APPENDIX A

2007 REGIONAL TRANSPORTATION PLAN
PLANNED IMPROVEMENTS

Table 6-1: 2007 Regional Transportation Plan Project List - Mainline Highway Improvements Category

Identifiers					Project Information				Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier		Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic
SJ07-1001	212-0000-0395		Tier I		Caltrans	I-205	Construct east and westbound auxiliary lanes	Tracy Blvd to Mountain House Parkway	$51,560,000	$51,560,000	$0	2009	2009	2013
SJ07-1002	212-0000-0336	0001	Tier I		Caltrans	I-205	Tree planting	Alameda County Line to I-5 (P.M. 0.0/12.6)	$2,455,000	$2,455,000	$0	various	done	2010
SJ07-1003			Tier I		Caltrans	I-205	Widen from 6 to 8 lanes (inside/outside)	I-580 to I-5	$396,640,000	$396,640,000	$0		2015	2020
SJ07-1004	212-0000-0346	7861	Tier I		Caltrans	I-205/I-580	Construct new westbound truck lanes	East of Mountain House Parkway to Alameda County Line (Note: Project continues in Alameda Co. to North Flynn Rd)	$50,000,000	$50,000,000	$0	2009	2011	2015
SJ07-1005			Tier I		Caltrans	I-5	Widen 6 to 8 lanes (inside)	French Camp Road to Charter Way	$42,100,000	$42,100,000	$0		2015	2020
SJ07-1006			Tier I		Caltrans	I-5	Widen 6 to 8 lanes (inside)	SR 120 to French Camp Road	$108,600,000	$108,600,000	$0		2015	2020
SJ07-1007	212-0000-0393		Tier I		Caltrans	I-5	North Stockton Widening - widen 6 to 8 lanes including auxiliary lanes	Country Club Blvd to north of Eight Mile Road	$350,000,000	$350,000,000	$0	2008	2009	2017
SJ07-1008	212-0000-0123		Tier I		Caltrans	I-5 Mossdale	Widen 9 to 12 through lanes	SR-120 to I-205 (P.M. R13.9/R15.6)	$122,300,000	$122,300,000	$0		2016	2020
SJ07-1009	112-0000-0036	7350	Tier I		Caltrans	Route 12	Provide safety and operational improvements	I-5 to Bouldin Island (P.M. 18.1/27.6)	$20,000,000	$20,000,000	$0	2011	2011	2017
SJ07-1010			Tier I		Caltrans	Route 12	Widen from 4 to 6 lanes	Lower Sacramento Road to Route 99	$31,045,000	$31,045,000	$0		2017	2020
SJ07-1011			Tier I		Caltrans	Route 12	Widen from 2 to 4 lanes	Lower Sacramento Road to I-5	$71,040,000	$71,040,000	$0		2015	2019
SJ07-1012	212-0000-0399	7239	Tier I		Caltrans	Route 12/Route 88	Widen from 2 to 4 lanes	Within the joint Route 88/Route 12 corridor	$67,086,000	$67,086,000	$0	2008	2011	2016
SJ07-1013			Tier I		Caltrans	SR 132	Widen 2 to 4 lanes	Gap Closure, I-580 to I-5	$20,000,000	$20,000,000	$0		2010	2016
SJ07-1014			Tier I		Caltrans	SR-120	Widen 4 to 6 lanes (inside)	I-5 to SR99	$78,000,000	$78,000,000	$0		2012	2016
SJ07-1015			Tier I		Caltrans	SR-4	Extension - New alignment from Fresno Ave. to east of Daggett Road	Fresno Avenue to east of Daggett Road	$217,600,000	$217,600,000	$0		2012	2016
SJ07-1016			Tier I		Caltrans	SR-4	Operational and Intersection Improvements	Daggett Road to I-5 (PM 12.6/15.9)	$3,800,000	$3,800,000	$0		2010	2014
SJ07-1017	212-0000-0394		Tier I		Caltrans	SR-99	99 Manteca - widen 4 to 6 lanes with interchange modifications	SR-120 to Arch Rd (PM 5.3/15.0)	$250,000,000	$250,000,000	$0	2012	2010	2015
SJ07-1018	212-0000-0344	7668	Tier I		Caltrans	SR-99	99 South Stockton - widen from 4 to 6 lanes with interchange modifications and realignment of the Highway 4 east approach and connection to Highway 99	Rt 4-Crosstown Freeway to South of Arch Road (PM 14.6/18.4)	$250,500,000	$250,500,000	$0	2008	2009	2013
SJ07-1019	212-0000-0313		Tier I		Caltrans	Various locations	SHOPP - Collision Reduction Grouped Projects	Various	$473,020,000	$473,020,000	$0	various	various	2030
SJ07-1020	212-0000-0314		Tier I		Caltrans	Various locations	SHOPP - Mobility Grouped Projects	Various	$98,840,000	$98,840,000	$0	various	various	2030
SJ07-1021	212-0000-0315		Tier I		Caltrans	Various locations	SHOPP Roadway Preservation Grouped Projects	Various	$134,140,000	$134,140,000	$0	various	various	2030
SJ07-1022	212-0000-0392		Tier I		Caltrans	Various locations	SHOPP-Other (Emergency Response, Mandates, Bridge Preservation, Roadside Preservation Etc.)	Various	$60,844,000	$60,844,000	$0	various	various	2030
SJ07-1023			Tier II		Caltrans	I-5	Widen 4 to 6 lanes (inside)	SR-12 to County Line	$91,000,000	$0	$91,000,000			
SJ07-1024			Tier II		Caltrans	I-5	Widen 6 to 8 lanes (inside)	Eight Mile Road to New Road A	$25,000,000	$0	$25,000,000		2013	2016
SJ07-1025			Tier II		Caltrans	I-5 Widening	Widen 8 to 10 lanes	Roth Road to Otto Drive	$400,000,000	$0	$400,000,000			
SJ07-1026			Tier II		Caltrans	I-5/SR-120	New branch connections (2 lane structures)	SR 120 West to I-5 North, and I-5 South to SR 120 East	$35,500,000	$0	$35,500,000			
SJ07-1027			Tier II		Caltrans	I-580	Widen 6 to 8 lanes	Mountain House Parkway to Alameda County line	$1,500,000	$0	$1,500,000			
SJ07-1028			Tier II		Caltrans	SR-12	Widen 2 to 4 lanes (outside), add turn lanes	SR 99 to SR 88	$50,500,000	$0	$50,500,000			
SJ07-1029			Tier II		Caltrans	SR-120	East of Escalon, widen to 5 lane conventional to county line	McHenry to existing 120 at Harrold	$25,000,000	$0	$25,000,000			
SJ07-1030			Tier II		Caltrans	SR-120	West of Escalon, widen from Jack Tone 5 lane conventional to Sexton, new south alignment to McHenry	Jack Tone to Sexton and McHenry	$75,000,000	$0	$75,000,000			
SJ07-1031			Tier II		Caltrans	SR-132	Improve roadway	I-580 to Stanislaus County line (PM 0.0/7.1)	$2,000,000	$0	$2,000,000			
SJ07-1032			Tier II		Caltrans	SR-26	New Capacity~ Widen 2 to 4 lanes (outside)	Cardinal (diverting canal) to Jack Tone Road	$48,000,000	$0	$48,000,000			
SJ07-1033			Tier II		Caltrans	SR-26	Widen 6 to 8 lanes	SR 99 to Austin Road Extension	$30,000,000	$0	$30,000,000			
SJ07-1034			Tier II		Caltrans	SR-4	Corridor Improvement Project Provide safety and operational improvement. Replace roads overburdened with more traffic than designed to handle.	I-5 to the city of Brentwood in Contra Costa County (Study Only)	$5,000,000	$0	$5,000,000			
SJ07-1035			Tier II		Caltrans	SR-4	Widen 6 to 8 lanes	I-5 to SR 99 (Crosstown)	$75,000,000	$0	$75,000,000			
SJ07-1036			Tier II		Caltrans	SR-4	Widen 6 to 8 lanes	SR 99 to Austin Road Extension	$30,000,000	$0	$30,000,000			
SJ07-1037			Tier II		Caltrans	SR-88	Passing lanes	SR-12 to County Line	$24,000,000	$0	$24,000,000			
SJ07-1038			Tier II		Caltrans	SR-99	New Capacity~ Widen 4 to 6 lanes (inside)	Jct. 12 East to County line.	$86,000,000	$0	$86,000,000			
SJ07-1039			Tier II		Caltrans	SR-99	New Capacity~ Widen 4 to 6 lanes (inside)	North of Harmony to SR-12 East	$11,250,000	$0	$11,250,000			

Table 6-1: 2007 Regional Transportation Plan Project List - Mainline Highway Improvements Category

Identifiers				Project Information				Cost to Deliver			Milestone Years			
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic	
SJ07-1040			Tier II	Caltrans	SR-99	Widen 6 to 8 lanes (outside)	City of Manteca Yosemite Avenue to City of Ripon (West Ripon Road)	$203,000,000	$0	$203,000,000				
SJ07-1041			Tier II	Caltrans	SR-99	Widen 6 to 8 lanes (outside)	Crosstown to Cherokee Road	$194,000,000	$0	$194,000,000				
SJ07-1042			Tier II	Caltrans	SR-99	Widen 6 to 8 lanes (outside)	Arch Road to Crosstown	$86,000,000	$0	$86,000,000				
SJ07-1043			Tier II	Caltrans	SR-99	Widen 6 to 8 lanes (outside)	Cherokee Road to Armstrong Road	$100,000,000	$0	$100,000,000				
SJ07-1044			Tier II	Caltrans	SR-99	Widen 6 to 8 lanes (outside)	French Camp Road to Mariposa Road	$100,000,000	$0	$100,000,000				
SJ07-1045			Tier II	Caltrans	SR-99	Widen 8 to 10 lanes (outside)	Mariposa Road to Cherokee Road	$150,000,000	$0	$150,000,000				
								$4,747,320,000	**$2,899,570,000**	**$1,847,750,000**				

Table 6-2: 2007 Regional Transportation Plan Project List - Interchange Projects Category

Identifiers							Project Information				Cost to Deliver			Milestone Years			
MPO I.D.	2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category		Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	Tier I	Tier II		FTIP Programming	NEPA Approval	Open to Traffic
1010	SJ07-2001			Tier I	Interchanges		Caltrans	I-5 at SR-4 (Crosstown Freeway)	Reconstruct Freeway to Freeway Interchange	I-5 at SR-4 (Crosstown Freeway)	$59,000,000	$59,000,000	$0		2017	2020	
1009	SJ07-2002			Tier I	Interchanges		Caltrans	SR-99 at SR-4 (Crosstown Freeway)	Reconstruct Freeway to Freeway Interchange	SR-99 at SR-4 (Crosstown Freeway)	$30,000,000	$30,000,000	$0		2021	2024	
A4	SJ07-2003			Tier I	Interchanges		Caltrans	SR-99 at Charter Way	Interchange improvements	SR-99 at Charter Way	See SJ07-1018	See SJ07-1018	$0				
91	SJ07-2004			Tier I	Interchanges		Lathrop	I-5 at Lathrop Road	Reconstruct interchange (P.M. 17.3/17.8)	I-5 at Lathrop Road	$33,000,000	$33,000,000	$0		2010	2015	
92	SJ07-2005			Tier I	Interchanges		Lathrop	I-5 at Louise Avenue	Reconstruct interchange (PM 16.4-16.8)	I-5 at Louise Avenue	$33,000,000	$33,000,000	$0		2010	2015	
139	SJ07-2006	212-0000-0397		Tier I	Interchanges		Lodi	SR-99 at Harney Lane	Reconstruct interchange to provide 6 through lanes on SR 99, 4 lanes on Harney and modify on-ramps and off-ramps	SR-99 at Harney Lane	$37,603,000	$37,603,000	$0	2008	2009	2011	
138	SJ07-2007	212-0000-0398		Tier I	Interchanges		Lodi	SR-99 at SR-12 West (Kettleman Lane)	Reconstruct interchange and widen to free flowing interchange	SR-99 at SR-12 West (Kettleman Lane)	$60,121,000	$60,121,000	$0	2008	2009	2011	
137	SJ07-2008			Tier I	Interchanges		Lodi	SR-99 at SR-12 East (Victor Road)	Complete reconstruction of SR 99/SR-12 interchange to provide 6 through lanes on SR 99 and modify on-ramps and off-ramps	SR-99 at SR-12 East (Victor Road)	$30,801,000	$30,801,000	$0	2011	2012	2016	
204	SJ07-2009	212-0000-0231		Tier I	Interchanges		Manteca	SR-120 at McKinley Avenue	Reconstruct/improve interchange including necessary auxillary lanes (P.M. 2.2/2.2)	SR-120 at McKinley Avenue	$32,093,000	$32,093,000	$0	2009	2009	2012	
A5	SJ07-2010			Tier I	Interchanges		Manteca	SR-120 at Airport Way	Reconstruct interchange	SR-120 at Airport Way	$18,010,000	$18,010,000	$0		2008	2010	
A6	SJ07-2011			Tier I	Interchanges		Manteca	SR-120 at Main Street (Manteca)	Reconstruct interchange	SR-120 at Main Street (Manteca)	$15,888,000	$15,888,000	$0		2015	2018	
A7	SJ07-2012			Tier I	Interchanges		Manteca	SR-120 at Union Road	Reconstruct interchange (P.M. 4.1/4.1)	SR-120 at Union Road	$15,888,000	$15,888,000	$0		2007	2009	
205	SJ07-2013			Tier I	Interchanges		Manteca	SR-99 at Austin Road	Reconstruct/improve interchange with new grade separation	SR-99 at Austin Road	$100,979,000	$100,979,000	$0		2009	2012	
203	SJ07-2014			Tier I	Interchanges		Manteca	SR-99 at North Main (Manteca)	Reconstruct overcrossing	SR-99 at North Main (Manteca)	See SJ07-1017	See SJ07-1017	$0				
A8	SJ07-2015			Tier I	Interchanges		Ripon	SR-99 at Main Street/UPRR Interchange (Ripon)	Reconstruct interchange of SR-99 and Main Street including reconstruction of Main Street overcrossing of UPRR and intersection improvements at Stockton Avenue and East Main Street	SR-99 at Main Street/UPRR Interchange (Ripon)	$5,000,000	$5,000,000	$0		2011	2015	
A9	SJ07-2016			Tier I	Interchanges		Ripon	SR-99 at Wilma Avenue Overcrossing/UPRR Interchange	Reconstruct interchange including reconstruction of existing overcrossing structure	SR-99 at Wilma Avenue Overcrossing/UPRR Interchange	$5,000,000	$5,000,000	$0		2011	2015	
352	SJ07-2017			Tier I	Interchanges		San Joaquin County	SR-132 at Bird Road	Upgrade interchange, lengthen ramps, widen approaches, install signal controls with necessary auxiliary lanes(P.M. 2.2/2.2)	SR-132 at Bird Road	$21,700,000	$21,700,000	$0	2007	CEQA 2006	2009	
827	SJ07-2018			Tier I	Interchanges		Stockton	I-5 at Charter Way	I-5/Charter Way interchange improvements (P.M. 25.3)	I-5 at Charter Way between Navy Drive and about 200 ft east of the IC	$21,389,000	$21,389,000	$0		2017	2015	
828	SJ07-2019			Tier I	Interchanges		Stockton	I-5 at Downing Ave	Modification of interchange to a higher capacity design (P.M. 23.4-24.4)	I-5 at Downing Ave	$66,000,000	$66,000,000	$0		2010	2015	
34	SJ07-2020	212-0000-0309		Tier I	Interchanges		Stockton	I-5 at Eight Mile Road	Modification of interchange (P.M. 34.7/35.9)	I-5 at Eight Mile Road	$37,000,000	$37,000,000	$0	2007	2009	2014	
673	SJ07-2021	212-0000-0230	7239	Tier I	Interchanges		Stockton	I-5 at French Camp/Arch-Sperry Road (HR 3-193 #2067)	Reconstruct existing French Camp Road interchange, construct auxiliary lanes on I-5, and realign Manthey Road (P.M. 20.8-21.2)	I-5 from PM 22.1/23.6 on French Camp Road from approx 2000 feet west of the IC and approx. 1700 feet east of the IC on Sperry Road. Improvements on nearby streets.	$61,170,000	$61,170,000	$0	2010	2007	2012	
682	SJ07-2022	212-0000-0309		Tier I	Interchanges		Stockton	I-5 at Hammer Lane	Interchange Modification and auxiliary lanes (PM 32.6)	I-5 at Hammer Lane	$50,000,000	$50,000,000	$0	2007	2009	2014	
35	SJ07-2023	212-0000-0309		Tier I	Interchanges		Stockton	I-5 at North Gateway (New Road A)	Construction of a new interchange and auxiliary lanes (PM 36.0/36.9)	I-5 at North Gateway (New Road A)	$63,000,000	$63,000,000	$0	2007	2009	2015	
32	SJ07-2024	212-0000-0309		Tier I	Interchanges		Stockton	I-5 at Otto Drive	Construction of a new interchange and auxiliary lanes (PM 33.3/34.2)	I-5 at Otto Drive	$44,024,000	$44,024,000	$0	2007	2009	2014	
671	SJ07-2025			Tier I	Interchanges		Stockton	SR-99 at Eight Mile Road	Reconstruct Interchange (PM 35.1-35.5)	SR-99 at Eight Mile Road	$82,000,000	$82,000,000	$0		2008	2013	
674	SJ07-2026			Tier I	Interchanges		Stockton	SR-99 at French Camp Road	Reconstruct interchange	SR-99 at French Camp Road	See SJ07-1018	See SJ07-1018	$0				
A10	SJ07-2027			Tier I	Interchanges		Stockton	SR-99 at Golden Gate	Construct new interchange	SR-99 at Golden Gate	See SJ07-1017	See SJ07-1017	$0				
672	SJ07-2028			Tier I	Interchanges		Stockton	SR-99 at March Lane and Wilson Way	Construction of the March Lane/SR-99 interchanges with connections to Wilson Way	SR-99 at March Lane and Wilson Way	$158,000,000	$158,000,000	$0		2008	2015	
683	SJ07-2029			Tier I	Interchanges		Stockton	SR-99 at Mariposa Road	Reconstruct interchange	SR-99 at Mariposa Road	See SJ07-1017	See SJ07-1017	$0				

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Identifiers							Project Information					Cost to Deliver			Milestone Years		
MPO I.D.	2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category		Jurisdiction	Facility Name/Route	Project Description	Project Limits		Total	Tier I	Tier II	FTIP Programming	NEPA Approval	Open to Traffic
670	SJ07-2030			Tier I	Interchanges		Stockton	SR-99 at Morada	Reconstruct interchange (PM 23.5-24.5)	SR-99 at Morada		$55,000,000	$55,000,000	$0		2008	2011
884	SJ07-2031			Tier I	Interchanges		Tracy	I-205 at MacArthur	Improve interchange, enhance circulation, and reduce congestion on I-205 (P.M.R8.1/R8.1)	I-205 at MacArthur		$5,422,000	$5,422,000	$0	2010	2013	2015
937	SJ07-2032	212-0000-0227		Tier I	Interchanges		Tracy	I-205 at Lammers Rd	Construct interchange (P.M. 2.4/5.3) HR 3-193 #2055 and HR 3-366 #460	I-205 at Lammers Rd		$63,000,000	$63,000,000	$0	2006	2009	2015
888	SJ07-2033			Tier I	Interchanges		Tracy	I-205 at Grant Line Road	Modification of existing interchange	I-205 at Grant Line Road		$27,040,000	$27,040,000	$0		2014	2017
960	SJ07-2034	212-0000-0228		Tier I	Interchanges		Tracy & Lathrop	I-205 at Paradise Road/Chrisman	Construct New Interchange (Goldrush City) (P.M. 13.1/13.1)	I-205 at Paradise Road/Chrisman		$54,015,000	$54,015,000	$0	2009	2009	2015
1018	SJ07-2035			Tier II	Interchanges		Caltrans	SR-12 at I-5	Loop Ramps	SR-12 at I-5		$11,250,000	$0	$11,250,000			
1020	SJ07-2036			Tier II	Interchanges		Caltrans	SR-99 at SR-26	Reconstruct interchange	SR-99 at SR-26		$19,500,000	$0	$19,500,000			
1019	SJ07-2037			Tier II	Interchanges		Caltrans	SR-99 at SR-88	Reconstruct interchange	SR-99 at SR-88		$19,500,000	$0	$19,500,000			
118	SJ07-2038			Tier II	Interchange		Lathrop	SR-120 at Yosemite/Guthmiller	Reconstruct interchange	Yosemite/Guthmiller		$2,200,000	$0	$2,200,000			
A11	SJ07-2039			Tier II	Interchanges		Ripon	SR-99 at Olive Road Interchange	Construct new full access Highway Overhead Interchange at Olive Road	SR-99 at Olive Road		$100,000,000	$0	$100,000,000		2011	2015
685	SJ07-2040			Tier II	Interchanges		Stockton	I-5 at Matthews Road	Reconstruct interchange	I-5 at Matthews Road		$35,000,000	$0	$35,000,000			
686	SJ07-2041			Tier II	Interchanges		Stockton	I-5 at Roth Road	Reconstruct interchange	I-5 at Roth Road		$35,000,000	$0	$35,000,000			
675	SJ07-2042			Tier II	Interchanges		Stockton	SR-99 at Arch Sperry Road	Phase 2 interchange improvements	SR-99 at Arch Sperry Road		$15,000,000	$0	$15,000,000			
676	SJ07-2043			Tier II	Interchanges		Stockton	SR-99 at Armstrong Road	Reconstruct interchange	SR-99 at Armstrong Road		$35,000,000	$0	$35,000,000			
678	SJ07-2044			Tier II	Interchanges		Stockton	SR-99 at New Road A (N. Gateway)	Construction of new interchange	SR-99 at New Road A (N. Gateway)		$35,000,000	$0	$35,000,000			
886	SJ07-2045			Tier II	Interchanges		Tracy	I-580 at Corral Hollow Road	Modification of existing interchange	I-580 at Coral Hollow Road		$20,000,000	$0	$20,000,000	2009	n/a	2013
885	SJ07-2046			Tier II	Interchanges		Tracy	I-580 at Lammers Road	Construction of new interchange	I-580 at Lammers Road		$55,000,000	$0	$55,000,000	2015	2018	2025
												$1,667,593,000	**$1,285,143,000**	**$382,450,000**			

Table 6-3: 2007 Regional Transportation Plan Project List - Regional Roadway Improvements Category

Identifiers					Project Information					Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic
SJ07-3001	212-0000-0311		Tier I	Regional Roads-Bridge	Caltrans	Various locations	Caltrans Highway Bridge Preventative Maintenance Program - Plng	Various	$0	$0	$0	various		2030
SJ07-3002	212-0000-0272		Tier I	Regional Roads-Bridge	Caltrans	Various locations	Caltrans Highway Bridge Program Lump Sum projects (Safety)	Various	$209,400,000	$209,400,000	$0	various		2030
SJ07-3003	various		Tier I	Regional Roads-Bridge	Caltrans	Various locations	Caltrans Highway Bridge Program Line Item projects (Safety)	Various	$74,581,000	$74,581,000	$0	various		2030
SJ07-3004	212-0000-0307		Tier I	Regional Roads-Rehab	Caltrans	Various locations	Lump sum for Emergency Repair Program (Safety)	Various	$1,745,000	$1,745,000	$0	various		2030
SJ07-3005	212-0000-0353		Tier I	Regional Roads-Rehab	Caltrans	Various locations	Caltrans Minor Program (Safety)	Various	$10,470,000	$10,470,000	$0	various		2030
SJ07-3006			Tier I	Regional Roads	Caltrans	Yosemite (SR 120)	Widen from 2 to 4 lanes	Van Allen to Brennan. 1.95 miles.	$3,689,000	$3,689,000	$0		2013	2015
SJ07-3007			Tier I	Regional Roads	Caltrans	Yosemite (SR 120)	Widen from 2 to 4 lanes	From Manteca City limit to North Ripon Road. 3.05 miles.	$5,358,000	$5,358,000	$0		2013	2015
SJ07-3008			Tier I	Regional Roads	Caltrans	Yosemite (SR 120)	Widen from 2 to 4 lanes	From French Camp to Van Allen. 2.1 miles.	$3,427,000	$3,427,000	$0		2013	2015
SJ07-3009			Tier I	Regional Roads	Escalon	McHenry Avenue	Widen from 2 to 4 lanes	Between First Street and Catherine Way	$3,096,000	$3,096,000	$0		2009	2010
SJ07-3010			Tier I	Regional Roads	Escalon	McHenry Avenue	So. McHenry Ave. Improvements and Rehab; reconstruct with center turn lane, bike lane, and graded shoulders.	Catherine Avenue to Jones Road	$3,389,000	$3,389,000	$0	link to SJ07-3062	2010	2012
SJ07-3011			Tier I	Regional Roads	Escalon	SR 120/Brennan Ave Intersection	Intersection improvements	SR-120 at Brennan Avenue	$873,000	$873,000	$0		2008	2009
SJ07-3012	212-0000-0146	K655	Tier I	Regional Roads-Beautification	Escalon	SR-120 (Escalon Gateway)	Scenic landmarks and landscaping	Several locations off SR-120 leading into downtown	$256,000	$256,000	$0	2006	2006	2007
SJ07-3013			Tier I	Regional Roads	Escalon	Ullrey Avenue/McHenry Avenue Intersection	Reconstruct intersection, including addition of turn pockets, improvement of traffic signal and installation of train pre-emption system for UPRR railroad crossing.	Intersection of Ullrey Avenue and McHenry Avenue including UPRR railroad crossing.	$986,000	$986,000	$0		2009	2010
SJ07-3014			Tier I	Regional Roads	Lathrop	Golden Valley Parkway	Construct parallel facility Six Lanes (from Lathrop Rd to Borkhurst Blvd) Four lanes (from Burkhurst to Paradise)	Along Northwest side of I-5 from Lathrop to Paradise	$59,290,000	$59,290,000	$0			2020
SJ07-3015			Tier I	Regional Roads	Lathrop	Lathrop Rd.	Widen from 2 to 4 lanes	From I-5 to east of UPRR	$2,771,000	$2,771,000	$0		2010	2013
SJ07-3016	112-0000-0158	3K44	Tier I	Regional Roads	Lathrop	Louise Avenue	Widen 2 lane to 4 lane	5th St to east of city limits	$2,075,000	$2,075,000	$0	2008	2008	2010
SJ07-3017			Tier I	Regional Roads	Lodi	Ham Lane	Widen 2/3 lanes to 4 lanes	From Lodi Avenue to Elm Street	$2,343,000	$2,343,000	$0	2010	2010	2015
SJ07-3018			Tier I	Regional Roads	Lodi	Harney Lane	Widen from 2/3 lane collector to 4 lane divided arterial	SR-99 to Lower Sacramento Road (2.6 Miles)	$19,808,000	$19,808,000	$0	2009	2010	2013
SJ07-3019			Tier I	Regional Roads	Lodi	Lockeford Street	Widen 2 to 4 lanes	Stockton Street to Cherokee Lane	$5,525,000	$5,525,000	$0	2009	2009	2011
SJ07-3020			Tier I	Regional Roads	Lodi	Pine Street	Widen from 2 to 3 lanes (adding turn lane)	Between Cherokee Lane and Beckman Road	$2,519,000	$2,519,000	$0	2008	2008	2009
SJ07-3021			Tier I	Regional Roads-Rehab	Lodi	Turner Road	Reconstruct and overlay Turner and Lower Sacramento Roads. Modify the Turner/Lower Sacramento intersection.	Lower Sacramento Road on the west, Loma Drive on the east and UPRR tracks on the north	$967,000	$967,000	$0	2007		2007
SJ07-3022			Tier I	Regional Roads	Lodi	Victor Road (SR-12)	Widen from 2 to 4 lanes. Add center dual left turn lane, turn pockets at intersections and median seperation with landscape	Between SR 99 to Central California Traction railroad tracks.	$9,278,000	$9,278,000	$0	2013	2014	2017
SJ07-3023			Tier I	Regional Roads	Manteca	Airport Way	Widen from 4 to 6 lanes	SR-120 - Lathrop Road (Manteca)	$18,189,000	$18,189,000	$0		2010	2013
SJ07-3024			Tier I	Regional Roads	Manteca	Lathrop Road	Widen from 2 to 4 lanes	From East of UPRR to SR-99	$10,390,000	$10,390,000	$0		2029	2030
SJ07-3025			Tier I	Regional Roads	Manteca	Louise Avenue	Improve roadway	From Main Street to SR-99	$1,516,000	$1,516,000	$0		2029	2030
SJ07-3026			Tier I	Regional Roads	Manteca	Louise Avenue	Widen 2 to 4 lanes	Manteca SPRR to SR-99	$840,000	$840,000	$0		2009	2011
SJ07-3027			Tier I	Regional Roads	Manteca	Louise Avenue	Widen 2 to 4 lanes	East of UPRR to Manteca SPRR	$2,400,000	$2,400,000	$0		2008	2009
SJ07-3028			Tier I	Regional Roads	Manteca	South Union Road	Widen from 2 to 4 lanes with a continuous left turn lane. Curb, gutter and sidewalk will also be constructed.	Project will connect South Union Rd where it is currently 4 lanes. SR120 off ramps to Wawona Street.	$1,031,000	$1,031,000	$0			2008
SJ07-3029			Tier I	Regional Roads	Manteca	Union Road	Widen from 4 to 6 lanes	From SR-120 to Woodward Road 0.45 miles.	$1,828,000	$1,828,000	$0			2008
SJ07-3030			Tier I	Regional Roads	Manteca	Woodward Avenue	Widen from 2 to 4 lanes	McKinley to Manteca Road. 3 miles.	$16,284,000	$16,284,000	$0			2009
SJ07-3031			Tier I	Regional Roads	Mountain House	Mountain House Parkway	Widen from 2 to 8 lanes	I-205 to Grant Line Road 1.15 miles.	$7,388,000	$7,388,000	$0		2021	2025
SJ07-3032			Tier I	Regional Roads	Port of Stockton	Daggett Road	Four-lane access road with an at-grade crossing	SR-4 to bridge across Burns Cut-off that connects Rough and Ready Island to mainland. At grade crossing over Burlington Santa Fe mainline	$4,600,000	$4,600,000	$0		2007	2007
SJ07-3033	212-0000-0229		Tier I	Regional Roads	Port of Stockton	Daggett Road HR 3-223 #2821	2 to 4 lanes, Improve SR-4/Daggett Road intersection	SR-4/Daggett Road intersection to Burns Cutoff Bridge	$11,880,000	$11,880,000	$0	2007	2008	2009
SJ07-3034	212-0000-0281		Tier I	Regional Roads-Bridge	Port of Stockton	Rough and Ready Island Bridge (Navy Dr Bridge)	Replacement of existing bridge (2 to 4 lanes) at Navy Drive to provide secondary access point	Bridge at Navy Drive	$15,606,000	$15,606,000	$0		2007	2011
SJ07-3035	112-0000-0162	3K47	Tier I	Regional Roads	Ripon	Main and Stockton St	Rehabilitate roadways and widen Stockton Street from 2 to 4 lanes between Second Street and Doak Boulevard	On Main Street from Acacia to Jack Tone Road and on Stockton Street from Main to Doak Blvd	$7,294,000	$7,294,000	$0	2007		2009
SJ07-3036			Tier I	Regional Roads	Ripon	River Road Plus Extension	Widen from 2 to 6 lanes	N Ripon Road to Austin interchange. Includes extension of Olive Road south to SJC line.	$37,892,000	$37,892,000	$0		2025	2030
SJ07-3037			Tier I	Regional Roads	Ripon	South Frontage Extension to Austin Road	Extension of South Frontage Road	From Jack Tone Road to Austin Road	$1,529,000	$1,529,000	$0		2018	2020
SJ07-3038			Tier I	Regional Roads	Ripon	South Frontage Road & Wilma Over Crossing	Construct a new South Frontage Road and modify Wilma Over Crossing	Existing Wilma Over Crossing from Stockton Ave to Jack Tone Rd	$2,750,000	$2,750,000	$0		2007	2008

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2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic
SJ07-3039			Tier I	Regional Roads	Ripon	Stanislaus River Crossing	Construction of a new bridge across the Stanislaus River parallel to SR-99 in Ripon	Parallel to SR-99 at the Stanislaus River	$11,066,000	$11,066,000	$0		2027	2030
SJ07-3040			Tier I	Regional Roads	San Joaquin County	Airport Way	Widen from 4 to 6 lanes	French Camp Road to City Limit	$2,645,000	$2,645,000	$0	2020	2019	2022
SJ07-3041	212-0000-0318	K641	Tier I	Regional Roads-Bridge	San Joaquin County	Airport Way Bridge #29C-187	Seismic retrofit	Near SJC line at San Joaquin River	$3,230,000	$3,230,000	$0	2007	2007	2008
SJ07-3042	212-0000-0319	K642	Tier I	Regional Roads-Rehab	San Joaquin County	Alpine Avenue	Rehabilitate roadway and surrounding streets	Kirk Avenue to Ryde Avenue	$500,000	$500,000	$0	2010		2011
SJ07-3043	212-0000-0321	K644	Tier I	Regional Roads-Rehab	San Joaquin County	Beyer Lane	Rehabilitate roadway and surrounding streets	Between SR28 and SR88	$370,000	$370,000	$0	2007		2009
SJ07-3044			Tier I	Regional Roads	San Joaquin County	Bryon Road and Grant Line Road Intersection Signalization Project	Costs associated with the installation of traffic signal with a preempt device to coordinate traffic flow with the railroad crossing	Bryon Road and Grant Line Road (east)	$1,857,000	$1,857,000	$0	2011	2011	2011
SJ07-3045	112-0000-0143	3K60	Tier I	Regional Roads-Rehab	San Joaquin County	Carpenter Road	Rehabilitate roadway and surrounding streets	South of Stockton on Carpenter Rd from South 99 Frontage Rd to east end and nearby streets	$323,000	$323,000	$0	2007		2009
SJ07-3046	212-0000-0322	K645	Tier I	Regional Roads-Rehab	San Joaquin County	Cherokee Rd	Rehabilitate roadway and surrounding streets	Sanguinetti Lane to Newtown Road	$460,000	$460,000	$0	2009		2011
SJ07-3047	112-0000-0144	3K61	Tier I	Regional Roads-Rehab	San Joaquin County	Cherryland Ave, Rt 88-Leonardini	Rehabilitate roadway and surrounding streets	East of Stockton from SR 88 to Leonardini Rd and nearby streets	$353,000	$353,000	$0	2007		2009
SJ07-3048	112-0000-0149	3K66	Tier I	Regional Roads-Rehab	San Joaquin County	Duncan Road	Rehabilitate roadway and surrounding streets	East of Stockton from Copperopolis Rd to SR 26 and nearby streets	$737,000	$737,000	$0	2007		2009
SJ07-3049	212-0000-0323	K646	Tier I	Regional Roads-Bridge	San Joaquin County	El Rancho Rd Bridge #29C-311	Bridge replacement	Near Tracy at Tom Paine Street	$1,927,000	$1,927,000	$0	2008	2007	2009
SJ07-3050			Tier I	Regional Roads	San Joaquin County	Eleventh Street	Improve roadway and intersections	Between Tracy City Limits Drive and I-5 including installation of traffic signal and/or roundabout improvements at intersections, center median, and an eastbound auxiliary lane at selected areas of Eleventh Street corridor	$20,455,000	$20,455,000	$0	2025	2023	2025
SJ07-3051	212-0000-0324	K647	Tier I	Regional Roads-Rehab	San Joaquin County	Escalon-Bellota Road	Rehabilitate roadway and surrounding streets	Near Stanislaus County border between SR4 and Copperopolis Rd	$726,000	$726,000	$0	2007		2008
SJ07-3052			Tier I	Regional Roads	San Joaquin County	Grant Line Road and Seventh Street (El Rancho Road) Traffic Signal/Pedestrian Crossing	Costs associated with the installation of a traffic signal and construction of sidewalk and bike route on Seventh Street/El Rancho Road and portion on Grant Line Road	Intersection of Grant Line Road and Seventh Street/El Rancho Road	$652,000	$652,000	$0	2011	2011	2011
SJ07-3053			Tier I	Regional Roads	San Joaquin County	Howard Road and Tracy Boulevard Intersection Improvements	Cost associated with improvements of the intersection including installation of a traffic signal, construction of left and right hand turn lanes, construction of shoulders	Howard Road and Tracy Boulevard intersection	$580,000	$580,000	$0	2011	2011	2011
SJ07-3054	212-0000-0325	K648	Tier I	Regional Roads-Rehab	San Joaquin County	Jack Tone Rd	Rehabilitate roadway and surrounding streets	French Camp Rd to Wildwood Road	$650,000	$650,000	$0	2007		2008
SJ07-3055			Tier I	Regional Roads	San Joaquin County	Jack Tone Road	Upgrade existing 2 lane highway to a 4 lane roadway facility with 8' paved shoulders, including the replacement of 5 bridges and widen one overpass bridge over the BNSF RR and acquire associated R/W.	Between Ripon City limits and Mariposa Road	$71,085,000	$71,085,000	$0	2020	2020	2022
SJ07-3056	212-0000-0326	K649	Tier I	Regional Roads-Rehab	San Joaquin County	Liberty Rd	Rehabilitate roadway and surrounding streets	Dry Creek Rd to Mackville Rd	$650,000	$650,000	$0	2009		2010
SJ07-3057			Tier I	Regional Roads	San Joaquin County	Linne Road Shoulders and Traffic Signal	Costs associated with the installation of a traffic signal at Linne Road and Chrisman Road, and paved shoulders on Linne Road	paved shoulders on Linne Road (MacArthur Road to Chrisman Road)	$9,293,000	$9,293,000	$0	2020	2020	2022
SJ07-3058			Tier I	Regional Roads	San Joaquin County	Lower Sacramento Road (Phase II) Segment 3A	Widen to include center left turn lane, installing curb, gutter and sidewalk	The City of Lodi Limits to WID Canal	$3,140,000	$3,140,000	$0	2007 (PE)		2008
SJ07-3059			Tier I	Regional Roads	San Joaquin County	Lower Sacramento Road, Segments 2B & 2C	Widen from 2 to 4 lanes; installing concrete median barrier, and installing shoulder wide to accommodate bicyclists	Pixley Slough Bridge to Harney Curve	$19,103,000	$19,103,000	$0	2007 (PE)		2010
SJ07-3060	212-0000-0327	K650	Tier I	Regional Roads-Rehab	San Joaquin County	Mackville Rd	Rehabilitate roadway and surrounding streets	SR-12/88 to Jahant Road	$306,000	$306,000	$0	2007		2008
SJ07-3061	212-0000-0328	K651	Tier I	Regional Roads-Bridge	San Joaquin County	McBride Rd Bridge #29C-331	Bridge replacement	SSJID Canal	$1,632,000	$1,632,000	$0	2008	2007	2009
SJ07-3062	112-0000-0142	3K59	Tier I	Regional Roads	San Joaquin County	McHenry Avenue Improvements & Bridge Replacement	Widening McHenry Avenue to install a two-way left turn lane and replacing two bridge structures	Stanislaus River Bridge to Jones Avenue	$29,446,000	$29,446,000	$0	2010	2010	2012
SJ07-3063			Tier I	Regional Roads	San Joaquin County	Pershing Avenue	Operational Improvements	Meadow Avenue to Thorton Road	$3,800,000	$3,800,000	$0	2008		2010
SJ07-3064	212-0000-0329	K652	Tier I	Regional Roads-Rehab	San Joaquin County	Schulte Road	Rehabilitate roadway and surrounding streets	Hansen Rd to Lammers Rd	$600,000	$600,000	$0	2007		2008
SJ07-3065	212-0000-0330	K653	Tier I	Regional Roads-Bridge	San Joaquin County	Tully Rd Bridge #29C-270	Bridge replacement	Near Lodi at Bear Creek	$2,415,000	$2,415,000	$0	2008	2008	2009
SJ07-3066			Tier I	Regional Roads	San Joaquin County	Turner Road	Widen road from 22' to 32'. Install left turn lanes and traffic signals	From I-5 to Lodi City limits	$22,770,000	$22,770,000	$0	2020	2020	2022
SJ07-3067	212-0000-0331	K654	Tier I	Regional Roads-Bridge	San Joaquin County	Wilson Way Bridge #29C-048	Rehabilitate bridge	At Stockton Canal Near Stockton	$4,310,000	$4,310,000	$0	2007	done	2008

