.9	41.9	44.0		44.0			
Actuated g/C Ratio	0.63	0.63			0.28	0.28	0.29		0.29			
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)	586	2175			960	430	504		451			
v/s Ratio Prot	c0.51	0.46			0.32		c0.48					
v/s Ratio Perm	c0.52					0.40			0.24			
v/c Ratio	1.63	0.73			1.14	1.43	1.64		0.83			
Uniform Delay, d1	44.9	18.8			54.0	54.0	53.0		49.5			
Progression Factor	1.17	1.07			0.82	0.76	0.98		0.97			
Incremental Delay, d2	286.7	0.5			70.7	197.9	297.2		13.0			
Delay (s)	339.2	20.6			115.0	239.2	348.9		61.1			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		140.5			174.3			254.9			0.0	
Approach LOS		F			F			F			A	
Intersection Summary												
HCM Average Control Delay		176.5			HCM Level of Service			F				
HCM Volume to Capacity ratio		1.60										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			11.1				
Intersection Capacity Utilization		171.4%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2035 No-Build AM

12: Woodruff Road & Commercial Drive

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1492	132	31	1683	62	121	7	10	111	29	88
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	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3396		1719	3420		1719	1652		1719	1605	
Flt Permitted	0.04	1.00		0.10	1.00		0.34	1.00		0.75	1.00	
Satd. Flow (perm)	75	3396		181	3420		611	1652		1348	1605	
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)	183	1658	147	34	1870	69	134	8	11	123	32	98
RTOR Reduction (vph)	0	4	0	0	2	0	0	9	0	0	74	0
Lane Group Flow (vph)	183	1801	0	34	1937	0	134	10	0	123	56	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)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Effective Green, g (s)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Actuated g/C Ratio	0.74	0.74		0.61	0.61		0.19	0.19		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)	209	2502		110	2079		174	315		139	166	
v/s Ratio Prot	c0.08	0.53			c0.57		c0.04	0.01			0.04	
v/s Ratio Perm	0.56			0.19			c0.11			0.09		
v/c Ratio	0.88	0.72		0.31	0.93		0.77	0.03		0.88	0.34	
Uniform Delay, d1	52.3	11.1		14.2	26.6		56.1	49.4		66.4	62.5	
Progression Factor	1.46	0.38		0.16	0.25		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.9	1.2		5.0	6.7		20.3	0.1		45.1	1.9	
Delay (s)	99.2	5.3		7.2	13.5		76.4	49.5		111.4	64.4	
Level of Service	F	A		A	B		E	D		F	E	
Approach Delay (s)		14.0			13.4			73.0			87.3	
Approach LOS		B			B			E			F	
Intersection Summary												
HCM Average Control Delay			20.0			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			16.1			
Intersection Capacity Utilization			85.8%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2035 No-Build AM

13: Woodruff Road & Smith Hines Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	1371	234	177	1667	2	105	2	148	2	2	4
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	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3363		1719	3438			1634			1667	
Flt Permitted	0.09	1.00		0.10	1.00			0.86			0.90	
Satd. Flow (perm)	167	3363		185	3438			1438			1523	
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)	9	1523	260	197	1852	2	117	2	164	2	2	4
RTOR Reduction (vph)	0	9	0	0	0	0	0	33	0	0	4	0
Lane Group Flow (vph)	9	1774	0	197	1854	0	0	250	0	0	4	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Effective Green, g (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Actuated g/C Ratio	0.80	0.80		0.81	0.81			0.12			0.12	
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)	134	2706		149	2773			173			183	
v/s Ratio Prot	0.53			0.54								
v/s Ratio Perm	0.05			c1.06				c0.17			0.00	
v/c Ratio	0.07	0.66		1.32	0.67			1.44			0.02	
Uniform Delay, d1	3.0	6.1		14.5	6.1			66.0			58.3	
Progression Factor	0.16	0.12		1.24	0.49			1.00			1.00	
Incremental Delay, d2	0.6	0.8		149.3	0.1			228.7			0.1	
Delay (s)	1.1	1.6		167.3	3.1			294.7			58.3	
Level of Service	A	A		F	A			F			E	
Approach Delay (s)	1.6			18.9				294.7			58.3	
Approach LOS	A			B				F			E	
Intersection Summary												
HCM Average Control Delay	30.3			HCM Level of Service			C					
HCM Volume to Capacity ratio	1.34											
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			11.0					
Intersection Capacity Utilization	107.2%			ICU Level of Service			G					
Analysis Period (min)	15											
c Critical Lane Group												