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SJ07-3068	212-0000-0320	K643	Tier I	Regional Roads-Bridge	San Joaquin County	Woodward Island Bridge	Replace existing ferry system with a new bridge	Jones Tract to Woodward Island	$6,934,000	$6,934,000	$0	2010	2009	2012
SJ07-3069	212-0000-0333	K657	Tier I	Regional Roads-Beautification	San Joaquin County-Stockton Metropolitian Airport	Airport Way	Bicycle and pedestrian multi-use trail and landscaping.	Arch Road to CE Dixon Street	$250,000	$250,000	$0	2007	2007	2010
SJ07-3070	112-0000-0026		Tier I	Regional Roads-SJCOG	SJCOG	Plan Program Monitor	Plan Program Monitor	San Joaquin County	$15,000,000	$15,000,000	$0	various		2030
SJ07-3071	212-0000-0001		Tier I	Regional Roads-Rehab	SJCOG	Regional Surface Transportation Program (STP) Lump Sum Projects	Rehabilitation of various streets and roads	San Joaquin County	$172,589,000	$172,589,000	$0	various		2030
SJ07-3072	212-0000-0232		Tier I	Regional Roads-Study	SJCOG	SR-130 Realignment Study	SAFETEA-LU HPP Study	San Joaquin County	$8,777,000	$8,777,000		2007		
SJ07-3073	112-0000-0025		Tier I	Regional Roads-SJCOG	SJCOG	Transportation Demand Mangement	Commute Connection- Rideshare Program	San Joaquin County	$25,000,000	$25,000,000	$0	various		2030
SJ07-3074			Tier I	Regional Roads	Stockton	Airport Way	Widen from 4 to 6 lanes	From Arch Road to French Camp Road	$29,633,000	$29,633,000	$0		2013	2015
SJ07-3075	212-0000-0335	K659	Tier I	Regional Roads	Stockton	Airport Way	Streetscape beautification including medians, frontages and landscaping, bike lanes, crosswalks	Charter Way to Carpenter Rd	$17,430,000	$17,430,000	$0	2007	2006	2011
SJ07-3076			Tier I	Regional Roads	Stockton	Airport Way	Reconstruct intersections, add turn lanes, and install traffic signal improvements	Between Harding Way and Industrial Drive	$7,346,000	$7,346,000	$0		2013	2015
SJ07-3077			Tier I	Regional Roads	Stockton	Alpine Avenue	Widen from 2 to 4 lanes with a middle turn lane. Construct curb, gutter, sidewalks and driveways.	UPRR (SPRR) to Wilson Way	$9,026,000	$9,026,000	$0	2005	2009	2011
SJ07-3078			Tier I	Regional Roads	Stockton	Arch-Sperry Road Extension	Complete the engineering design and acquire the right of way. Relocated a segment of Sperry Road and extend Sperry Road from Performance Drive to French Camp Road. 4 lane extension on an 8 lane roadway project.	Extend Sperry Road approximately one mile from Performance Drive to French Camp Road	$64,937,000	$64,937,000	$0	2007	2007	2011
SJ07-3079			Tier I	Regional Roads-Beautification	Stockton	California Street	Reconstruct Frontages on California Street	Alpine Street to Miner Avenue	$10,713,000	$10,713,000	$0		2011	2015
SJ07-3080			Tier I	Regional Roads-Rehab	Stockton	California Street Rehabilitation	Rehabilitation to include: driveways, wheelchair ramps, median islands, pedestrian improvements, and class II bicycle lanes.	California Street, various Locations	$3,641,000	$3,641,000	$0			2011
SJ07-3081			Tier I	Regional Roads-Beautification	Stockton	Charter Way Beautification Phase III	Beautification improvements	Stanislaus Street to Wilson Way	$1,531,000	$1,531,000	$0		2012	2015
SJ07-3082	212-0000-0260		Tier I	Regional Roads-Bridge	Stockton	Davis Rd over Pixley Creek Bridge	Replace 2 lane bridge with 4 lane bridge	Davis Road Bridge over Pixley Slough between Eight Mile Road and Waterburry Drive. 0.1 miles South of Eight Mile Road	$3,961,000	$3,961,000	$0	2011	2007	2013
SJ07-3083			Tier I	Regional Roads	Stockton	Davis Road	Widen from 2 to 4 lanes	Bear Creek to Eight Mile Road	$11,262,000	$11,262,000	$0			2015
SJ07-3084			Tier I	Regional Roads	Stockton	Eight Mile Road Expressway	Widen to 8 through lanes	Between I-5 and Route 99 including reconstruction of intersections, addition of turn and acceleration/deceleration lanes, and construction of a raised median.	$145,121,000	$145,121,000	$0			2015
SJ07-3085			Tier I	Regional Roads	Stockton	El Dorado Street (Phase 2)	Widen roadway from 2 lanes each direction to 2 lanes SB, 3 lanes NB, and a center dual turn lane	Mariposa Avenue to Bianchi Road	$9,285,000	$9,285,000	$0			2010
SJ07-3086			Tier I	Regional Roads-Bridge	Stockton	Feather River Dr. Extension	Construct 2 lane bridge to cross Calaveras River linking Ryde Avenue with Feather River Drive	Feather River Drive to Ryde Avenue	$3,256,000	$3,256,000	$0			2009
SJ07-3087			Tier I	Regional Roads	Stockton	Hammer Lane (Phase III)	Widen from 4 to 6 lanes	Kelley Drive to Thorton Road, excluding the Pershing Avenue intersection	$14,038,000	$14,038,000	$0			2009
SJ07-3088			Tier I	Regional Roads	Stockton	Hammer Lane west of I-5	Widen from 6 to 8 lanes from I-5 to Mariners Drive and Construct 8 lanes from Mariners Drive to Trinity Parkway	Widen from I-5 to Mariners Drive and Construct 8 lanes from Mariners Drive to Trinity Parkway	$20,162,000	$20,162,000	$0			2015
SJ07-3089			Tier I	Regional Roads	Stockton	Holman Road	Widen from 4 to 6 lanes	Villa Antinori Eight Mile. 1.05 miles.	$5,534,000	$5,534,000	$0			2015
SJ07-3090			Tier I	Regional Roads	Stockton	I-5/Eight Mile Road	New undercrossing (P.M. 35.7/35.8)	I-5 at Eight Mile Road	$9,000,000	$9,000,000	$0		2009	2011
SJ07-3091			Tier I	Regional Roads	Stockton	Lower Sacramento Road	Widen from 4 to 6 lanes	Hammer Lane to Bear Creek	$9,223,000	$9,223,000	$0			2010
SJ07-3092			Tier I	Regional Roads	Stockton	Lower Sacramento Road	Widen Lower Sacramento Road from 2 to 6 lanes including the replacement of Pixley Slough Bridge and Bear Creek Bridge. Reconstruct Eight Mile Road intersection.	Lower Sacramento Road between Bear Creek to Pixley Slough Bridge including the replacement of Pixley Slough Bridge and Bear Creek Bridge	$37,438,000	$37,438,000	$0		2007	2011
SJ07-3093			Tier I	Regional Roads	Stockton	March Lane	Extend an 8 lane March Lane east to the future Rt 99/Wilson Way IC. A 4-lane extension of Marantha Drive will also be built.	March Lane extends from Holman Road to Rt 99/Wilson Way IC; and Marantha Drive extends from Wilson Way to 700 feet north of March Lane	$93,408,000	$93,408,000	$0		done	2011
SJ07-3094			Tier I	Regional Roads	Stockton	March Lane	Widen from 6 to 8 lanes	El Dorado Street to West Lane	$1,416,000	$1,416,000	$0			2009
SJ07-3095			Tier I	Regional Roads	Stockton	Morada Lane	Extension of Morada Lane (4 lane facility) West Lane to Lower Sacramento Road	Between West Lane to Lower Sacramento Road	$69,896,000	$69,896,000	$0			2015

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SJ07-3096			Tier I	Regional Roads	Stockton	Pacific Avenue	Widen from 6 to 8 lanes including reconstruction of intersections, addition of turn and acceleration lanes and construction/extension of a raised landscaped median	Hammer Lane to March Lane-Between the Calaveras River and Hammer Lane	$51,070,000	$51,070,000	$0			2012
SJ07-3097			Tier I	Regional Roads-Bridge	Stockton	Pacific Avenue/ Calaveras Bridge Replacement	Replace dual 2 lane bridges with 6 lane bridge	Pacific Avenue/Calaveras Bridge	$8,160,000	$8,160,000	$0			2010
SJ07-3098			Tier I	Regional Roads	Stockton	Stanislaus Street	Widen from 2 to 4 lanes	Crosstown Freeway to Park Street	$3,548,000	$3,548,000	$0			2011
SJ07-3099			Tier I	Regional Roads	Stockton	Tam O'Shanter Drive and Hammertown Drive Traffic Signal	Costs associated with installation of a traffic signal and Class II bike lane on Tam O' Shanter Drive	Tam O'Shanter and Hammertown Drive intersection	$560,000	$560,000	$0			2012
SJ07-3100			Tier I	Regional Roads	Stockton	Thornton Road	Widen 1.5 mile section of roadway from 2 lanes both directions to 6 lanes with a center dual turn lane	From Pershing Avenue to Bear Creek Bridge	$12,506,000	$12,506,000	$0			2010
SJ07-3101			Tier I	Regional Roads	Stockton	Traffic Signal Controller Upgrades/Retiming	Upgrade traffic signal controllers and modify signal timing along three corridors	March Lane between I-5 and Pacific Avenue, Harding Way between Lincoln Street and California Street and Wilson Way between Bradford Street and Market Street	$635,000	$635,000	$0			2012
SJ07-3102			Tier I	Regional Roads	Stockton	Trinity Parkway Extension	Construct 4 lane extension	From Bear Creek Bridge to Hammer Lane	$43,714,000	$43,714,000	$0			2012
SJ07-3103	212-0000-0229		Tier I	Regional Roads	Stockton & Port of Stockton	Daggett Road	Reconstruct Daggett Road (Rough & Ready Island)	Burns Cutoff Bridge to SR-4	$5,894,000	$5,894,000	$0	2011	2011	2012
SJ07-3104			Tier I	Regional Roads	Stockton & Port of Stockton	Navy Drive	Widen from 2 to 4 lanes, includes bridge improvements on McCloy, widening and intersection	Navy Drive (including bridge on McCloy) McCloy to SR 4	$69,401,000	$69,401,000	$0		2007	2012
SJ07-3105	212-0000-0334	K658	Tier I	Regional Roads-Beautification	Tracy	10th Street	Widen sidewalks and construct bicycle facilities	Central Street to East street	$1,310,000	$1,310,000	$0	2009	2009	2009
SJ07-3106			Tier I	Regional Roads	Tracy	Corral Hollow Road	Widen from 2 to 4 lanes	Parkside Drive to Linne Road	$20,343,000	$20,343,000	$0		2013	2016
SJ07-3107			Tier I	Regional Roads	Tracy	Eleventh Street Improvements and MacArthur Dr. Intersection	Installation of traffic signal and/or roundabout improvements at intersections, center median, and an eastbound auxiliary lane at selected areas of Eleventh Street corridor	11th Street at MacArthur Drive	$9,027,000	$9,027,000	$0		2015	2018
SJ07-3108			Tier I	Regional Roads	Tracy	Grant Line Road	Widen from 2 to 4 lanes	Between Parker Avenue and MacArthur Drive including construction of median and sidewalk	$5,605,000	$5,605,000	$0			2009
SJ07-3109			Tier I	Regional Roads	Tracy	Grant Line Road	Widen from 5 to 6 lanes	From Naglee Road to Lammers Road	$5,583,000	$5,583,000	$0			2012
SJ07-3110			Tier I	Regional Roads	Tracy	Lammers Road	Widen from 2 to 4 lanes	I-205 to I-580	$70,271,000	$70,271,000	$0		2013	2017
SJ07-3111			Tier I	Regional Roads	Tracy	Linne Road	Widen from 2 to 4 lanes	Corral Hollow Road to Chrisman Road	$62,824,000	$62,824,000	$0		2013	2017
SJ07-3112			Tier I	Regional Roads	Tracy	MacArthur Drive	Widen 2 to 4 lanes (Valpico Road to Schulte Road) and extend 4 lane roadway (Mt. Diablo Road to Eleventh Street)	MacArthur Drive from Valpico Road to Schulte Road; MacArthur Drive from Mt. Diablo Road to Eleventh Street	$21,892,000	$21,892,000	$0		2009	2012
SJ07-3113			Tier I	Regional Roads	Tracy	Schulte Road	Extend 4 lane roadway	From back of Faith Lane (San Marco Subdivision limits) to Lammers Road (approx 1.0 mile extension)	$18,682,000	$18,682,000	$0		2010	2012
SJ07-3114			Tier I	Regional Roads	Tracy	Traffic Signal -Byron Road and Lammers Road	Costs associated with installation of a traffic signal	Lammers Road and Byron Road intersection	$1,857,000	$1,857,000	$0		2010	2012
SJ07-3115			Tier I	Regional Roads	Tracy	Traffic Signal-Grant Line Road Coordination	Costs associated with connecting thirteen traffic signals along Grant Line Road	Between West City Limits and MacArthur Drive	$150,000	$150,000	$0		2009	2011
SJ07-3116			Tier I	Regional Roads-Rehab	Various	Misc. Streets and Rds.	Operations and Maintence	Various	$505,350,000	$505,350,000	$0	various		2030
SJ07-3117			Tier II	Regional Roads	Escalon	California Street/McHenry Avenue Intersection	Relocate/reconstruct intersection to include realignment of California Street to a new 4-way intersection of California Street, Weiss Way and McHenry Avenue	Intersection of California Street and McHenry Avenue including intersection of California Street, Weiss Way and McHenry Avenue.	$4,223,000	$0	$4,223,000	2008	2009	2010
SJ07-3118			Tier II	Regional Roads	Escalon	Brennan Road	Widen from 2 to 4 lanes	SR 120 south to Jones Avenue	$7,840,000	$0	$7,840,000			
SJ07-3119			Tier II	Regional Roads	Escalon	Campbell Road	Widen from 2 to 4 lanes	Construct 2 lane extension of Campbell Road between Santa Fe Avenue and Rt 120	$2,500,000	$0	$2,500,000			
SJ07-3120			Tier II	Regional Roads	Escalon	Escalon Truck Route/Campbell Road	Widen from 2 to 4 lanes	Construct 2 lane extension of Campbell Road between Santa Fe Avenue and Rt 120	$5,341,000	$0	$5,341,000			
SJ07-3121			Tier II	Regional Roads	Escalon	Jones Road	Widen from 2 to 4 lanes	Brennan Road to Harrold Avenue	$2,000,000	$0	$2,000,000			
SJ07-3122			Tier II	Regional Roads	Escalon	Miller Road	Widen from 2 to 4 lanes	Escalon-Bellota Avenue to Campbell Avenue	$1,123,000	$0	$1,123,000			
SJ07-3123			Tier II	Regional Roads	Escalon	Miller Road	Widen from 2 to 4 lanes	Escalon-Bellota Avenue to Campbell Avenue	$1,123,000	$0	$1,123,000			
SJ07-3124			Tier II	Regional Roads	Escalon	South Arterial #1	Widen from 2 to 4 lanes	Brennan Avenue to Harrold Avenue	$5,055,000	$0	$5,055,000			
SJ07-3125			Tier II	Regional Roads	Lathrop	Roth Road	Widen to 4 lanes	Airport Way to I-5	$0	$0	$0			
SJ07-3126			Tier II	Regional Roads	Lathrop	Yosemite Avenue	Widen to 6 lanes	McKinley to UPRR	$0	$0	$0			
SJ07-3127			Tier II	Regional Roads	Lathrop	Yosemite Avenue	Widen to 6 lanes	SR 120 to McKinley	$0	$0	$0			
SJ07-3128			Tier II	Regional Roads	Lathrop & Manteca	Lathrop Road	Widen to 4 lanes	I-5 to SR-99	$0	$0	$0			
SJ07-3129			Tier II	Regional Roads	Lodi	Central Avenue	Widen 2 to 3 lanes	From Kettleman Lane to Lodi Avenue	$5,019,000	$0	$5,019,000	2011	2012	2016
SJ07-3130			Tier II	Regional Roads	Lodi	Hutchins Street	Widen 3 to 4 lanes	From Kettleman Lane to Lodi Avenue	$4,001,000	$0	$4,001,000	2015	2016	2020

Table 6-3: 2007 Regional Transportation Plan Project List - Regional Roadway Improvements Category

Identifiers					Project Information				Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic
SJ07-3131			Tier II	Regional Roads	Lodi	Tokay Street	Reconstruct and widen Tokay Street (widen the existing 37-43 foot section to 50 feet within the existing right of way)	Church Street to Cherokee Lane	$6,247,000	$0	$6,247,000	2011	2012	2016
SJ07-3132			Tier II	Regional Roads	Lodi	Harney Lane	Widen from 2 to 4 lanes	Lower Sacramento Road to Davis. 1.5 Miles	$858,000	$0	$858,000	2011		
SJ07-3133			Tier II	Regional Roads	Lodi	Lockeford Street	Widen from 2 to 4 lanes with center dual left turn lane and turn pockets at intersections	From Stockton Street easterly to Cherokee Lane	$1,000,000	$0	$1,000,000			
SJ07-3134			Tier II	Regional Roads	Lodi	Tokay Street	Widen Tokay Street by 10 feet for four blocks. Reconstruct roadway. Replace as required curb, gutter, sidewalk and parkways to current standards.	From Church Street to Cherokee Lane	$3,000,000	$0	$3,000,000			
SJ07-3135			Tier II	Regional Roads	Manteca	Airport Way	Widen from 4 to 6 lanes	SR-120 - Lathrop Road (Manteca)	$4,900,000	$0	$4,900,000			
SJ07-3136			Tier II	Regional Roads	Ripon	Doak Boulevard	Construct roundabouts at six major intersections	Stockton Avenue to Mohler Road	$2,200,000	$0	$2,200,000	2010		
SJ07-3137			Tier II	Regional Roads	Ripon	West Ripon Road	Widen existing road from 2 to 4 lanes and extend Ripon Road West to Eleventh Street in Tracy	Ripon Road West to Eleventh Street in Tracy	$50,000,000	$0	$50,000,000			
SJ07-3138			Tier II	Regional Roads	San Joaquin County	Airport Way	Widen from 2 to 4 lanes	Between (Manteca City Limits) Lathrop Road to French Camp Road	$21,948,000	$0	$21,948,000	2020	2019	2022
SJ07-3139			Tier II	Regional Roads	San Joaquin County	Escalon Bellota Road	Widen 2 to 4 lanes with shoulders	Escalon City limits to Mariposa Road	$10,128,000	$0	$10,128,000		2020	2022
SJ07-3140			Tier II	Regional Roads	San Joaquin County	Elliott Road	Widen from 2 to 4 lanes	SR-88 to Peltier Road	$12,900,000	$0	$12,900,000			
SJ07-3141			Tier II	Regional Roads	San Joaquin County	French Camp Road	Widen from 2 to 4 lanes	SR-99 to SR-120	$26,084,000	$0	$26,084,000			
SJ07-3142			Tier II	Regional Roads	San Joaquin County	Howard Road	Passing lanes and channelization	Howard Road	$23,935,000	$0	$23,935,000			
SJ07-3143			Tier II	Regional Roads	San Joaquin County	Jack Tone Road	Widen from 2 to 4 lanes	Entire length (SR-99 to SR88)	$27,000,000	$0	$27,000,000			
SJ07-3144			Tier II	Regional Roads	San Joaquin County	Lathrop Road	Widen from 4 to 6 lanes	SR-99 to Austin Road 2 miles.	$6,240,000	$0	$6,240,000	2011		
SJ07-3145			Tier II	Regional Roads	San Joaquin County	Liberty Road	Widen from 2 to 4 lanes	SR-99 to SR-88	$24,974,000	$0	$24,974,000			
SJ07-3146			Tier II	Regional Roads	San Joaquin County	Louise Avenue	Widen from 2 to 4 lanes	City limit to Austin. 0.4 miles.	$702,000	$0	$702,000	2011		
SJ07-3147			Tier II	Regional Roads	San Joaquin County	Lower Sacramento Road	Widen from 2 to 4 lanes	Peltier to Sacto County line. 3.7 miles.	$5,772,000	$0	$5,772,000	2020		
SJ07-3148			Tier II	Regional Roads	San Joaquin County	Mariposa Road	Widen from 2 to 4 lanes	Austin Road to Jack Tone Road	$32,531,000	$0	$32,531,000	2015		
SJ07-3149			Tier II	Regional Roads	San Joaquin County	Mariposa Road	Widen from 2 to 4 lanes	Jack Tone Road to Escalon-Belota Road	$20,063,000	$0	$20,063,000			
SJ07-3150			Tier II	Regional Roads	San Joaquin County	Peltier Road	Widen from 2 to 4 lanes	SR-99 to I-5	$15,500,000	$0	$15,500,000			
SJ07-3151			Tier II	Regional Roads	San Joaquin County	Peltier Road	Widen from 2 to 4 lanes	SR-99 to Elliot Road	$25,573,000	$0	$25,573,000			
SJ07-3152			Tier II	Regional Roads	San Joaquin County	River Road	Widen from 2 to 4 lanes	McHenry Avenue to N. Ripon Road. 7 miles	$10,921,000	$0	$10,921,000	2015		
SJ07-3153			Tier II	Regional Roads	San Joaquin County	River Road	Widen from 2 to 4 lanes	McHenry to Santa Fe. 2.5 miles.	$3,900,000	$0	$3,900,000	2011		
SJ07-3154			Tier II	Regional Roads	San Joaquin County	Roth Road	Upgrade existing 2 lane roadway to a 4 lane facility to a 64' pavement width (4 lane plus paved shoulders)	UPRR to Airport Way. 0.5 miles.	$4,386,000	$0	$4,386,000	2011		
SJ07-3155			Tier II	Regional Roads	San Joaquin County	Schulte Road	Widen from 2 to 4 lanes	Hanson to Lammers. 2 miles.	$3,120,000	$0	$3,120,000	2015		
SJ07-3156			Tier II	Regional Roads	San Joaquin County	Thornton Road	Widen from 2 to 4 lanes	Eight Mile to SR-12	$1,030,000	$0	$1,030,000	2015		
SJ07-3157			Tier II	Regional Roads	San Joaquin County	Tracy Boulevard	Passing lanes and channelization	Tracy Boulevard	$21,202,000	$0	$21,202,000			
SJ07-3158			Tier II	Regional Roads	Stockton	Airport Way	Widen from 4 to 6 lanes	French Camp Road to Roth Road	$15,000,000	$0	$15,000,000			
SJ07-3159			Tier II	Regional Roads	Stockton	Airport Way	Widen from 6 to 8 lanes	Arch/Sperry Road to French Camp Road	$20,000,000	$0	$20,000,000			
SJ07-3160			Tier II	Regional Roads	Stockton	Arch/Sperry Project	Widen from 2 to 6 lanes	Austin Road to Frontier Way	$0	$0	$0			
SJ07-3161			Tier II	Regional Roads	Stockton	Arch/Sperry Project	Widen from 2 to 6 lanes	Frontier Way to SR-99	$0	$0	$0			
SJ07-3162			Tier II	Regional Roads	Stockton	Arch-Sperry Road	Contruct 4 to 8 lanes	I-5 to Performance Drive	$65,000,000	$0	$65,000,000			
SJ07-3163			Tier II	Regional Roads	Stockton	Arch-Sperry Road	Construct 2 to 8 lanes	Performance Drive to SR-99	$35,000,000	$0	$35,000,000			
SJ07-3164			Tier II	Regional Roads	Stockton	Austin Road	Construct 6 lanes	SR-26 to Main Street	$10,000,000	$0	$10,000,000			
SJ07-3165			Tier II	Regional Roads	Stockton	Austin Road	Construct 8 Lanes	Main Street to Mariposa Road	$60,000,000	$0	$60,000,000			
SJ07-3166			Tier II	Regional Roads	Stockton	Austin Road	Construct 6 lanes	Mariposa Road to Arch Road	$5,000,000	$0	$5,000,000			
SJ07-3167			Tier II	Regional Roads	Stockton	Austin Road	Construct 4 lanes	Arch Road to French Camp Road	$20,000,000	$0	$20,000,000			
SJ07-3168			Tier II	Regional Roads	Stockton	Center/El Dorado	Widen to 4 lanes	Harding to Charter	$0	$0	$0			
SJ07-3169			Tier II	Regional Roads	Stockton	El Dorado Street	Widen to 6 lanes	Yokuts Avenue to Hammer Lane	$6,000,000	$0	$6,000,000	2008		
SJ07-3170			Tier II	Regional Roads	Stockton	Fremont Street	Widen to 4 lanes	Pershing Avenue to Center Street	$4,000,000	$0	$4,000,000	2010		
SJ07-3171			Tier II	Regional Roads	Stockton	French Camp Road	Widen from 2 to 6 lanes	SR-99 to Arch-Sperry Road	$40,000,000	$0	$40,000,000			
SJ07-3172			Tier II	Regional Roads	Stockton	Mariposa Road	Widen from 2 to 4 lanes	Between Route 99 and Austin Road	$89,955,000	$0	$89,955,000			
SJ07-3173			Tier II	Regional Roads	Stockton	New Road A-North Gateway	Construct 4 lanes. Project involves 2 railroad grade separation	I-5 to SR-99	$25,000,000	$0	$25,000,000			
SJ07-3174			Tier II	Regional Roads	Stockton	Pershing Avenue	Widen to 6 lanes	Alpine Avenue to Thornton Road	$13,000,000	$0	$13,000,000	2020		
SJ07-3175			Tier II	Regional Roads	Stockton	West Lane	Widen from 4 to 6 lanes	Armstrong Road to Eight Mile Road	$10,000,000	$0	$10,000,000			

Table 6-3: 2007 Regional Transportation Plan Project List - Regional Roadway Improvements Category

Identifiers					Project Information				Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	RTP Category	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Open to Traffic
SJ07-3176			Tier II	Regional Roads	Stockton	West Lane	Widen from 4 to 6 lanes	UPRR (SPRR) s/o Alpine-Calaveras River	$44,200,000	$0	$44,200,000			
SJ07-3177			Tier II	Regional Roads	Stockton	West Lane	Widen from 6 to 8 lanes	Eight Mile Road to Alpine Avenue	$35,000,000	$0	$35,000,000			
SJ07-3178			Tier II	Regional Roads	Stockton	West Lane	Widen to 8 lanes	Calaveras River to Eight Mile Road	$8,000,000	$0	$8,000,000	2010		
SJ07-3179			Tier II	Regional Roads	Stockton	West Lane/Airport Way	Widen from 4 to 6 lanes	Alpine Avenue to Arch-Sperry Road	$60,000,000	$0	$60,000,000			
SJ07-3180			Tier II	Regional Roads	Stockton	Trinity Parkway Extension	Construct 4 lane extension	Hammer Lane to March Lane	$0	$0	$0			
SJ07-3181			Tier II	Regional Roads	Tracy	Corral Hollow Road Widening	Widen 2 to 4 lanes including ROW and construction of two bridges	Linne Road to I-580	$51,785,000	$0	$51,785,000	2014	2017	2020
SJ07-3182			Tier II	Regional Roads	Tracy	Eleventh Street Bridge	Replacement of existing Tracy East Overhead Bridge		$15,000,000	$0	$15,000,000	2011	2014	2016
SJ07-3183			Tier II	Regional Roads	Tracy	Tracy Blvd.	Widen 2 to 4 lanes	I-205 to Eleventh Street	$15,000,000	$0	$15,000,000	2012	2015	2020
SJ07-3184			Tier II	Regional Roads-Rehab	Tracy	Tracy Blvd.	Reconstruct Tracy Blvd.	South of Linne to Tracy Municipal Airport entrance	$2,231,000	$0	$2,231,000			2017
SJ07-3185			Tier II	Regional Roads	Various	Deferred Maintenance on Bridges, state highways, local streets, and the cost of maintining reconstructed facilities	Undetermined	Undetermined	Undetermined	$0	Undetermined			
SJ07-3186			Tier II	Regional Roads	Various	General Backlog of Deferred Street Maintenance	Assuming the current backlog of $277 million (figure based on survey of local agencies) grows at a rate of 5% annually	Various	$895,000,000	$0	$895,000,000			
SJ07-3187			Tier II	Regional Roads-Bridge	Stockton	Pershing Ave/Calaveras River Bridge (#29CO243)	Replace existing 4 lane bridge with a new 6 lane bridge. New bridge will be an RC slab on RC piles.	Pershing Avenue/Calaveras River Bridge 0.02 miles north of Telegraph Avenue	$10,949,000	$0	$10,949,000	2011		2010
									$3,523,812,000	**$2,502,533,000**	**$1,959,459,000**			

Table 6-4: 2007 Regional Transportation Plan Project List - Railroad Crossing Safety Category

Identifiers: 2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	Project Information: Jurisdiction	Facility Name/Route	Project Description	Project Limits	Cost to Deliver: Total	TIER I	TIER II	Milestone Years: RTP/FTIP Programming	NEPA Approval	Open to Traffic
SJ07-4001			Tier I	Caltrans	Rt 12/UPRR Crossing	Construct new grade separation	Rt 12 at UPRR	See SJ07-1011	See SJ07-1011	$0			
SJ07-4002			Tier I	Caltrans	Section 130 Railroad Grade Crossing Hazard Elimination Projects	Eliminate hazards at railroad grade crossings	Various locations in San Joaquin County	$7,126,000	$7,126,000		various	various	2030
SJ07-4003			Tier I	Escalon	Escalon BNSF Crossing Improvement	Construct grade separation or at-grade improvements of BNSF railway crossings	At location in City of Esalcon to be determined through local arterial circulation analysis	$30,000,000	$30,000,000	$0		2027	2030
SJ07-4004	112-0000-0155	3K41	Tier I	Lathrop	Lathrop Road at UPRR (Westerly)	Preliminary engineering and Environmental Phase and Construction of a 4 lane overpass	Lathrop Road at UPRR	$15,000,000	$15,000,000	$0	2009	2010	2013
SJ07-4005	112-0000-0158	3K44	Tier I	Lathrop	Louise Avenue at UPRR	Construct at grade improvements	Louise Avenue at UPRR	$1,200,000	$1,200,000	$0	2008	2008	2010
SJ07-4006			Tier I	Lodi	Harney Lane at UPRR	Construct grade separation	Harney Lane at UPRR	$13,619,000	$13,619,000	$0	2009	2010	2013
SJ07-4007			Tier I	Lodi	Lodi Avenue/UPRR	Construct safety improvements of railway crossing	Lodi Avenue/UPRR	$14,549,000	$14,549,000	$0		2017	2020
SJ07-4008			Tier I	Manteca	Airport Way/UPRR	Construct five lane grade separation over the UPRR	Airport Way/UPRR between Louise Avenue and Lathrop Road	$20,751,000	$20,751,000	$0		2010	2013
SJ07-4009			Tier I	Manteca	Austin Road Grade Crossing	Construct new grade separation	Austin Road near SR 99	See SJ07-2013	See SJ07-2013	$0			
SJ07-4010			Tier I	Ripon	Main Street at UPRR	Reconstruct Main Street Over Crossing structure	Main Street at UPRR	$10,000,000	$10,000,000	$0		2011	2015
SJ07-4011			Tier I	Ripon	Wilma Avenue at UPRR	Reconstruct existing overcrossing structure	Wilma Avenue at UPRR	$10,000,000	$10,000,000	$0		2011	2015
SJ07-4012			Tier I	Stockton	Airport Way/BNSF	Construct at-grade improvements of railway crossing	Airport Way between Pilgrim Street and Sierra Nevada Street	$2,138,000	$2,138,000	$0			2011
SJ07-4013			Tier I	Stockton	Alpine Road/UPRR (Easterly)	Construct grade separation of roadway and railway	West Lane to Motego Avenue	$26,751,000	$26,751,000	$0			2011
SJ07-4014			Tier I	Stockton	Eight Mile/UPRR (Easterly) Former SPRR	Construct grade separation of roadway and railway	Eight Mile Road between Leach Road and Golf View Road	$50,117,000	$50,117,000	$0			2011
SJ07-4015			Tier I	Stockton	Eight Mile/UPRR (Westerly)	Construct grade separation of roadway and railway	Eight Mile/UPRR (Westerly) between Davis Road and Lower Sacramento Road	$53,552,000	$53,552,000	$0			2010
SJ07-4016			Tier I	Stockton	Eighth Street/UPRR	Construct grade separation of roadway and railway	Eighth Street between California Street and Airport Way	$45,674,000	$45,674,000	$0			2011
SJ07-4017			Tier I	Stockton	Lower Sacramento Road, at UPRR (Bear Creek in Stockton)	Construct a 6 lane divided overpass includes the LSR bridge over Bear Creek	Lower Sacramento Road, at UPRR between Bear Creek and Marlette Road	$59,361,000	$59,361,000	$0			2011
SJ07-4018			Tier I	Stockton	Morada /UPRR (SPRR) at Grade Crossing	Widen from 2 to 6 lanes, Improvements will include additional grade crossing protection	Morada/UPRR at-grade crossing	$2,375,000	$2,375,000	$0		2007	2011
SJ07-4019			Tier I	Stockton & San Joaquin County	West Lane at UPRR	Eliminate the existing at-grade crossing of the UPRR and the associated modal conflicts. To improve both through traffic capacity and vehicular safety. Construct a 6 lane overpass	On West Lane between Alpine Avenue & El Pinal Drive/Klinger Road	$56,030,000	$56,030,000	$0	2009	2010	2014
SJ07-4020			Tier II	Lathrop	Louise Avenue at SPRR	Construct a grade separation	Louise Avenue at SPRR	$4,500,000	$0	$4,500,000			
SJ07-4021			Tier II	Mountain House	Byron Road at Central Parkway	Construct overpass	Byron Road at Central Parkway	$6,540,000	$0	$6,540,000			
SJ07-4022			Tier II	Mountain House	Byron Road at Marina Boulevard	Construct overpass	Byron Road at Marina Boulevard	$3,000,000	$0	$3,000,000			
SJ07-4023			Tier II	Mountain House	Byron Road at Mountain House Parkway	Construct overpass	Byron Road at Mountain House Parkway	$3,000,000	$0	$3,000,000			
SJ07-4024			Tier II	Port of Stockton	Daggett Road at BNSF	Construct grade separation	Daggett Road at BNSF	$10,600,000	$0	$10,600,000			
SJ07-4025			Tier II	Ripon	Olive Road Overcrossing at UPRR/SR-99	Construct new full access Highway Overhead Interchange overcrossing at Olive Road/UPRR	Olive Road Interchange at SR-99	$10,000,000	$0	$10,000,000		2011	2015
SJ07-4026			Tier II	San Joaquin County	Davis Road at UPRR	Construct grade separation	Davis Road at UPRR	$10,000,000	$0	$10,000,000			
SJ07-4027			Tier II	San Joaquin County	French Camp at UPRR	Construct a 2 lane highway overpass	French Camp at UPRR	$2,340,000	$0	$2,340,000			
SJ07-4028			Tier I	San Joaquin County	Lower Sacramento Road/UPRR (near Woodson Road)	Replace grade separation of roadway and railway	Lower Sacramento Road/UPRR (near Woodson Road)	$10,000,000	$10,000,000	$0			
SJ07-4029			Tier II	San Joaquin County	Turner Road at UPRR	Construct grade separartion	Turner Road at UPRR	$10,000,000	$0	$10,000,000			
SJ07-4030			Tier II	Stockton	Airport Way at BNSF (UPRR)	Construct 4 lane grade separation	Airport Way at BNSF	$15,000,000	$0	$15,000,000			
SJ07-4031			Tier II	Stockton	Alpine Road/UPRR (Westerly)	Construct grade separation of roadway and railway	Alpine Road/UPRR (Westerly)	$30,034,000	$0	$30,034,000			
SJ07-4032			Tier II	Stockton	Morada Lane/UPRR (Westerly)	Construct grade separation of roadway and railway	Future Extension of Morado Lane between Lower Sacramento Road and West Lane	$40,382,000	$0	$40,382,000			
SJ07-4033			Tier II	Tracy	Chrisman Road at UPRR at Bates	Construct grade separation	Chrisman Road at UPRR	$40,014,000	$0	$40,014,000	2015	2018	2022
SJ07-4034			Tier II	Tracy	Eleventh Street at SPRR	Construct a 4 lane underpass	Eleventh Street at SPRR	$10,000,000	$0	$10,000,000	2015	2018	2024
SJ07-4035			Tier II	Tracy	Tracy Boulevard at SPRR	Construct a 4 lane underpass	Tracy Boulevard at SPRR	$10,000,000	$0	$10,000,000	2015	2018	2024
								$633,653,000	**$428,243,000**	**$205,410,000**			

Table 6-5: 2007 Regional Transportation Plan Project List - Bus Transit Category

Identifiers					Project Information				Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier		Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion
SJ07-5001			Tier I		Lodi	Grapeline Capita	Purchase 10 vehicles, 5 are replacement and 5 are increase to flee	Grapeline Capita	$825,000	$825,000	$0	various		2030
SJ07-5002	212-0000-0155		Tier I		Lodi	Grapeline Capita	Costs associated with the installation of bus stop shelters including benches at various locations	Grapeline Capita	$520,000	$520,000	$0	various		2030
SJ07-5003			Tier I		Lodi	Grapeline Capita	Costs associated with expanding the square footage of shop work space to accommodate bus maintenance and repair activities	Grapeline Capita	$4,244,000	$4,244,000	$0			
SJ07-5004	212-0000-0299		Tier I		Lodi	Grapeline Capita	Costs to improve and maintain transportation service facilities at main transit statior	Grapeline Capita	$575,000	$575,000	$0			
SJ07-5005			Tier I		Lodi	Grapeline Operations	Lodi Grapeline transit service facilities, fueling stations, and maintenance shop upgrades/expansions	Lodi Grapeline Transit Service Facilities	$2,534,000	$2,534,000	$0			
SJ07-5006	212-0000-0154		Tier I		Lodi	Grapeline Operations	Costs associated with the delivery of the Grapeline fixed route and comparable Paratransit/General Public Dial-A-Ride services.	Grapeline Operations	$11,648,000	$11,648,000	$0	various		2030
SJ07-5007	212-0000-0292		Tier I		Lodi	Grapeline Operations	Purchase of six (6) Dial-A-Ride Vehicles	Grapeline Operations	$552,000	$552,000	$0			
SJ07-5008	212-0000-0292		Tier I		Lodi	Lodi DAR	Lodi DAR Capital	Purchase 12 buses in years 2001 to 2005, 19 in 2005 to 2010, 19 in 2015 to 2020 and 19 in 2020 to 2015	$6,160,000	$6,160,000	$0	various		2030
SJ07-5009			Tier I		Lodi	Lodi Grapeline (Fixed Route	Lodi Grapline Capita	Purchase 8 buses in years 2010 to 201	$2,760,000	$2,760,000	$0	various		2030
SJ07-5010	212-0000-0351	139	Tier I		Lodi	Municipal Service Center Transit Vehicle Maintenance Facility	Renovation and Expansior	Municipal Service Center (MSC) Fleet Service Shop.	$2,867,000	$2,867,000	$0			
SJ07-5011			Tier I		Lodi	Operations	Operations	Includes 2.5% increase in operations annually as a result of growtl	$25,618,000	$25,618,000	$0	various		2030
SJ07-5012	212-0000-0361		Tier I		Lodi Unified School District	School Bus Replacement Project	Costs associated with the purchase of replacement buses		$1,485,000	$1,485,000	$0	2009		
SJ07-5013	212-0000-0375		Tier I		Lodi Unified School District	Street Sweeper Replacement Project	Costs associated with the purchase of a CNG street sweeper		$160,000	$160,000	$0	2010		
SJ07-5014	212-0000-0234		Tier I		Manteca	City of Manteca Short Range Transit Analysis and Action Plar	Costs to update document and support transit planning efforts	City of Manteca	$60,000	$60,000	$0			
SJ07-5015	212-0000-0358		Tier I		Manteca	Manteca Passenger Amenities	Bus shelters/pedestrian facilities, bike facilities, lighting and multifunctional landscaped area.	Manteca Transit	$100,000	$100,000	$0			
SJ07-5016	212-0000-0300		Tier I		Manteca	Manteca Transit System	Costs associated with Safety/Security/ITS	Manteca Transit	$25,000	$25,000	$0			
SJ07-5017	212-0000-0235		Tier I		Manteca	Manteca Transit System Capita	Purchase of 8 vehicles over the next three years, 4 Vehicles the first year and 2 vehicles per year for two subsequent years	Manteca Transit Sytem Capita	$1,348,000	$1,348,000	$0			
SJ07-5018	212-0000-0282/ 212-0000-0213		Tier I		Manteca	Manteca Transit System Operations	Costs associated with the Operations and administration of DAR and fixed route	Manteca	$3,399,000	$3,399,000	$0	various		2030
SJ07-5019	212-0000-0359		Tier I		Ripon	City of Ripon Fixed Route Transit System Operations	Costs associated with the delivery of a fixed route transit system in the City of Ripon ($300,000 annually	City of Ripon	$7,200,000	$7,200,000	$0	2009		2030
SJ07-5020			Tier I		Ripon	City of Ripon Short Range Transit Plar	Cost associated with transit planning efforts		$50,000	$50,000	$0	2009		2010
SJ07-5021			Tier I		Ripon	Ripon Park N Ride Lot	Construction of a new park n ride lo	Park N Ride Lot at Jack Tone Road and SR-99	$450,000	$450,000	$0			2008
SJ07-5022	212-0000-0359		Tier I		Ripon	Ripon Transit Service Capital	Costs associated with the purchase of two fixed route buses		$600,000	$600,000	$0	2009		2010
SJ07-5023	212-0000-0374		Tier I		San Joaquin County	Replacement of Unleaded Fuel Vehicles (Fleet Services) with Hybrid Vehicles	Costs associated with the purchase of sixty hybrid (gas-electric) vehicle		$2,039,000	$2,039,000	$0	2011		
SJ07-5024	212-0000-0363		Tier I		SJRRC	SJRRC Purchase of Passenger Rail Cars	Cost associated with the purchase of six passenger rail cars		$16,500,000	$16,500,000	$0	2010		
SJ07-5025	212-0000-0362		Tier I		SJRTD	BRT Project Phase II Airport Way Corridor: Hybrid Diesel-Electric Bus Procurement	Costs associated with the purchase of hybrid diesel-electric buses		$5,500,000	$5,500,000	$0	2010		
SJ07-5026			Tier I		SJRTD	Bus Rapid Transit (BRT)	Regional/Inter-Regional BRT systen	Regional/Inter-Regional-Operations	$50,647,000	$50,647,000	$0	various		2030
SJ07-5027	212-0000-0279		Tier I		SJRTD	Bus Rapid Transit (BRT) Vehicles	Purchase of buses for service expansion (Intercity/Interregional	San Joaquin County-Capita	$10,000,000	$10,000,000	$0			
SJ07-5028	212-0000-0304		Tier I		SJRTD	Camera and Security Equipment	Purchase and installation of camera and security equipment for surveillance on buses and bus facilities	SJRTD Capital	$750,000	$750,000	$0			

Table 6-5: 2007 Regional Transportation Plan Project List - Bus Transit Category

Identifiers				Project Information					Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion
SJ07-5029			Tier I	SJRTD	Coordinated Transportation Vehicles	Includes new replacement buses or vans	San Joaquin County-Capita	$5,200,000	$5,200,000	$0			
SJ07-5030	212-0000-0266		Tier I	SJRTD	County Operations	FTA Section 5311 funding for services to rural areas of San Joaquin County	San Joaquin County-Operations	$7,636,000	$7,636,000	$0			2030
SJ07-5031			Tier I	SJRTD	County Wide DAR	Expansion and replacement buses	San Joaquin County-Capita	$4,200,000	$4,200,000	$0			
SJ07-5032	212-0000-0161/ 212-0000-0246/ 212-0000-0159/ 212-0000-0245/ 212-0000-0167		Tier I	SJRTD	Countywide DAR	Countywide GPDAR	San Joaquin County-Operations	$214,630,000	$214,630,000	$0	various		2030
SJ07-5033	212-0000-360		Tier I	SJRTD	Deviated Fixed Route Service: Replacement and Expansion (Ultra Low Sulfur Diesel) Buses	Cost associated with the purchase of replacement and expansion buses		$2,100,000	$2,100,000	$0	2009		
SJ07-5034	212-0000-0236		Tier I	SJRTD	Downtown Transit Center	Construction, continuing development and improvements to the Downtown Transit Center	SJRTD Capital	$1,814,000	$1,814,000	$0			2030
SJ07-5035	212-0000-0164		Tier I	SJRTD	Intelligent Technologies	Intelligent Technologies	San Joaquin County-Capita	$2,000,000	$2,000,000	$0			
SJ07-5036	212-0000-0304		Tier I	SJRTD	Intercity/Interregiona	Expansion and replacement buses	San Joaquin County-Capita	$50,000,000	$50,000,000	$0			
SJ07-5037	212-0000-0161/ 212-0000-0246/ 212-0000-0159/ 212-0000-0245/ 212-0000-0167		Tier I	SJRTD	Intercity/Interregional/Hoppe	I/C I/R Operations	San Joaquin County-Operations	$441,541,000	$441,541,000	$0	various		2030
SJ07-5038	212-0000-0332		Tier I	SJRTD	Mall Transfer Facilities Projec	Bus shelters/pedestrian facilities, bike facilities, lighting and multifunctional landscaped area.	West Yokuts Avenue	$0					
SJ07-5039	212-0000-0367		Tier I	SJRTD	Non-Revenue Hybrid Replacement Vehicles	Costs associated with the purchase of ten hybrid electric replacement vehicles		$219,000	$219,000	$0	2010		
SJ07-5040	212-0000-0332/ 212-0000-0165		Tier I	SJRTD	Operational Facilities	Expansion/Modernization	San Joaquin County-Capita	$7,500,000	$7,500,000	$0			
SJ07-5041			Tier I	SJRTD	Passenger Amenities	Bus shelters/pedestrian facilities, bike facilities, lighting and multifunctional landscaped area.	Stockton Metropolitan Area-Capita	$900,000	$900,000	$0			
SJ07-5042	212-0000-0352	140	Tier I	SJRTD	Regional Operations Facility	Expansion/Modernization	San Joaquin County-Capita	$35,000,000	$35,000,000	$0			
SJ07-5043	212-0000-0244		Tier I	SJRTD	RTD Capital Improvement Projects	Capital improvements	San Joaquin County-Capita	$20,000,000	$20,000,000	$0			
SJ07-5044			Tier I	SJRTD	SMA	Expansion and replacement buses	Stockton Metropolitan Area-Capita	$50,000,000	$50,000,000	$0			
SJ07-5045	212-0000-0161/ 212-0000-0246/ 212-0000-0159/ 212-0000-0245/ 212-0000-0167		Tier I	SJRTD	SMA	SMA Fixed Route and SMA DAR	Stockton Metropolitan Area-Operations	$1,114,374,000	$1,114,374,000	$0	various		2030
SJ07-5046	212-0000-0158		Tier I	SJRTD	Support Vehicles	Cost to secure support vehicles	San Joaquin County-Capita	$1,000,000	$1,000,000	$0			
SJ07-5047	212-0000-0364		Tier I	SJRTD/ City of Stockton	BRT Project Phase II Airport Way Corridor: Stockton Airport to Downtown Transit Center	Costs associated with the implementation of the BRT service along the corridor including traffic signal upgrades, bus stop amenities and access enhancments		$2,408,000	$2,408,000	$0	2009		
SJ07-5048	212-0000-0349		Tier I	Tracy	DAR	DAR Capital	Purchase 4 buses every 5 year period (20 Total)	$2,000,000	$2,000,000	$0	2011	n/a	2030
SJ07-5049	212-0000-0350		Tier I	Tracy	Fixed Route Service	Capital	Purchase 3 buses every 5 year period; Purchase 2 buses every 10 year period	$3,000,000	$3,000,000	$0	2011	n/a	2030
SJ07-5050	212-0000-0206		Tier I	Tracy	TRACER Capital	Construction of turnouts and 18 shelter	various locations including multi-modal station	$1,370,000	$1,370,000	$0			2011
SJ07-5051	212-0000-0206		Tier I	Tracy	TRACER Capital	Phase I Bus Turnouts - Street Facility improvements for bus turnouts to improve traffic flow, decrease emissions, and operations/passenger safety	TRACER Capital	$1,760,000	$1,760,000	$0			2011
SJ07-5052	212-0000-0206		Tier I	Tracy	TRACER Capital	Phase Bus Turnouts II - Passenger Shelters	Costs of passenger shelters and bus turnouts	$1,125,000	$1,125,000	$0			2021
SJ07-5053	212-0000-0347		Tier I	Tracy	TRACER Capital	Paratransit Minivans	Cost of Paratransit Minivans at $70,000 each	$140,000	$140,000	$0			2011
SJ07-5054	212-0000-0348		Tier I	Tracy	TRACER Capital	Transit Supervisor Vehicle	Cost of a Transit Supervisor Vehicle	$50,000	$50,000	$0			2011
SJ07-5055	212-0000-0149		Tier I	Tracy	TRACER Operations	Costs associated with the delivery of fixed route and paratransit services including salaries, contracting of service, equipments, etc.	Includes 3.0% increase in operations annually as a result of growth	$20,676,000	$20,676,000	$0	2008	n/a	2030
SJ07-5056	212-0000-0208		Tier I	Tracy	TRACER Project Mangement and Planning	Costs to support transit planning efforts to update the City of Tracy Short-Range Transit Analysis and Action Plan and Grant Management	TRACER Project Management and Planning	$1,377,000	$1,377,000	$0			2031
SJ07-5057	112-0000-0104	2K47	Tier I	Tracy	Tracy Multimodal Station	Construction of a new multimodal station	Downtown City of Tracy	$12,563,000	$12,563,000	$0	2007	2007	2009
SJ07-5058	212-0000-361		Tier I	Lodi	Dial-A-Ride Fixed Route Bus Replacement Project	Cost associated with the purchase of seven fixed route bus replacement projects		$1,000,000	$1,000,000	$0	2009		

Table 6-5: 2007 Regional Transportation Plan Project List - Bus Transit Category

Identifiers				2007 RTP Tier	Project Information					Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #		PPNO		Jurisdiction	Facility Name/Route	Project Description	Project Limits		Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion
SJ07-5059	212-0000-0400			Tier I	Various Agencies	FTA JARC Funding	Costs associated with the competively selected projects from the Coordinated Human Services Transportation Plan for San Joaquin County	San Joaquin County		$9,200,000	$0	$0	2007		
SJ07-5060	212-0000-0401//212-0000-0355			Tier I	Various Agencies	FTA New Freedom Funding	Costs associated with the competively selected projects from the Coordinated Human Services Transportation Plan for San Joaquin County, and the costs associated with the implementation of the Coordinated plan.	San Joaquin County		$3,200,000	$3,200,000	$0	2007		
SJ07-5061				Tier II	Manteca	Manteca MultiModal Statior	Costs associated with the construction of a multmodal station			$4,600,000	$0	$4,600,000			
SJ07-5062				Tier II	Ripon	Ripon Multi-Modal Statior	Construct a new bus and train statio	Ripon Multi-Modal Statior		$6,000,000	$0	$6,000,000			
SJ07-5063				Tier II	SJRTD	Countywide DAR	Countywide GPDAR	San Joaquin County-Operations		$44,348,000	$0	$44,348,000			
SJ07-5064				Tier II	SJRTD	Countywide DAR	Expansion and replacement buses	San Joaquin County-Capita		$1,000,000	$0	$1,000,000			
SJ07-5065				Tier II	SJRTD	Countywide DAR	Service Operations	San Joaquin County-Operations		$212,687,000	$0	$212,687,000			
SJ07-5066				Tier II	SJRTD	Countywide DAR Capita	Expansion and replacement buses	San Joaquin County-Capita		$22,880,000	$0	$22,880,000			
SJ07-5067				Tier II	SJRTD	Intercity/Interregiona	Operations	San Joaquin County-Operations		$50,854,000	$0	$50,854,000			
SJ07-5068				Tier II	SJRTD	Intercity/Interregiona	Expansion and replacement buses	Intercity/Interregional/Hoppe		$40,000,000	$0	$40,000,000			
SJ07-5069				Tier II	SJRTD	Intercity/Interregional Capita	Expansion and replacement buses	San Joaquin County-Capita		$33,760,000	$0	$33,760,000			
SJ07-5070				Tier II	SJRTD	Intercity/Interregional/Hoppe	I/C I/R Operations	San Joaquin County-Operations		$91,233,000	$0	$91,233,000			
SJ07-5071				Tier II	SJRTD	RTD Bus Rapid Transi	Regional/Interregional Bus Rapid Transit System	San Joaquin County-Operations		$80,000,000	$0	$80,000,000			
SJ07-5072				Tier II	SJRTD	RTD Bus Rapid Transit Vehicles	Purchase of buses for service expansion (Intercity/Interregional	San Joaquin County-Capita		$18,000,000	$0	$18,000,000			
SJ07-5073				Tier II	SJRTD	RTD Capital Improvement Projects	Capital improvements	San Joaquin County-Capita		$132,154,000	$0	$132,154,000			
SJ07-5074				Tier II	SJRTD	RTD Downtown Transit Center	Construction, continuing development and improvements to the Downtown Transit Center	San Joaquin County-Capita		$5,000,000	$0	$5,000,000			
SJ07-5075				Tier II	SJRTD	RTD Facility Modernizatior		San Joaquin County-Capita		$19,020,000	$0	$19,020,000			
SJ07-5076				Tier II	SJRTD	RTD Support Vehicles	Costs to secure support vehicle	San Joaquin County-Capita		$2,750,000	$0	$2,750,000			
SJ07-5077				Tier II	SJRTD	SMA	SMA Fixed Route and SMA DAR	Stockton Metropolitan Area-Operations		$230,328,000	$0	$230,328,000			
SJ07-5078				Tier II	SJRTD	SMA	Expansion and replacement buses	Stockton Metroplitan Area-Operations		$49,000,000	$0	$49,000,000			
SJ07-5079				Tier II	SJRTD	SMA Capital	Expansion and replacement buses	Stockton Metropolitan Area-Capita		$56,046,000	$0	$56,046,000			
SJ07-5080				Tier II	SJRTD	SMA Operations	Local Service Operations	Stockton Metropolitan Area-Operations		$582,605,000	$0	$582,605,000			
SJ07-5081				Tier II	Various	Local Service	Operations	Various Operations		$194,202,000	$0	$194,202,000			
SJ07-5082				Tier II	Various	Miscellaneous Capital Improvement Projects	Facility upgrades, passenger amenities, operating equipment	Various Capital		$57,961,000	$0	$57,961,000			
										$4,111,027,000	**$2,167,399,000**	**$1,682,265,000**			

Table 6-6: 2007 Regional Transportation Plan Project List - Rail Corridor Improvements Category

Identifiers	2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	Project Information	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Cost to Deliver	Total	TIER I	TIER II	Milestone Years	FTIP Programming	NEPA Approval	Completion Date
SJ07-6001	112-0000-0139	2030	Tier I	Caltrans	Caltrans Intercity Rail	Construct double main track, panelized turnouts, relocate/renew siding turnout, and realign existing trackage.	San Joaquin County between Escalon and Stockton	$31,200,000	$31,200,000	$0							
SJ07-6002	212-0000-0121		Tier I	SJRRC	ACE Capital	Acquisition of two rail cars	ACE Capital	$3,648,000	$3,648,000	$0							
SJ07-6003	212-0000-0281		Tier I	SJRRC	ACE Capital	Purchase two additional rail cars for ACE service expansion	ACE Capital	$8,800,000	$8,800,000	$0							
SJ07-6004	212-0000-0190		Tier I	SJRRC	ACE Capital	SJRRC shared costs for the overall maintenance of vehicles	ACE Capital	$7,564,000	$7,564,000	$0							2030
SJ07-6005	212-0000-0262		Tier I	SJRRC	ACE Capital	Capital lease with UPRR for a 10 year trackage rights	ACE Capital	$14,780,000	$14,780,000	$0							
SJ07-6006	212-0000-0293		Tier I	SJRRC	ACE Capital	Signal Upgrade project	Between Niles Junction and Lathrop	$4,325,000	$4,325,000	$0							
SJ07-6007			Tier I	SJRRC	ACE Capital	Purchase of Replacement Vehicles (Bus, Van) for ACE Service	ACE Capital	$126,000	$126,000	$0							
SJ07-6008			Tier I	SJRRC	ACE Capital	Construction of an ADA compliant pedestrian underpass and Center Platform at the Station to facilitate train movement	Santa Clara Caltrain Station	$3,448,000	$3,448,000	$0							
SJ07-6009			Tier I	SJRRC	ACE Capital	Realignment of tracking	Near Altamont Pass	$4,064,000	$4,064,000	$0							
SJ07-6010	212-0000-0301	2066	Tier I	SJRRC	ACE Capital	Construction	Northwest Track Connection in Stockton	$7,500,000	$7,500,000	$0							
SJ07-6011	212-0000-0302		Tier I	SJRRC	ACE Capital	Improvements to the Wireless Security System on the ACE service	ACE Capital	$500,000	$500,000	$0							
SJ07-6012	212-0000-0303		Tier I	SJRRC	ACE Capital	Double Track in Lathrop and Track Extension in Stockton	Between Stockton and Lathrop	$4,000,000	$4,000,000	$0							
SJ07-6013	112-0000-0140	2031	Tier I	SJRRC	ACE Capital	Restoration of abandoned Depot building	Downtown Stockton, between Weber Ave and Miner Ave	$7,000,000	$7,000,000	$0	2007						
SJ07-6014	212-0000-0210		Tier I	SJRRC	ACE Equipment Maintenance Facility	Relocation of ACE Maintenance Facility from Union Pacific Railroad facility to permanent facility.	ACE Capital	$32,250,000	$32,250,000	$0							
SJ07-6015	212-0000-0306		Tier I	SJRRC	ACE Gap Closure Project	Allow SJRCC to operate on separate tracks from Union Pacific Railroad between maintenance yard and the station siding.	Between the Stockton ACE Station and the ACE Equipment Maintenance Facility	$7,000,000	$7,000,000	$0							
SJ07-6016			Tier I	SJRRC	ACE Service Extensions	Enhance/extend intercity rail to benefit residents; integrate ACE with the State intercity rail service; extend ACE service	San Joaquin County and San Joaquin Valley; Sacramento, Modesto, and San Francisco	$8,563,000	$8,563,000	$0	various						2030
SJ07-6017			Tier I	SJRRC	ACE Corridor	Acquisition of ACE Corridor between Lathrop and Niles Junction	Between Lathrop and Niles Junction	$45,000,000	$45,000,000	$0							
SJ07-6018			Tier I	SJRRC	Phase II Implementation Plan for the Central Valley Rail Service	Commuter rail service	Central Valley to Sacramento	$1,000,000	$1,000,000	$0							
SJ07-6019			Tier I	SJRRC	Operations	Shuttle Services in San Joaquin County stations	San Joaquin County	$1,123,000	$1,123,000	$0	various						2030
SJ07-6020			Tier I	SJRRC	Capital	Maintenance Facility Expansion from 9 train sets to 17 train sets Phase 1		$17,000,000	$17,000,000	$0							2015
SJ07-6021			Tier I	SJRRC	ACE Operations	ACE operations and Capital Access Fee (5 trains from 2012 to 2016, 6 trains from 2017 to 2021, 7 trains from 2022 to 2029 and 8 trains from 2030 to 2041)	SJRRC/Santa Clara/Alameda contributions shown	$241,365,000	$241,365,000	$0	various						2030
SJ07-6022			Tier I	SJRRC	Lathrop Transfer Station	Lathrop Transfer Station- Between ACE and Central Valley Service		$5,500,000	$5,500,000	$0							
SJ07-6023			Tier I	SJRRC	Rail Information Systems	Rail Information Systems (Ticket vending machines, on-train internet, changeable message signs at stations, trip planner via internet, real time system for train status for ACE and other connecting services)		$13,400,000	$13,400,000	$0							
SJ07-6024			Tier I	SJRRC	Rail Station Expansion	Rail Station Expansion/Improvements/Access	Stockton station, Lathrop station and Tracy 2nd station (west)	$28,250,000	$28,250,000	$0							
SJ07-6025			Tier I	SJRRC	Central Valley Rail Service	Central Valley Rail Service Operations and Maintenance, Capital Access Fees, ROW purchase)		$125,000,000	$125,000,000	$0							
SJ07-6026			Tier I	SJRRC	Central Valley Rail Service	Central Valley Commuter Rail Service (Rolling stock procurement and construction of layover facility in Ripon. Track construction projects include siding extension, construction of double track, road crossing improvements, and signal improvements.		$35,000,000	$35,000,000	$0							
SJ07-6027			Tier I	Various	Northern California Logistical Program	Implement rail freight shuttle	Between the Port of Stockton and Port of Oakland to divert truck freight traffic from the I-205 corridor	$10,000,000	$10,000,000	$0							
SJ07-6028			Tier II	SJRRC	ACE Capital	Rolling Stock/Track Improvements/ Station Improvements	ACE Capital	$32,000,000	$0	$32,000,000	various						2030

Table 6-6: 2007 Regional Transportation Plan Project List - Rail Corridor Improvements Category

Identifiers					Project Information					Cost to Deliver			Milestone Years			
	2007 RTP MPO ID	CTIPS ID #	PPNO	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits		Total	TIER I	TIER II		FTIP Programming	NEPA Approval	Completion Date
	SJ07-6029			Tier II	SJRRC	ACE Train Extension (Central Valley to Sacramento Commuter Rail Project)	Extension of services	Central Valley to Sacramento		$54,000,000	$0	$54,000,000				
	SJ07-6030			Tier II	SJRRC	Altamount Service Improvements	Rolling Stock/Track Improvements/ Station Improvements	Altamount Operations (SJRRC)		$52,000,000	$0	$52,000,000				
	SJ07-6031			Tier II	SJRRC		Dual Mode Rail-Road Hybrid Demonstration Project (Vehicles that can run on rail & roads. Project can be on either the former CCT line between Stockton and Sacramento or on Byron Hwy line.)			$10,000,000	$0	$10,000,000				
	SJ07-6032			Tier II	SJRRC		Rail/Port to Port Rail Freight Service (planning, engineering, purchase of 52.6 Miles of ROW.) Track Construction projects include siding extensions, construction of double track, road crossing improvements and signal improvements.	Oakland to Stockton		$141,000,000	$0	$141,000,000				
	SJ07-6033			Tier II	SJRRC		Direct ACE/BART Connection (a direct connection between ACE and BART at Valley/Stanley or at Greenville Rd in Alameda County.			$20,000,000	$0	$20,000,000				
	SJ07-6034			Tier II	SJRRC		Byron Highway Commuter Rail Service Operations and Maintenance and ROW purchase (2 trains from 2015 to 2019, 3 trains from 2020 to 2029 and 4 trains from 2030 to 2041).			$100,000,000	$0	$100,000,000				
	SJ07-6035			Tier II	SJRRC		Altamont Corridor Speed and Safety upgrades (including signal upgrade to automatic train stop increase train speed from 79 to 90 MPH and several track realighment projects)			$30,000,000	$0	$30,000,000				
	SJ07-6036			Tier II	SJRRC		Maintenance Facility Expansion from 9 train sets to 17 train sets Phase 2			$15,000,000	$0	$15,000,000				2022
										$1,121,406,000	**$667,406,000**	**$454,000,000**				

Table 6-7: 2007 Regional Transportation Plan Project List - Public Airport-Aviation Projects Category

Identifiers		Project Information			Cost to Deliver			Milestone Years		
2007 RTP MPO ID	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Total	TIER I	TIER II		NEPA Approval	Completion
SJ07-7001	Tier I	San Joaquin County	Stockton Metro Airport	Northeast Air Cargo Apron Expansion, Phase 1 (257' x 450')	$1,200,000	$1,200,000	$0			2007
SJ07-7002	Tier I	San Joaquin County	Stockton Metro Airport	Environmental Study Update	$300,000	$300,000	$0			2008
SJ07-7003	Tier I	San Joaquin County	Stockton Metro Airport	Reconstruct General Aviation Apron Phase 1	$1,582,000	$1,582,000	$0			2008
SJ07-7004	Tier I	San Joaquin County	Stockton Metro Airport	Engineering Design for several projects (8-15 of CIP)	$380,000	$380,000	$0			2008
SJ07-7005	Tier I	San Joaquin County	Stockton Metro Airport	Install Runway Centerline and Touchdown Zone Lights Runway 11L-29R	$1,082,000	$1,082,000	$0		FONSI 2008	2009
SJ07-7006	Tier I	San Joaquin County	Stockton Metro Airport	Infield Drainage Upgrade	$312,000	$312,000	$0		FONSI 2008	2009
SJ07-7007	Tier I	San Joaquin County	Stockton Metro Airport	Line Wash Rack Pond	$50,000	$50,000	$0		FONSI 2008	2009
SJ07-7008	Tier I	San Joaquin County	Stockton Metro Airport	Holding Apron Runway 29L	$162,000	$162,000	$0		FONSI 2008	2010
SJ07-7009	Tier I	San Joaquin County	Stockton Metro Airport	Install New 250 KVA Emergency Generator and Update Switch Gear at Terminal Building	$350,000	$350,000	$0		FONSI 2008	2010
SJ07-7010	Tier I	San Joaquin County	Stockton Metro Airport	Rehabilitate Home Rund Duct and Cable	$277,000	$277,000	$0		FONSI 2008	2010
SJ07-7011	Tier I	San Joaquin County	Stockton Metro Airport	Air Cargo Apron Expansion	$4,503,000	$4,503,000	$0		FONSI 2008	2010
SJ07-7012	Tier I	San Joaquin County	Stockton Metro Airport	Reconstruct GA Apron- Phase 2	$1,867,000	$1,867,000	$0		FONSI 2008	2011
SJ07-7013	Tier I	San Joaquin County	Stockton Metro Airport	Engineering Design for several projects (17-21 in the CIP)	$210,000	$210,000	$0		FONSI 2008	2011
SJ07-7014	Tier I	San Joaquin County	Stockton Metro Airport	Handicap Elevator- Airline Terminal Building	$264,000	$264,000	$0		FONSI 2008	2011
SJ07-7015	Tier I	San Joaquin County	Stockton Metro Airport	Reconstruct Taxiway B Shoulders	$661,000	$661,000	$0		FONSI 2008	2011
SJ07-7016	Tier I	San Joaquin County	Stockton Metro Airport	Overlay Runway 11R-29L Including Medium Intensity Runway Lights	$857,000	$857,000	$0			
SJ07-7017	Tier I	San Joaquin County	Stockton Metro Airport	Reconstruct Taxiway H	$1,346,000	$1,346,000	$0			
SJ07-7018	Tier I	San Joaquin County	Stockton Metro Airport	Construct Corporate Hangars (27,500 Sq Ft.)	$1,293,000	$1,293,000	$0			
SJ07-7042	Tier I	San Joaquin County	Stockton Metro Airport	North Side Development Phase 2 (CT-CIP, 2005)	$1,224,900	$1,224,900	$0			2009
SJ07-7043	Tier I	Tracy	New Jerusalem Airport	RWY Overlay (CT-CIP, 2005)	$400,000	$400,000	$0			2009
SJ07-7044	Tier I	Tracy	Tracy Municipal Airport	Construct Blast Pads, RWY 8-26 Ends (CT-CIP, 2005)	$50,000	$50,000	$0			2007
SJ07-7045	Tier I	Tracy	Tracy Municipal Airport	Construct Blast Pads, RWY 30 Ends (CT-CIP, 2005)	$25,000	$25,000	$0			2007
SJ07-7046	Tier I	Tracy	Tracy Municipal Airport	Construct Blast Pads, RWY 12 Ends (CT-CIP, 2005)	$65,000	$65,000	$0			2007

Table 6-7: 2007 Regional Transportation Plan Project List - Public Airport-Aviation Projects Category

Identifiers		Project Information				Cost to Deliver			Milestone Years		
2007 RTP MPO ID	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Total	TIER I	TIER II		NEPA Approval	Completion
SJ07-7047	Tier I	Tracy	Tracy Municipal Airport	RSA Grading/Drainage (CT-CIP, 2005)	$75,000	$75,000	$0			2007
SJ07-7019	Tier I	Tracy	Tracy Municipal Airport	Establish Airport Concession Area	$20,000	$20,000	$0			2008
SJ07-7020	Tier I	Tracy	Tracy Municipal Airport	Improvements to main entrance road, lighting, road construction	$241,000	$241,000	$0			2011
SJ07-7021	Tier I	Tracy	Tracy Municipal Airport	Install Fixed Based Operator (FBO) Hangar Lighting	$10,000	$10,000	$0			2008
SJ07-7022	Tier I	Tracy	Tracy Municipal Airport	Install High-end sanitation restrooms	$40,000	$40,000	$0			2008
SJ07-7023	Tier I	Tracy	Tracy Municipal Airport	Install shade structures in airport park	$15,000	$15,000	$0			2008
SJ07-7024	Tier I	Tracy	Tracy Municipal Airport	Renovate Park Irrigation System	$10,000	$10,000	$0			2008
SJ07-7025	Tier I	Tracy	Tracy Municipal Airport	Slurry seal airport runway, taxiway, and hanger area	$505,000	$505,000	$0			2007
SJ07-7026	Tier I	Tracy	Tracy Municipal Airport	T-Hanger Installation	$2,112,000	$2,112,000	$0			2008
SJ07-7027	Tier I	Tracy	Tracy Municipal Airport	Upgrade septic system	$10,000	$10,000	$0			2008
SJ07-7028	Tier II	Tracy	Tracy Municipal Airport	Aircraft wash facility	$99,000	$0	$99,000			2011
SJ07-7029	Tier II	Tracy	Tracy Municipal Airport	Build permanent public restrooms	$221,000	$0	$221,000			2011
SJ07-7030	Tier II	Tracy	Tracy Municipal Airport	Construct FBO Facility in South Hanger area	$2,407,000	$0	$2,407,000			2017
SJ07-7031	Tier II	Tracy	Tracy Municipal Airport	Construct FBO, Administration Facility and Pilot Lounge in main airport area	$4,268,000	$0	$4,268,000			2017
SJ07-7032	Tier II	Tracy	Tracy Municipal Airport	FBO Office - Repair FBO Building	$1,017,000	$0	$1,017,000			2011
SJ07-7033	Tier II	Tracy	Tracy Municipal Airport	Install helicopter pad	$92,000	$0	$92,000			2017
SJ07-7034	Tier II	Tracy	Tracy Municipal Airport	Land acquisition identified in Airport Master Plan; Canal area; North of airport-safety and oversight areas; south hanger area.	$21,849,000	$0	$21,849,000			2011
SJ07-7035	Tier II	Tracy	Tracy Municipal Airport	Municipal Services Installation (water distribution system, sanitary sewer system, upgrade storm drainage system)	$2,775,000	$0	$2,775,000			2017
SJ07-7036	Tier II	Tracy	Tracy Municipal Airport	Public parking area repairs	$353,000	$0	$353,000			2017
SJ07-7037	Tier II	Tracy	Tracy Municipal Airport	Relocate Airport Beacon	$12,000					2017
SJ07-7038	Tier II	Tracy	Tracy Municipal Airport	Security (security enhancements, lighting in permanent hangar and tiedown areas)	$3,112,000	$0	$3,112,000			2011
SJ07-7039	Tier II	Tracy	Tracy Municipal Airport	Taxiway Construction (pavement, permanent hanger sites, north of runway 25, south hanger area)	$4,808,000	$0	$4,808,000			2011
SJ07-7040	Tier II	Tracy	Tracy Municipal Airport	Update Airport Master Plan	$0					
SJ07-7041	Tier II	Tracy	Tracy Municipal Airport	Update of the Airport Master Plan, Business Plan and Minimum Standards Document	$200,000	$0	$200,000			2011

Table 6-7: 2007 Regional Transportation Plan Project List - Public Airport-Aviation Projects Category

Identifiers			Project Information				Cost to Deliver				Milestone Years			
	2007 RTP MPO ID	2007 RTP Tier		Jurisdiction	Facility Name/Route	Project Description		Total	TIER I	TIER II		NEPA Approval	Completion	
								$62,711,900	$21,498,900	$41,201,000				

Table 6-8: 2007 Regional Transportation Plan Project List - Bicycle and Pedestrian Facilities Improvement Projects Category

Identifiers			Project Information					Cost to Deliver			Milestone Years		
2007 RTP MPO ID	CTIPS ID #	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion	Project Milestone Years
SJ07-8001	212-0000-0119	Tier I	Lathrop	Lathrop Road	Bicycle Facilities Improvement Project: Provision of bicycle and pedestrian facilities	City of Lathrop	$175,000	$175,000	$0	2008	2008	2008	
SJ07-8002	212-0000-0339	Tier I	Ripon	Jack Tone Road	Reconstruct roadway to include a new Class 1 bikeway	Jack Tone Road	$3,000,000	$3,000,000	$0	2008		2008	
SJ07-8003		Tier I	Ripon	Stanislaus River Trail	Construct Class I bicycle/pedestrian trail along the Stanislaus River	Corps Park to Jack Tone Golf Course Stanislaus River Trail	$1,500,000	$1,500,000	$0				
SJ07-8004		Tier I	San Joaquin County	Airport Way	Construction of a Class III Bike Lane	Durham Ferry Road to Trahern Road, 3.7 miles	$148,000	$148,000	$0				
SJ07-8005		Tier I	San Joaquin County	Airport Way	Construction of a Class III Bike Lane	West Ripon Road to Trahern Road, 2.7 miles	$108,000	$108,000	$0				
SJ07-8006		Tier I	San Joaquin County	Armstrong Road	Widen existing 20' roadway to 32' wide for construction of a class III bike lane	Davis Road to Lower Sacramento Road	$1,609,000	$1,609,000	$0	2010	2009	2010	
SJ07-8007		Tier I	San Joaquin County	Armstrong Road	Construction of a Class III Bike Lane	Micke Grove Road to Frontage Road, 0.7 miles	$210,000	$210,000	$0				
SJ07-8008		Tier I	San Joaquin County	Armstrong Road	Construction of a Class III Bike Lane	West Lane to Micke Grove Road, 0.3 miles	$90,000	$90,000	$0				
SJ07-8009		Tier I	San Joaquin County	Armstrong Road	Construction of a Class III Bike Lane	Davis Road to West Lane, 3.0 miles	$900,000	$900,000	$0				
SJ07-8010		Tier I	San Joaquin County	Austin Road	Construct 4 feet roadway widening on each side to provide class III bike route and resurface existing roadway	French Camp Road to Louise Avenue, 2.3 miles	$1,884,000	$1,884,000	$0	N/A	N/A	2008	
SJ07-8011		Tier I	San Joaquin County	South Stockton Sidewalks	Installation of curb, gutter and sidewalks on streets in the southeast area of unincorporated Stockton	Eleventh Street (B Street to D Street), D Street (Loomis Road to Eighth Street), Eighth Street (Bieghle Street to D Street), Ninth Street (D Street to Pock Lane) and Pock Lane (City limits to Loomis Road)	$3,304,000	$3,304,000	$0	2011			
SJ07-8012		Tier I	Stockton	Calaveras Pedestrian Trail	Bike/Pedestrian Trail	From existing Bike/Pedestrian trail to city park at Buckley Cove	$320,000	$320,000	$0				
SJ07-8013		Tier I	Stockton	Center Street , Fremont Street to Bridge at Weber	Bicycle/Pedestrian Walkway	Center Street , Fremont Street to Bridge at Weber	$782,000	$782,000	$0				
SJ07-8014		Tier I	Stockton	Charter Way, French Camp - Stanislaus Street	Beautification project, landscaping, bike, lockers, bike racks	Charter Way, French Camp - Stanislaus Street	$732,000	$732,000	$0				
SJ07-8015		Tier I	Stockton	Duck Creek/Walker Slough	Bikeway improvements	Duck Creek/Walker Slough, 5.2 Miles	$287,000	$287,000	$0				
SJ07-8016		Tier I	Stockton	EBMUD Aqueduct	Bikeway improvements	EBMUD Aqueduct, 7.5 Miles	$371,000	$371,000	$0				
SJ07-8017		Tier I	Stockton	El Dorado St. n/s Corridor	Bikeway improvements	El Dorado St. n/s Corridor, 14.2 Miles	$35,000	$35,000	$0				
SJ07-8018		Tier I	Stockton	Pershing Avenue	Bikeway improvements	Pershing Avenue, 1.3 Miles	$3,000	$3,000	$0				
SJ07-8019		Tier I	Stockton	Weber Street Feature	Bike Lockers	Weber Street	$555,000	$555,000	$0				
SJ07-8020		Tier I	Tracy	Tracy Gateway, Landscape Gateways to the City (4 locations)	Gateway sites include: landscape PNR, bike trailways	4 locations	$279,000	$279,000	$0	2012	n/a	2014	
SJ07-8021		Tier I	Various	Miscellaneous Regional Bikeway Facilities	Specific projects are listed in the San Joaquin Regional Bikeway Plan; Corridors include Calaveras River, Stanislaus River, Tidewater Bikeway, and on-street bike lanes.	Calaveras River, Stanislaus River, Tidewater Bikeway, and on-street bike lanes.	$24,222,000	$24,222,000	$0				
SJ07-8022		Tier II	Lathrop	5th Street, Louise Avenue to Lathrop Road	Bikeway improvements	5th Street, Louise Avenue to Lathrop Road, 1.0 Miles	$11,000	$0	$11,000				
SJ07-8023		Tier II	Lathrop	Harlan Road, Louise Avenue to Howland Road	Bikeway improvements	Harlan Road, Louise Avenue to Howland Road, 1.6 Miles	$3,000	$0	$3,000				
SJ07-8024		Tier II	Lathrop	Thomsen Street, Harlan Road to 5th Street	Bikeway improvements	Thomsen Street, Harlan Road to 5th Street, 0.8 Miles	$6,000	$0	$6,000				
SJ07-8025		Tier II	Lodi	Harney Lane , Lower Sacramento Road to W 99 Frontage Road	Bikeway improvements	Harney Lane , Lower Sacramento Road to W 99 Frontage Road, 2.7 Miles	$192,000	$0	$192,000				
SJ07-8026		Tier II	Lodi	Hutchins St., Harney Lane to Holly Drive	Bikeway improvements	Hutchins St., Harney Lane to Holly Drive, 2.6 Miles	$185,000	$0	$185,000				
SJ07-8027		Tier II	Lodi	Lodi Loop Trail	Bikeway improvements	Lodi Loop Trail, 4.7 Miles	$517,000	$0	$517,000				
SJ07-8028		Tier II	Lodi	Turner Road Lodi City Limits	Bikeway improvements	Turner Road Lodi City Limits, 3.7 Miles	$349,000	$0	$349,000				
SJ07-8029		Tier II	Ripon	Milgeo Avenue, Murphy Road to Spring Creek Drive	Class II Bikeway improvements	Milgeo Avenue, Murphy Road to Spring Creek Drive, 2.1 Miles	$150,000	$0	$150,000			2010	