I-85/I-385 Interchange Improvements
2035 No-Build AM

14: Woodruff Road & Walmart Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	2055	24	20	4623	118	70	4	35	120	2	12
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	1.00		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3432		1719	3425		1719	1563			1711	
Flt Permitted	0.04	1.00		0.04	1.00		0.79	1.00			0.72	
Satd. Flow (perm)	65	3432		69	3425		1423	1563			1281	
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)	34	2283	27	22	5137	131	78	4	39	133	2	13
RTOR Reduction (vph)	0	0	0	0	1	0	0	14	0	0	3	0
Lane Group Flow (vph)	34	2310	0	22	5267	0	78	29	0	0	145	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)	116.4	116.4		105.4	105.4		22.3	22.3			22.3	
Effective Green, g (s)	116.4	116.4		105.4	105.4		22.3	22.3			22.3	
Actuated g/C Ratio	0.78	0.78		0.70	0.70		0.15	0.15			0.15	
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)	102	2663		48	2407		212	232			190	
v/s Ratio Prot	0.01	c0.67			c1.54			0.02				
v/s Ratio Perm	0.25			0.32			0.05				c0.11	
v/c Ratio	0.33	0.87		0.46	2.19		0.37	0.12			0.77	
Uniform Delay, d1	43.2	11.5		9.8	22.3		57.5	55.4			61.3	
Progression Factor	1.31	0.70		0.51	0.50		1.00	1.00			1.00	
Incremental Delay, d2	2.6	3.6		2.8	534.8		1.7	0.4			18.2	
Delay (s)	59.5	11.7		7.8	545.9		59.2	55.7			79.5	
Level of Service	E	B		A	F		E	E			E	
Approach Delay (s)		12.4			543.7			58.0			79.5	
Approach LOS		B			F			E			E	
Intersection Summary												
HCM Average Control Delay			370.0			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.93									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			17.6			
Intersection Capacity Utilization			155.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2035 No-Build AM

15: Woodruff Road & Verdin Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	1061	29	134	2960	77	479	352	39	67	285	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	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	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3424		1719	3425		1719	1810	1538	1719	1739	
Flt Permitted	0.04	1.00		0.16	1.00		0.15	1.00	1.00	0.53	1.00	
Satd. Flow (perm)	81	3424		295	3425		276	1810	1538	961	1739	
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)	64	1179	32	149	3289	86	532	391	43	74	317	112
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	29	0	3	0
Lane Group Flow (vph)	64	1210	0	149	3374	0	532	391	14	74	426	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)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Effective Green, g (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.33	0.33	0.33	0.14	0.14	
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)	48	2048		176	2048		309	591	502	133	241	
v/s Ratio Prot	0.35			c0.99			c0.26		0.22		0.24	
v/s Ratio Perm	0.79			0.51			c0.30		0.01	0.08		
v/c Ratio	1.33	0.59		0.85	1.65		1.72	0.66	0.03	0.56	1.77	
Uniform Delay, d1	30.1	18.7		24.5	30.1		45.7	43.4	34.3	60.3	64.6	
Progression Factor	1.00	1.08		0.65	0.67		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	205.6	0.6		4.8	291.5		338.1	3.2	0.0	6.8	361.0	
Delay (s)	235.8	20.9		20.6	311.7		383.8	46.6	34.4	67.1	425.6	
Level of Service	F	C		C	F		F	D	C	E	F	
Approach Delay (s)	31.7			299.4			231.8			372.9		
Approach LOS	C			F			F			F		
Intersection Summary												
HCM Average Control Delay			240.4	HCM Level of Service			F					
HCM Volume to Capacity ratio			1.65									
Actuated Cycle Length (s)			150.0	Sum of lost time (s)			11.5					
Intersection Capacity Utilization			172.8%	ICU Level of Service			H					
Analysis Period (min)			15									
c Critical Lane Group												



