Table 6-8: 2007 Regional Transportation Plan Project List - Bicycle and Pedestrian Facilities Improvement Projects Category

Identifiers			Project Information				Cost to Deliver			Milestone Years			
2007 RTP MPO ID	CTIPS ID #	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits	Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion	Project Milestone Years
SJ07-8030		Tier II	Ripon	South City, Doak Boulevard Bicycle Loop	Class I Bikeway improvements	South City, Doak Boulevard Bicycle Loop. 0.5 Miles	$200,000	$0	$200,000			2008	
SJ07-8031		Tier II	San Joaquin County	Austin Road	Construction of a Class III Bike Lane	Stanislaus River to West Ripon Road, 2.0 miles	$600,000	$0	$600,000	2015			
SJ07-8032		Tier II	San Joaquin County	Blossom Road	Construction of a Class III Bike Lane	Walnut Grove Road to Peltier Road, 2.2 miles	$330,000	$0	$330,000				
SJ07-8033		Tier II	San Joaquin County	Byron Road	Construction of a Class III Bike Lane	Developer to Grant Line Road, 2.4 miles	$96,000	$0	$96,000				
SJ07-8034		Tier II	San Joaquin County	Carlin Road	Construction of a Class III Bike Lane	Crocker Road to Roberts Road, 1.6 miles	$480,000	$0	$480,000				
SJ07-8035		Tier II	San Joaquin County	Chrisman Road*	Construction of a Class III Bike Lane	Durham Ferry Road to CA Aqueduct, 1.6 miles	$480,000	$0	$480,000				
SJ07-8036		Tier II	San Joaquin County	Chrisman Road*	Construction of a Class III Bike Lane	Tracy to Durham Ferry Road, 3.0 miles	$150,000	$0	$150,000				
SJ07-8037		Tier II	San Joaquin County	Collier Road	Construction of a Class III Bike Lane	Linn Road to Mackville Road, 1.1 miles	$330,000	$0	$330,000				
SJ07-8038		Tier II	San Joaquin County	Collier Road	Construction of a Class III Bike Lane	Elliot Road to Linne Road, 3.5 miles	$1,050,000	$0	$1,050,000				
SJ07-8039		Tier II	San Joaquin County	Collier Road	Construction of a Class III Bike Lane	Lower Sacramento Road to Elliot Road, 6.5 miles	$1,950,000	$0	$1,950,000				
SJ07-8040		Tier II	San Joaquin County	Copperopolis Road	Construction of a Class III Bike Lane	Milton Road to Escalon-Bellota Road, 5.2 miles	$1,560,000	$0	$1,560,000				
SJ07-8041		Tier II	San Joaquin County	Corral Hollow Road	Construction of a Class III Bike Lane	Tracy to Lammers Road, 2.2 miles	$660,000	$0	$660,000				
SJ07-8042		Tier II	San Joaquin County	Corral Hollow Road	Construction of a Class III Bike Lane	Alameda County to CA Aqueduct, 7.8 miles	$2,340,000	$0	$2,340,000				
SJ07-8043		Tier II	San Joaquin County	Crocker Road	Construction of a Class III Bike Lane	Undine Road to Carlin Road, 2.1 miles	$630,000	$0	$630,000				
SJ07-8044		Tier II	San Joaquin County	Davis Road*	Construction of a Class III Bike Lane	Turner Road to Hwy 12, 2.1 miles	$630,000	$0	$630,000				
SJ07-8045		Tier II	San Joaquin County	Dodds Road	Construction of a Class III Bike Lane	Escalon-Bellota Road to Van Allen Rd, 3.0 miles	$900,000	$0	$900,000				
SJ07-8046		Tier II	San Joaquin County	Dodds Road	Construction of a Class III Bike Lane	Stanislaus County to Escalon Bellota Rd, 4.0 miles	$1,200,000	$0	$1,200,000				
SJ07-8047		Tier II	San Joaquin County	Dos Reis Road	Construction of a Class III Bike Lane	Manthew Road to Dos Reis Staging Area, 1.4 miles	$420,000	$0	$420,000				
SJ07-8048		Tier II	San Joaquin County	Duncan Road	Construction of a Class III Bike Lane	Milton Road to Eight Mile Road, 5.3 miles	$1,590,000	$0	$1,590,000				
SJ07-8049		Tier II	San Joaquin County	Durham Ferry Road*	Construction of a Class III Bike Lane	Chrisman Road to Airport Way, 6.5 miles	$3,250,000	$0	$3,250,000				
SJ07-8050		Tier II	San Joaquin County	Eight Mile Road	Construction of a Class III Bike Lane	Stockton to Stockton, 0.5 miles	$20,000	$0	$20,000				
SJ07-8051		Tier II	San Joaquin County	Eight Mile Road	Construction of a Class III Bike Lane	Micke Grove Road to Frontage Road, 0.8 miles	$32,000	$0	$32,000				
SJ07-8052		Tier II	San Joaquin County	Eight Mile Road	Construction of a Class III Bike Lane	Jack Tone Road to Duncan Road, 2.7 miles	$108,000	$0	$108,000				
SJ07-8053		Tier II	San Joaquin County	Elliot Road	Construction of a Class III Bike Lane	Collier Road to Hwy 12, 4.3 miles	$1,290,000	$0	$1,290,000				
SJ07-8054		Tier II	San Joaquin County	Escalon-Belllota Road	Construction of a Class III Bike Lane	Milton Road to Hwy 4, 4.0 miles	$1,200,000	$0	$1,200,000				
SJ07-8055		Tier II	San Joaquin County	Escalon-Bellota Road	Construction of a Class III Bike Lane	Dodds Road to Escalon Bellota Road, 3.4 miles	$1,020,000	$0	$1,020,000				
SJ07-8056		Tier II	San Joaquin County	Escalon-Bellota Road	Construction of a Class III Bike Lane	HWY 4 to Dodds Road, 5.0 miles	$200,000	$0	$200,000				
SJ07-8057		Tier II	San Joaquin County	Grant Line Road	Construction of a Class III Bike Lane	Byron Road to Tracy Blvd, 0.4 miles	$120,000	$0	$120,000				
SJ07-8058		Tier II	San Joaquin County	Hansen Road	Construction of a Class III Bike Lane	Von Sosten Road to Schulte Road, 1.9 miles	$570,000	$0	$570,000				
SJ07-8059		Tier II	San Joaquin County	Harney Lane	Construction of a Class III Bike Lane	Tully Road to Tully Road, 0.5 miles	$150,000	$0	$150,000				
SJ07-8060		Tier II	San Joaquin County	Howard Road	Construction of a Class III Bike Lane	Roberts Road to Wolfe Road, 2.2 miles	$88,000	$0	$88,000				
SJ07-8061		Tier II	San Joaquin County	Howard Road	Construction of a Class III Bike Lane	Tracy Blvd. to Undine Road, 2.2 miles	$88,000	$0	$88,000				
SJ07-8062		Tier II	San Joaquin County	Jahant Road	Construction of a Class III Bike Lane	Linn Road to Mackville Road, 0.7 miles	$210,000	$0	$210,000				
SJ07-8063		Tier II	San Joaquin County	Kile Road	Construction of a Class III Bike Lane	Thorton Road to Ray Road, 3.2 miles	$960,000	$0	$960,000				

Table 6-8: 2007 Regional Transportation Plan Project List - Bicycle and Pedestrian Facilities Improvement Projects Category

Identifiers			Project Information					Cost to Deliver			Milestone Years			
2007 RTP MPO ID	CTIPS ID #	2007 RTP Tier	Jurisdiction	Facility Name/Route	Project Description	Project Limits		Total	TIER I	TIER II	FTIP Programming	NEPA Approval	Completion	Project Milestone Years
SJ07-8064		Tier II	San Joaquin County	Lammers Road	Construction of a Class III Bike Lane	Corral Hollow Road to Tracy Blvd, 0.3 miles		$90,000	$0	$90,000				
SJ07-8065		Tier II	San Joaquin County	Liberty Road	Construction of a Class III Bike Lane	HWY 88 to Amador County, 2.9 miles		$870,000	$0	$870,000				
SJ07-8066		Tier II	San Joaquin County	Liberty Road	Construction of a Class III Bike Lane	Mackville Road to Hwy 88, 2.1 miles		$630,000	$0	$630,000				
SJ07-8067		Tier II	San Joaquin County	Linn Road	Construction of a Class III Bike Lane	Collier Road to Jahant Road, 0.7 miles		$210,000	$0	$210,000				
SJ07-8068		Tier II	San Joaquin County	Linn Road	Construction of a Class III Bike Lane	Collier Road to Collier Road, 0.3 miles		$90,000	$0	$90,000				
SJ07-8069		Tier II	San Joaquin County	Live Oak Road	Construction of a Class III Bike Lane	Jack Tone Road to Tully Road, 1.5 miles		$450,000	$0	$450,000				
SJ07-8070		Tier II	San Joaquin County	Live Oak Road	Construction of a Class III Bike Lane	HWY 88 to Jack Tone Road, 1.8 miles		$540,000	$0	$540,000				
SJ07-8071		Tier II	San Joaquin County	Live Oak Road	Construction of a Class III Bike Lane	Frontage Road to Hwy 88, 4.0 miles		$1,200,000	$0	$1,200,000				
SJ07-8072		Tier II	San Joaquin County	Lone Tree Road	Construction of a Class III Bike Lane	Van Allen Road to French Camp Road, 5.0 miles		$1,500,000	$0	$1,500,000				
SJ07-8073		Tier II	San Joaquin County	Louise Avenue	Construction of a Class III Bike Lane	Austin Road to Jack Tone Road, 2.0 miles		$600,000	$0	$600,000				
SJ07-8074		Tier II	San Joaquin County	Lower Sacramento Road*	Construction of a Class III Bike Lane	Harney Lane to Eight Mile Road, 2.1 miles		$315,000	$0	$315,000				
SJ07-8075		Tier II	San Joaquin County	Mackville Road	Construction of a Class III Bike Lane	Collier Road to Liberty Road, 1.5 miles		$450,000	$0	$450,000				
SJ07-8076		Tier II	San Joaquin County	Mackville Road	Construction of a Class III Bike Lane	Collier Road to Hwy 12, 1.8 miles		$540,000	$0	$540,000				
SJ07-8077		Tier II	San Joaquin County	Matthews Road	Construction of a Class III Bike Lane	Wolf Road to Manthey Street, 1.2 miles		$48,000	$0	$48,000				
SJ07-8078		Tier II	San Joaquin County	Micke Grove Road	Construction of a Class III Bike Lane	Armstrong Rd to Eight Mile Rd		$1,000,000	$0	$1,000,000				
SJ07-8079		Tier II	San Joaquin County	Milgeo Road	Construction of a Class III Bike Lane	Ripon to Murphy Road, 0.4 miles		$120,000	$0	$120,000				
SJ07-8080		Tier II	San Joaquin County	Murphy Road	Construction of a Class III Bike Lane	Milgeo Road to French Camp Rd, 4.1 miles		$1,230,000	$0	$1,230,000				
SJ07-8081		Tier II	San Joaquin County	Odell Avenue	Construction of a Class III Bike Lane	Downing Street, s/o Horton Ave		$10,000	$0	$10,000				
SJ07-8082		Tier II	San Joaquin County	Patterson Pass Road	Construction of a Class III Bike Lane	Alameda County to Schulte Road, 1.8 miles		$540,000	$0	$540,000				
SJ07-8083		Tier II	San Joaquin County	Peltier Road	Construction of a Class III Bike Lane	Blossom Road to Thorton Road, 2.1 miles		$630,000	$0	$630,000				
SJ07-8084		Tier II	San Joaquin County	Ray Road	Construction of a Class III Bike Lane	Peltier Road to Woodbridge Road, 2.0 miles		$600,000	$0	$600,000				
SJ07-8085		Tier II	San Joaquin County	River Road	Construction of a Class III Bike Lane	McHenry Ave to Sante Fe Road, 2.6 miles		$104,000	$0	$104,000				
SJ07-8086		Tier II	San Joaquin County	Roberts Road	Construction of a Class III Bike Lane	Carlin Road to Howard Road, 0.9 miles		$270,000	$0	$270,000				
SJ07-8087		Tier II	San Joaquin County	Roth Road	Construction of a Class III Bike Lane	Manthey Street to Airport Way, 1.5 miles		$450,000	$0	$450,000				
SJ07-8088		Tier II	San Joaquin County	SR99 Frontage Road	Construction of a Class III Bike Lane	Harney Lane to Wilson Way, 6.5 miles		$1,950,000	$0	$1,950,000				
SJ07-8089		Tier II	San Joaquin County	Thornton Road	Construction of a Class III Bike Lane	Sacramento County to Walnut Grove Road, 2.2 miles		$330,000	$0	$330,000				
SJ07-8090		Tier II	San Joaquin County	Thornton Road	Construction of a Class III Bike Lane	Peltier Road to Woodbridge Road, 2.0 miles		$300,000	$0	$300,000				
SJ07-8091		Tier II	San Joaquin County	Thornton Road	Construction of a Class III Bike Lane	Kile Road to Peltier Road, 2.1 miles		$315,000	$0	$315,000				
SJ07-8092		Tier II	San Joaquin County	Thornton Road	Construction of a Class III Bike Lane	Walnut Grove Road to Kile Road, 1.0 miles		$150,000	$0	$150,000				
SJ07-8093		Tier II	San Joaquin County	Thornton Road*	Construction of a Class III Bike Lane	DeVries Road to Eight Mile Road, 1.1 miles		$55,000	$0	$55,000				
SJ07-8094		Tier II	San Joaquin County	Tracy Blvd*	Construction of a Class III Bike Lane	Howard Road to Lammers Road, 4.2 miles		$210,000	$0	$210,000				
SJ07-8095		Tier II	San Joaquin County	Tully Road	Construction of a Class III Bike Lane	HWY 12 to Brandt Road, 1.4 miles		$420,000	$0	$420,000				
SJ07-8096		Tier II	San Joaquin County	Tully Road	Construction of a Class III Bike Lane	Harney Lane to Live Oak Road, 1.5 miles		$450,000	$0	$450,000				
SJ07-8097		Tier II	San Joaquin County	Tully Road	Construction of a Class III Bike Lane	Brandt Road to Harney Lane, 3.1miles		$930,000	$0	$930,000				

Table 6-8: 2007 Regional Transportation Plan Project List - Bicycle and Pedestrian Facilities Improvement Projects Category

Identifiers: 2007 RTP MPO ID	CTIPS ID #	2007 RTP Tier	Project Information: Jurisdiction	Facility Name/Route	Project Description	Project Limits	Cost to Deliver: Total	TIER I	TIER II	Milestone Years: FTIP Programming	NEPA Approval	Completion	Project Milestone Years
SJ07-8098		Tier II	San Joaquin County	Tully Road	Construction of a Class III Bike Lane	Live Oak Road to Eight Mile Road, 1.5 miles	$450,000	$0	$450,000				
SJ07-8099		Tier II	San Joaquin County	Undine Road	Construction of a Class III Bike Lane	Howard Road to Crocker Road, 2.9 miles	$870,000	$0	$870,000				
SJ07-8100		Tier II	San Joaquin County	Van Allen Road	Construction of a Class III Bike Lane	Dodds Road to Lone Tree Road, 2.0 miles	$600,000	$0	$600,000				
SJ07-8101		Tier II	San Joaquin County	Von Sosten Road	Construction of a Class III Bike Lane	Patterson Pass Road to Byron Road, 2.9 miles	$870,000	$0	$870,000				
SJ07-8102		Tier II	San Joaquin County	Walnut Grove Road	Construction of a Class III Bike Lane	Blossom Road to Thorton Road, 1.0 miles	$300,000	$0	$300,000				
SJ07-8103		Tier II	San Joaquin County	Walnut Grove Road	Construction of a Class III Bike Lane	Contra Costa County to Blossom Road, 3.4 miles	$136,000	$0	$136,000				
SJ07-8104		Tier II	San Joaquin County	West Lane	Construction of a Class III Bike Lane	Lodi to Armstron Road, 0.9 miles	$36,000	$0	$36,000				
SJ07-8105		Tier II	San Joaquin County	West Lane	Construction of a Class III Bike Lane	Eight Mile Road to Armstrong Road, 2.4 miles	$96,000	$0	$96,000				
SJ07-8106		Tier II	San Joaquin County	Wolfe Lane Road	Construction of a Class III Bike Lane	Howard Road to Matthews Road, 0.3 miles	$12,000	$0	$12,000				
SJ07-8107		Tier II	San Joaquin County	Woodbridge Road	Construction of a Class III Bike Lane	Davis Road to Lower Sacramento Road, 1.9 miles	$570,000	$0	$570,000				
SJ07-8108		Tier II	San Joaquin County	Woodbridge Road	Construction of a Class III Bike Lane	Davis Road to Chestnut Road 1.9 miles	$570,000	$0	$570,000				
SJ07-8109		Tier II	San Joaquin County	Woodbridge Road	Construction of a Class III Bike Lane	Thorton Road to Ray Road, 1.2 miles	$360,000	$0	$360,000				
SJ07-8110		Tier II	Tracy	Corral Hollow Road, Parkside Road to Linne Road	Bikeway improvements	Corral Hollow Road, Parkside Road to Linne Road, 1.8 Miles	$117,000	$0	$117,000	2016	2014	2018	
SJ07-8111		Tier II	Tracy	MacArthur Boulevard, 3rd Street to Linne Road	Bikeway improvements	MacArthur Boulevard, 3rd Street to Linne Road, 2.4 Miles	$200,000	$0	$200,000	2011	n/a	2014	
						TOTAL	**$89,613,000**	**$40,514,000**	**$49,099,000**				

Table 6-9: 2007 Regional Transportation Plan Project List - Transportation Control Measure Category

Identifiers		Project Information				Cost to Deliver			Milestone Years
2007 RTP MPO ID	2007 RTP Tier	Jurisdiction	Project Name	Project Description	Total	TIER I	TIER II	Completion
SJ07-9001	Tier I	Various	Ridesharing and Vanpool Programs	Trip Reduction Coordination, Guaranteed Ride Home, Vanpool Enhancement, Match lists, TDM marketing, etc.	$4,600,000	$4,600,000	$0	2007-2030
SJ07-9002	Tier I	Various	Park and Ride Lots	Various Locations	$450,000	$450,000	$0	2007-2010
SJ07-9003	Tier I	Various	Traffic Flow Improvements and Systems Managements	Signal System Improvements, Operational and Intersection Improvements to Smooth Traffic Flow, Closed Circuit TV, Freeway Service Patrols	$5,000,000	$5,000,000	$0	2007-2030
SJ07-9004	Tier I	Stockton		Neighborhood Traffic Calming	$8,050,000	$8,050,000	$0	2007-2030
SJ07-9005	Tier I	Stockton		Sidewalk, Curb, Gutter & Wheelchair Ramps	$16,100,000	$16,100,000	$0	2007-2030
SJ07-9006	Tier I	Stockton		Street Lighting Improvements	$2,875,000	$2,875,000	$0	2007-2030
SJ07-9007	Tier I	Stockton		Traffic Control System Upgrades	$29,900,000	$29,900,000	$0	2007-2030
SJ07-9008	Tier I	Stockton		Install Traffic Signals	$2,560,000	$2,560,000	$0	2007-2011
SJ07-9009	Tier I	Tracy	Traffic Signal Coordination	Grant Line Road	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9010	Tier I	San Joaquin County	Traffic Signal/Ped Crossing	Grant Line Road and Seventh Street	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9011	Tier I	San Joaquin County	Traffic Signal	Chrisman Road	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9012	Tier I	San Joaquin County	Intersection Improvements	Howard Road and Tracy Blvd.	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9013	Tier I	San Joaquin County	Intersection Signalization	Byron Road and Grant Line Road	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9014	Tier I	San Joaquin County		South Stockton Sidewalks	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9015	Tier I	Stockton	Traffic Signal	Tam O'Shanter Drive and Hammertown Drive	See Regional Roadway Project List	$0	$0	2007-2011
SJ07-9016	Tier I	Tracy	Traffic Signal	Byron Road and Lammers Road	See Regional Roadway Project List	$0	$0	2007-2011
					$69,535,000	**$69,535,000**	**$0**	

Table 6-10: 2007 Regional Transportation Plan Project List - Transportation Control Measure Category

Identifiers	2007 RTP MPO ID	2007 RTP Tier	Project Information	Jurisdiction	Project Name	Project Description	Cost to Deliver	Total	TIER I	TIER II	Milestone Years	Completion
SJ07-10001	Tier II				Advanced Railroad highway interface Technology Deployment	Deploy Railroad/Highway grade crossing technology at crossing with safety and/or high volume and delay concers		$750,000	$0	$750,000		2007-2030
SJ07-10002	Tier II				City of Stockton Expansion of ATMS and Cent Cnlt Sys, Phase II	Expand Central Network, Add CCTV cameras, Interconnect Traffic Signals, Intagration w/Caltrans,		$9,700,000	$0	$9,700,000		2007-2030
SJ07-10003	Tier II			Stockton	Caltrans Traffic Ops System (TOS) gap closure Project (Region)	Elements that aid in surveillance and management activitiesto be par of the TOS		$2,000,000	$0	$2,000,000		2007-2030
SJ07-10004	Tier II				EVP Deployments	Emergency Vehcile Preemption for City of Stockton, Preempetion of signals to allow faster deployment of emergency vehciles.		$3,500,000	$0	$3,500,000		2007-2030
SJ07-10005	Tier II			Various	Integrated Smart Corridors	Implementation of multiple ITS packages and systems		$4,000,000	$0	$4,000,000		2007-2030
SJ07-10006	Tier II			Various	Communications Interie Projects Stockton, County, and Caltrans	Communications link of sharing of traffic information		$3,000,000	$0	$3,000,000		2007-2030
SJ07-10007	Tier II			Stockton	Urban Area Traffic Signal Coordination	Local traffic signal coordination		$1,500,000	$0	$1,500,000		2007-2030
SJ07-10008	Tier II			Port	Port of Stockton ITS Project	Inbound/Outbound Truck monitoring system Staging area improvments		$300,000	$0	$300,000		2007-2030
SJ07-10009	Tier II			Stockton/County	Railroad Highway Interface (RHI)corridor project	Deployment of Railroad/highway grade crossing safety technology at needed crossings.		$750,000	$0	$750,000		2007-2030
SJ07-10010	Tier II			Stockton/County	Alternate Route Signaling	Installation of 58 static alternate route signs w/in county for designated detour routes w/changeable/portable signage		$2,900,000	$0	$2,900,000		2007-2030
SJ07-10011	Tier II			County	Vanpool Vehicle Traffic Probes	Vehicle Tracking systems			$0	$0		2007-2030
SJ07-10012	Tier II				Incident Management/Emergency Services				$0	$0		2007-2030
SJ07-10013	Tier II			Various	Traffic Safety Task Force/Team	Devleop Traffic Safety Team		$150,000	$0	$150,000		2007-2030
SJ07-10014	Tier II				Transit Systems				$0	$0		2007-2030
SJ07-10015	Tier II			SJRTD	San Joaquin Transit Electronic Fare Payment	Corrdination of fare payment systems using "TransLink" similar to that used by MTC		$2,000,000	$0	$2,000,000		2007-2030
SJ07-10016	Tier II			SJRTD	Transit Management System (TrMS) Upgrades	Upgrades to the SmartTrac system		$2,000,000	$0	$2,000,000		2007-2030
SJ07-10017	Tier II			SJRTD	Smart Nextbus Arrival Signs	Deployment of electronic signage that will inform riders of the arrival times of transit vehicles		$200,000	$0	$200,000		2007-2030
SJ07-10018	Tier II			SJRTD/County	Demand-Responsive Transit System Integration Study	Study ofdemand-responsive transit system integration strategies		$2,700,000	$0	$2,700,000		2007-2030
SJ07-10019	Tier II			SJRTD	Transit Information System	Implement a system for collecting, processing and disseminating transit information		$600,000	$0	$600,000		2007-2030
SJ07-10020	Tier II				Traveler Information Systems				$0	$0		2007-2030
SJ07-10021	Tier II			County	Metropolitan Traveler Information System	This project would implement a comprehensive Integrated Traveler Information System		$4,000,000	$0	$4,000,000		2007-2030
SJ07-10022	Tier II			Various	Regional ITS configuration Management/Coordination Plan	Develop logical data exchange network partnerships		$300,000	$0	$300,000		2007-2030
								$40,350,000	**$0**	**$40,350,000**		

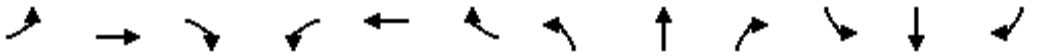
APPENDIX B

LEVEL OF SERVICE CALCULATION WORKSHEETS

EXISTING CONDITIONS
LEVEL OF SERVICE CALCULATION WORKSHEETS

INTERSECTIONS #3 – 9 AM & PM

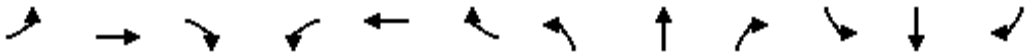
REFER TO CITY OF TRACY GENERAL PLAN (2/1/11) FOR EXISTING CONDITIONS LOS CALCULATIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	143	0	98	13	103	0	0	472	247
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	147	0	101	13	106	0	0	487	255
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	620	620	487	620	620	106	487			106		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	620	620	487	620	620	106	487			106		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	63	100	89	99			100		
cM capacity (veh/h)	354	399	581	397	399	948	1076			1485		

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	248	120	487	255
Volume Left	147	13	0	0
Volume Right	101	0	0	255
cSH	520	1076	1700	1700
Volume to Capacity	0.48	0.01	0.29	0.15
Queue Length 95th (ft)	64	1	0	0
Control Delay (s)	18.1	1.0	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	18.1	1.0	0.0	
Approach LOS	C			

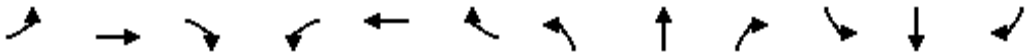
Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	45.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	0	8	0	0	0	0	52	13	71	544	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	67	0	8	0	0	0	0	54	14	74	567	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	776	782	567	776	776	61	567			68		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	776	782	567	776	776	61	567			68		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	100	98	100	100	100	100			95		
cM capacity (veh/h)	303	310	523	298	313	1004	1005			1534		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	75	68	641
Volume Left	67	0	74
Volume Right	8	14	0
cSH	318	1700	1534
Volume to Capacity	0.24	0.04	0.05
Queue Length 95th (ft)	22	0	4
Control Delay (s)	19.8	0.0	1.3
Lane LOS	C		A
Approach Delay (s)	19.8	0.0	1.3
Approach LOS	C		

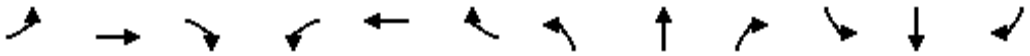
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	194	3	78	1	46	0	0	201	209
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	228	4	92	1	54	0	0	236	246
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	418	416	359	416	539	54	482			54		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	418	416	359	416	539	54	482			54		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	58	99	91	100			100		
cM capacity (veh/h)	493	527	685	547	449	1013	1080			1551		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	324	55	482
Volume Left	228	1	0
Volume Right	92	0	246
cSH	627	1080	1700
Volume to Capacity	0.52	0.00	0.28
Queue Length 95th (ft)	74	0	0
Control Delay (s)	16.7	0.2	0.0
Lane LOS	C	A	
Approach Delay (s)	16.7	0.2	0.0
Approach LOS	C		

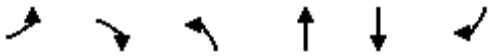
Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	38	0	7	0	0	0	0	9	2	39	356	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	45	0	8	0	0	0	0	11	2	46	424	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	529	530	424	529	529	12	424			13		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	529	530	424	529	529	12	424			13		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	100	99	100	100	100	100			97		
cM capacity (veh/h)	450	442	630	444	442	1069	1135			1605		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	13	470
Volume Left	45	0	46
Volume Right	8	2	0
cSH	471	1700	1605
Volume to Capacity	0.11	0.01	0.03
Queue Length 95th (ft)	10	0	2
Control Delay (s)	13.6	0.0	1.0
Lane LOS	B		A
Approach Delay (s)	13.6	0.0	1.0
Approach LOS	B		

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	37.6%	ICU Level of Service	A	
Analysis Period (min)	15			



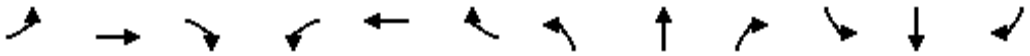
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	18	42	21	27	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65
Hourly flow rate (vph)	2	28	65	32	42	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	204	42	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	204	42	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	96			
cM capacity (veh/h)	752	1028	1566			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	29	97	43
Volume Left	2	65	0
Volume Right	28	0	2
cSH	1009	1566	1700
Volume to Capacity	0.03	0.04	0.03
Queue Length 95th (ft)	2	3	0
Control Delay (s)	8.7	5.0	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	5.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	20.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
20: Arbor Ave & MACARTHUR DRIVE (N)

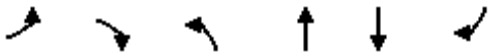
4/8/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	5	22	14	25	4	64	21	5	2	24	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	6	25	16	28	5	73	24	6	2	27	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	39	49	102	39
Volume Left (vph)	8	16	73	2
Volume Right (vph)	25	5	6	9
Hadj (s)	-0.31	0.04	0.14	-0.10
Departure Headway (s)	4.0	4.3	4.3	4.1
Degree Utilization, x	0.04	0.06	0.12	0.04
Capacity (veh/h)	872	806	817	851
Control Delay (s)	7.1	7.6	7.9	7.3
Approach Delay (s)	7.1	7.6	7.9	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
HCM Level of Service	A			
Intersection Capacity Utilization	22.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	25	25	80	103	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	27	27	87	112	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	267	126	139			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	267	126	139			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	98			
cM capacity (veh/h)	709	925	1444			

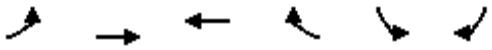
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	114	139
Volume Left	27	27	0
Volume Right	27	0	27
cSH	803	1444	1700
Volume to Capacity	0.07	0.02	0.08
Queue Length 95th (ft)	5	1	0
Control Delay (s)	9.8	1.9	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	1.9	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	185	34	67	172	75	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	201	37	73	187	82	77

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total (vph)	238	73	187	159
Volume Left (vph)	0	73	0	82
Volume Right (vph)	37	0	0	77
Hadj (s)	-0.06	0.53	0.03	-0.16
Departure Headway (s)	4.7	5.7	5.2	4.9
Degree Utilization, x	0.31	0.11	0.27	0.22
Capacity (veh/h)	732	609	671	678
Control Delay (s)	9.8	8.2	8.9	9.3
Approach Delay (s)	9.8	8.7		9.3
Approach LOS	A	A		A

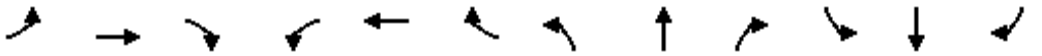
Intersection Summary			
Delay	9.2		
HCM Level of Service	A		
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	397	406	11	19	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	15	418	427	12	20	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			492			
pX, platoon unblocked						
vC, conflicting volume	439				881	433
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439				881	433
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	98
cM capacity (veh/h)	1121				313	623

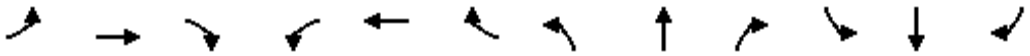
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	433	439	34
Volume Left	15	0	20
Volume Right	0	12	14
cSH	1121	1700	392
Volume to Capacity	0.01	0.26	0.09
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.4	0.0	15.0
Lane LOS	A		C
Approach Delay (s)	0.4	0.0	15.0
Approach LOS			C

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		



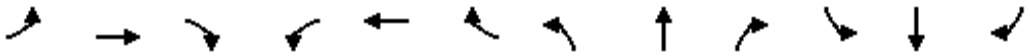
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	176	153	140	360	47	293	234	107	32	135	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.94	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3478		4990	3539	1583	1770	3300	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3478		4990	3539	1583	1770	3300	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	191	166	152	391	51	318	254	116	35	147	121
RTOR Reduction (vph)	0	0	121	0	11	0	0	0	82	0	91	0
Lane Group Flow (vph)	61	191	45	152	431	0	318	254	34	35	177	0
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	3.4	14.6	14.6	5.0	16.2		4.0	15.7	15.7	1.5	13.2	
Effective Green, g (s)	5.4	16.6	16.6	7.0	18.2		6.0	17.7	17.7	3.5	15.2	
Actuated g/C Ratio	0.09	0.27	0.27	0.12	0.30		0.10	0.29	0.29	0.06	0.25	
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)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	157	966	432	204	1041		492	1030	461	102	825	
v/s Ratio Prot	0.03	0.05		c0.09	c0.12		c0.06	c0.07		0.02	0.05	
v/s Ratio Perm			0.03						0.02			
v/c Ratio	0.39	0.20	0.10	0.75	0.41		0.65	0.25	0.07	0.34	0.21	
Uniform Delay, d1	26.1	17.0	16.5	26.0	17.0		26.4	16.5	15.6	27.5	18.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	0.1	0.1	13.7	0.3		2.9	0.1	0.1	2.0	0.1	
Delay (s)	27.7	17.1	16.6	39.8	17.3		29.3	16.6	15.7	29.6	18.2	
Level of Service	C	B	B	D	B		C	B	B	C	B	
Approach Delay (s)		18.5			23.1			22.3			19.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	210	107	115	229	83	108	320	129	49	337	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.96		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3360		1770	3398		1770	3387		1770	3472	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3360		1770	3398		1770	3387		1770	3472	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	228	116	125	249	90	117	348	140	53	366	53
RTOR Reduction (vph)	0	92	0	0	53	0	0	53	0	0	15	0
Lane Group Flow (vph)	96	252	0	125	286	0	117	435	0	53	404	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.5	9.9		4.5	9.9		4.5	16.2		2.3	13.5	
Effective Green, g (s)	5.0	10.4		5.0	10.4		5.0	17.2		2.3	14.5	
Actuated g/C Ratio	0.10	0.20		0.10	0.20		0.10	0.34		0.05	0.28	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.0	5.0	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	3.5		3.0	3.5	
Lane Grp Cap (vph)	174	687		174	694		174	1145		80	989	
v/s Ratio Prot	0.05	0.08		c0.07	c0.08		c0.07	c0.13		0.03	0.12	
v/s Ratio Perm												
v/c Ratio	0.55	0.37		0.72	0.41		0.67	0.38		0.66	0.41	
Uniform Delay, d1	21.9	17.4		22.3	17.6		22.2	12.8		23.9	14.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.4		11.2	0.5		7.8	0.3		18.7	0.3	
Delay (s)	24.0	17.8		33.4	18.1		29.9	13.0		42.6	15.1	
Level of Service	C	B		C	B		C	B		D	B	
Approach Delay (s)		19.2			22.2			16.3			18.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

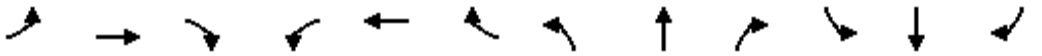


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	217	215	79	45	288	59	47	112	36	84	138	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	0.96		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3397		1770	3449		1770	3411		1770	3201	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3397		1770	3449		1770	3411		1770	3201	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	278	276	101	58	369	76	60	144	46	108	177	310
RTOR Reduction (vph)	0	44	0	0	23	0	0	39	0	0	249	0
Lane Group Flow (vph)	278	333	0	58	422	0	60	151	0	108	238	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.5	24.1		3.4	14.0		3.1	9.4		5.1	11.4	
Effective Green, g (s)	13.5	24.1		3.4	14.0		3.1	9.4		5.1	11.4	
Actuated g/C Ratio	0.23	0.42		0.06	0.24		0.05	0.16		0.09	0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	412	1412		104	833		95	553		156	629	
v/s Ratio Prot	c0.16	0.10		0.03	c0.12		0.03	0.04		c0.06	c0.07	
v/s Ratio Perm												
v/c Ratio	0.67	0.24		0.56	0.51		0.63	0.27		0.69	0.38	
Uniform Delay, d1	20.3	11.0		26.6	19.0		26.9	21.3		25.7	20.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.1		6.3	0.5		12.9	0.3		12.5	0.4	
Delay (s)	24.6	11.1		32.9	19.5		39.8	21.6		38.2	20.6	
Level of Service	C	B		C	B		D	C		D	C	
Approach Delay (s)		16.8			21.1			25.9			23.8	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

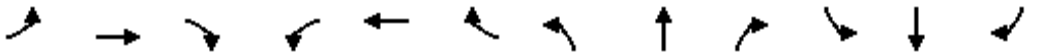
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	272	63	72	376	16	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	1770	1863	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	68	78	409	17	13
RTOR Reduction (vph)	0	44	0	0	0	10
Lane Group Flow (vph)	296	24	78	409	17	3
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	10.8	10.8	1.8	16.6	6.3	6.3
Effective Green, g (s)	10.8	10.8	1.8	16.6	6.3	6.3
Actuated g/C Ratio	0.35	0.35	0.06	0.54	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	651	553	103	1001	361	323
v/s Ratio Prot	0.16		c0.04	c0.22	c0.01	
v/s Ratio Perm		0.02				0.00
v/c Ratio	0.45	0.04	0.76	0.41	0.05	0.01
Uniform Delay, d1	7.8	6.6	14.3	4.2	9.9	9.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	26.7	0.3	0.1	0.0
Delay (s)	8.3	6.7	41.1	4.5	9.9	9.8
Level of Service	A	A	D	A	A	A
Approach Delay (s)	8.0			10.4	9.9	
Approach LOS	A			B	A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



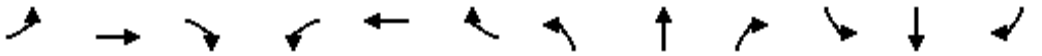
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	172	16	170	1205	24	37	31	30	19	69	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	0.95	1.00	0.97	1.00	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)	3433	5085	1583	1770	5085	1583	3433	3539	1583	3433	1863	1583
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)	3433	5085	1583	1770	5085	1583	3433	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	187	17	185	1310	26	40	34	33	21	75	190
RTOR Reduction (vph)	0	0	12	0	0	7	0	0	26	0	0	154
Lane Group Flow (vph)	9	187	5	185	1310	19	40	34	7	21	75	36
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	1.1	17.4	17.4	9.9	26.2	26.2	2.5	11.6	11.6	1.1	10.2	10.2
Effective Green, g (s)	3.2	19.5	19.5	12.0	28.3	28.3	4.6	13.7	13.7	3.2	12.3	12.3
Actuated g/C Ratio	0.05	0.30	0.30	0.19	0.44	0.44	0.07	0.21	0.21	0.05	0.19	0.19
Clearance Time (s)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	171	1540	479	330	2235	696	245	753	337	171	356	302
v/s Ratio Prot	0.00	0.04		c0.10	c0.26		c0.01	0.01		0.01	c0.04	
v/s Ratio Perm			0.00			0.01			0.00			0.02
v/c Ratio	0.05	0.12	0.01	0.56	0.59	0.03	0.16	0.05	0.02	0.12	0.21	0.12
Uniform Delay, d1	29.2	16.2	15.7	23.8	13.6	10.2	28.1	20.2	20.0	29.3	22.0	21.6
Progression Factor	1.00	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	0.1	0.0	0.0	2.2	0.4	0.0	0.3	0.0	0.0	0.3	0.3	0.2
Delay (s)	29.3	16.3	15.7	26.0	14.0	10.3	28.4	20.2	20.1	29.6	22.3	21.7
Level of Service	C	B	B	C	B	B	C	C	C	C	C	C
Approach Delay (s)		16.8			15.4			23.2			22.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



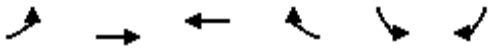
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	267	73	140	482	209	508	996	135	419	564	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	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)	3433	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
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)	3433	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	290	79	152	524	227	552	1083	147	455	613	118
RTOR Reduction (vph)	0	0	63	0	0	174	0	0	57	0	0	79
Lane Group Flow (vph)	89	290	16	152	524	53	552	1083	90	455	613	39
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases			2			6			4			8
Actuated Green, G (s)	4.6	15.9	15.9	6.1	17.4	17.4	14.2	32.8	32.8	8.1	26.7	26.7
Effective Green, g (s)	6.6	17.9	17.9	8.1	19.4	19.4	16.2	34.8	34.8	10.1	28.7	28.7
Actuated g/C Ratio	0.08	0.21	0.21	0.09	0.22	0.22	0.19	0.40	0.40	0.12	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	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	1047	326	320	1135	353	640	1417	634	399	1169	523
v/s Ratio Prot	0.03	0.06		c0.04	c0.10		c0.16	c0.31		c0.13	0.17	
v/s Ratio Perm			0.01			0.03			0.06			0.02
v/c Ratio	0.34	0.28	0.05	0.47	0.46	0.15	0.86	0.76	0.14	1.14	0.52	0.07
Uniform Delay, d1	38.1	29.1	27.7	37.4	29.2	27.1	34.3	22.5	16.6	38.4	23.6	20.0
Progression Factor	1.00	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	0.8	0.1	0.1	1.1	0.3	0.2	11.5	2.5	0.1	89.1	0.4	0.1
Delay (s)	38.9	29.2	27.7	38.5	29.5	27.3	45.8	25.0	16.7	127.5	24.0	20.0
Level of Service	D	C	C	D	C	C	D	C	B	F	C	C
Approach Delay (s)		30.8			30.5			30.8			63.3	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	86.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



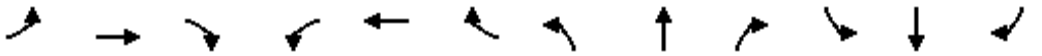
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	390	243	177	399	142	279	503	152	95	377	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	424	264	192	434	154	303	547	165	103	410	171
RTOR Reduction (vph)	0	0	198	0	0	111	0	0	117	0	0	113
Lane Group Flow (vph)	130	424	66	192	434	43	303	547	48	103	410	58
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	5.8	14.5	14.5	7.5	16.2	16.2	6.1	17.0	17.0	4.6	15.5	15.5
Effective Green, g (s)	6.8	16.5	16.5	8.5	18.2	18.2	7.1	19.0	19.0	5.6	17.5	17.5
Actuated g/C Ratio	0.10	0.25	0.25	0.13	0.28	0.28	0.11	0.29	0.29	0.09	0.27	0.27
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	2.0	2.5	2.5	2.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	356	890	398	445	982	439	372	1025	458	293	944	422
v/s Ratio Prot	0.04	0.12		c0.06	c0.12		c0.09	c0.15		0.03	0.12	
v/s Ratio Perm			0.04			0.03			0.03			0.04
v/c Ratio	0.37	0.48	0.17	0.43	0.44	0.10	0.81	0.53	0.10	0.35	0.43	0.14
Uniform Delay, d1	27.4	20.9	19.2	26.3	19.5	17.6	28.6	19.6	17.1	28.3	19.9	18.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.1	0.2	0.2	0.1	12.2	0.3	0.0	0.3	0.1	0.1
Delay (s)	27.6	21.2	19.3	26.6	19.7	17.7	40.8	19.8	17.1	28.6	20.1	18.4
Level of Service	C	C	B	C	B	B	D	B	B	C	C	B
Approach Delay (s)		21.6			21.0			25.7			20.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



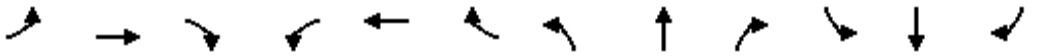
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	550	906	93	77	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		1.00	1.00
Frt		1.00	0.99		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3490		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3490		1770	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	632	1041	107	89	114
RTOR Reduction (vph)	0	0	22	0	0	77
Lane Group Flow (vph)	0	632	1126	0	89	37
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		16.6	16.6		7.1	7.1
Effective Green, g (s)		16.6	16.6		7.1	7.1
Actuated g/C Ratio		0.52	0.52		0.22	0.22
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1853	1828		396	355
v/s Ratio Prot		0.18	c0.32		c0.05	
v/s Ratio Perm						0.02
v/c Ratio		0.34	0.62		0.22	0.10
Uniform Delay, d1		4.4	5.3		10.1	9.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.6		0.3	0.1
Delay (s)		4.5	5.9		10.3	9.9
Level of Service		A	A		B	A
Approach Delay (s)		4.5	5.9		10.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



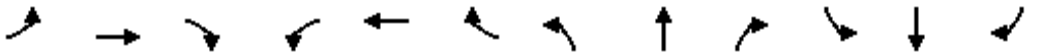
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	462	94	483	758	11	203	29	628	1	18	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1785	1583		1858	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.74	1.00		0.99	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1375	1583		1842	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	502	102	525	824	12	221	32	683	1	20	29
RTOR Reduction (vph)	0	0	80	0	0	5	0	0	4	0	0	0
Lane Group Flow (vph)	27	502	22	525	824	7	0	253	679	0	21	29
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		Free
Protected Phases	7	4		3	8			2	3		6	
Permitted Phases			4			8	2		2	6		Free
Actuated Green, G (s)	1.8	14.9	14.9	24.4	37.5	37.5		17.4	41.8		17.4	68.7
Effective Green, g (s)	1.8	14.9	14.9	24.4	37.5	37.5		17.4	41.8		17.4	68.7
Actuated g/C Ratio	0.03	0.22	0.22	0.36	0.55	0.55		0.25	0.61		0.25	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	46	768	343	629	1932	864		348	1055		467	1583
v/s Ratio Prot	0.02	c0.14		c0.30	0.23				c0.23			
v/s Ratio Perm			0.01			0.00		c0.18	0.20		0.01	0.02
v/c Ratio	0.59	0.65	0.06	0.83	0.43	0.01		0.73	0.64		0.04	0.02
Uniform Delay, d1	33.1	24.5	21.4	20.3	9.2	7.1		23.5	8.7		19.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	17.7	2.0	0.1	9.3	0.2	0.0		7.4	1.4		0.0	0.0
Delay (s)	50.8	26.6	21.4	29.6	9.4	7.1		30.9	10.0		19.4	0.0
Level of Service	D	C	C	C	A	A		C	B		B	A
Approach Delay (s)		26.8			17.2			15.6			8.2	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



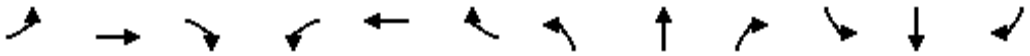
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	30	21	162	28	448	15	490	69	194	310	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.86		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3039		1770	3474		3433	3493	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3039		1770	3474		3433	3493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	33	23	176	30	487	16	533	75	211	337	32
RTOR Reduction (vph)	0	0	21	0	220	0	0	13	0	0	7	0
Lane Group Flow (vph)	46	33	2	176	297	0	16	595	0	211	362	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	2.0	5.2	5.2	9.8	13.0		0.6	18.0		7.3	24.7	
Effective Green, g (s)	2.0	5.2	5.2	9.8	13.0		0.6	18.0		7.3	24.7	
Actuated g/C Ratio	0.04	0.09	0.09	0.17	0.23		0.01	0.32		0.13	0.44	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	63	327	146	308	702		19	1111		445	1532	
v/s Ratio Prot	0.03	0.01		c0.10	c0.10		0.01	c0.17		c0.06	0.10	
v/s Ratio Perm			0.00									
v/c Ratio	0.73	0.10	0.01	0.57	0.42		0.84	0.54		0.47	0.24	
Uniform Delay, d1	26.9	23.4	23.2	21.3	18.5		27.8	15.7		22.7	9.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.9	0.1	0.0	2.6	0.4		131.7	0.5		0.8	0.1	
Delay (s)	61.8	23.5	23.3	23.9	18.9		159.5	16.2		23.5	10.0	
Level of Service	E	C	C	C	B		F	B		C	A	
Approach Delay (s)		40.7			20.1			19.9			14.9	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	275	27	97	327	156	62	382	67	123	244	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3492		1770	3367		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3492		1770	3367		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	255	299	29	105	355	170	67	415	73	134	265	147
RTOR Reduction (vph)	0	9	0	0	81	0	0	0	56	0	0	107
Lane Group Flow (vph)	255	319	0	105	444	0	67	415	17	134	265	40
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	11.1	18.1		7.0	14.0		3.4	14.1	14.1	6.1	16.8	16.8
Effective Green, g (s)	11.1	18.1		7.0	14.0		3.4	14.1	14.1	6.1	16.8	16.8
Actuated g/C Ratio	0.18	0.30		0.11	0.23		0.06	0.23	0.23	0.10	0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	321	1031		202	769		98	814	364	176	970	434
v/s Ratio Prot	c0.14	0.09		0.06	c0.13		0.04	c0.12		c0.08	c0.07	
v/s Ratio Perm									0.01			0.03
v/c Ratio	0.79	0.31		0.52	0.58		0.68	0.51	0.05	0.76	0.27	0.09
Uniform Delay, d1	24.0	16.8		25.6	21.0		28.4	20.6	18.4	26.9	17.5	16.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.7	0.2		2.3	1.1		17.9	0.5	0.1	17.5	0.2	0.1
Delay (s)	36.7	16.9		27.8	22.1		46.3	21.1	18.4	44.4	17.6	16.7
Level of Service	D	B		C	C		D	C	B	D	B	B
Approach Delay (s)		25.6			23.0			23.8			23.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	61.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	71	202	118	5	144	29	227	425	14	24	334	71
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	83	235	137	6	167	34	264	494	16	28	388	83

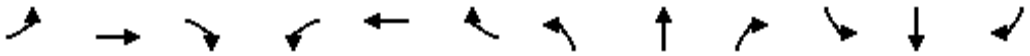
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	317	137	207	264	510	28	471
Volume Left (vph)	83	0	6	264	0	28	0
Volume Right (vph)	0	137	34	0	16	0	83
Hadj (s)	0.16	-0.67	-0.06	0.53	0.01	0.53	-0.09
Departure Headway (s)	8.9	8.1	9.4	8.9	8.4	9.1	8.5
Degree Utilization, x	0.78	0.31	0.54	0.65	1.19	0.07	1.11
Capacity (veh/h)	399	440	368	396	435	388	434
Control Delay (s)	36.1	13.4	22.8	25.8	130.8	11.6	103.1
Approach Delay (s)	29.3		22.8	95.0		98.0	
Approach LOS	D		C	F		F	

Intersection Summary				
Delay	72.6			
HCM Level of Service	F			
Intersection Capacity Utilization	72.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	261	12	11	59	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	284	13	12	64	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	148	19			25	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	148	19			25	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	73			96	
cM capacity (veh/h)	810	1059			1589	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	290	25	65
Volume Left	7	0	64
Volume Right	284	12	0
cSH	1052	1700	1589
Volume to Capacity	0.28	0.01	0.04
Queue Length 95th (ft)	28	0	3
Control Delay (s)	9.7	0.0	7.2
Lane LOS	A		A
Approach Delay (s)	9.7	0.0	7.2
Approach LOS	A		

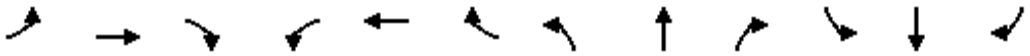
Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	51	21	78	214	87	42	160	13	55	140	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	55	23	85	233	95	46	174	14	60	152	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	82	412	234	216
Volume Left (vph)	3	85	46	60
Volume Right (vph)	23	95	14	4
Hadj (s)	-0.13	-0.06	0.04	0.08
Departure Headway (s)	5.8	5.3	5.7	5.8
Degree Utilization, x	0.13	0.61	0.37	0.35
Capacity (veh/h)	528	646	573	566
Control Delay (s)	9.7	16.1	12.1	11.9
Approach Delay (s)	9.7	16.1	12.1	11.9
Approach LOS	A	C	B	B

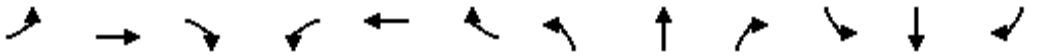
Intersection Summary				
Delay	13.6			
HCM Level of Service	B			
Intersection Capacity Utilization	50.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	75	110	9	40	161	140	9	151	63	83	124	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	120	10	43	175	152	10	164	68	90	135	99

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	82	129	371	10	233	90	234
Volume Left (vph)	82	0	43	10	0	90	0
Volume Right (vph)	0	10	152	0	68	0	99
Hadj (s)	0.53	-0.02	-0.19	0.53	-0.17	0.53	-0.26
Departure Headway (s)	7.6	7.0	6.5	7.6	6.9	7.5	6.7
Degree Utilization, x	0.17	0.25	0.66	0.02	0.44	0.19	0.43
Capacity (veh/h)	435	469	537	441	479	452	499
Control Delay (s)	11.0	11.2	21.3	9.6	14.1	11.0	13.4
Approach Delay (s)	11.1		21.3	13.9		12.7	
Approach LOS	B		C	B		B	

Intersection Summary				
Delay	15.5			
HCM Level of Service	C			
Intersection Capacity Utilization	52.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	164	17	31	263	38	30	97	32	30	105	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1203	1249		1203	1243		1203	1220		1203	1267	1077
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1203	1249		1203	1243		1203	1220		1203	1267	1077
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	91	180	19	34	289	42	33	107	35	33	115	118
RTOR Reduction (vph)	0	5	0	0	7	0	0	20	0	0	0	91
Lane Group Flow (vph)	91	194	0	34	324	0	33	122	0	33	115	27
Heavy Vehicles (%)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Turn Type	Prot			Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	4.5	22.8		1.2	19.5		1.2	11.3		2.2	12.3	12.3
Effective Green, g (s)	4.5	22.8		1.2	19.5		1.2	11.3		2.2	12.3	12.3
Actuated g/C Ratio	0.08	0.43		0.02	0.36		0.02	0.21		0.04	0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	101	532		27	453		27	258		49	291	248
v/s Ratio Prot	c0.08	c0.16		0.03	c0.26		c0.03	c0.10		0.03	0.09	
v/s Ratio Perm												0.03
v/c Ratio	0.90	0.36		1.26	0.72		1.22	0.47		0.67	0.40	0.11
Uniform Delay, d1	24.3	10.4		26.2	14.6		26.2	18.5		25.3	17.4	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	58.8	0.4		261.3	5.3		247.9	1.4		30.8	0.9	0.2
Delay (s)	83.0	10.9		287.4	19.9		274.1	19.9		56.1	18.3	16.5
Level of Service	F	B		F	B		F	B		E	B	B
Approach Delay (s)		33.5			44.8			67.8			22.2	
Approach LOS		C			D			E			C	

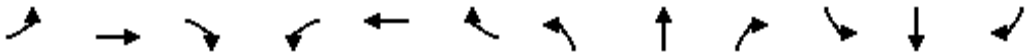
Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	53.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	143	58	66	40	57	238
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	162	66	75	45	65	270
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	498	98			120	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	498	98			120	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	68	93			96	
cM capacity (veh/h)	508	958			1467	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	228	120	335
Volume Left	162	0	65
Volume Right	66	45	0
cSH	588	1700	1467
Volume to Capacity	0.39	0.07	0.04
Queue Length 95th (ft)	46	0	3
Control Delay (s)	15.0	0.0	1.8
Lane LOS	B		A
Approach Delay (s)	15.0	0.0	1.8
Approach LOS	B		

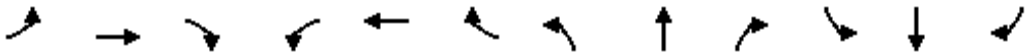
Intersection Summary			
Average Delay		5.9	
Intersection Capacity Utilization		40.5%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	41	31	27	102	146	32	14	25	157	19	68
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	17	51	38	33	126	180	40	17	31	194	23	84

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	106	340	88	301
Volume Left (vph)	17	33	40	194
Volume Right (vph)	38	180	31	84
Hadj (s)	-0.15	-0.26	-0.09	0.00
Departure Headway (s)	5.3	4.9	5.5	5.2
Degree Utilization, x	0.16	0.46	0.13	0.43
Capacity (veh/h)	604	696	578	649
Control Delay (s)	9.3	11.9	9.3	12.1
Approach Delay (s)	9.3	11.9	9.3	12.1
Approach LOS	A	B	A	B

Intersection Summary				
Delay	11.4			
HCM Level of Service	B			
Intersection Capacity Utilization	45.9%	ICU Level of Service	A	
Analysis Period (min)	15			



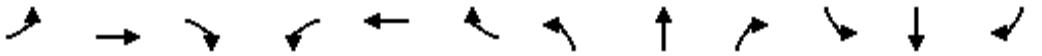
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1	88	10	1	16	70	254	6	9	367	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.86		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1599		1770	5066		1770	5032	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1599		1770	5066		1770	5032	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1	96	11	1	17	76	276	7	10	399	30
RTOR Reduction (vph)	0	0	84	0	16	0	0	3	0	0	12	0
Lane Group Flow (vph)	87	1	12	11	2	0	76	280	0	10	417	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	4.2	4.9	4.9	0.6	1.3		2.3	17.6		0.6	15.9	
Effective Green, g (s)	4.2	4.9	4.9	0.6	1.3		2.3	17.6		0.6	15.9	
Actuated g/C Ratio	0.11	0.12	0.12	0.02	0.03		0.06	0.44		0.02	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	230	195	27	52		103	2246		27	2015	
v/s Ratio Prot	c0.05	0.00		0.01	0.00		c0.04	0.06		0.01	c0.08	
v/s Ratio Perm			c0.01									
v/c Ratio	0.47	0.00	0.06	0.41	0.03		0.74	0.12		0.37	0.21	
Uniform Delay, d1	16.7	15.3	15.4	19.4	18.6		18.4	6.5		19.4	7.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.0	0.1	9.7	0.2		23.8	0.0		8.4	0.1	
Delay (s)	18.5	15.3	15.5	29.1	18.8		42.2	6.5		27.7	7.8	
Level of Service	B	B	B	C	B		D	A		C	A	
Approach Delay (s)		16.9			22.7			14.1			8.3	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	39.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	223	773	78	50	106	84
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	242	840	85	54	115	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		1325	0	1002	905
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		1325	0	1002	905
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	85		36	95	0	61
cM capacity (veh/h)	1623		132	1085	92	235

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	1083	139	115	91
Volume Left	242	0	115	0
Volume Right	840	54	0	0
cSH	1623	202	92	235
Volume to Capacity	0.15	0.69	1.25	0.39
Queue Length 95th (ft)	13	108	204	43
Control Delay (s)	3.4	55.1	258.8	29.7
Lane LOS	A	F	F	D
Approach Delay (s)	3.4	55.1	157.5	
Approach LOS		F	F	

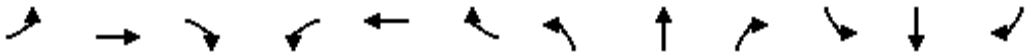
Intersection Summary			
Average Delay	30.8		
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	15	0	50	27	514	0	0	217	102
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	17	0	58	31	598	0	0	252	119
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	913	913	252	913	913	598	252			598		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	913	913	252	913	913	598	252			598		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	93	100	88	98			100		
cM capacity (veh/h)	221	267	786	250	267	502	1313			979		

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	76	629	252	119
Volume Left	17	31	0	0
Volume Right	58	0	0	119
cSH	407	1313	1700	1700
Volume to Capacity	0.19	0.02	0.15	0.07
Queue Length 95th (ft)	17	2	0	0
Control Delay (s)	15.8	0.7	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	15.8	0.7	0.0	
Approach LOS	C			

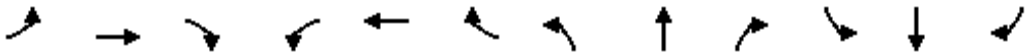
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	198	0	93	0	0	0	0	343	265	165	67	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	208	0	98	0	0	0	0	361	279	174	71	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	918	1058	71	918	918	501	71			640		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	918	1058	71	918	918	501	71			640		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	4	100	90	100	100	100	100			82		
cM capacity (veh/h)	216	183	992	195	221	570	1530			944		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	306	640	244
Volume Left	208	0	174
Volume Right	98	279	0
cSH	289	1700	944
Volume to Capacity	1.06	0.38	0.18
Queue Length 95th (ft)	297	0	17
Control Delay (s)	109.8	0.0	7.4
Lane LOS	F		A
Approach Delay (s)	109.8	0.0	7.4
Approach LOS	F		

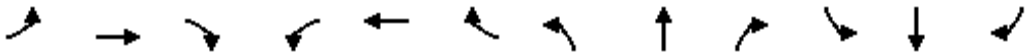
Intersection Summary				
Average Delay	29.8			
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	56	2	6	9	312	0	0	80	43
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	62	2	7	10	343	0	0	88	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	475	474	112	474	498	343	135			343		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	475	474	112	474	498	343	135			343		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	88	100	99	99			100		
cM capacity (veh/h)	491	486	942	498	471	700	1449			1216		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	70	353	135
Volume Left	62	10	0
Volume Right	7	0	47
cSH	511	1449	1700
Volume to Capacity	0.14	0.01	0.08
Queue Length 95th (ft)	12	1	0
Control Delay (s)	13.2	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	13.2	0.3	0.0
Approach LOS	B		

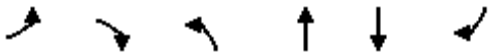
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	33.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	181	0	3	0	0	0	0	140	321	75	61	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	189	0	3	0	0	0	0	146	334	78	64	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	533	700	64	533	533	313	64			480		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	533	700	64	533	533	313	64			480		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	56	100	100	100	100	100	100			93		
cM capacity (veh/h)	432	337	1001	431	420	727	1539			1082		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	192	480	142
Volume Left	189	0	78
Volume Right	3	334	0
cSH	436	1700	1082
Volume to Capacity	0.44	0.28	0.07
Queue Length 95th (ft)	55	0	6
Control Delay (s)	19.6	0.0	5.0
Lane LOS	C		A
Approach Delay (s)	19.6	0.0	5.0
Approach LOS	C		

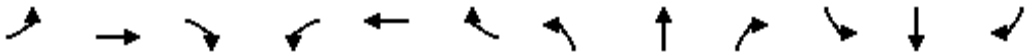
Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	54.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	40	29	30	30	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	43	32	33	33	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	128	33	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	33	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	98			
cM capacity (veh/h)	849	1041	1579			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	46	64	33
Volume Left	2	32	0
Volume Right	43	0	0
cSH	1030	1579	1700
Volume to Capacity	0.04	0.02	0.02
Queue Length 95th (ft)	3	2	0
Control Delay (s)	8.7	3.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	3.7	0.0
Approach LOS	A		

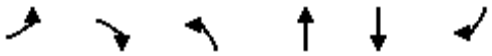
Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	22	67	12	9	1	28	12	16	2	33	12
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	17	27	81	14	11	1	34	14	19	2	40	14

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	124	27	67	57
Volume Left (vph)	17	14	34	2
Volume Right (vph)	81	1	19	14
Hadj (s)	-0.33	0.12	-0.04	-0.11
Departure Headway (s)	3.9	4.4	4.2	4.2
Degree Utilization, x	0.13	0.03	0.08	0.07
Capacity (veh/h)	898	784	811	826
Control Delay (s)	7.5	7.6	7.6	7.5
Approach Delay (s)	7.5	7.6	7.6	7.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.5			
HCM Level of Service	A			
Intersection Capacity Utilization	22.6%	ICU Level of Service	A	
Analysis Period (min)	15			



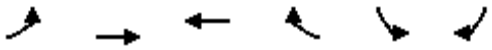
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	25	25	123	103	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	27	27	134	112	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	314	126	139			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	314	126	139			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	98			
cM capacity (veh/h)	666	925	1444			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	161	139
Volume Left	27	27	0
Volume Right	27	0	27
cSH	775	1444	1700
Volume to Capacity	0.07	0.02	0.08
Queue Length 95th (ft)	6	1	0
Control Delay (s)	10.0	1.4	0.0
Lane LOS	A	A	
Approach Delay (s)	10.0	1.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

INTERSECTION #22 PM

REFER TO CITY OF TRACY GENERAL PLAN (2/1/11) FOR EXISTING CONDITIONS LOS CALCULATIONS



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	132	320	328	105	73	138
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	135	327	335	107	74	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			492			
pX, platoon unblocked						
vC, conflicting volume	442				984	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	442				984	388
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	88				69	79
cM capacity (veh/h)	1118				242	660

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	461	442	215
Volume Left	135	0	74
Volume Right	0	107	141
cSH	1118	1700	413
Volume to Capacity	0.12	0.26	0.52
Queue Length 95th (ft)	10	0	73
Control Delay (s)	3.4	0.0	22.8
Lane LOS	A		C
Approach Delay (s)	3.4	0.0	22.8
Approach LOS			C

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

INTERSECTIONS #25-27 PM

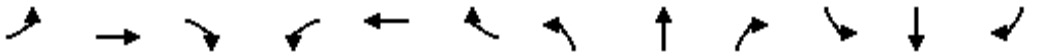
REFER TO CITY OF TRACY GENERAL PLAN (2/1/11) FOR EXISTING CONDITIONS LOS CALCULATIONS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	486	14	9	194	70	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	1770	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	1770	1863	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	528	15	10	211	76	37
RTOR Reduction (vph)	0	9	0	0	0	29
Lane Group Flow (vph)	528	6	10	211	76	8
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	13.8	13.8	0.5	18.3	7.2	7.2
Effective Green, g (s)	13.8	13.8	0.5	18.3	7.2	7.2
Actuated g/C Ratio	0.41	0.41	0.01	0.55	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	767	652	26	1018	380	340
v/s Ratio Prot	c0.28		0.01	c0.11	c0.04	
v/s Ratio Perm		0.00				0.01
v/c Ratio	0.69	0.01	0.38	0.21	0.20	0.02
Uniform Delay, d1	8.1	5.8	16.3	3.9	10.8	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.0	9.2	0.1	0.3	0.0
Delay (s)	10.7	5.8	25.6	4.0	11.0	10.4
Level of Service	B	A	C	A	B	B
Approach Delay (s)	10.5			5.0	10.8	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	33.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

INTERSECTIONS #29-45 PM

REFER TO CITY OF TRACY GENERAL PLAN (2/1/11) FOR EXISTING CONDITIONS LOS CALCULATIONS



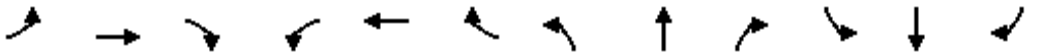
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	3	131	50	3	16	129	384	48	16	616	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.87		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1625		1770	5001		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1625		1770	5001		1770	5024	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	3	142	54	3	17	140	417	52	17	670	59
RTOR Reduction (vph)	0	0	124	0	16	0	0	19	0	0	14	0
Lane Group Flow (vph)	70	3	18	54	4	0	140	450	0	17	715	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	4.4	5.9	5.9	1.3	2.8		4.2	22.8		0.6	19.2	
Effective Green, g (s)	4.4	5.9	5.9	1.3	2.8		4.2	22.8		0.6	19.2	
Actuated g/C Ratio	0.09	0.13	0.13	0.03	0.06		0.09	0.49		0.01	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	236	200	49	98		160	2447		23	2070	
v/s Ratio Prot	0.04	0.00		c0.03	0.00		c0.08	c0.09		0.01	c0.14	
v/s Ratio Perm			c0.01									
v/c Ratio	0.42	0.01	0.09	1.10	0.04		0.88	0.18		0.74	0.35	
Uniform Delay, d1	19.9	17.8	18.0	22.7	20.6		20.9	6.7		22.9	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.0	0.2	159.9	0.2		37.4	0.0		77.7	0.1	
Delay (s)	21.6	17.8	18.2	182.5	20.8		58.4	6.7		100.6	9.5	
Level of Service	C	B	B	F	C		E	A		F	A	
Approach Delay (s)		19.3			138.8			18.6			11.6	
Approach LOS		B			F			B			B	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

INTERSECTION #47 PM

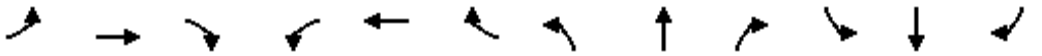
REFER TO CITY OF TRACY GENERAL PLAN (2/1/11) FOR EXISTING CONDITIONS LOS CALCULATIONS

FUTURE CONDITIONS (2035)
LEVEL OF SERVICE CALCULATION WORKSHEETS



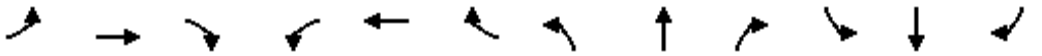
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1800	0	675	0	1170	380	0	700	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.91	0.91	1.00		0.95	0.88		0.91	1.00
Frt				1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95	0.95	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3221	1610	1583		3539	2787		5085	1583
Flt Permitted				0.95	0.95	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3221	1610	1583		3539	2787		5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1800	0	675	0	1170	380	0	700	30
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	17
Lane Group Flow (vph)	0	0	0	1206	594	675	0	1170	380	0	700	13
Turn Type				Split		Free			pm+ov			Perm
Protected Phases				8	8			2	8		6	
Permitted Phases						Free			2			6
Actuated Green, G (s)				35.0	35.0	75.0		32.0	67.0		32.0	32.0
Effective Green, g (s)				35.0	35.0	75.0		32.0	67.0		32.0	32.0
Actuated g/C Ratio				0.47	0.47	1.00		0.43	0.89		0.43	0.43
Clearance Time (s)				4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)				3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)				1503	751	1583		1510	2787		2170	675
v/s Ratio Prot				c0.37	0.37			c0.33	0.06		0.14	
v/s Ratio Perm						0.43			0.07			0.01
v/c Ratio				0.80	0.79	0.43		0.77	0.14		0.32	0.02
Uniform Delay, d1				17.1	16.9	0.0		18.4	0.5		14.3	12.4
Progression Factor				1.00	1.00	1.00		0.85	1.00		0.98	0.75
Incremental Delay, d2				3.2	5.7	0.8		3.8	0.0		0.4	0.0
Delay (s)				20.2	22.6	0.8		19.5	0.5		14.3	9.3
Level of Service				C	C	A		B	A		B	A
Approach Delay (s)		0.0			15.5			14.8			14.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	0	675	0	0	0	0	1500	1150	0	2175	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00					0.91	0.88		0.91	1.00
Frt		1.00	0.85					1.00	0.85		1.00	0.85
Flt Protected		0.95	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)		1770	1583					5085	2787		5085	1583
Flt Permitted		0.95	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)		1770	1583					5085	2787		5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	0	675	0	0	0	0	1500	1150	0	2175	325
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	242	0	0	68
Lane Group Flow (vph)	0	50	675	0	0	0	0	1500	908	0	2175	257
Turn Type	Prot		Free						Perm			Perm
Protected Phases	7	4						2			6	
Permitted Phases			Free						2			6
Actuated Green, G (s)		7.8	75.0					59.2	59.2		59.2	59.2
Effective Green, g (s)		7.8	75.0					59.2	59.2		59.2	59.2
Actuated g/C Ratio		0.10	1.00					0.79	0.79		0.79	0.79
Clearance Time (s)		4.0						4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0						3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		184	1583					4014	2200		4014	1250
v/s Ratio Prot		0.03						0.29			c0.43	
v/s Ratio Perm			c0.43						0.33			0.16
v/c Ratio		0.27	0.43					0.37	0.41		0.54	0.21
Uniform Delay, d1		31.0	0.0					2.4	2.5		2.9	2.0
Progression Factor		1.00	1.00					1.00	1.00		0.74	1.63
Incremental Delay, d2		0.8	0.8					0.3	0.6		0.4	0.3
Delay (s)		31.8	0.8					2.6	3.0		2.5	3.5
Level of Service		C	A					A	A		A	A
Approach Delay (s)		3.0			0.0			2.8			2.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	2.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

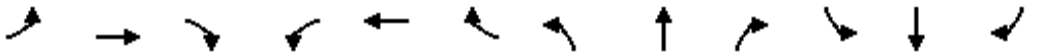


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	170	200	250	100	10	1150	350	250	10	40	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.94	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)	1770	3539	1583	1770	5016		4990	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	5016		4990	1863	1583	1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	170	200	250	100	10	1150	350	250	10	40	50
RTOR Reduction (vph)	0	0	169	0	7	0	0	0	196	0	0	45
Lane Group Flow (vph)	70	170	31	250	103	0	1150	350	54	10	40	5
Turn Type	Prot		Perm	Prot			Prot		Over	Prot		Over
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases			2									
Actuated Green, G (s)	6.2	10.4	10.4	14.8	19.0		22.5	26.3	14.8	0.6	4.4	6.2
Effective Green, g (s)	6.2	10.4	10.4	14.8	19.0		22.5	26.3	14.8	0.6	4.4	6.2
Actuated g/C Ratio	0.09	0.15	0.15	0.22	0.28		0.33	0.39	0.22	0.01	0.06	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	161	540	242	385	1399		1649	719	344	16	120	144
v/s Ratio Prot	0.04	c0.05		c0.14	0.02		c0.23	c0.19	0.03	0.01	0.02	0.00
v/s Ratio Perm			0.02									
v/c Ratio	0.43	0.31	0.13	0.65	0.07		0.70	0.49	0.16	0.62	0.33	0.03
Uniform Delay, d1	29.3	25.7	24.9	24.3	18.1		19.8	15.8	21.6	33.6	30.4	28.2
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	1.9	0.3	0.2	3.8	0.0		1.3	0.5	0.2	57.6	1.6	0.1
Delay (s)	31.2	26.0	25.2	28.0	18.1		21.1	16.3	21.8	91.2	32.1	28.3
Level of Service	C	C	C	C	B		C	B	C	F	C	C
Approach Delay (s)		26.4			25.0			20.3			36.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

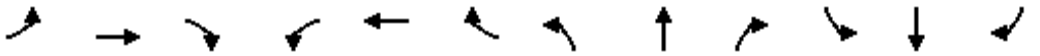
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	600	1100	0	1175	350	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		5085	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		5085	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	600	1100	0	1175	350	150
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	600	1100	0	1175	350	150
Turn Type		Free				Free
Protected Phases	4			8	2	
Permitted Phases		Free				Free
Actuated Green, G (s)	22.6	60.0		22.6	29.4	60.0
Effective Green, g (s)	22.6	60.0		22.6	29.4	60.0
Actuated g/C Ratio	0.38	1.00		0.38	0.49	1.00
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1333	1583		1915	867	1583
v/s Ratio Prot	0.17			0.23	0.20	
v/s Ratio Perm		c0.69				0.09
v/c Ratio	0.45	0.69		0.61	0.40	0.09
Uniform Delay, d1	14.0	0.0		15.2	9.7	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	2.5		0.6	1.4	0.1
Delay (s)	14.3	2.5		15.7	11.1	0.1
Level of Service	B	A		B	B	A
Approach Delay (s)	6.7			15.7	7.8	
Approach LOS	A			B	A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