I-85/I-385 Interchange Improvements
2035 No-Build AM

16: Woodruff Road & Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1007	74	759	2693	2	231	40	555	32	42	12
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	
Frt		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)		3402		1719	3438			1735	1538	1719	1751	
Flt Permitted		0.74		0.07	1.00			0.72	1.00	0.15	1.00	
Satd. Flow (perm)		2517		130	3438			1294	1538	278	1751	
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)	8	1119	82	843	2992	2	257	44	617	36	47	13
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	16	0	3	0
Lane Group Flow (vph)	0	1206	0	843	2994	0	0	301	601	36	57	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)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Effective Green, g (s)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Actuated g/C Ratio		0.42		0.75	0.75			0.17	0.46	0.17	0.17	
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)		1052		561	2583			224	715	48	304	
v/s Ratio Prot				c0.44	0.87				0.25		0.03	
v/s Ratio Perm		0.48		c0.69				c0.23	0.15	0.13		
v/c Ratio		1.15		1.50	1.16			1.34	0.84	0.75	0.19	
Uniform Delay, d1		43.6		45.7	18.6			62.0	35.3	58.9	53.0	
Progression Factor		0.76		1.27	0.74			1.00	1.00	1.00	1.00	
Incremental Delay, d2		75.3		227.1	72.1			181.5	9.4	51.9	0.5	
Delay (s)		108.6		285.1	85.8			243.5	44.7	110.8	53.4	
Level of Service		F		F	F			F	D	F	D	
Approach Delay (s)		108.6			129.6			109.8			74.9	
Approach LOS		F			F			F			E	
Intersection Summary												
HCM Average Control Delay			121.6			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.44									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			11.3			
Intersection Capacity Utilization			141.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2035 No-Build AM

17: Woodruff Road & Bell Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1572	128	40	3801	24	198	2	48	20	2	85
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	3399		1719	3435			1695			1600	
Flt Permitted	0.04	1.00		0.08	1.00			0.59			0.95	
Satd. Flow (perm)	64	3399		137	3435			1039			1531	
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)	39	1747	142	44	4223	27	220	2	53	22	2	94
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	39	1885	0	44	4250	0	0	269	0	0	118	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Effective Green, g (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.17			0.17	
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)	48	2556		103	2583			177			261	
v/s Ratio Prot	0.55			c1.24								
v/s Ratio Perm	0.61			0.32				c0.26			0.08	
v/c Ratio	0.81	0.74		0.43	1.65			1.52			0.45	
Uniform Delay, d1	11.9	10.4		6.8	18.6			62.2			55.9	
Progression Factor	0.89	0.86		0.60	0.48			1.00			1.00	
Incremental Delay, d2	39.6	0.7		1.2	290.5			261.1			2.0	
Delay (s)	50.1	9.6		5.2	299.4			323.3			57.9	
Level of Service	D	A		A	F			F			E	
Approach Delay (s)	10.4			296.4				323.3			57.9	
Approach LOS	B			F				F			E	
Intersection Summary												
HCM Average Control Delay	209.9			HCM Level of Service			F					
HCM Volume to Capacity ratio	1.62											
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			11.6					
Intersection Capacity Utilization	136.2%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM

18: Woodruff Road & SC 14
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	851	131	72	2101	284	525	546	188	188	326	454
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	0.98		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	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.22	1.00		0.15	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	100	3438	1538	389	3377		278	1810	1538	345	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)	239	946	146	80	2334	316	583	607	209	209	362	504
RTOR Reduction (vph)	0	0	51	0	7	0	0	0	46	0	0	4
Lane Group Flow (vph)	239	946	95	80	2643	0	583	607	163	209	362	500
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)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Effective Green, g (s)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Actuated g/C Ratio	0.57	0.48	0.65	0.52	0.46		0.34	0.24	0.30	0.21	0.14	0.22
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)	194	1657	998	282	1547		335	434	462	163	253	346
v/s Ratio Prot	0.10	0.28	0.02	0.02	c0.78		c0.29	0.34	0.02	0.09	0.20	c0.12
v/s Ratio Perm	c0.59		0.05	0.13			c0.30		0.08	0.18		0.20
v/c Ratio	1.23	0.57	0.09	0.28	1.71		1.74	1.40	0.35	1.28	1.43	1.45
Uniform Delay, d1	50.4	27.8	9.9	19.8	40.6		46.2	57.0	41.0	56.1	64.5	58.1
Progression Factor	0.90	0.92	3.32	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	129.5	0.9	0.0	0.9	321.6		345.3	192.9	0.7	165.5	215.2	216.1
Delay (s)	174.8	26.4	32.8	20.6	362.2		391.5	249.9	41.8	221.6	279.7	274.3
Level of Service	F	C	C	C	F		F	F	D	F	F	F
Approach Delay (s)		53.7			352.2			277.8			265.8	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	261.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	144.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