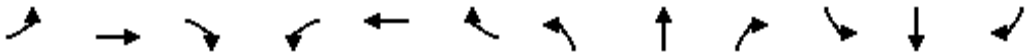
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	410	0	560	275	275	0	0	320	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	0.97	1.00			0.95	
Frt				1.00	1.00	0.85	1.00	1.00			0.95	
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1681	1681	1583	3433	1863			3348	
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1681	1681	1583	3433	1863			3348	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	410	0	560	275	275	0	0	320	180
RTOR Reduction (vph)	0	0	0	0	0	438	0	0	0	0	109	0
Lane Group Flow (vph)	0	0	0	205	205	122	275	275	0	0	391	0
Turn Type				Split		Perm	Split					
Protected Phases				8	8		2	2			6	
Permitted Phases						8						
Actuated Green, G (s)				16.3	16.3	16.3	33.4	33.4			13.3	
Effective Green, g (s)				16.3	16.3	16.3	33.4	33.4			13.3	
Actuated g/C Ratio				0.22	0.22	0.22	0.45	0.45			0.18	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)				365	365	344	1529	830			594	
v/s Ratio Prot				c0.12	0.12		0.08	c0.15			c0.12	
v/s Ratio Perm						0.08						
v/c Ratio				0.56	0.56	0.35	0.18	0.33			0.66	
Uniform Delay, d1				26.2	26.2	24.9	12.5	13.5			28.7	
Progression Factor				1.00	1.00	1.00	0.57	0.64			1.25	
Incremental Delay, d2				2.0	2.0	0.6	0.3	1.1			2.6	
Delay (s)				28.1	28.1	25.5	7.4	9.7			38.5	
Level of Service				C	C	C	A	A			D	
Approach Delay (s)		0.0			26.6			8.6			38.5	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



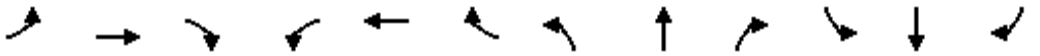
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	0	400	0	0	0	0	460	440	200	530	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	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)		1770	1583					3539	1583	1770	3539	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1770	1583					3539	1583	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	0	400	0	0	0	0	460	440	200	530	0
RTOR Reduction (vph)	0	0	346	0	0	0	0	0	221	0	0	0
Lane Group Flow (vph)	0	90	54	0	0	0	0	460	219	200	530	0
Turn Type	Split		Perm						Perm	Split		
Protected Phases	4	4						2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)		10.1	10.1					37.4	37.4	15.5	15.5	
Effective Green, g (s)		10.1	10.1					37.4	37.4	15.5	15.5	
Actuated g/C Ratio		0.13	0.13					0.50	0.50	0.21	0.21	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		238	213					1765	789	366	731	
v/s Ratio Prot		c0.05						0.13		0.11	c0.15	
v/s Ratio Perm			0.03						c0.14			
v/c Ratio		0.38	0.25					0.26	0.28	0.55	0.73	
Uniform Delay, d1		29.6	29.1					10.8	10.9	26.6	27.8	
Progression Factor		1.00	1.00					1.00	1.00	1.61	1.60	
Incremental Delay, d2		1.0	0.6					0.4	0.9	1.5	3.2	
Delay (s)		30.6	29.7					11.2	11.8	44.3	47.5	
Level of Service		C	C					B	B	D	D	
Approach Delay (s)		29.9			0.0			11.5			46.6	
Approach LOS		C			A			B			D	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



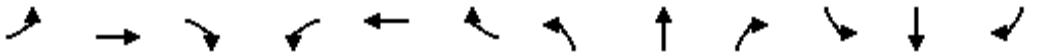
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	160	0	70	425	40	0	0	50	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					1.00		0.97	1.00			1.00	
Frt					0.96		1.00	1.00			0.96	
Flt Protected					0.97		0.95	1.00			1.00	
Satd. Flow (prot)					1726		3433	1863			1791	
Flt Permitted					0.97		0.95	1.00			1.00	
Satd. Flow (perm)					1726		3433	1863			1791	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	160	0	70	425	40	0	0	50	20
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	0	0	0	207	0	425	40	0	0	52	0
Turn Type				Split			Split					
Protected Phases				8	8		2	2			6	
Permitted Phases												
Actuated Green, G (s)					14.1		41.2	41.2			7.7	
Effective Green, g (s)					14.1		41.2	41.2			7.7	
Actuated g/C Ratio					0.19		0.55	0.55			0.10	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					324		1886	1023			184	
v/s Ratio Prot					c0.12		c0.12	0.02			c0.03	
v/s Ratio Perm												
v/c Ratio					0.64		0.23	0.04			0.28	
Uniform Delay, d1					28.1		8.7	7.8			31.1	
Progression Factor					1.00		0.39	0.43			1.02	
Incremental Delay, d2					4.1		0.3	0.1			0.8	
Delay (s)					32.2		3.7	3.4			32.5	
Level of Service					C		A	A			C	
Approach Delay (s)		0.0			32.2			3.6			32.5	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



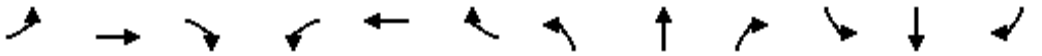
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	0	410	0	0	0	0	450	360	10	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00						0.95	1.00	1.00	1.00	
Frt		0.87						1.00	0.85	1.00	1.00	
Flt Protected		1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1617						3539	1583	1770	1863	
Flt Permitted		1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1617						3539	1583	1770	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	15	0	410	0	0	0	0	450	360	10	200	0
RTOR Reduction (vph)	0	359	0	0	0	0	0	0	166	0	0	0
Lane Group Flow (vph)	0	66	0	0	0	0	0	450	194	10	200	0
Turn Type	Split								Perm	Split		
Protected Phases	4	4						2		6	6	
Permitted Phases									2			
Actuated Green, G (s)		9.3						40.5	40.5	13.2	13.2	
Effective Green, g (s)		9.3						40.5	40.5	13.2	13.2	
Actuated g/C Ratio		0.12						0.54	0.54	0.18	0.18	
Clearance Time (s)		4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		201						1911	855	312	328	
v/s Ratio Prot		c0.04						c0.13		0.01	c0.11	
v/s Ratio Perm									0.12			
v/c Ratio		0.33						0.24	0.23	0.03	0.61	
Uniform Delay, d1		30.0						9.1	9.0	25.6	28.5	
Progression Factor		1.00						1.00	1.00	1.63	1.53	
Incremental Delay, d2		1.0						0.3	0.6	0.0	3.0	
Delay (s)		31.0						9.4	9.7	41.8	46.5	
Level of Service		C						A	A	D	D	
Approach Delay (s)		31.0			0.0			9.5			46.3	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



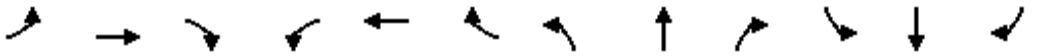
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	1575	550	0	1175	350	0	0	0	125	75	1175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		0.95	1.00				0.95	0.95	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	0.99	1.00
Satd. Flow (prot)	1770	5085	1583		3539	1583				1681	1747	1583
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	0.99	1.00
Satd. Flow (perm)	1770	5085	1583		3539	1583				1681	1747	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	1575	550	0	1175	350	0	0	0	125	75	1175
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	150	1575	550	0	1175	350	0	0	0	99	101	1175
Turn Type	Prot		Free			Free				Prot		Free
Protected Phases	5	2			6					7	4	
Permitted Phases			Free			Free						Free
Actuated Green, G (s)	12.7	73.3	90.0		56.6	90.0				8.7	8.7	90.0
Effective Green, g (s)	12.7	73.3	90.0		56.6	90.0				8.7	8.7	90.0
Actuated g/C Ratio	0.14	0.81	1.00		0.63	1.00				0.10	0.10	1.00
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	250	4141	1583		2226	1583				162	169	1583
v/s Ratio Prot	0.08	0.31			0.33					0.06	0.06	
v/s Ratio Perm			0.35			0.22						c0.74
v/c Ratio	0.60	0.38	0.35		0.53	0.22				0.61	0.60	0.74
Uniform Delay, d1	36.3	2.2	0.0		9.3	0.0				39.0	39.0	0.0
Progression Factor	1.00	1.00	1.00		1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	4.0	0.3	0.6		0.9	0.3				6.7	5.6	3.2
Delay (s)	40.3	2.5	0.6		10.2	0.3				45.7	44.6	3.2
Level of Service	D	A	A		B	A				D	D	A
Approach Delay (s)		4.5			7.9			0.0			9.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



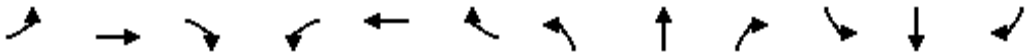
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	280	0	10	250	240	0	0	170	460
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					1.00		1.00	0.91			1.00	1.00
Frt					1.00		1.00	1.00			1.00	0.85
Flt Protected					0.95		0.95	1.00			1.00	1.00
Satd. Flow (prot)					1769		1770	5085			1863	1583
Flt Permitted					0.95		0.95	1.00			1.00	1.00
Satd. Flow (perm)					1769		1770	5085			1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	280	0	10	250	240	0	0	170	460
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	0	298
Lane Group Flow (vph)	0	0	0	0	288	0	250	240	0	0	170	162
Turn Type				Split			Prot					Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Actuated Green, G (s)					13.9		13.0	38.1			21.1	21.1
Effective Green, g (s)					13.9		13.0	38.1			21.1	21.1
Actuated g/C Ratio					0.23		0.22	0.64			0.35	0.35
Clearance Time (s)					4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					410		384	3229			655	557
v/s Ratio Prot					c0.16		c0.14	0.05			0.09	
v/s Ratio Perm												c0.10
v/c Ratio					0.70		0.65	0.07			0.26	0.29
Uniform Delay, d1					21.1		21.4	4.2			13.9	14.0
Progression Factor					1.00		0.65	0.67			1.00	1.00
Incremental Delay, d2					5.4		3.9	0.0			1.0	1.3
Delay (s)					26.5		17.9	2.9			14.8	15.4
Level of Service					C		B	A			B	B
Approach Delay (s)		0.0			26.5			10.5			15.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



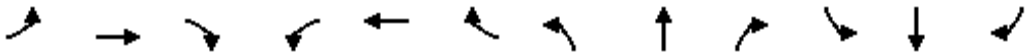
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	310	0	220	0	0	0	0	180	630	10	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor	0.94	1.00						0.95	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)	4990	1583						3539	1583	1770	3539	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	4990	1583						3539	1583	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	0	220	0	0	0	0	180	630	10	440	0
RTOR Reduction (vph)	0	185	0	0	0	0	0	0	242	0	0	0
Lane Group Flow (vph)	310	35	0	0	0	0	0	180	389	10	440	0
Turn Type	Split								Perm	Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.6	9.6						37.0	37.0	1.4	42.4	
Effective Green, g (s)	9.6	9.6						37.0	37.0	1.4	42.4	
Actuated g/C Ratio	0.16	0.16						0.62	0.62	0.02	0.71	
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	798	253						2182	976	41	2501	
v/s Ratio Prot	c0.06	0.02						0.05		0.01	c0.12	
v/s Ratio Perm									c0.25			
v/c Ratio	0.39	0.14						0.08	0.40	0.24	0.18	
Uniform Delay, d1	22.6	21.6						4.6	5.8	28.8	2.9	
Progression Factor	1.00	1.00						1.00	1.00	1.08	1.14	
Incremental Delay, d2	0.3	0.3						0.1	1.2	2.8	0.1	
Delay (s)	22.9	21.9						4.7	7.1	33.9	3.5	
Level of Service	C	C						A	A	C	A	
Approach Delay (s)		22.5			0.0			6.5			4.2	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



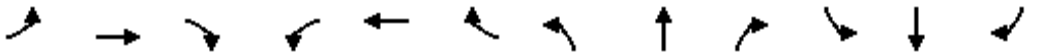
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized						Yes			Yes			
Volume (veh/h)	20	110	0	0	550	250	150	0	230	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	20	110	0	0	550	250	150	0	230	0	0	0
Approach Volume (veh/h)		130			550			150			0	
Crossing Volume (veh/h)		0			170			130			700	
High Capacity (veh/h)		1385			1212			1251			795	
High v/c (veh/h)		0.09			0.45			0.12			0.00	
Low Capacity (veh/h)		1161			1005			1040			632	
Low v/c (veh/h)		0.11			0.55			0.14			0.00	

Intersection Summary				
Maximum v/c High	0.45			
Maximum v/c Low	0.55			
Intersection Capacity Utilization	58.1%	ICU Level of Service	B	



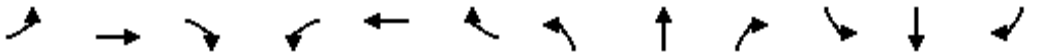
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			Yes									
Volume (veh/h)	0	60	20	150	550	0	0	0	0	70	0	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	60	20	150	550	0	0	0	0	70	0	10
Approach Volume (veh/h)		60			700			0			80	
Crossing Volume (veh/h)		220			0			130			700	
High Capacity (veh/h)		1166			1385			1251			795	
High v/c (veh/h)		0.05			0.51			0.00			0.10	
Low Capacity (veh/h)		962			1161			1040			632	
Low v/c (veh/h)		0.06			0.60			0.00			0.13	

Intersection Summary					
Maximum v/c High	0.51				
Maximum v/c Low	0.60				
Intersection Capacity Utilization	54.5%	ICU Level of Service		A	



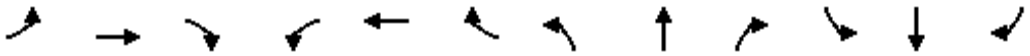
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	180	130	870	0	0	415	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)						4.0	4.0	4.0			4.0	4.0
Lane Util. Factor						1.00	1.00	0.95			0.95	1.00
Frt						0.85	1.00	1.00			1.00	0.85
Flt Protected						1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)						1583	1770	3539			3539	1583
Flt Permitted						1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)						1583	1770	3539			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	0	0	180	130	870	0	0	415	240
RTOR Reduction (vph)	0	0	0	0	0	142	0	0	0	0	0	106
Lane Group Flow (vph)	0	0	0	0	0	38	130	870	0	0	415	134
Turn Type				Split		Perm	Prot					Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)						7.4	7.2	44.6			33.4	33.4
Effective Green, g (s)						7.4	7.2	44.6			33.4	33.4
Actuated g/C Ratio						0.12	0.12	0.74			0.56	0.56
Clearance Time (s)						4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)						3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)						195	212	2631			1970	881
v/s Ratio Prot							c0.07	c0.25			0.12	
v/s Ratio Perm						c0.02						0.08
v/c Ratio						0.19	0.61	0.33			0.21	0.15
Uniform Delay, d1						23.6	25.1	2.6			6.7	6.4
Progression Factor						1.00	0.67	0.73			1.00	1.00
Incremental Delay, d2						0.5	4.9	0.3			0.2	0.4
Delay (s)						24.1	21.7	2.2			6.9	6.8
Level of Service						C	C	A			A	A
Approach Delay (s)		0.0			24.1			4.8			6.9	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



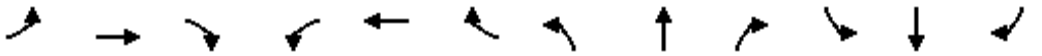
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	0	50	0	0	0	0	900	10	85	330	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					1.00		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3533		1770	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3533		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	0	50	0	0	0	0	900	10	85	330	0
RTOR Reduction (vph)	0	0	45	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	50	50	5	0	0	0	0	909	0	85	330	0
Turn Type	Split		Perm							Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	6.2	6.2	6.2					34.6		7.2	45.8	
Effective Green, g (s)	6.2	6.2	6.2					34.6		7.2	45.8	
Actuated g/C Ratio	0.10	0.10	0.10					0.58		0.12	0.76	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	174	174	164					2037		212	2701	
v/s Ratio Prot	c0.03	0.03						c0.26		c0.05	0.09	
v/s Ratio Perm			0.00									
v/c Ratio	0.29	0.29	0.03					0.45		0.40	0.12	
Uniform Delay, d1	24.9	24.9	24.2					7.2		24.4	1.9	
Progression Factor	1.00	1.00	1.00					1.00		0.76	1.43	
Incremental Delay, d2	0.9	0.9	0.1					0.7		1.2	0.1	
Delay (s)	25.8	25.8	24.3					7.9		19.8	2.7	
Level of Service	C	C	C					A		B	A	
Approach Delay (s)		25.3			0.0			7.9			6.2	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



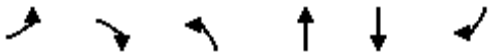
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	210	0	120	50	225	0	0	230	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1770	1583	1770	1863			3539	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1770	1583	1770	1863			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	210	0	120	50	225	0	0	230	210
RTOR Reduction (vph)	0	0	0	0	0	92	0	0	0	0	0	134
Lane Group Flow (vph)	0	0	0	0	210	28	50	225	0	0	230	76
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)					8.0	8.0	2.1	18.7			12.6	12.6
Effective Green, g (s)					8.0	8.0	2.1	18.7			12.6	12.6
Actuated g/C Ratio					0.23	0.23	0.06	0.54			0.36	0.36
Clearance Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					408	365	107	1004			1285	575
v/s Ratio Prot							c0.03	c0.12			0.06	
v/s Ratio Perm					0.12	0.02						0.05
v/c Ratio					0.51	0.08	0.47	0.22			0.18	0.13
Uniform Delay, d1					11.7	10.5	15.8	4.2			7.5	7.4
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					1.1	0.1	3.2	0.1			0.1	0.1
Delay (s)					12.8	10.5	19.0	4.3			7.6	7.5
Level of Service					B	B	B	A			A	A
Approach Delay (s)		0.0			12.0			7.0			7.5	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	34.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	0	20	0	0	0	0	150	10	40	400	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00						0.95	1.00	1.00	1.00	
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)	1770	1583						3539	1583	1770	1863	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1583						3539	1583	1770	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	0	20	0	0	0	0	150	10	40	400	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	125	4	0	0	0	0	0	150	5	40	400	0
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Actuated Green, G (s)	6.5	6.5						17.3	17.3	1.3	22.6	
Effective Green, g (s)	6.5	6.5						17.3	17.3	1.3	22.6	
Actuated g/C Ratio	0.18	0.18						0.47	0.47	0.04	0.61	
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	310	277						1650	738	62	1135	
v/s Ratio Prot		0.00						0.04		0.02	c0.21	
v/s Ratio Perm	c0.07								0.00			
v/c Ratio	0.40	0.01						0.09	0.01	0.65	0.35	
Uniform Delay, d1	13.6	12.6						5.5	5.3	17.7	3.6	
Progression Factor	1.00	1.00						1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.0						0.0	0.0	20.7	0.2	
Delay (s)	14.4	12.7						5.5	5.3	38.4	3.8	
Level of Service	B	B						A	A	D	A	
Approach Delay (s)		14.2			0.0			5.5			6.9	
Approach LOS		B			A			A			A	

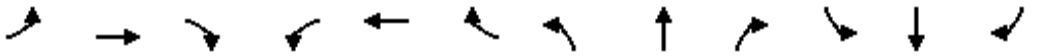
Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	37.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	20	50	30	30	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	20	50	30	30	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160	30	30			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160	30	30			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	97			
cM capacity (veh/h)	805	1044	1583			

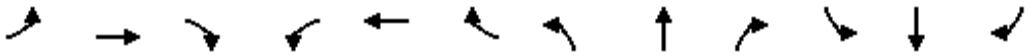
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	20	80	30
Volume Left	0	50	0
Volume Right	20	0	0
cSH	1044	1583	1700
Volume to Capacity	0.02	0.03	0.02
Queue Length 95th (ft)	1	2	0
Control Delay (s)	8.5	4.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.5	4.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	75	400	100	80	25	370	75	225	25	50	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.89		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	1796		3433	1653		1770	1770	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	1796		3433	1653		1770	1770	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	75	400	100	80	25	370	75	225	25	50	25
RTOR Reduction (vph)	0	0	0	0	18	0	0	103	0	0	15	0
Lane Group Flow (vph)	50	75	400	100	87	0	370	197	0	25	60	0
Turn Type	Prot		Free	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free									
Actuated Green, G (s)	5.2	7.0	75.0	8.3	10.1		13.2	40.6		3.1	30.5	
Effective Green, g (s)	5.2	7.0	75.0	8.3	10.1		13.2	40.6		3.1	30.5	
Actuated g/C Ratio	0.07	0.09	1.00	0.11	0.13		0.18	0.54		0.04	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	123	330	1583	196	242		604	895		73	720	
v/s Ratio Prot	0.03	0.02		c0.06	c0.05		c0.11	0.12		0.01	0.03	
v/s Ratio Perm			c0.25									
v/c Ratio	0.41	0.23	0.25	0.51	0.36		0.61	0.22		0.34	0.08	
Uniform Delay, d1	33.4	31.5	0.0	31.4	29.5		28.5	9.0		35.0	13.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.08	1.08		1.00	1.00	
Incremental Delay, d2	2.2	0.4	0.4	2.2	0.9		1.6	0.5		2.8	0.2	
Delay (s)	35.6	31.8	0.4	33.7	30.4		32.4	10.1		37.8	13.9	
Level of Service	D	C	A	C	C		C	B		D	B	
Approach Delay (s)		8.2			32.0			22.4			19.9	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	10	30	20	30	25	70	25	10	25	25	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	10	30	20	30	25	70	25	10	25	25	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	55			40			195	170	25	180	172	42
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	55			40			195	170	25	180	172	42
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			90	96	99	97	96	98
cM capacity (veh/h)	1550			1570			710	702	1051	737	700	1028

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	65	75	105	75
Volume Left	25	20	70	25
Volume Right	30	25	10	25
cSH	1550	1570	730	798
Volume to Capacity	0.02	0.01	0.14	0.09
Queue Length 95th (ft)	1	1	13	8
Control Delay (s)	2.9	2.0	10.8	10.0
Lane LOS	A	A	B	A
Approach Delay (s)	2.9	2.0	10.8	10.0
Approach LOS			B	A

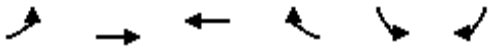
Intersection Summary				
Average Delay	6.9			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	25	30	25	25	25	30	250	100	25	620	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	1.00	0.88	1.00	1.00	
Frt	1.00	0.92		1.00	0.92		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1710		3433	1723		1770	1863	2787	1770	1850	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	1770	1710		3433	1723		1770	1863	2787	1125	1850	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	25	30	25	25	25	30	250	100	25	620	30
RTOR Reduction (vph)	0	28	0	0	23	0	0	0	0	0	1	0
Lane Group Flow (vph)	30	27	0	25	27	0	30	250	100	25	649	0
Turn Type	Prot			Prot			Prot		Free	Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases									Free	6		
Actuated Green, G (s)	1.9	4.7		1.9	4.7		3.2	56.4	75.0	49.2	49.2	
Effective Green, g (s)	1.9	4.7		1.9	4.7		3.2	56.4	75.0	49.2	49.2	
Actuated g/C Ratio	0.03	0.06		0.03	0.06		0.04	0.75	1.00	0.66	0.66	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	45	107		87	108		76	1401	2787	738	1214	
v/s Ratio Prot	c0.02	c0.02		0.01	0.02		c0.02	0.13			c0.35	
v/s Ratio Perm									0.04	0.02		
v/c Ratio	0.67	0.25		0.29	0.25		0.39	0.18	0.04	0.03	0.53	
Uniform Delay, d1	36.2	33.5		35.9	33.5		35.0	2.7	0.0	4.5	6.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	31.5	1.2		1.8	1.2		3.4	0.3	0.0	0.1	1.7	
Delay (s)	67.7	34.7		37.7	34.7		38.3	2.9	0.0	4.6	8.5	
Level of Service	E	C		D	C		D	A	A	A	A	
Approach Delay (s)		46.4			35.7			5.0			8.4	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

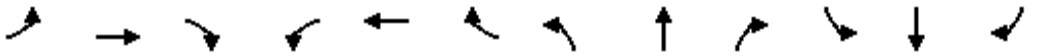
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	230	40	660	180	80	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	3433	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	3433	1863	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	230	40	660	180	80	320
RTOR Reduction (vph)	0	27	0	0	0	0
Lane Group Flow (vph)	230	13	660	180	80	320
Turn Type		Over	Prot			Free
Protected Phases	4	2	3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	12.3	18.9	16.8	33.1	18.9	60.0
Effective Green, g (s)	12.3	18.9	16.8	33.1	18.9	60.0
Actuated g/C Ratio	0.20	0.32	0.28	0.55	0.32	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	382	499	961	1028	558	1583
v/s Ratio Prot	c0.12	0.01	c0.19	0.10	0.05	
v/s Ratio Perm						c0.20
v/c Ratio	0.60	0.03	0.69	0.18	0.14	0.20
Uniform Delay, d1	21.6	14.2	19.3	6.7	14.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	0.1	2.1	0.1	0.5	0.3
Delay (s)	24.3	14.3	21.3	6.8	15.3	0.3
Level of Service	C	B	C	A	B	A
Approach Delay (s)	22.8			18.2	3.3	
Approach LOS	C			B	A	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



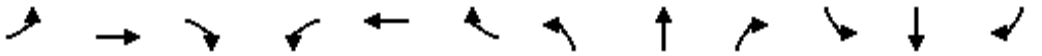
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	1050	780	40	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	1050	780	40	25	25
RTOR Reduction (vph)	0	0	0	14	0	21
Lane Group Flow (vph)	25	1050	780	26	25	4
Turn Type	Prot			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases				8		6
Actuated Green, G (s)	0.6	21.9	17.3	23.6	6.3	6.3
Effective Green, g (s)	0.6	21.9	17.3	23.6	6.3	6.3
Actuated g/C Ratio	0.02	0.60	0.48	0.65	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	29	2141	1691	1207	308	275
v/s Ratio Prot	0.01	c0.30	0.22	0.00	c0.01	
v/s Ratio Perm				0.01		0.00
v/c Ratio	0.86	0.49	0.46	0.02	0.08	0.02
Uniform Delay, d1	17.8	4.0	6.3	2.2	12.5	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	109.1	0.2	0.2	0.0	0.1	0.0
Delay (s)	126.9	4.2	6.5	2.2	12.6	12.4
Level of Service	F	A	A	A	B	B
Approach Delay (s)		7.0	6.3		12.5	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	36.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



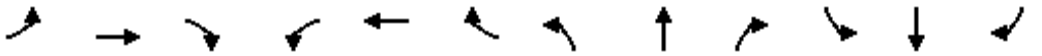
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	25	20	25	10	90	60	920	25	50	340	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		0.97	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.98	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1822	1583		1799	1583	1770	5065		3433	3510	
Flt Permitted		0.85	1.00		0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1588	1583		1429	1583	1770	5065		3433	3510	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	25	20	25	10	90	60	920	25	50	340	20
RTOR Reduction (vph)	0	0	16	0	0	50	0	2	0	0	3	0
Lane Group Flow (vph)	0	45	4	0	35	40	60	943	0	50	357	0
Turn Type	Perm		pm+ov	Perm		pm+ov	Prot			Prot		
Protected Phases		4	5		8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		7.5	14.4		7.5	13.0	6.9	50.0		5.5	48.6	
Effective Green, g (s)		7.5	14.4		7.5	13.0	6.9	50.0		5.5	48.6	
Actuated g/C Ratio		0.10	0.19		0.10	0.17	0.09	0.67		0.07	0.65	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		159	388		143	359	163	3377		252	2274	
v/s Ratio Prot			0.00			0.01	c0.03	c0.19		0.01	0.10	
v/s Ratio Perm		c0.03	0.00		0.02	0.02						
v/c Ratio		0.28	0.01		0.24	0.11	0.37	0.28		0.20	0.16	
Uniform Delay, d1		31.3	24.5		31.1	26.1	32.0	5.1		32.7	5.2	
Progression Factor		1.00	1.00		1.00	1.00	0.78	1.43		1.33	1.55	
Incremental Delay, d2		1.0	0.0		0.9	0.1	1.4	0.2		0.4	0.1	
Delay (s)		32.2	24.5		32.0	26.3	26.2	7.5		43.8	8.2	
Level of Service		C	C		C	C	C	A		D	A	
Approach Delay (s)		29.9			27.9			8.6			12.5	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



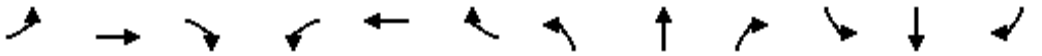
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	280	370	150	640	130	520	820	110	420	460	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95		0.94	0.95	1.00	0.94	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		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)	1770	5085	1583	3433	3450		4990	3539	1583	4990	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	3433	3450		4990	3539	1583	4990	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	280	370	150	640	130	520	820	110	420	460	140
RTOR Reduction (vph)	0	0	0	0	20	0	0	0	47	0	0	0
Lane Group Flow (vph)	90	280	370	150	750	0	520	820	63	420	460	140
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		Free
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			Free						2			Free
Actuated Green, G (s)	5.6	10.3	90.0	19.1	23.8		13.4	32.1	51.2	12.5	31.2	90.0
Effective Green, g (s)	5.6	10.3	90.0	19.1	23.8		13.4	32.1	51.2	12.5	31.2	90.0
Actuated g/C Ratio	0.06	0.11	1.00	0.21	0.26		0.15	0.36	0.57	0.14	0.35	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	110	582	1583	729	912		743	1262	901	693	1227	1583
v/s Ratio Prot	c0.05	0.06		0.04	c0.22		c0.10	c0.23	0.01	0.08	0.13	
v/s Ratio Perm			c0.23						0.02			0.09
v/c Ratio	0.82	0.48	0.23	0.21	0.82		0.70	0.65	0.07	0.61	0.37	0.09
Uniform Delay, d1	41.7	37.3	0.0	29.2	31.1		36.4	24.2	8.7	36.4	22.1	0.0
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	35.7	0.6	0.3	0.1	6.1		2.9	2.6	0.0	1.5	0.9	0.1
Delay (s)	77.4	38.0	0.3	29.3	37.2		39.3	26.8	8.7	37.9	23.0	0.1
Level of Service	E	D	A	C	D		D	C	A	D	C	A
Approach Delay (s)		24.0			35.9			29.9			26.0	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



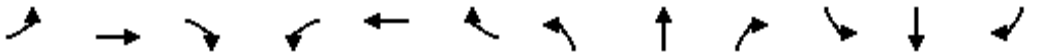
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	360	270	120	230	90	350	600	70	50	540	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.5	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3390		3433	3484		1770	3471	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3390		3433	3484		1770	3471	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	360	270	120	230	90	350	600	70	50	540	80
RTOR Reduction (vph)	0	0	96	0	39	0	0	7	0	0	10	0
Lane Group Flow (vph)	190	360	174	120	281	0	350	663	0	50	610	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	14.2	16.1	30.9	10.9	12.8		14.8	33.1		4.7	23.0	
Effective Green, g (s)	14.7	16.6	30.9	11.4	13.3		15.3	34.1		5.2	24.0	
Actuated g/C Ratio	0.18	0.20	0.37	0.14	0.16		0.18	0.41		0.06	0.29	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	5.0		4.5	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	312	705	673	242	541		631	1426		110	1000	
v/s Ratio Prot	c0.11	c0.10	0.05	0.07	0.08		c0.10	0.19		0.03	c0.18	
v/s Ratio Perm			0.06									
v/c Ratio	0.61	0.51	0.26	0.50	0.52		0.55	0.46		0.45	0.61	
Uniform Delay, d1	31.6	29.7	18.2	33.3	32.1		30.9	17.9		37.7	25.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.4	0.6	0.2	1.6	0.9		1.1	0.2		3.0	1.1	
Delay (s)	35.0	30.4	18.4	34.9	33.0		32.0	18.2		40.6	26.7	
Level of Service	C	C	B	C	C		C	B		D	C	
Approach Delay (s)		27.5			33.5			22.9			27.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



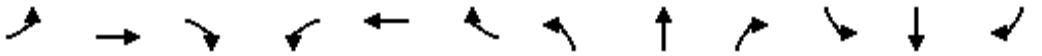
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	220	80	50	290	70	80	520	40	130	400	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3398		1770	3436		1770	3501		1770	3335	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3398		1770	3436		1770	3501		1770	3335	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	220	80	50	290	70	80	520	40	130	400	250
RTOR Reduction (vph)	0	42	0	0	25	0	0	6	0	0	107	0
Lane Group Flow (vph)	300	258	0	50	335	0	80	554	0	130	543	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.7	27.8		3.3	14.4		4.6	17.9		8.8	22.1	
Effective Green, g (s)	16.7	27.8		3.3	14.4		4.6	17.9		8.8	22.1	
Actuated g/C Ratio	0.23	0.38		0.04	0.20		0.06	0.24		0.12	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	401	1280		79	670		110	849		211	999	
v/s Ratio Prot	c0.17	0.08		0.03	c0.10		0.05	c0.16		c0.07	0.16	
v/s Ratio Perm												
v/c Ratio	0.75	0.20		0.63	0.50		0.73	0.65		0.62	0.54	
Uniform Delay, d1	26.6	15.5		34.7	26.5		34.0	25.2		30.9	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.5	0.1		15.4	0.6		21.1	1.8		5.3	0.6	
Delay (s)	34.0	15.6		50.0	27.1		55.1	27.0		36.2	22.2	
Level of Service	C	B		D	C		E	C		D	C	
Approach Delay (s)		24.8			29.9			30.5			24.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	73.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



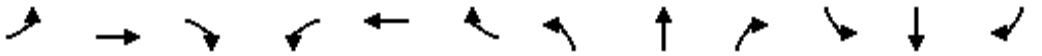
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	300	130	90	410	25	120	400	40	25	330	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	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)	3433	3539	1583	1770	3509		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3509		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	300	130	90	410	25	120	400	40	25	330	40
RTOR Reduction (vph)	0	0	78	0	8	0	0	0	26	0	0	29
Lane Group Flow (vph)	130	300	52	90	427	0	120	400	14	25	330	11
Turn Type	Prot		pt+ov	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4	4 5	3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	3.0	10.8	19.0	3.0	10.8		4.2	16.9	16.9	0.6	13.3	13.3
Effective Green, g (s)	3.0	10.8	19.0	3.0	10.8		4.2	16.9	16.9	0.6	13.3	13.3
Actuated g/C Ratio	0.06	0.23	0.40	0.06	0.23		0.09	0.36	0.36	0.01	0.28	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	218	808	636	112	801		157	1264	566	22	995	445
v/s Ratio Prot	0.04	0.08	0.03	c0.05	c0.12		c0.07	c0.11		0.01	0.09	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.60	0.37	0.08	0.80	0.53		0.76	0.32	0.03	1.14	0.33	0.03
Uniform Delay, d1	21.6	15.4	8.8	21.9	16.0		21.1	11.0	9.9	23.3	13.5	12.3
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	4.3	0.3	0.1	32.6	0.7		19.6	0.1	0.0	237.5	0.2	0.0
Delay (s)	25.9	15.7	8.8	54.5	16.7		40.7	11.2	9.9	260.9	13.7	12.3
Level of Service	C	B	A	D	B		D	B	A	F	B	B
Approach Delay (s)		16.5			23.2			17.4			29.2	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	775	600	625	975	50	775	230	550	120	125	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	75	775	600	625	975	50	775	230	550	120	125	175
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	75	775	600	625	975	50	775	230	550	120	125	175
Turn Type	Prot		Free	Prot		Free	Prot		Free	Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			Free			Free			Free			Free
Actuated Green, G (s)	7.2	22.1	90.0	15.0	29.9	90.0	28.4	30.1	90.0	6.8	8.5	90.0
Effective Green, g (s)	7.2	22.1	90.0	15.0	29.9	90.0	28.4	30.1	90.0	6.8	8.5	90.0
Actuated g/C Ratio	0.08	0.25	1.00	0.17	0.33	1.00	0.32	0.33	1.00	0.08	0.09	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	142	1249	1583	572	1689	1583	1083	1184	1583	259	334	1583
v/s Ratio Prot	0.04	c0.15		c0.18	c0.19		c0.23	0.06		0.03	0.04	
v/s Ratio Perm			c0.38			0.03			0.35			0.11
v/c Ratio	0.53	0.62	0.38	1.09	0.58	0.03	0.72	0.19	0.35	0.46	0.37	0.11
Uniform Delay, d1	39.8	30.2	0.0	37.5	24.8	0.0	27.2	21.3	0.0	39.9	38.3	0.0
Progression Factor	1.28	1.39	1.00	1.00	1.00	1.00	0.80	0.70	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.8	0.5	65.4	1.4	0.0	2.1	0.1	0.5	1.3	0.7	0.1
Delay (s)	53.8	43.9	0.5	102.9	26.3	0.0	23.9	15.0	0.5	41.2	39.0	0.1
Level of Service	D	D	A	F	C	A	C	B	A	D	D	A
Approach Delay (s)		26.5			54.5			14.3			23.4	
Approach LOS		C			D			B			C	

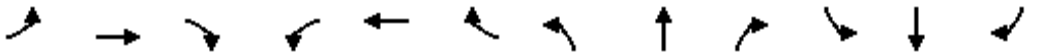
Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	470	1070	140	150	890	550	510	1870	140	640	1030	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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)	3433	5085	1583	3433	5085	1583	3433	5085	1583	3433	5085	1583
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)	3433	5085	1583	3433	5085	1583	3433	5085	1583	3433	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	100%	100%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	470	1070	112	150	890	550	510	1870	140	640	1030	340
RTOR Reduction (vph)	0	0	7	0	0	1	0	0	4	0	0	12
Lane Group Flow (vph)	470	1070	105	150	890	549	510	1870	136	640	1030	328
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Actuated Green, G (s)	15.0	32.8	64.5	7.0	24.8	45.8	31.7	42.0	49.0	21.0	31.3	46.3
Effective Green, g (s)	15.0	32.8	64.5	7.0	24.8	45.8	31.7	42.0	49.0	21.0	31.3	46.3
Actuated g/C Ratio	0.13	0.28	0.54	0.06	0.21	0.39	0.27	0.35	0.41	0.18	0.26	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	433	1404	859	202	1062	610	916	1798	653	607	1340	617
v/s Ratio Prot	c0.14	0.21	0.03	0.04	0.18	c0.16	0.15	c0.37	0.01	c0.19	0.20	0.07
v/s Ratio Perm			0.03			0.19			0.07			0.14
v/c Ratio	1.09	0.76	0.12	0.74	0.84	0.90	0.56	1.04	0.21	1.05	0.77	0.53
Uniform Delay, d1	51.9	39.4	13.3	55.0	45.1	34.3	37.5	38.4	22.4	48.9	40.4	27.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	68.2	2.5	0.1	13.7	5.9	16.1	0.7	32.5	0.2	51.7	2.7	0.9
Delay (s)	120.1	41.9	13.4	68.7	51.0	50.4	38.2	70.9	22.6	100.6	43.1	28.8
Level of Service	F	D	B	E	D	D	D	E	C	F	D	C
Approach Delay (s)		62.2			52.5			61.6			59.0	
Approach LOS		E			D			E			E	

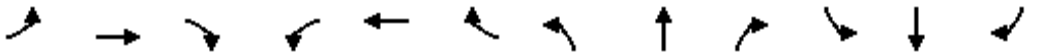
Intersection Summary			
HCM Average Control Delay	59.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	118.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



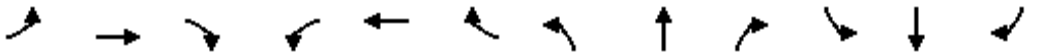
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	1030	470	150	900	150	500	550	160	100	480	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0	3.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	360	1030	470	150	900	150	500	550	160	100	480	330
RTOR Reduction (vph)	0	0	44	0	0	39	0	0	47	0	0	14
Lane Group Flow (vph)	360	1030	426	150	900	111	500	550	113	100	480	316
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	16.0	46.1	68.4	8.9	39.0	59.9	22.3	23.1	32.0	20.9	20.7	36.7
Effective Green, g (s)	17.0	48.1	70.4	9.9	41.0	63.9	23.3	25.1	36.0	20.9	22.7	38.7
Actuated g/C Ratio	0.14	0.40	0.59	0.08	0.34	0.53	0.19	0.21	0.30	0.17	0.19	0.32
Clearance Time (s)	5.0	6.0	5.0	5.0	6.0	4.0	5.0	6.0	5.0	4.0	6.0	5.0
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.5	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	486	1419	929	283	1209	843	667	740	475	598	669	511
v/s Ratio Prot	c0.10	c0.29	0.09	0.04	0.25	0.03	c0.15	c0.16	0.02	0.03	0.14	0.09
v/s Ratio Perm			0.18			0.05			0.05			0.11
v/c Ratio	0.74	0.73	0.46	0.53	0.74	0.13	0.75	0.74	0.24	0.17	0.72	0.62
Uniform Delay, d1	49.4	30.4	14.0	52.8	34.9	14.1	45.6	44.4	31.7	42.1	45.6	34.4
Progression Factor	1.00	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	5.3	3.3	0.1	1.0	4.2	0.1	4.1	3.6	0.1	0.1	3.1	1.6
Delay (s)	54.7	33.7	14.2	53.8	39.1	14.2	49.7	48.0	31.8	42.3	48.7	36.0
Level of Service	D	C	B	D	D	B	D	D	C	D	D	D
Approach Delay (s)		32.8			37.8			46.5			43.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	960	50	20	1390	240	120	120	130	200	40	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	0.87	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3263		1770	3090	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3263		1770	3090	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	960	50	20	1390	240	120	120	130	200	40	220
RTOR Reduction (vph)	0	0	19	0	0	90	0	115	0	0	149	0
Lane Group Flow (vph)	130	960	31	20	1390	150	120	135	0	200	111	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	5.1	41.6	49.9	1.8	38.3	50.6	8.3	9.4		12.3	13.4	
Effective Green, g (s)	5.1	41.6	49.9	1.8	38.3	50.6	8.3	9.4		12.3	13.4	
Actuated g/C Ratio	0.06	0.51	0.62	0.02	0.47	0.62	0.10	0.12		0.15	0.17	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	111	1815	1052	39	1671	1066	181	378		268	511	
v/s Ratio Prot	c0.07	c0.27	0.00	0.01	c0.39	0.02	0.07	c0.04		c0.11	c0.04	
v/s Ratio Perm			0.02			0.07						
v/c Ratio	1.17	0.53	0.03	0.51	0.83	0.14	0.66	0.36		0.75	0.22	
Uniform Delay, d1	38.0	13.2	6.1	39.2	18.6	6.3	35.1	33.1		32.9	29.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	138.7	0.3	0.0	10.9	3.7	0.1	8.8	0.6		10.8	0.2	
Delay (s)	176.7	13.5	6.1	50.1	22.3	6.3	43.9	33.6		43.7	29.5	
Level of Service	F	B	A	D	C	A	D	C		D	C	
Approach Delay (s)		31.8			20.3			37.0			35.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	81.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



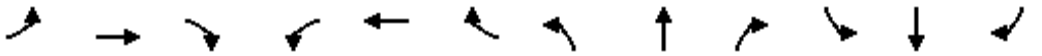
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	820	100	490	960	70	210	530	630	25	190	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	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)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	1863	1583
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)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	820	100	490	960	70	210	530	630	25	190	450
RTOR Reduction (vph)	0	0	59	0	0	27	0	0	0	0	0	0
Lane Group Flow (vph)	390	820	41	490	960	43	210	530	630	25	190	450
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		Free	Prot		Free
Protected Phases	7	4	4 5	3	8	8 1	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	12.6	21.1	36.1	25.0	33.5	41.4	11.0	21.4	87.4	3.9	14.3	87.4
Effective Green, g (s)	12.6	21.1	36.1	25.0	33.5	41.4	11.0	21.4	87.4	3.9	14.3	87.4
Actuated g/C Ratio	0.14	0.24	0.41	0.29	0.38	0.47	0.13	0.24	1.00	0.04	0.16	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	495	854	654	506	1356	750	223	867	1583	79	305	1583
v/s Ratio Prot	0.11	c0.23	0.03	c0.28	0.27	0.03	c0.12	c0.15		0.01	0.10	
v/s Ratio Perm									0.40			0.28
v/c Ratio	0.79	0.96	0.06	0.97	0.71	0.06	0.94	0.61	0.40	0.32	0.62	0.28
Uniform Delay, d1	36.1	32.7	15.5	30.8	22.8	12.4	37.9	29.3	0.0	40.5	34.0	0.0
Progression Factor	1.00	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	8.1	21.6	0.0	31.6	1.7	0.0	44.0	1.3	0.7	2.3	3.9	0.5
Delay (s)	44.2	54.3	15.5	62.4	24.5	12.5	81.9	30.6	0.7	42.8	38.0	0.5
Level of Service	D	D	B	E	C	B	F	C	A	D	D	A
Approach Delay (s)		48.3			36.2			24.7			12.8	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	40	180	20	40	170
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	40	180	20	40	170
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	180			200	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	180			200	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	95			97	
cM capacity (veh/h)	565	863			1372	

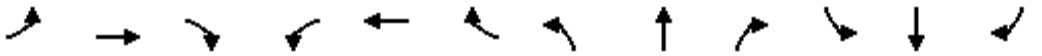
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	10	40	180	20	40	170
Volume Left	10	0	0	0	40	0
Volume Right	0	40	0	20	0	0
cSH	565	863	1700	1700	1372	1700
Volume to Capacity	0.02	0.05	0.11	0.01	0.03	0.10
Queue Length 95th (ft)	1	4	0	0	2	0
Control Delay (s)	11.5	9.4	0.0	0.0	7.7	0.0
Lane LOS	B	A			A	
Approach Delay (s)	9.8		0.0		1.5	
Approach LOS	A					

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		



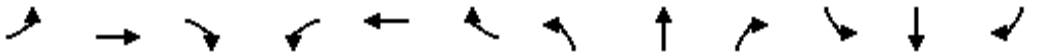
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	150	20	30	240	160	20	340	20	100	270	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		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)	1770	3477		1770	1863	1583	1770	1847		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3477		1770	1863	1583	1770	1847		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	150	20	30	240	160	20	340	20	100	270	10
RTOR Reduction (vph)	0	15	0	0	0	122	0	3	0	0	0	6
Lane Group Flow (vph)	30	155	0	30	240	38	20	357	0	100	270	4
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	2.0	13.5		1.7	13.2	13.2	0.6	18.5		6.4	24.3	24.3
Effective Green, g (s)	2.0	13.5		1.7	13.2	13.2	0.6	18.5		6.4	24.3	24.3
Actuated g/C Ratio	0.04	0.24		0.03	0.24	0.24	0.01	0.33		0.11	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	63	837		54	438	372	19	609		202	807	686
v/s Ratio Prot	c0.02	0.04		0.02	c0.13		0.01	c0.19		c0.06	0.14	
v/s Ratio Perm						0.02						0.00
v/c Ratio	0.48	0.18		0.56	0.55	0.10	1.05	0.59		0.50	0.33	0.01
Uniform Delay, d1	26.5	16.9		26.8	18.8	16.8	27.8	15.6		23.3	10.5	9.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.1		11.8	1.4	0.1	224.0	1.4		1.9	0.2	0.0
Delay (s)	32.1	17.0		38.6	20.2	16.9	251.8	17.1		25.2	10.8	9.0
Level of Service	C	B		D	C	B	F	B		C	B	A
Approach Delay (s)		19.3			20.3			29.4			14.5	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



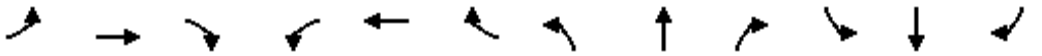
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	100	25	150	380	240	10	1700	100	75	1125	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3433		1770	3334		1770	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3433		1770	3334		1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	100	25	150	380	240	10	1700	100	75	1125	50
RTOR Reduction (vph)	0	22	0	0	125	0	0	0	39	0	0	23
Lane Group Flow (vph)	10	103	0	150	495	0	10	1700	61	75	1125	27
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	2.1	8.8		11.3	18.0		0.7	33.9	45.2	4.3	37.5	39.6
Effective Green, g (s)	2.1	8.8		11.3	18.0		0.7	33.9	45.2	4.3	37.5	39.6
Actuated g/C Ratio	0.03	0.12		0.15	0.24		0.01	0.46	0.61	0.06	0.50	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	50	407		269	808		17	2320	1048	102	2566	929
v/s Ratio Prot	0.01	0.03		c0.08	c0.15		0.01	c0.33	0.01	c0.04	c0.22	0.00
v/s Ratio Perm									0.03			0.02
v/c Ratio	0.20	0.25		0.56	0.61		0.59	0.73	0.06	0.74	0.44	0.03
Uniform Delay, d1	35.3	29.8		29.2	25.0		36.7	16.5	5.9	34.4	11.7	8.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.3		2.5	1.4		42.8	1.2	0.0	23.8	0.1	0.0
Delay (s)	37.2	30.1		31.7	26.4		79.4	17.7	5.9	58.2	11.8	8.2
Level of Service	D	C		C	C		E	B	A	E	B	A
Approach Delay (s)		30.6			27.5			17.4			14.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



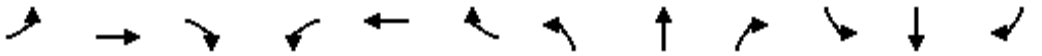
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	280	200	30	170	450	570	80	670	70	640	440	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	3539	1583	1770	1863	1583	1770	3539	1583	3433	5022	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	3539	1583	1770	1863	1583	1770	3539	1583	3433	5022	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	280	200	30	170	450	570	80	670	70	640	440	40
RTOR Reduction (vph)	0	0	23	0	0	0	0	0	53	0	9	0
Lane Group Flow (vph)	280	200	7	170	450	570	80	670	17	640	471	0
Turn Type	Prot		Perm	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	13.6	24.8	24.8	15.0	26.2	102.2	24.3	25.3	25.3	21.1	22.1	
Effective Green, g (s)	13.6	24.8	24.8	15.0	26.2	102.2	24.3	25.3	25.3	21.1	22.1	
Actuated g/C Ratio	0.13	0.24	0.24	0.15	0.26	1.00	0.24	0.25	0.25	0.21	0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	457	859	384	260	478	1583	421	876	392	709	1086	
v/s Ratio Prot	0.08	0.06		c0.10	c0.24		0.05	c0.19		c0.19	0.09	
v/s Ratio Perm			0.00			c0.36			0.01			
v/c Ratio	0.61	0.23	0.02	0.65	0.94	0.36	0.19	0.76	0.04	0.90	0.43	
Uniform Delay, d1	41.8	31.1	29.4	41.1	37.2	0.0	31.1	35.7	29.3	39.5	34.6	
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	0.1	0.0	5.8	27.0	0.6	0.2	4.0	0.0	14.8	0.3	
Delay (s)	44.2	31.2	29.5	46.9	64.3	0.6	31.3	39.7	29.3	54.3	34.9	
Level of Service	D	C	C	D	E	A	C	D	C	D	C	
Approach Delay (s)		38.3			31.3			38.0			46.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	38.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	102.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



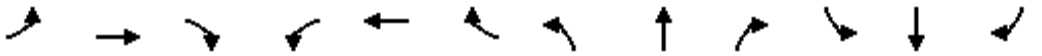
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	490	300	100	610	230	190	400	70	130	320	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		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)	1770	3539	1583	1770	3394		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3394		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	490	300	100	610	230	190	400	70	130	320	180
RTOR Reduction (vph)	0	0	117	0	42	0	0	0	63	0	0	147
Lane Group Flow (vph)	240	490	183	100	798	0	190	400	7	130	320	33
Turn Type	Prot		pm+ov	Prot			Prot		Over	Prot		Over
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4									
Actuated Green, G (s)	14.4	30.0	42.0	7.6	23.2		12.0	17.5	7.6	8.4	13.9	14.4
Effective Green, g (s)	14.4	30.0	42.0	7.6	23.2		12.0	17.5	7.6	8.4	13.9	14.4
Actuated g/C Ratio	0.18	0.38	0.53	0.10	0.29		0.15	0.22	0.10	0.11	0.17	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	321	1335	916	169	990		267	779	151	187	619	287
v/s Ratio Prot	c0.14	0.14	0.03	0.06	c0.24		c0.11	c0.11	0.00	0.07	0.09	0.02
v/s Ratio Perm			0.09									
v/c Ratio	0.75	0.37	0.20	0.59	0.81		0.71	0.51	0.04	0.70	0.52	0.11
Uniform Delay, d1	30.8	17.9	9.9	34.5	26.1		32.1	27.3	32.7	34.3	29.8	27.2
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	9.2	0.2	0.1	5.5	4.9		8.6	0.6	0.1	10.7	0.7	0.2
Delay (s)	40.0	18.1	10.0	39.9	30.9		40.7	27.8	32.8	45.0	30.5	27.4
Level of Service	D	B	A	D	C		D	C	C	D	C	C
Approach Delay (s)		20.8			31.9			32.1			32.6	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



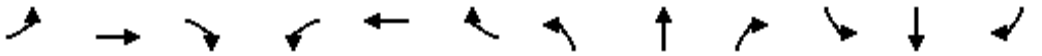
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	210	230	40	150	20	470	540	50	30	560	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1830		3433	3494		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1830		3433	3494		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	210	230	40	150	20	470	540	50	30	560	280
RTOR Reduction (vph)	0	0	165	0	5	0	0	8	0	0	0	119
Lane Group Flow (vph)	250	210	65	40	165	0	470	582	0	30	560	161
Turn Type	Prot		Perm	Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	13.9	24.6	24.6	3.4	14.1		13.1	40.2		2.8	29.9	43.8
Effective Green, g (s)	13.9	24.6	24.6	3.4	14.1		13.1	40.2		2.8	29.9	43.8
Actuated g/C Ratio	0.16	0.28	0.28	0.04	0.16		0.15	0.46		0.03	0.34	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	283	527	448	69	297		517	1614		57	640	870
v/s Ratio Prot	c0.14	0.11		0.02	c0.09		c0.14	0.17		0.02	c0.30	0.03
v/s Ratio Perm			0.04									0.07
v/c Ratio	0.88	0.40	0.15	0.58	0.56		0.91	0.36		0.53	0.88	0.19
Uniform Delay, d1	35.8	25.2	23.3	41.1	33.6		36.4	15.1		41.4	26.8	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.0	0.5	0.2	11.3	2.2		19.7	0.1		8.5	12.7	0.1
Delay (s)	61.8	25.7	23.5	52.4	35.8		56.1	15.2		50.0	39.5	11.9
Level of Service	E	C	C	D	D		E	B		D	D	B
Approach Delay (s)		38.0			39.0			33.4			31.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



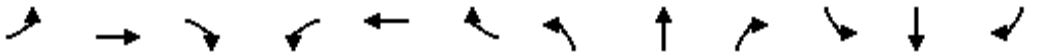
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	50	25	100	175	75	35	1875	25	75	1175	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	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)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5085	1583
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)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	50	25	100	175	75	35	1875	25	75	1175	25
RTOR Reduction (vph)	0	0	22	0	0	59	0	0	7	0	0	10
Lane Group Flow (vph)	25	50	3	100	175	16	35	1875	18	75	1175	15
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	1.4	9.2	9.2	9.9	17.7	17.7	2.7	39.1	39.1	6.5	42.9	42.9
Effective Green, g (s)	1.4	9.2	9.2	9.9	17.7	17.7	2.7	39.1	39.1	6.5	42.9	42.9
Actuated g/C Ratio	0.02	0.11	0.11	0.12	0.22	0.22	0.03	0.48	0.48	0.08	0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	31	212	180	217	409	347	59	2464	767	143	2703	842
v/s Ratio Prot	0.01	0.03		c0.06	c0.09		0.02	c0.37		c0.04	c0.23	
v/s Ratio Perm			0.00			0.01			0.01			0.01
v/c Ratio	0.81	0.24	0.02	0.46	0.43	0.05	0.59	0.76	0.02	0.52	0.43	0.02
Uniform Delay, d1	39.5	32.5	31.7	32.9	27.1	24.8	38.5	17.0	10.8	35.6	11.5	8.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	83.8	0.6	0.0	1.5	0.7	0.1	15.0	1.4	0.0	3.4	0.1	0.0
Delay (s)	123.3	33.1	31.8	34.5	27.9	24.9	53.4	18.4	10.9	39.1	11.6	8.9
Level of Service	F	C	C	C	C	C	D	B	B	D	B	A
Approach Delay (s)		55.3			29.1			19.0			13.2	
Approach LOS		E			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



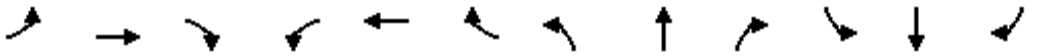
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	140	30	80	290	250	50	280	50	270	310	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		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)	1770	1813		1770	1863	1583	1770	3459		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1813		1770	1863	1583	1770	3459		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	140	30	80	290	250	50	280	50	270	310	140
RTOR Reduction (vph)	0	10	0	0	0	124	0	21	0	0	0	75
Lane Group Flow (vph)	200	160	0	80	290	126	50	309	0	270	310	65
Turn Type	Prot			Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	9.1	18.1		6.4	15.4	27.5	3.4	12.7		12.1	21.4	30.5
Effective Green, g (s)	9.1	18.1		6.4	15.4	27.5	3.4	12.7		12.1	21.4	30.5
Actuated g/C Ratio	0.14	0.28		0.10	0.24	0.42	0.05	0.19		0.19	0.33	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	247	503		173	439	764	92	673		328	1160	836
v/s Ratio Prot	c0.11	c0.09		0.05	c0.16	0.03	0.03	c0.09		c0.15	0.09	0.01
v/s Ratio Perm						0.05						0.03
v/c Ratio	0.81	0.32		0.46	0.66	0.17	0.54	0.46		0.82	0.27	0.08
Uniform Delay, d1	27.3	18.7		27.8	22.6	11.8	30.2	23.3		25.6	16.2	9.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	17.5	0.4		2.0	3.7	0.1	6.4	0.5		15.3	0.1	0.0
Delay (s)	44.8	19.1		29.8	26.3	11.9	36.6	23.8		40.8	16.3	9.7
Level of Service	D	B		C	C	B	D	C		D	B	A
Approach Delay (s)		33.0			20.9			25.5			24.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	120	10	50	350	150	10	460	70	90	320	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3498		3433	3539	1583	1770	3539	1583	1770	3386	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3498		3433	3539	1583	1770	3539	1583	1770	3386	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	120	10	50	350	150	10	460	70	90	320	130
RTOR Reduction (vph)	0	8	0	0	0	133	0	0	65	0	45	0
Lane Group Flow (vph)	80	122	0	50	350	17	10	460	5	90	405	0
Turn Type	Prot			Prot		Over	Prot		Over	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases												
Actuated Green, G (s)	6.4	14.3		4.3	12.2	6.6	0.6	16.2	4.3	6.6	22.2	
Effective Green, g (s)	6.4	14.3		4.3	12.2	6.6	0.6	16.2	4.3	6.6	22.2	
Actuated g/C Ratio	0.11	0.25		0.07	0.21	0.11	0.01	0.28	0.07	0.11	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	197	871		257	752	182	19	999	119	204	1310	
v/s Ratio Prot	c0.05	0.04		0.01	c0.10	0.01	0.01	c0.13	0.00	c0.05	0.12	
v/s Ratio Perm												
v/c Ratio	0.41	0.14		0.19	0.47	0.09	0.53	0.46	0.04	0.44	0.31	
Uniform Delay, d1	23.7	16.8		24.9	19.8	22.7	28.3	17.0	24.6	23.7	12.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	0.1		0.4	0.5	0.2	23.9	0.3	0.2	1.5	0.1	
Delay (s)	25.1	16.8		25.3	20.2	23.0	52.1	17.3	24.8	25.2	12.4	
Level of Service	C	B		C	C	C	D	B	C	C	B	
Approach Delay (s)		20.0			21.4			18.9			14.5	
Approach LOS		B			C			B			B	

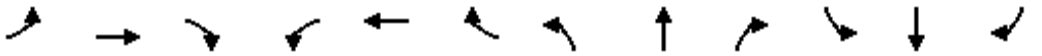
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	130	20	20	120	50	30	160	20	50	110	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1203	1267	1077	1203	1211		1203	1246		1203	1267	1077
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1203	1267	1077	1203	1211		1203	1246		1203	1267	1077
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	130	20	20	120	50	30	160	20	50	110	70
RTOR Reduction (vph)	0	0	12	0	28	0	0	8	0	0	0	45
Lane Group Flow (vph)	80	130	8	20	142	0	30	172	0	50	110	25
Heavy Vehicles (%)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	5.0	15.7	16.9	0.6	11.3		1.2	9.8		2.0	10.6	15.6
Effective Green, g (s)	5.0	15.7	16.9	0.6	11.3		1.2	9.8		2.0	10.6	15.6
Actuated g/C Ratio	0.11	0.36	0.38	0.01	0.26		0.03	0.22		0.05	0.24	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	136	451	510	16	310		33	277		55	305	479
v/s Ratio Prot	c0.07	0.10	0.00	0.02	c0.12		0.02	c0.14		c0.04	0.09	0.01
v/s Ratio Perm			0.01									0.02
v/c Ratio	0.59	0.29	0.02	1.25	0.46		0.91	0.62		0.91	0.36	0.05
Uniform Delay, d1	18.6	10.2	8.4	21.8	13.8		21.4	15.5		21.0	13.9	9.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.4	0.0	314.0	1.1		118.0	4.3		87.5	0.7	0.0
Delay (s)	24.9	10.5	8.4	335.8	14.9		139.4	19.8		108.5	14.7	9.4
Level of Service	C	B	A	F	B		F	B		F	B	A
Approach Delay (s)		15.4			48.7			36.9			33.5	
Approach LOS		B			D			D			C	

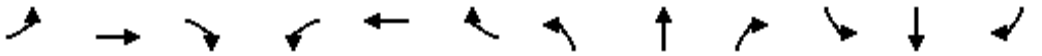
Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



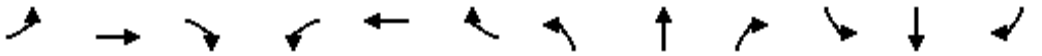
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	230	0	230	330	130	25	220	420	110	300	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.96		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539		3433	3389		1770	1863	1583	1770	1762	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3539		3433	3389		1770	1863	1583	1770	1762	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	230	0	230	330	130	25	220	420	110	300	170
RTOR Reduction (vph)	0	0	0	0	48	0	0	0	0	0	21	0
Lane Group Flow (vph)	70	230	0	230	412	0	25	220	420	110	449	0
Turn Type	Prot			Prot			Prot		Free	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									Free			
Actuated Green, G (s)	4.9	13.1		9.7	17.9		1.3	17.6	62.5	6.1	22.4	
Effective Green, g (s)	4.9	13.1		9.7	17.9		1.3	17.6	62.5	6.1	22.4	
Actuated g/C Ratio	0.08	0.21		0.16	0.29		0.02	0.28	1.00	0.10	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	139	742		533	971		37	525	1583	173	632	
v/s Ratio Prot	0.04	0.06		c0.07	c0.12		0.01	c0.12		0.06	c0.26	
v/s Ratio Perm									0.27			
v/c Ratio	0.50	0.31		0.43	0.42		0.68	0.42	0.27	0.64	0.71	
Uniform Delay, d1	27.6	20.9		23.9	18.1		30.4	18.3	0.0	27.1	17.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.9	0.2		0.6	0.3		39.3	0.5	0.4	7.4	3.8	
Delay (s)	30.5	21.1		24.5	18.4		69.7	18.8	0.4	34.6	21.0	
Level of Service	C	C		C	B		E	B	A	C	C	
Approach Delay (s)		23.3			20.4			9.1			23.6	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



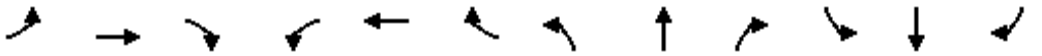
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	490	40	30	510	150	40	20	30	160	20	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.97			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.96	1.00
Satd. Flow (prot)	3433	3499		1770	3419			1740			1783	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.98			0.96	1.00
Satd. Flow (perm)	3433	3499		1770	3419			1740			1783	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	240	490	40	30	510	150	40	20	30	160	20	110
RTOR Reduction (vph)	0	6	0	0	31	0	0	22	0	0	0	96
Lane Group Flow (vph)	240	524	0	30	629	0	0	68	0	0	180	14
Turn Type	Prot			Prot			Split			Split		Over
Protected Phases	7	4		3	8		2	2		6	6	7
Permitted Phases												
Actuated Green, G (s)	10.0	30.0		1.8	21.8			7.1			25.7	10.0
Effective Green, g (s)	10.0	30.0		1.8	21.8			7.1			25.7	10.0
Actuated g/C Ratio	0.12	0.37		0.02	0.27			0.09			0.32	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	426	1302		40	925			153			569	196
v/s Ratio Prot	c0.07	0.15		0.02	c0.18			c0.04			c0.10	0.01
v/s Ratio Perm												
v/c Ratio	0.56	0.40		0.75	0.68			0.45			0.32	0.07
Uniform Delay, d1	33.2	18.7		39.2	26.3			34.9			20.8	31.2
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.7	0.2		55.2	2.1			2.1			0.3	0.2
Delay (s)	35.0	18.9		94.4	28.4			36.9			21.1	31.3
Level of Service	C	B		F	C			D			C	C
Approach Delay (s)		23.9			31.2			36.9			25.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



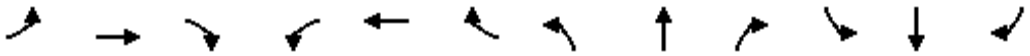
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	375	25	25	1200	50	25	10	25	40	10	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.89		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5038		1770	5055		1770	1663		1770	1863	1583
Flt Permitted	0.20	1.00		0.51	1.00		0.75	1.00		0.73	1.00	1.00
Satd. Flow (perm)	381	5038		946	5055		1399	1663		1368	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	375	25	25	1200	50	25	10	25	40	10	150
RTOR Reduction (vph)	0	8	0	0	6	0	0	21	0	0	0	65
Lane Group Flow (vph)	150	392	0	25	1244	0	25	14	0	40	10	85
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	30.9	30.9		30.9	30.9		6.5	6.5		6.5	6.5	6.5
Effective Green, g (s)	30.9	30.9		30.9	30.9		6.5	6.5		6.5	6.5	6.5
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	259	3429		644	3441		200	238		196	267	227
v/s Ratio Prot		0.08			0.25			0.01			0.01	
v/s Ratio Perm	c0.39			0.03			0.02			0.03		c0.05
v/c Ratio	0.58	0.11		0.04	0.36		0.12	0.06		0.20	0.04	0.37
Uniform Delay, d1	3.8	2.5		2.4	3.1		17.0	16.8		17.2	16.8	17.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.1	0.0		0.0	0.1		0.3	0.1		0.5	0.1	1.0
Delay (s)	6.9	2.5		2.4	3.1		17.3	16.9		17.7	16.8	18.6
Level of Service	A	A		A	A		B	B		B	B	B
Approach Delay (s)		3.7			3.1			17.0			18.4	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	45.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



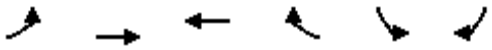
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	20	350	130	30	50	725	890	230	60	250	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	0.94	0.91	1.00	1.00	0.91	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)	1770	1863	2787	1770	1863	1583	4990	5085	1583	1770	5085	1583
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)	1770	1863	2787	1770	1863	1583	4990	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	20	350	130	30	50	725	890	230	60	250	50
RTOR Reduction (vph)	0	0	265	0	0	45	0	0	198	0	0	32
Lane Group Flow (vph)	40	20	85	130	30	5	725	890	32	60	250	18
Turn Type	Prot		Over	Prot		Over	Prot		Over	Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases												6
Actuated Green, G (s)	5.3	2.9	18.3	10.4	8.0	6.9	18.3	38.8	10.4	6.9	27.4	27.4
Effective Green, g (s)	5.3	2.9	18.3	10.4	8.0	6.9	18.3	38.8	10.4	6.9	27.4	27.4
Actuated g/C Ratio	0.07	0.04	0.24	0.14	0.11	0.09	0.24	0.52	0.14	0.09	0.37	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	125	72	680	245	199	146	1218	2631	220	163	1858	578
v/s Ratio Prot	0.02	0.01	0.03	c0.07	c0.02	0.00	c0.15	c0.18	0.02	0.03	0.05	
v/s Ratio Perm												0.01
v/c Ratio	0.32	0.28	0.13	0.53	0.15	0.03	0.60	0.34	0.14	0.37	0.13	0.03
Uniform Delay, d1	33.1	35.0	22.1	30.0	30.4	31.0	25.1	10.6	28.4	32.0	15.9	15.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.81	1.78	0.97	0.52	1.53	2.84
Incremental Delay, d2	1.5	2.1	0.1	2.2	0.4	0.1	0.6	0.3	0.2	1.4	0.1	0.1
Delay (s)	34.6	37.1	22.2	32.2	30.8	31.1	20.9	19.1	27.8	18.1	24.4	43.5
Level of Service	C	D	C	C	C	C	C	B	C	B	C	D
Approach Delay (s)		24.1			31.8			20.9			26.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



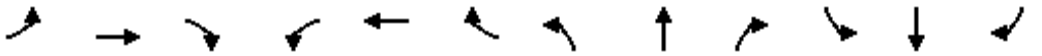
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized						Yes						
Volume (veh/h)	0	0	0	0	0	230	0	0	0	0	70	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	0	0	230	0	0	0	0	70	0
Approach Volume (veh/h)		0			0			0			70	
Crossing Volume (veh/h)		70			0			0			0	
High Capacity (veh/h)		1311			1385			1385			1385	
High v/c (veh/h)		0.00			0.00			0.00			0.05	
Low Capacity (veh/h)		1094			1161			1161			1161	
Low v/c (veh/h)		0.00			0.00			0.00			0.06	

Intersection Summary					
Maximum v/c High	0.05				
Maximum v/c Low	0.06				
Intersection Capacity Utilization	30.9%	ICU Level of Service		A	



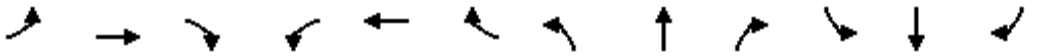
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Right Turn Channelized						
Volume (veh/h)	40	260	0	0	150	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	40	260	0	0	150	0
Approach Volume (veh/h)		300	0		150	
Crossing Volume (veh/h)		150	40		0	
High Capacity (veh/h)		1232	1342		1385	
High v/c (veh/h)		0.24	0.00		0.11	
Low Capacity (veh/h)		1022	1123		1161	
Low v/c (veh/h)		0.29	0.00		0.13	

Intersection Summary			
Maximum v/c High	0.24		
Maximum v/c Low	0.29		
Intersection Capacity Utilization	30.9%	ICU Level of Service	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	50	10	100	280	30	20	340	50	20	240	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		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)	1770	1816		1770	1836		1770	3471		1770	3498	
Flt Permitted	0.57	1.00		0.56	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1065	1816		1045	1836		1770	3471		1770	3498	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	50	10	100	280	30	20	340	50	20	240	20
RTOR Reduction (vph)	0	7	0	0	5	0	0	16	0	0	9	0
Lane Group Flow (vph)	10	53	0	100	305	0	20	374	0	20	251	0
Turn Type	pm+pt			pm+pt			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	11.6	11.1		17.8	14.2		0.7	11.9		0.7	11.9	
Effective Green, g (s)	11.6	11.1		17.8	14.2		0.7	11.9		0.7	11.9	
Actuated g/C Ratio	0.27	0.26		0.41	0.33		0.02	0.27		0.02	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	466		490	602		29	954		29	961	
v/s Ratio Prot	0.00	0.03		c0.02	c0.17		c0.01	c0.11		0.01	0.07	
v/s Ratio Perm	0.01			0.07								
v/c Ratio	0.03	0.11		0.20	0.51		0.69	0.39		0.69	0.26	
Uniform Delay, d1	11.7	12.3		8.1	11.7		21.2	12.8		21.2	12.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.2	0.7		51.3	0.3		51.3	0.1	
Delay (s)	11.7	12.4		8.3	12.4		72.4	13.0		72.4	12.4	
Level of Service	B	B		A	B		E	B		E	B	
Approach Delay (s)		12.3			11.4			15.9			16.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	43.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

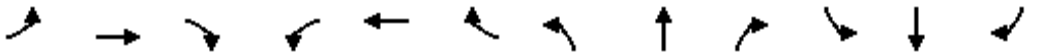


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	25	25	100	25	150	25	130	30	80	200	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.87		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)	1770	3539	1583	3433	1623		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	3433	1623		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	25	25	100	25	150	25	130	30	80	200	25
RTOR Reduction (vph)	0	0	24	0	126	0	0	0	26	0	0	24
Lane Group Flow (vph)	25	25	1	100	49	0	25	130	4	80	200	1
Turn Type	Prot		Over	Prot			Prot		Over	Prot		Over
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases												
Actuated Green, G (s)	1.5	2.8	1.5	5.0	6.3		1.5	12.1	5.0	3.1	13.7	1.5
Effective Green, g (s)	1.5	2.8	1.5	5.0	6.3		1.5	12.1	5.0	3.1	13.7	1.5
Actuated g/C Ratio	0.04	0.07	0.04	0.13	0.16		0.04	0.31	0.13	0.08	0.35	0.04
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	68	254	61	440	262		68	1098	203	273	1243	61
v/s Ratio Prot	0.01	0.01	0.00	c0.03	c0.03		0.01	0.04	0.00	c0.02	c0.06	0.00
v/s Ratio Perm												
v/c Ratio	0.37	0.10	0.02	0.23	0.19		0.37	0.12	0.02	0.29	0.16	0.02
Uniform Delay, d1	18.3	16.9	18.0	15.3	14.1		18.3	9.6	14.9	16.9	8.7	18.0
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	3.3	0.2	0.1	0.3	0.3		3.3	0.0	0.0	0.6	0.1	0.1
Delay (s)	21.6	17.1	18.1	15.5	14.5		21.6	9.7	14.9	17.5	8.8	18.1
Level of Service	C	B	B	B	B		C	A	B	B	A	B
Approach Delay (s)		19.0			14.9			12.1			11.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	39.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

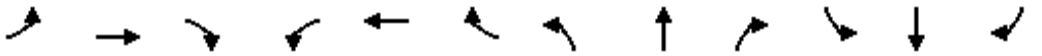
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	60	110	180	40	290	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.64	1.00
Satd. Flow (perm)	1770	1583	1863	1583	1199	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	110	180	40	290	150
RTOR Reduction (vph)	0	96	0	16	0	0
Lane Group Flow (vph)	60	14	180	24	290	150
Turn Type		custom		Perm	Perm	
Protected Phases			2			6
Permitted Phases	8	8		2	6	
Actuated Green, G (s)	4.0	4.0	18.9	18.9	18.9	18.9
Effective Green, g (s)	4.0	4.0	18.9	18.9	18.9	18.9
Actuated g/C Ratio	0.13	0.13	0.61	0.61	0.61	0.61
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	229	205	1140	968	733	1140
v/s Ratio Prot			0.10			0.08
v/s Ratio Perm	c0.03	0.01		0.02	c0.24	
v/c Ratio	0.26	0.07	0.16	0.03	0.40	0.13
Uniform Delay, d1	12.1	11.8	2.6	2.4	3.1	2.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	0.1	0.0	0.4	0.1
Delay (s)	12.7	12.0	2.6	2.4	3.4	2.6
Level of Service	B	B	A	A	A	A
Approach Delay (s)	12.2		2.6			3.1
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	470	210	730	650	160	320	110	480	70	50	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		0.97	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	3433	3434		3433	1863	1583	1770	1816	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	3433	3434		3433	1863	1583	1770	1816	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	470	210	730	650	160	320	110	480	70	50	10
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	7	0
Lane Group Flow (vph)	10	470	210	730	795	0	320	110	480	70	53	0
Turn Type	Prot		Free	Prot			Prot		Free	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free						Free			
Actuated Green, G (s)	1.2	31.1	91.9	22.5	52.4		12.6	14.7	91.9	7.6	9.7	
Effective Green, g (s)	1.2	31.1	91.9	22.5	52.4		12.6	14.7	91.9	7.6	9.7	
Actuated g/C Ratio	0.01	0.34	1.00	0.24	0.57		0.14	0.16	1.00	0.08	0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	630	1583	841	1958		471	298	1583	146	192	
v/s Ratio Prot	0.01	c0.25		c0.21	0.23		c0.09	c0.06		0.04	0.03	
v/s Ratio Perm			0.13						0.30			
v/c Ratio	0.43	0.75	0.13	0.87	0.41		0.68	0.37	0.30	0.48	0.28	
Uniform Delay, d1	45.0	26.9	0.0	33.3	11.0		37.7	34.5	0.0	40.3	37.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.6	4.8	0.2	9.4	0.1		3.9	0.8	0.5	2.5	0.8	
Delay (s)	57.6	31.7	0.2	42.7	11.2		41.6	35.2	0.5	42.7	38.6	
Level of Service	E	C	A	D	B		D	D	A	D	D	
Approach Delay (s)		22.5			26.1			19.2			40.8	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	460	500	75	40	855	60	125	25	25	30	30	585
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.94	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	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)	4990	3539	1583	1770	3539	1583	1770	1723		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	4990	3539	1583	1770	3539	1583	1770	1723		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	460	500	75	40	855	60	125	25	25	30	30	585
RTOR Reduction (vph)	0	0	29	0	0	35	0	20	0	0	0	0
Lane Group Flow (vph)	460	500	46	40	855	25	125	30	0	30	30	585
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						Free
Actuated Green, G (s)	10.5	32.2	42.5	3.3	25.0	29.6	10.3	13.6		4.6	7.9	69.7
Effective Green, g (s)	10.5	32.2	42.5	3.3	25.0	29.6	10.3	13.6		4.6	7.9	69.7
Actuated g/C Ratio	0.15	0.46	0.61	0.05	0.36	0.42	0.15	0.20		0.07	0.11	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	752	1635	1056	84	1269	763	262	336		117	211	1583
v/s Ratio Prot	c0.09	0.14	0.01	0.02	c0.24	0.00	0.07	0.02		0.02	0.02	
v/s Ratio Perm			0.02			0.01						c0.37
v/c Ratio	0.61	0.31	0.04	0.48	0.67	0.03	0.48	0.09		0.26	0.14	0.37
Uniform Delay, d1	27.7	11.7	5.5	32.4	18.9	11.7	27.2	23.0		30.9	27.8	0.0
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	1.5	0.1	0.0	4.2	1.4	0.0	1.4	0.1		1.2	0.3	0.7
Delay (s)	29.2	11.9	5.5	36.6	20.3	11.7	28.6	23.1		32.1	28.2	0.7
Level of Service	C	B	A	D	C	B	C	C		C	C	A
Approach Delay (s)		19.1			20.5			27.0			3.4	
Approach LOS		B			C			C			A	