I-85/I-385 Interchange Improvements
2035 No-Build AM

19: E Parkins Mill Road & US 276

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	142	135	67	182	31	139	131	1888	101	114	1648	120
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	3268		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.73	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1330	3268		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)	158	150	74	202	34	154	146	2098	112	127	1831	133
RTOR Reduction (vph)	0	67	0	0	0	140	0	0	52	0	0	54
Lane Group Flow (vph)	158	157	0	202	34	14	146	2098	60	127	1831	79
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)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Effective Green, g (s)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Actuated g/C Ratio	0.16	0.08		0.09	0.09	0.09	0.13	0.53	0.53	0.07	0.47	0.47
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)	237	254		296	161	137	223	2635	820	222	2322	723
v/s Ratio Prot	0.05	0.05		c0.06	0.02		c0.08	c0.42		0.04	0.37	
v/s Ratio Perm	c0.05					0.01			0.04			0.05
v/c Ratio	0.67	0.62		0.68	0.21	0.10	0.65	0.80	0.07	0.57	0.79	0.11
Uniform Delay, d1	35.3	40.2		39.8	38.1	37.7	37.2	17.0	10.2	40.8	20.1	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	1.04	1.86	1.00	1.00	1.00
Incremental Delay, d2	8.0	6.2		7.2	1.3	0.6	3.7	1.2	0.1	4.6	2.8	0.3
Delay (s)	43.3	46.4		47.0	39.4	38.3	41.9	18.8	19.0	45.4	22.9	13.6
Level of Service	D	D		D	D	D	D	B	B	D	C	B
Approach Delay (s)		45.1			42.9			20.3			23.7	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM Average Control Delay			25.1				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			69.3%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM
























20: Duvall Drive & US 276



Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	459	129	1592	305	138	1661
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	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4821		1719	4940
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1719	1538	4821		350	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	510	143	1769	339	153	1846
RTOR Reduction (vph)	0	4	63	0	0	0
Lane Group Flow (vph)	510	139	2045	0	153	1846
Turn Type	Perm		Perm			
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	20.7		20.7	20.7
Effective Green, g (s)	12.0	12.0	20.7		20.7	20.7
Actuated g/C Ratio	0.27	0.27	0.46		0.46	0.46
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)	458	410	2218		161	2272
v/s Ratio Prot	c0.30		0.42			0.37
v/s Ratio Perm		0.09			c0.44	
v/c Ratio	1.11	0.34	0.92		0.95	0.81
Uniform Delay, d1	16.5	13.3	11.4		11.7	10.5
Progression Factor	1.00	1.00	0.95		1.00	1.00
Incremental Delay, d2	76.8	1.0	5.1		58.9	3.3
Delay (s)	93.3	14.3	16.0		70.5	13.8
Level of Service	F	B	B		E	B
Approach Delay (s)	76.0		16.0			18.1
Approach LOS	E		B			B
Intersection Summary						
HCM Average Control Delay			25.1	HCM Level of Service		C
HCM Volume to Capacity ratio			1.01			
Actuated Cycle Length (s)			45.0	Sum of lost time (s)		12.3
Intersection Capacity Utilization			91.8%	ICU Level of Service		F
Analysis Period (min)			15			
c Critical Lane Group						





















I-85/I-385 Interchange Improvements
2035 No-Build AM

23: US 276 & Millennium Blvd

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	137	1603	283	33	2233	77	96	101	83	6	20	52
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	0.93		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)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.04	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.62	1.00	1.00
Satd. Flow (perm)	72	3438	1538	141	3438	1538	3335	3206		1129	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)	152	1781	314	37	2481	86	107	112	92	7	22	58
RTOR Reduction (vph)	0	0	96	0	0	22	0	82	0	0	0	16
Lane Group Flow (vph)	152	1781	218	37	2481	64	107	122	0	7	22	42
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)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	16.2		9.4	8.8	16.8
Effective Green, g (s)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	16.2		9.4	8.8	16.8
Actuated g/C Ratio	0.75	0.69	0.69	0.71	0.68	0.68	0.05	0.11		0.06	0.06	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)	144	2386	1067	152	2322	1039	183	356		75	109	312
v/s Ratio Prot	c0.06	0.52		0.01	0.72		c0.03	c0.04		0.00	0.01	0.01
v/s Ratio Perm	c0.73		0.14	0.16		0.04				0.01		0.01
v/c Ratio	1.06	0.75	0.20	0.24	1.07	0.06	0.58	0.34		0.09	0.20	0.13
Uniform Delay, d1	54.2	14.2	8.0	12.6	23.6	8.0	67.2	59.8		64.0	65.1	57.9
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	90.6	1.6	0.2	1.3	40.1	0.1	6.0	1.8		0.9	2.8	0.3
Delay (s)	144.7	15.7	8.1	13.9	63.8	8.1	73.3	61.6		64.9	67.9	58.2
Level of Service	F	B	A	B	E	A	E	E		E	E	E
Approach Delay (s)		23.4			61.2			65.6			61.2	
Approach LOS		C			E			E			E	
Intersection Summary												
HCM Average Control Delay			45.3			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			145.7			Sum of lost time (s)				14.0		
Intersection Capacity Utilization			92.5%			ICU Level of Service				F		
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM

24: Pelham Road & The Parkway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	1294	1254	0	2248	1068	0	0	0	379	695	199
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)	306	1438	1393	0	2498	1187	0	0	0	421	772	221
RTOR Reduction (vph)	0	0	10	0	0	1	0	0	0	0	0	95
Lane Group Flow (vph)	306	1438	1383	0	2498	1186	0	0	0	421	772	126
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)	9.2	82.2	82.2		67.2	103.9				36.7	36.7	36.7
Effective Green, g (s)	9.2	82.2	82.2		67.2	103.9				36.7	36.7	36.7
Actuated g/C Ratio	0.07	0.63	0.63		0.52	0.80				0.28	0.28	0.28
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)	236	2174	972		1777	1229				485	511	434
v/s Ratio Prot	0.09	0.42			0.73	0.27					c0.43	
v/s Ratio Perm			c0.90			0.50				0.24		0.08
v/c Ratio	1.30	0.66	1.42		1.41	0.97				0.87	1.51	0.29
Uniform Delay, d1	60.4	15.1	23.9		31.4	11.5				44.3	46.6	36.5
Progression Factor	1.00	1.00	1.00		0.93	1.05				1.00	1.00	1.00
Incremental Delay, d2	161.1	1.6	196.4		182.9	2.9				15.8	239.8	0.6
Delay (s)	221.5	16.7	220.3		212.2	15.0				60.2	286.5	37.1
Level of Service	F	B	F		F	B				E	F	D
Approach Delay (s)		127.1			148.7			0.0			180.1	
Approach LOS		F			F			A			F	
Intersection Summary												
HCM Average Control Delay			145.8		HCM Level of Service			F				
HCM Volume to Capacity ratio			1.45									
Actuated Cycle Length (s)			130.0		Sum of lost time (s)			11.1				
Intersection Capacity Utilization			190.4%		ICU Level of Service			H				
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM







25: Pelham Road & I-85 SB off ramp



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑↑
Volume (vph)	0	1673	1531	0	998	1785
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	1859	1701	0	1109	1983
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	0	1859	1701	0	1109	1980
Turn Type					Perm	
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		53.4	53.4		65.7	65.7
Effective Green, g (s)		53.4	53.4		65.7	65.7
Actuated g/C Ratio		0.41	0.41		0.51	0.51
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)		1412	1412		869	1368
v/s Ratio Prot		c0.54	0.49		0.65	
v/s Ratio Perm						c0.73
v/c Ratio		1.32	1.20		1.28	1.45
Uniform Delay, d1		38.3	38.3		32.1	32.1
Progression Factor		0.95	1.05		1.00	1.00
Incremental Delay, d2		146.0	97.0		133.2	205.5
Delay (s)		182.3	137.1		165.4	237.6
Level of Service		F	F		F	F
Approach Delay (s)		182.3	137.1		211.7	
Approach LOS		F	F		F	
Intersection Summary						
HCM Average Control Delay		184.4		HCM Level of Service		F
HCM Volume to Capacity ratio		1.39				
Actuated Cycle Length (s)		130.0		Sum of lost time (s)		10.9
Intersection Capacity Utilization		163.4%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						




















I-85/I-385 Interchange Improvements
2035 No-Build AM

26: Pelham Road & I-85 NB off ramp

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↔	↔
Volume (vph)	1540	0	0	782	1192	1268
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)	1711	0	0	869	1324	1409
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1711	0	0	869	1324	1409
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	46.2			46.2	73.0	73.0
Effective Green, g (s)	46.2			46.2	73.0	73.0
Actuated g/C Ratio	0.36			0.36	0.56	0.56
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)	1222			1222	1873	864
v/s Ratio Prot	c0.50			0.25	0.40	
v/s Ratio Perm						c0.92
v/c Ratio	1.40			0.71	0.71	1.63
Uniform Delay, d1	41.9			36.1	20.7	28.5
Progression Factor	0.99			0.87	1.00	1.00
Incremental Delay, d2	180.5			1.8	1.4	288.9
Delay (s)	221.9			33.4	22.1	317.4
Level of Service	F			C	C	F
Approach Delay (s)	221.9			33.4	174.4	
Approach LOS	F			C	F	
Intersection Summary						
HCM Average Control Delay		166.6		HCM Level of Service		F
HCM Volume to Capacity ratio		1.54				
Actuated Cycle Length (s)		130.0		Sum of lost time (s)		10.8
Intersection Capacity Utilization		182.5%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						






















I-85/I-385 Interchange Improvements
2035 No-Build AM

27: Pelham Road & Boland Court

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	1933	830	157	1185	10	438	2	164	35	3	16
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	
Flt Protected	1.00	0.95		1.00	1.00			1.00	0.85		0.96	
Flt Permitted	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3283		1719	3434			1724	1538		1682	
Satd. Flow (perm)	352	3283		95	3434			1300	1538		241	
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)	50	2148	922	174	1317	11	487	2	182	39	3	18
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	85	0	12	0
Lane Group Flow (vph)	50	3033	0	174	1328	0	0	489	97	0	48	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)	69.3	69.3		86.3	86.3			30.7	30.7		30.7	
Effective Green, g (s)	69.3	69.3		86.3	86.3			30.7	30.7		30.7	
Actuated g/C Ratio	0.53	0.53		0.66	0.66			0.24	0.24		0.24	
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)	188	1750		192	2280			307	363		57	
v/s Ratio Prot		c0.92		c0.07	0.39							
v/s Ratio Perm	0.14			0.53				c0.38	0.06		0.20	
v/c Ratio	0.27	1.73		0.91	0.58			1.59	0.27		0.84	
Uniform Delay, d1	16.5	30.4		43.1	12.0			49.6	40.5		47.3	
Progression Factor	0.62	0.57		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	330.2		40.4	1.1			281.7	0.6		66.8	
Delay (s)	10.6	347.5		83.5	13.1			331.3	41.1		114.1	
Level of Service	B	F		F	B			F	D		F	
Approach Delay (s)		342.1			21.2			252.6			114.1	
Approach LOS		F			C			F			F	
Intersection Summary												
HCM Average Control Delay			238.3			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.62									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			19.7			
Intersection Capacity Utilization			136.1%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												


















I-85/I-385 Interchange Improvements
2035 No-Build AM

28: Forsythia Dr & E Butler Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	0	22	22	0	166	3	1372	16	58	1240	14
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		0.88		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		1584		1719	3432		1719	3432	
Flt Permitted		0.51	1.00		0.96		0.15	1.00		0.12	1.00	
Satd. Flow (perm)		914	1538		1529		268	3432		210	3432	
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)	30	0	24	24	0	184	3	1524	18	64	1378	16
RTOR Reduction (vph)	0	0	20	0	34	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	30	4	0	174	0	3	1541	0	64	1393	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)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Effective Green, g (s)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.18	0.18		0.18		0.66	0.66		0.66	0.66	
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)		165	277		275		177	2265		139	2265	
v/s Ratio Prot								c0.45				0.41
v/s Ratio Perm		0.03	0.00		c0.11		0.01			0.30		
v/c Ratio		0.18	0.02		0.63		0.02	0.68		0.46	0.62	
Uniform Delay, d1		26.1	25.3		28.5		4.4	7.9		6.2	7.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.55	0.53	
Incremental Delay, d2		0.8	0.0		5.6		0.2	1.7		8.6	1.0	
Delay (s)		26.9	25.3		34.1		4.6	9.5		12.0	4.9	
Level of Service		C	C		C		A	A		B	A	
Approach Delay (s)		26.2			34.1			9.5			5.2	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			9.4			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			75.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			74.9%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

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	1476	91	251	1003	0	783	0	344	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			
Frt		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)		3408		1719	3438			1719	1538			
Flt Permitted		1.00		0.06	1.00			0.95	1.00			
Satd. Flow (perm)		3408		111	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	1640	101	279	1114	0	870	0	382	0	0	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	1738	0	279	1114	0	0	870	339	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		59.0		81.0	81.0			57.0	57.0			
Effective Green, g (s)		59.0		81.0	81.0			57.0	57.0			
Actuated g/C Ratio		0.39		0.54	0.54			0.38	0.38			
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)		1340		231	1857			653	584			
v/s Ratio Prot				c0.13	0.32							
v/s Ratio Perm		c0.51		0.52				0.51	0.22			
v/c Ratio		1.30		1.21	0.60			1.33	0.58			
Uniform Delay, d1		45.5		50.5	23.5			46.5	37.0			
Progression Factor		0.94		1.73	1.20			0.99	0.99			
Incremental Delay, d2		137.9		97.4	0.1			159.9	1.8			
Delay (s)		180.7		184.8	28.2			205.9	38.4			
Level of Service		F		F	C			F	D			
Approach Delay (s)		180.7			59.6			154.8			0.0	
Approach LOS		F			E			F			A	
Intersection Summary												
HCM Average Control Delay			134.8			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.30									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			116.0%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												
























I-85/I-385 Interchange Improvements
2035 No-Build AM

31: E Butler Road & I-385 NB Ramps

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		 			 							
Volume (vph)	580	1679	0	0	1229	719	0	0	0	25	0	426
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
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Flt	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	0.07	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	123	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)	644	1866	0	0	1366	799	0	0	0	28	0	473
RTOR Reduction (vph)	0	0	0	0	0	294	0	0	0	0	0	19
Lane Group Flow (vph)	644	1866	0	0	1366	505	0	0	0	28	0	454
Turn Type	pm+pt				custom				custom			custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	101.0	101.0			53.0	53.0				37.0		37.0
Effective Green, g (s)	101.0	101.0			53.0	53.0				37.0		37.0
Actuated g/C Ratio	0.67	0.67			0.35	0.35				0.25		0.25
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)	530	2315			1215	543				424		379
v/s Ratio Prot	c0.34	0.54										c0.30
v/s Ratio Perm	c0.48				0.40	0.33				0.02		
v/c Ratio	1.22	0.81			1.12	0.93				0.07		1.20
Uniform Delay, d1	47.5	17.5			48.5	46.7				43.3		56.5
Progression Factor	1.49	0.64			1.00	1.00				1.00		1.00
Incremental Delay, d2	98.5	0.3			67.1	24.8				0.1		112.1
Delay (s)	169.2	11.4			115.6	71.5				43.4		168.6
Level of Service	F	B			F	E				D		F
Approach Delay (s)		51.9			99.3			0.0			161.6	
Approach LOS		D			F			A			F	
Intersection Summary												
HCM Average Control Delay			82.4		HCM Level of Service					F		
HCM Volume to Capacity ratio			1.18									
Actuated Cycle Length (s)			150.0		Sum of lost time (s)					12.0		
Intersection Capacity Utilization			116.0%		ICU Level of Service					H		
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2035 No-Build AM

34: Frontage Road & Roper Mountain Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	99	151	111	23	18	848	1234	1042	99	1751	37
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	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1665	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.07	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	1719	1645		1633	1665	1538	119	3438	1538	358	3427	
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)	4	110	168	123	26	20	942	1371	1158	110	1946	41
RTOR Reduction (vph)	0	42	0	0	0	19	0	0	106	0	1	0
Lane Group Flow (vph)	4	236	0	74	75	1	942	1371	1052	110	1986	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)	10.0	10.0		4.0	4.0	4.0	98.0	98.0	98.0	55.0	55.0	
Effective Green, g (s)	10.0	10.0		4.0	4.0	4.0	98.0	98.0	98.0	55.0	55.0	
Actuated g/C Ratio	0.08	0.08		0.03	0.03	0.03	0.75	0.75	0.75	0.42	0.42	
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)	132	127		50	51	47	545	2592	1159	151	1450	
v/s Ratio Prot	0.00	c0.14		c0.05	0.05		c0.49	0.40			0.58	
v/s Ratio Perm						0.00	c0.81		0.68	0.31		
v/c Ratio	0.03	1.85		1.48	1.47	0.01	1.73	0.53	0.91	0.73	1.37	
Uniform Delay, d1	55.5	60.0		63.0	63.0	61.1	41.1	6.6	12.5	31.3	37.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.92	0.94	1.00	1.00	
Incremental Delay, d2	0.2	413.2		296.8	291.8	0.2	328.5	0.1	1.3	26.3	170.8	
Delay (s)	55.7	473.2		359.8	354.8	61.3	369.5	6.1	13.0	57.6	208.3	
Level of Service	E	F		F	F	E	F	A	B	E	F	
Approach Delay (s)		467.3			322.3			107.0			200.4	
Approach LOS		F			F			F			F	
Intersection Summary												
HCM Average Control Delay			162.5			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.68									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			134.7%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												




















I-85/I-385 Interchange Improvements
2035 No-Build AM

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	1061	0	1506	265	1618	0	0	1551	462
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	1179	0	1673	294	1798	0	0	1723	513
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	173
Lane Group Flow (vph)	0	0	0	589	590	1664	294	1798	0	0	1723	340
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				52.0	52.0	52.0	9.0	66.0			51.0	51.0
Effective Green, g (s)				52.0	52.0	52.0	9.0	66.0			51.0	51.0
Actuated g/C Ratio				0.40	0.40	0.40	0.07	0.51			0.39	0.39
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)				653	653	1083	231	1745			1349	603
v/s Ratio Prot							0.09	c0.52			c0.50	
v/s Ratio Perm				0.36	0.36	c0.61						0.22
v/c Ratio				0.90	0.90	1.54	1.27	1.03			1.28	0.56
Uniform Delay, d1				36.6	36.6	39.0	60.5	32.0			39.5	30.8
Progression Factor				1.00	1.00	1.00	1.38	0.23			0.42	0.11
Incremental Delay, d2				16.5	16.7	246.1	125.9	16.3			125.3	0.3
Delay (s)				53.1	53.3	285.1	209.2	23.8			142.0	3.7
Level of Service				D	D	F	F	C			F	A
Approach Delay (s)		0.0			189.2			49.8			110.3	
Approach LOS		A			F			D			F	
Intersection Summary												
HCM Average Control Delay			124.0			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.41									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			18.0			
Intersection Capacity Utilization			146.5%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												





















I-85/I-385 Interchange Improvements
2035 No-Build AM

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	1065	380	979	1633	0	818	0	458	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			
Frt		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	0.11	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	190	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	1183	422	1088	1814	0	909	0	509	0	0	0
RTOR Reduction (vph)	0	0	221	0	0	0	0	0	45	0	0	0
Lane Group Flow (vph)	0	1183	201	1088	1814	0	454	455	464	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)		31.6	31.6	91.2	90.6		26.9	26.9	26.9			
Effective Green, g (s)		31.6	31.6	91.2	90.6		26.9	26.9	26.9			
Actuated g/C Ratio		0.24	0.24	0.70	0.70		0.21	0.21	0.21			
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)		1201	374	759	2396		338	338	560			
v/s Ratio Prot		0.24		c0.59	0.53							
v/s Ratio Perm			0.13	c0.42			0.28	0.28	0.17			
v/c Ratio		0.99	0.54	1.43	0.76		1.34	1.35	0.83			
Uniform Delay, d1		49.0	42.8	32.6	12.6		51.5	51.5	49.3			
Progression Factor		0.87	0.67	0.77	0.52		1.00	1.00	1.00			
Incremental Delay, d2		20.5	4.6	195.8	0.2		173.0	174.3	10.9			
Delay (s)		63.3	33.1	220.8	6.8		224.6	225.8	60.2			
Level of Service		E	C	F	A		F	F	E			
Approach Delay (s)		55.3			87.0			166.0			0.0	
Approach LOS		E			F			F			A	
Intersection Summary												
HCM Average Control Delay			97.3			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.39									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			11.9			
Intersection Capacity Utilization			146.5%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

I-85/I-385 Interchange Improvements
2035 No-Build AM

37: Roper Mountain Road & Congaree Road

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	439	1127	2	6	1471	614	316	4	325	2	4	2
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			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1541			1780	1538
Flt Permitted	0.06	1.00			0.95	1.00	0.75	1.00			0.81	1.00
Satd. Flow (perm)	107	4939			3256	1538	1364	1541			1466	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)	488	1252	2	7	1634	682	351	4	361	2	4	2
RTOR Reduction (vph)	0	0	0	0	0	240	0	242	0	0	0	2
Lane Group Flow (vph)	488	1254	0	0	1641	442	351	123	0	0	6	0
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)	90.6	90.6			61.6	61.6	26.9	26.9			26.9	26.9
Effective Green, g (s)	90.6	90.6			61.6	61.6	26.9	26.9			26.9	26.9
Actuated g/C Ratio	0.70	0.70			0.47	0.47	0.21	0.21			0.21	0.21
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)	362	3442			1543	729	282	319			303	318
v/s Ratio Prot	c0.24	0.25						0.08				
v/s Ratio Perm	c0.70				0.50	0.29	c0.26				0.00	0.00
v/c Ratio	1.35	0.36			1.06	0.61	1.24	0.39			0.02	0.00
Uniform Delay, d1	45.2	8.0			34.2	25.2	51.5	44.4			41.1	40.9
Progression Factor	1.00	1.00			0.88	0.47	1.00	1.00			1.00	1.00
Incremental Delay, d2	174.0	0.3			37.6	2.3	136.3	1.6			0.1	0.0
Delay (s)	219.1	8.3			67.6	14.1	187.9	46.0			41.1	40.9
Level of Service	F	A			E	B	F	D			D	D
Approach Delay (s)		67.4			51.9			115.6			41.1	
Approach LOS		E			D			F			D	
Intersection Summary												
HCM Average Control Delay			67.0			HCM Level of Service				E		
HCM Volume to Capacity ratio			1.28									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			11.9			
Intersection Capacity Utilization			105.8%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												