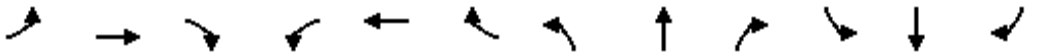
Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	69.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	700	1080	50	330	760	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.88	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	2787	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	2787	1770	5085	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	700	1080	50	330	760	75
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	700	1080	50	330	760	41
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	17.1	75.0	5.2	26.3	40.7	40.7
Effective Green, g (s)	17.1	75.0	5.2	26.3	40.7	40.7
Actuated g/C Ratio	0.23	1.00	0.07	0.35	0.54	0.54
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1159	2787	123	1783	1863	859
v/s Ratio Prot	c0.14		0.03	0.06	0.22	
v/s Ratio Perm		c0.39				0.03
v/c Ratio	0.60	0.39	0.41	0.19	0.41	0.05
Uniform Delay, d1	25.9	0.0	33.4	16.9	10.1	8.1
Progression Factor	0.96	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.3	2.2	0.1	0.7	0.1
Delay (s)	25.6	0.3	35.6	17.0	10.7	8.2
Level of Service	C	A	D	B	B	A
Approach Delay (s)	10.3			19.4	10.5	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

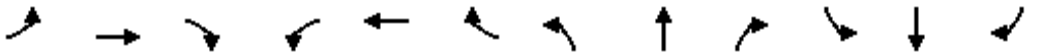
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	50	70	1740	20	50	1225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	5085	1583	1770	5085
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	5085	1583	1770	5085
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	70	1740	20	50	1225
RTOR Reduction (vph)	0	64	0	5	0	0
Lane Group Flow (vph)	50	6	1740	15	50	1225
Turn Type		Over		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)	4.5	5.7	45.5	45.5	5.7	55.2
Effective Green, g (s)	4.5	5.7	45.5	45.5	5.7	55.2
Actuated g/C Ratio	0.07	0.08	0.67	0.67	0.08	0.82
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	133	3418	1064	149	4146
v/s Ratio Prot	c0.03	0.00	c0.34		0.03	c0.24
v/s Ratio Perm				0.01		
v/c Ratio	0.42	0.04	0.51	0.01	0.34	0.30
Uniform Delay, d1	30.4	28.5	5.5	3.7	29.2	1.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.1	0.1	0.0	1.3	0.0
Delay (s)	32.8	28.6	5.7	3.7	30.6	1.6
Level of Service	C	C	A	A	C	A
Approach Delay (s)	30.4		5.6			2.7
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	67.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	25	75	50	25	50	200	1675	50	75	1150	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt		1.00	0.85		0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1817	1583		1728		1770	5085	1583	1770	5085	1583
Flt Permitted		0.79	1.00		0.85		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1479	1583		1493		1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	25	75	50	25	50	200	1675	50	75	1150	20
RTOR Reduction (vph)	0	0	0	0	29	0	0	0	12	0	0	7
Lane Group Flow (vph)	0	50	75	0	96	0	200	1675	38	75	1150	13
Turn Type	Perm		Free	Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		Free	8					2			6
Actuated Green, G (s)		10.8	90.0		10.8		15.4	59.2	59.2	8.0	51.8	51.8
Effective Green, g (s)		10.8	90.0		10.8		15.4	59.2	59.2	8.0	51.8	51.8
Actuated g/C Ratio		0.12	1.00		0.12		0.17	0.66	0.66	0.09	0.58	0.58
Clearance Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		177	1583		179		303	3345	1041	157	2927	911
v/s Ratio Prot							c0.11	c0.33		0.04	0.23	
v/s Ratio Perm		0.03	0.05		c0.06				0.02			0.01
v/c Ratio		0.28	0.05		0.54		0.66	0.50	0.04	0.48	0.39	0.01
Uniform Delay, d1		36.1	0.0		37.2		34.9	7.9	5.4	39.0	10.5	8.2
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9	0.1		3.1		5.3	0.5	0.1	2.3	0.4	0.0
Delay (s)		36.9	0.1		40.3		40.2	8.4	5.5	41.3	10.9	8.2
Level of Service		D	A		D		D	A	A	D	B	A
Approach Delay (s)		14.8			40.3			11.6			12.7	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



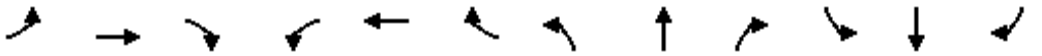
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	75	100	40	210	200	1700	10	125	1150	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5069	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5069	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	20	75	100	40	210	200	1700	10	125	1150	25
RTOR Reduction (vph)	0	0	51	0	0	182	0	0	3	0	2	0
Lane Group Flow (vph)	25	20	24	100	40	28	200	1700	7	125	1173	0
Confl. Peds. (#/hr)				210								
Turn Type	Prot		pt+ov	Prot		Over	Prot		Perm	Prot		
Protected Phases	7	4	4 5	3	8	1	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	2.7	6.3	22.2	7.5	11.1	9.4	11.9	31.4	31.4	9.4	28.9	
Effective Green, g (s)	2.7	6.3	22.2	7.5	11.1	9.4	11.9	31.4	31.4	9.4	28.9	
Actuated g/C Ratio	0.04	0.09	0.31	0.11	0.16	0.13	0.17	0.44	0.44	0.13	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	68	166	498	188	293	211	298	2262	704	236	2075	
v/s Ratio Prot	0.01	0.01	0.01	c0.06	c0.02	0.02	c0.11	c0.33		0.07	0.23	
v/s Ratio Perm									0.00			
v/c Ratio	0.37	0.12	0.05	0.53	0.14	0.13	0.67	0.75	0.01	0.53	0.57	
Uniform Delay, d1	33.1	29.6	16.8	29.9	25.6	27.0	27.5	16.3	10.9	28.5	16.0	
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	3.3	0.3	0.0	2.9	0.2	0.3	5.8	1.4	0.0	2.1	0.4	
Delay (s)	36.5	29.9	16.9	32.8	25.8	27.3	33.4	17.8	10.9	30.7	16.4	
Level of Service	D	C	B	C	C	C	C	B	B	C	B	
Approach Delay (s)		23.1			28.7			19.4			17.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

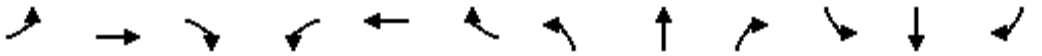
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	200	400	1500	170	270	1015
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.91	1.00	0.94	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	5085	1583	4990	5085
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	5085	1583	4990	5085
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	400	1500	170	270	1015
RTOR Reduction (vph)	0	331	0	0	0	0
Lane Group Flow (vph)	200	69	1500	170	270	1015
Turn Type		Over		Free	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases				Free		
Actuated Green, G (s)	12.0	10.2	24.9	59.1	10.2	39.1
Effective Green, g (s)	12.0	10.2	24.9	59.1	10.2	39.1
Actuated g/C Ratio	0.20	0.17	0.42	1.00	0.17	0.66
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	359	273	2142	1583	861	3364
v/s Ratio Prot	c0.11	0.04	c0.29		0.05	c0.20
v/s Ratio Perm				0.11		
v/c Ratio	0.56	0.25	0.70	0.11	0.31	0.30
Uniform Delay, d1	21.2	21.2	14.0	0.0	21.4	4.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.5	1.1	0.1	0.2	0.1
Delay (s)	23.0	21.6	15.1	0.1	21.6	4.3
Level of Service	C	C	B	A	C	A
Approach Delay (s)	22.1		13.6			7.9
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



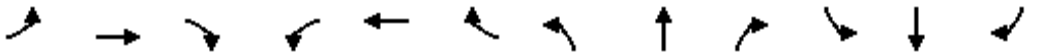
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	10	50	70	10	460	40	990	30	430	525	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.88		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)	3433	1630		1770	1863	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1630		1770	1863	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	220	10	50	70	10	460	40	990	30	430	525	260
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	220	15	0	70	10	460	40	990	21	430	525	260
Turn Type	Prot			Prot		Free	Prot		Perm	Prot		Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						Free			2			Free
Actuated Green, G (s)	15.9	9.6		7.8	1.5	90.0	5.2	38.0	38.0	18.6	51.4	90.0
Effective Green, g (s)	15.9	9.6		7.8	1.5	90.0	5.2	38.0	38.0	18.6	51.4	90.0
Actuated g/C Ratio	0.18	0.11		0.09	0.02	1.00	0.06	0.42	0.42	0.21	0.57	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	606	174		153	31	1583	102	1494	668	709	2021	1583
v/s Ratio Prot	c0.06	0.01		c0.04	0.01		0.02	c0.28		c0.13	0.15	
v/s Ratio Perm						c0.29			0.01			0.16
v/c Ratio	0.36	0.09		0.46	0.32	0.29	0.39	0.66	0.03	0.61	0.26	0.16
Uniform Delay, d1	32.6	36.3		39.1	43.7	0.0	40.9	20.9	15.2	32.4	9.7	0.0
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	0.4	0.2		2.2	6.0	0.5	2.5	2.3	0.1	1.5	0.3	0.2
Delay (s)	33.0	36.5		41.3	49.7	0.5	43.4	23.2	15.3	33.9	10.0	0.2
Level of Service	C	D		D	D	A	D	C	B	C	B	A
Approach Delay (s)		33.7			6.7			23.7			16.4	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



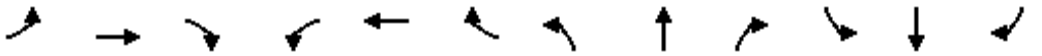
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1530	70	80	1700	20	150	25	190	30	25	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1739	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1739	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	1530	70	80	1700	20	150	25	190	30	25	20
RTOR Reduction (vph)	0	0	28	0	0	6	0	0	168	0	19	0
Lane Group Flow (vph)	10	1530	42	80	1700	14	150	25	22	30	26	0
Turn Type	Prot		pm+ov	Prot		Over	Prot		Over	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4									
Actuated Green, G (s)	0.6	32.5	43.6	8.4	40.3	5.7	11.1	10.1	8.4	5.7	4.7	
Effective Green, g (s)	0.6	32.5	43.6	8.4	40.3	5.7	11.1	10.1	8.4	5.7	4.7	
Actuated g/C Ratio	0.01	0.45	0.60	0.12	0.55	0.08	0.15	0.14	0.12	0.08	0.06	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	15	2273	1036	205	2819	124	270	259	183	139	112	
v/s Ratio Prot	0.01	c0.30	0.01	c0.05	c0.33	0.01	c0.08	0.01	0.01	0.02	c0.02	
v/s Ratio Perm			0.02									
v/c Ratio	0.67	0.67	0.04	0.39	0.60	0.11	0.56	0.10	0.12	0.22	0.23	
Uniform Delay, d1	36.0	15.9	6.0	29.8	10.8	31.1	28.5	27.3	28.8	31.4	32.3	
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	75.9	0.8	0.0	1.2	0.4	0.4	2.5	0.2	0.3	0.8	1.1	
Delay (s)	111.8	16.7	6.0	31.0	11.2	31.5	31.0	27.5	29.1	32.2	33.4	
Level of Service	F	B	A	C	B	C	C	C	C	C	C	
Approach Delay (s)		16.8			12.3			29.8			32.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



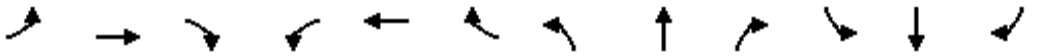
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	400	10	10	530	30	20	80	10	30	40	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	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	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3526		1770	3511		1770	1832		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.91	1.00		0.91	1.00	1.00
Satd. Flow (perm)	1770	3526		1770	3511		1693	1832		1693	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	400	10	10	530	30	20	80	10	30	40	80
RTOR Reduction (vph)	0	2	0	0	5	0	0	9	0	0	0	71
Lane Group Flow (vph)	70	408	0	10	555	0	20	81	0	30	40	9
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	2.4	20.2		0.6	18.4		4.4	4.4		4.4	4.4	4.4
Effective Green, g (s)	2.4	20.2		0.6	18.4		4.4	4.4		4.4	4.4	4.4
Actuated g/C Ratio	0.06	0.54		0.02	0.49		0.12	0.12		0.12	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	114	1915		29	1737		200	217		200	220	187
v/s Ratio Prot	c0.04	0.12		0.01	c0.16			c0.04			0.02	
v/s Ratio Perm							0.01			0.02		0.01
v/c Ratio	0.61	0.21		0.34	0.32		0.10	0.37		0.15	0.18	0.05
Uniform Delay, d1	16.9	4.4		18.1	5.6		14.6	15.1		14.7	14.8	14.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.4	0.1		7.0	0.1		0.2	1.1		0.3	0.4	0.1
Delay (s)	26.4	4.4		25.1	5.7		14.9	16.2		15.1	15.2	14.7
Level of Service	C	A		C	A		B	B		B	B	B
Approach Delay (s)		7.6			6.1			16.0			14.9	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	37.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



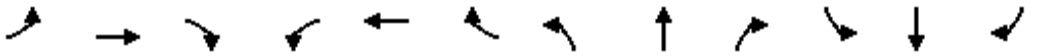
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	200	50	50	400	150	25	25	25	190	75	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.96		1.00	0.92		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3433		1770	3394		1770	1723		1770	1793	
Flt Permitted	0.95	1.00		0.60	1.00		0.82	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3433		1112	3394		1521	1723		1770	1793	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	200	50	50	400	150	25	25	25	190	75	25
RTOR Reduction (vph)	0	31	0	0	62	0	0	22	0	0	19	0
Lane Group Flow (vph)	50	219	0	50	488	0	25	28	0	190	81	0
Turn Type	Prot			Perm			Perm			Split		
Protected Phases	7	4			8			2		6	6	
Permitted Phases				8			2					
Actuated Green, G (s)	1.5	17.5		12.0	12.0		4.9	4.9		10.5	10.5	
Effective Green, g (s)	1.5	17.5		12.0	12.0		4.9	4.9		10.5	10.5	
Actuated g/C Ratio	0.03	0.39		0.27	0.27		0.11	0.11		0.23	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	59	1338		297	907		166	188		414	419	
v/s Ratio Prot	c0.03	0.06			c0.14			0.02		c0.11	0.05	
v/s Ratio Perm				0.04			c0.02					
v/c Ratio	0.85	0.16		0.17	0.54		0.15	0.15		0.46	0.19	
Uniform Delay, d1	21.6	8.9		12.6	14.1		18.1	18.1		14.8	13.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	64.8	0.1		0.3	0.6		0.4	0.4		0.8	0.2	
Delay (s)	86.4	9.0		12.9	14.7		18.5	18.5		15.6	14.0	
Level of Service	F	A		B	B		B	B		B	B	
Approach Delay (s)		21.9			14.5			18.5			15.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



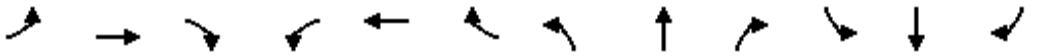
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	40	260	80	160	25	625	1325	25	25	900	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.91	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)	3433	1863	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
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)	3433	1863	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	215	40	260	80	160	25	625	1325	25	25	900	390
RTOR Reduction (vph)	0	0	0	0	0	21	0	0	9	0	0	0
Lane Group Flow (vph)	215	40	260	80	160	4	625	1325	16	25	900	390
Turn Type	Prot		Free	Prot		Perm	Prot		pm+ov	Prot		Free
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			Free			8			2			Free
Actuated Green, G (s)	9.7	13.5	90.0	10.4	14.2	14.2	20.9	47.9	58.3	2.2	29.2	90.0
Effective Green, g (s)	9.7	13.5	90.0	10.4	14.2	14.2	20.9	47.9	58.3	2.2	29.2	90.0
Actuated g/C Ratio	0.11	0.15	1.00	0.12	0.16	0.16	0.23	0.53	0.65	0.02	0.32	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	370	279	1583	205	294	250	797	2706	1096	43	1650	1583
v/s Ratio Prot	c0.06	0.02		0.05	c0.09		c0.18	0.26	0.00	0.01	c0.18	
v/s Ratio Perm			0.16			0.00			0.01			c0.25
v/c Ratio	0.58	0.14	0.16	0.39	0.54	0.02	0.78	0.49	0.01	0.58	0.55	0.25
Uniform Delay, d1	38.2	33.2	0.0	36.9	34.9	32.0	32.4	13.3	5.6	43.4	25.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	1.34	1.00
Incremental Delay, d2	2.3	0.2	0.2	1.2	2.1	0.0	5.1	0.6	0.0	13.5	0.9	0.3
Delay (s)	40.5	33.5	0.2	38.1	37.0	32.0	37.5	14.0	5.6	53.8	34.3	0.3
Level of Service	D	C	A	D	D	C	D	B	A	D	C	A
Approach Delay (s)		19.6			36.8			21.3			24.6	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



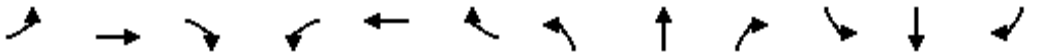
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	725	100	225	25	200	425	400	1500	25	500	1200	1150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	1.00	1.00	1.00	1.00	1.00	0.97	0.86	1.00	0.97	0.91	0.88
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)	4990	1863	1583	1770	1863	1583	3433	6408	1583	3433	5085	2787
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)	4990	1863	1583	1770	1863	1583	3433	6408	1583	3433	5085	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	725	100	225	25	200	425	400	1500	25	500	1200	1150
RTOR Reduction (vph)	0	0	152	0	0	0	0	0	7	0	0	0
Lane Group Flow (vph)	725	100	73	25	200	425	400	1500	18	500	1200	1150
Turn Type	Split		pt+ov	Split		Free	Prot		pt+ov	Prot		Free
Protected Phases	4	4	4 5	8	8		5	2	2 8	1	6	
Permitted Phases						Free						Free
Actuated Green, G (s)	15.9	15.9	29.2	13.8	13.8	90.0	13.3	28.3	42.1	16.0	31.0	90.0
Effective Green, g (s)	15.9	15.9	29.2	13.8	13.8	90.0	13.3	28.3	42.1	16.0	31.0	90.0
Actuated g/C Ratio	0.18	0.18	0.32	0.15	0.15	1.00	0.15	0.31	0.47	0.18	0.34	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	882	329	514	271	286	1583	507	2015	740	610	1752	2787
v/s Ratio Prot	c0.15	0.05	0.05	0.01	c0.11		0.12	0.23	0.01	c0.15	c0.24	
v/s Ratio Perm						0.27						c0.41
v/c Ratio	0.82	0.30	0.14	0.09	0.70	0.27	0.79	0.74	0.02	0.82	0.68	0.41
Uniform Delay, d1	35.7	32.2	21.5	32.7	36.1	0.0	37.0	27.6	12.9	35.6	25.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.34	1.25	1.48	1.00	1.00	1.00
Incremental Delay, d2	6.2	0.5	0.1	0.1	7.3	0.4	6.4	2.0	0.0	8.5	2.2	0.5
Delay (s)	41.9	32.8	21.7	32.9	43.4	0.4	56.0	36.7	19.1	44.1	27.5	0.5
Level of Service	D	C	C	C	D	A	E	D	B	D	C	A
Approach Delay (s)		36.7			14.9			40.5			19.5	
Approach LOS		D			B			D			B	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



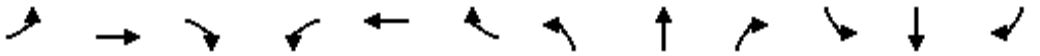
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	610	20	240	410	440	110	170	750	420	150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		0.94	0.95	1.00	1.00	1.00	0.88	0.97	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5061		4990	3539	1583	1770	1863	2787	3433	1863	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5061		4990	3539	1583	1770	1863	2787	3433	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	610	20	240	410	440	110	170	750	420	150	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	25	625	0	240	410	440	110	170	713	420	150	0
Turn Type	Prot			Prot		Free	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases						Free			2			
Actuated Green, G (s)	2.4	16.9		13.5	28.0	75.0	7.7	15.5	29.0	13.1	20.9	
Effective Green, g (s)	2.4	16.9		13.5	28.0	75.0	7.7	15.5	29.0	13.1	20.9	
Actuated g/C Ratio	0.03	0.23		0.18	0.37	1.00	0.10	0.21	0.39	0.17	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	57	1140		898	1321	1583	182	385	1226	600	519	
v/s Ratio Prot	0.01	c0.12		0.05	0.12		0.06	0.09	c0.10	c0.12	0.08	
v/s Ratio Perm						0.28			0.15			
v/c Ratio	0.44	0.55		0.27	0.31	0.28	0.60	0.44	0.58	0.70	0.29	
Uniform Delay, d1	35.6	25.7		26.5	16.7	0.0	32.2	26.0	18.2	29.1	21.2	
Progression Factor	1.00	1.00		1.23	0.95	1.00	0.78	1.17	1.46	1.00	1.00	
Incremental Delay, d2	5.3	0.5		0.2	0.1	0.4	5.4	3.6	0.7	3.7	1.4	
Delay (s)	41.0	26.2		32.7	16.0	0.4	30.5	34.1	27.2	32.8	22.6	
Level of Service	D	C		C	B	A	C	C	C	C	C	
Approach Delay (s)		26.8			13.4			28.7			30.1	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



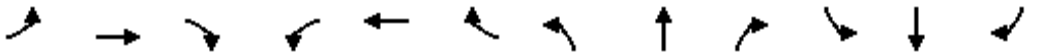
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	400	270	25	190	25	170	25	25	25	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.92		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3477		3433	1723		1770	1723	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3477		3433	1723		1770	1723	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	400	270	25	190	25	170	25	25	25	25	25
RTOR Reduction (vph)	0	0	0	0	11	0	0	16	0	0	20	0
Lane Group Flow (vph)	25	400	270	25	204	0	170	34	0	25	30	0
Turn Type	Prot		Free	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free									
Actuated Green, G (s)	1.0	10.5	42.0	0.5	10.0		5.8	14.5		0.5	9.2	
Effective Green, g (s)	1.0	10.5	42.0	0.5	10.0		5.8	14.5		0.5	9.2	
Actuated g/C Ratio	0.02	0.25	1.00	0.01	0.24		0.14	0.35		0.01	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	42	885	1583	21	828		474	595		21	377	
v/s Ratio Prot	0.01	c0.11		0.01	0.06		c0.05	0.02		0.01	0.02	
v/s Ratio Perm			c0.17									
v/c Ratio	0.60	0.45	0.17	1.19	0.25		0.36	0.06		1.19	0.08	
Uniform Delay, d1	20.3	13.3	0.0	20.8	12.9		16.4	9.2		20.8	13.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.6	0.4	0.2	261.4	0.2		0.5	0.0		261.4	0.1	
Delay (s)	40.9	13.7	0.2	282.1	13.1		16.9	9.2		282.1	13.1	
Level of Service	D	B	A	F	B		B	A		F	B	
Approach Delay (s)		9.4			41.1			15.1			102.8	
Approach LOS		A			D			B			F	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	42.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



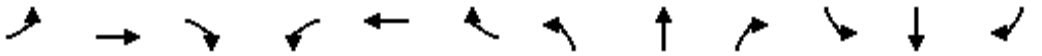
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1960	0	590	0	1420	550	0	1640	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor				0.91	0.91	1.00		0.95	0.88		0.91	1.00
Frt				1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected				0.95	0.95	1.00		1.00	1.00		1.00	1.00
Satd. Flow (prot)				3221	1610	1583		3539	2787		5085	1583
Flt Permitted				0.95	0.95	1.00		1.00	1.00		1.00	1.00
Satd. Flow (perm)				3221	1610	1583		3539	2787		5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	1960	0	590	0	1420	550	0	1640	130
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	73
Lane Group Flow (vph)	0	0	0	1313	647	590	0	1420	550	0	1640	57
Turn Type				Split		Free			pm+ov			Perm
Protected Phases				8	8			2	8		6	
Permitted Phases						Free			2			6
Actuated Green, G (s)				34.0	34.0	75.0		33.0	67.0		33.0	33.0
Effective Green, g (s)				34.0	34.0	75.0		33.0	67.0		33.0	33.0
Actuated g/C Ratio				0.45	0.45	1.00		0.44	0.89		0.44	0.44
Clearance Time (s)				4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)				3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)				1460	730	1583		1557	2787		2237	697
v/s Ratio Prot				c0.41	0.40			c0.40	0.09		0.32	
v/s Ratio Perm						0.37			0.11			0.04
v/c Ratio				0.90	0.89	0.37		0.91	0.20		0.73	0.08
Uniform Delay, d1				18.9	18.7	0.0		19.6	0.5		17.4	12.2
Progression Factor				1.00	1.00	1.00		0.81	1.00		0.68	0.20
Incremental Delay, d2				7.7	12.5	0.7		8.8	0.0		1.7	0.2
Delay (s)				26.7	31.2	0.7		24.7	0.5		13.5	2.6
Level of Service				C	C	A		C	A		B	A
Approach Delay (s)		0.0			21.8			18.0			12.7	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	0	940	0	0	0	0	1890	1760	0	2760	840
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00					0.91	0.88		0.91	1.00
Frt		1.00	0.85					1.00	0.85		1.00	0.85
Flt Protected		0.95	1.00					1.00	1.00		1.00	1.00
Satd. Flow (prot)		1770	1583					5085	2787		5085	1583
Flt Permitted		0.95	1.00					1.00	1.00		1.00	1.00
Satd. Flow (perm)		1770	1583					5085	2787		5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	0	940	0	0	0	0	1890	1760	0	2760	840
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	432	0	0	206
Lane Group Flow (vph)	0	80	940	0	0	0	0	1890	1328	0	2760	634
Turn Type	Prot		Free						Perm			Perm
Protected Phases	7	4						2			6	
Permitted Phases			Free						2			6
Actuated Green, G (s)		10.4	75.0					56.6	56.6		56.6	56.6
Effective Green, g (s)		10.4	75.0					56.6	56.6		56.6	56.6
Actuated g/C Ratio		0.14	1.00					0.75	0.75		0.75	0.75
Clearance Time (s)		4.0						4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0						3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		245	1583					3837	2103		3837	1195
v/s Ratio Prot		0.05						0.37			c0.54	
v/s Ratio Perm			c0.59						0.48			0.40
v/c Ratio		0.33	0.59					0.49	0.63		0.72	0.53
Uniform Delay, d1		29.1	0.0					3.6	4.3		4.9	3.8
Progression Factor		1.00	1.00					1.00	1.00		0.85	2.80
Incremental Delay, d2		0.8	1.6					0.5	1.5		0.6	0.9
Delay (s)		29.9	1.6					4.0	5.8		4.9	11.5
Level of Service		C	A					A	A		A	B
Approach Delay (s)		3.9			0.0			4.9			6.4	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

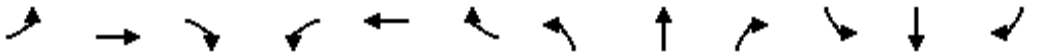


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	350	75	250	200	75	1350	225	275	60	90	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.94	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		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)	1770	3539	1583	1770	4877		4990	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	4877		4990	1863	1583	1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	350	75	250	200	75	1350	225	275	60	90	170
RTOR Reduction (vph)	0	0	62	0	54	0	0	0	219	0	0	154
Lane Group Flow (vph)	50	350	13	250	221	0	1350	225	56	60	90	16
Turn Type	Prot		Perm	Prot			Prot		Over	Prot		Over
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases			2									
Actuated Green, G (s)	7.6	13.2	13.2	16.0	21.6		26.3	28.9	16.0	4.4	7.0	7.6
Effective Green, g (s)	7.6	13.2	13.2	16.0	21.6		26.3	28.9	16.0	4.4	7.0	7.6
Actuated g/C Ratio	0.10	0.17	0.17	0.20	0.28		0.34	0.37	0.20	0.06	0.09	0.10
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	171	595	266	361	1342		1672	686	323	99	166	153
v/s Ratio Prot	0.03	c0.10		c0.14	0.05		c0.27	0.12	0.04	0.03	c0.05	0.01
v/s Ratio Perm			0.01									
v/c Ratio	0.29	0.59	0.05	0.69	0.16		0.81	0.33	0.17	0.61	0.54	0.11
Uniform Delay, d1	33.0	30.1	27.4	29.0	21.6		23.8	17.8	25.8	36.2	34.2	32.4
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	1.0	1.5	0.1	5.7	0.1		3.0	0.3	0.3	10.1	3.6	0.3
Delay (s)	33.9	31.6	27.5	34.6	21.7		26.8	18.1	26.1	46.3	37.8	32.7
Level of Service	C	C	C	C	C		C	B	C	D	D	C
Approach Delay (s)		31.2			27.8			25.6			36.7	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	78.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

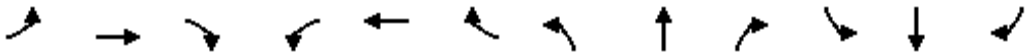
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1475	1515	0	1575	525	720
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	1.00		0.91	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		5085	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		5085	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1475	1515	0	1575	525	720
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1475	1515	0	1575	525	720
Turn Type		Free				Free
Protected Phases	4			8	2	
Permitted Phases		Free				Free
Actuated Green, G (s)	43.9	90.0		43.9	38.1	90.0
Effective Green, g (s)	43.9	90.0		43.9	38.1	90.0
Actuated g/C Ratio	0.49	1.00		0.49	0.42	1.00
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1726	1583		2480	749	1583
v/s Ratio Prot	0.42			0.31	0.30	
v/s Ratio Perm		c0.96				0.45
v/c Ratio	0.85	0.96		0.64	0.70	0.45
Uniform Delay, d1	20.2	0.0		17.1	21.3	0.0
Progression Factor	0.89	1.00		0.59	1.00	1.00
Incremental Delay, d2	3.0	11.0		0.3	5.4	0.9
Delay (s)	21.1	11.0		10.4	26.7	0.9
Level of Service	C	B		B	C	A
Approach Delay (s)	16.0			10.4	11.8	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



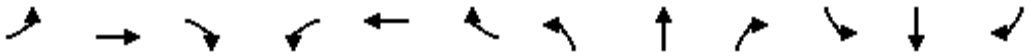
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	370	0	560	875	325	0	0	630	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor				0.95	0.95	1.00	0.97	1.00			0.95	
Frt				1.00	1.00	0.85	1.00	1.00			0.97	
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1681	1681	1583	3433	1863			3426	
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	
Satd. Flow (perm)				1681	1681	1583	3433	1863			3426	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	370	0	560	875	325	0	0	630	170
RTOR Reduction (vph)	0	0	0	0	0	453	0	0	0	0	33	0
Lane Group Flow (vph)	0	0	0	185	185	107	875	325	0	0	767	0
Turn Type				Split		Perm	Split					
Protected Phases				8	8		2	2			6	
Permitted Phases						8						
Actuated Green, G (s)				14.3	14.3	14.3	30.0	30.0			18.7	
Effective Green, g (s)				14.3	14.3	14.3	30.0	30.0			18.7	
Actuated g/C Ratio				0.19	0.19	0.19	0.40	0.40			0.25	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0			3.0	
Lane Grp Cap (vph)				321	321	302	1373	745			854	
v/s Ratio Prot				c0.11	0.11		c0.25	0.17			c0.22	
v/s Ratio Perm						0.07						
v/c Ratio				0.58	0.58	0.35	0.64	0.44			0.90	
Uniform Delay, d1				27.6	27.6	26.3	18.1	16.4			27.2	
Progression Factor				1.00	1.00	1.00	0.30	0.31			1.03	
Incremental Delay, d2				2.5	2.5	0.7	1.7	1.4			11.8	
Delay (s)				30.1	30.1	27.1	7.1	6.4			39.8	
Level of Service				C	C	C	A	A			D	
Approach Delay (s)		0.0			28.3			6.9			39.8	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



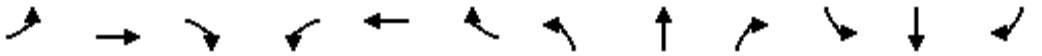
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	10	440	0	0	0	0	1100	540	350	650	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1782	1583					3539	1583	1770	3539	
Flt Permitted		0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1782	1583					3539	1583	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	10	440	0	0	0	0	1100	540	350	650	0
RTOR Reduction (vph)	0	0	381	0	0	0	0	0	282	0	0	0
Lane Group Flow (vph)	0	110	59	0	0	0	0	1100	258	350	650	0
Turn Type	Split		Perm						Perm	Split		
Protected Phases	4	4						2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)		10.0	10.0					34.2	34.2	18.8	18.8	
Effective Green, g (s)		10.0	10.0					34.2	34.2	18.8	18.8	
Actuated g/C Ratio		0.13	0.13					0.46	0.46	0.25	0.25	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		238	211					1614	722	444	887	
v/s Ratio Prot		c0.06						c0.31		c0.20	0.18	
v/s Ratio Perm			0.04						0.16			
v/c Ratio		0.46	0.28					0.68	0.36	0.79	0.73	
Uniform Delay, d1		30.0	29.3					16.1	13.3	26.2	25.8	
Progression Factor		1.00	1.00					1.00	1.00	0.94	0.94	
Incremental Delay, d2		1.4	0.7					2.3	1.4	6.2	2.1	
Delay (s)		31.4	30.0					18.4	14.6	30.9	26.4	
Level of Service		C	C					B	B	C	C	
Approach Delay (s)		30.3			0.0			17.2			28.0	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



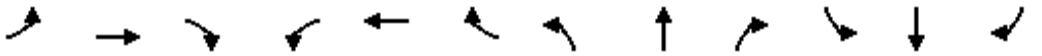
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	180	10	20	675	75	0	0	220	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					1.00		0.97	1.00			1.00	
Frt					0.99		1.00	1.00			0.99	
Flt Protected					0.96		0.95	1.00			1.00	
Satd. Flow (prot)					1763		3433	1863			1842	
Flt Permitted					0.96		0.95	1.00			1.00	
Satd. Flow (perm)					1763		3433	1863			1842	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	180	10	20	675	75	0	0	220	20
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	0	204	0	675	75	0	0	235	0
Turn Type				Split			Split					
Protected Phases				8	8		2	2			6	
Permitted Phases												
Actuated Green, G (s)					13.8		34.7	34.7			14.5	
Effective Green, g (s)					13.8		34.7	34.7			14.5	
Actuated g/C Ratio					0.18		0.46	0.46			0.19	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					324		1588	862			356	
v/s Ratio Prot					c0.12		c0.20	0.04			c0.13	
v/s Ratio Perm												
v/c Ratio					0.63		0.43	0.09			0.66	
Uniform Delay, d1					28.2		13.5	11.3			28.0	
Progression Factor					1.00		0.31	0.35			1.02	
Incremental Delay, d2					4.0		0.8	0.2			4.5	
Delay (s)					32.2		5.0	4.2			33.1	
Level of Service					C		A	A			C	
Approach Delay (s)		0.0			32.2			4.9			33.1	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



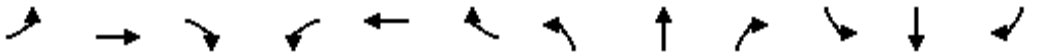
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	310	0	0	0	0	730	470	100	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00						0.95	1.00	1.00	1.00	
Frt		0.87						1.00	0.85	1.00	1.00	
Flt Protected		1.00						1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1622						3539	1583	1770	1863	
Flt Permitted		1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1622						3539	1583	1770	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	310	0	0	0	0	730	470	100	300	0
RTOR Reduction (vph)	0	274	0	0	0	0	0	0	231	0	0	0
Lane Group Flow (vph)	0	56	0	0	0	0	0	730	239	100	300	0
Turn Type	Split								Perm	Split		
Protected Phases	4	4						2		6	6	
Permitted Phases									2			
Actuated Green, G (s)		8.7						38.1	38.1	16.2	16.2	
Effective Green, g (s)		8.7						38.1	38.1	16.2	16.2	
Actuated g/C Ratio		0.12						0.51	0.51	0.22	0.22	
Clearance Time (s)		4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		188						1798	804	382	402	
v/s Ratio Prot		c0.03						c0.21		0.06	c0.16	
v/s Ratio Perm									0.15			
v/c Ratio		0.30						0.41	0.30	0.26	0.75	
Uniform Delay, d1		30.4						11.4	10.7	24.4	27.5	
Progression Factor		1.00						1.00	1.00	0.96	0.90	
Incremental Delay, d2		0.9						0.7	0.9	0.3	6.6	
Delay (s)		31.2						12.1	11.6	23.7	31.3	
Level of Service		C						B	B	C	C	
Approach Delay (s)		31.2			0.0			11.9			29.4	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



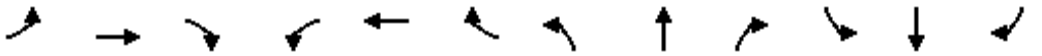
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	2450	900	0	1775	325	0	0	0	540	50	1270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00		0.95	1.00				0.95	0.95	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	0.96	1.00
Satd. Flow (prot)	1770	5085	1583		3539	1583				1681	1699	1583
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	0.96	1.00
Satd. Flow (perm)	1770	5085	1583		3539	1583				1681	1699	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	2450	900	0	1775	325	0	0	0	540	50	1270
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	275	2450	900	0	1775	325	0	0	0	292	298	1270
Turn Type	Prot		Free			Free				Prot		Free
Protected Phases	5	2			6					7	4	
Permitted Phases			Free			Free						Free
Actuated Green, G (s)	15.0	66.0	90.0		47.0	90.0				16.0	16.0	90.0
Effective Green, g (s)	15.0	66.0	90.0		47.0	90.0				16.0	16.0	90.0
Actuated g/C Ratio	0.17	0.73	1.00		0.52	1.00				0.18	0.18	1.00
Clearance Time (s)	4.0	4.0			4.0					4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0					3.0	3.0	
Lane Grp Cap (vph)	295	3729	1583		1848	1583				299	302	1583
v/s Ratio Prot	0.16	0.48			c0.50					0.17	0.18	
v/s Ratio Perm			0.57			0.21						c0.80
v/c Ratio	0.93	0.66	0.57		0.96	0.21				0.98	0.99	0.80
Uniform Delay, d1	37.0	6.2	0.0		20.6	0.0				36.8	36.9	0.0
Progression Factor	1.00	1.00	1.00		1.02	1.00				1.00	1.00	1.00
Incremental Delay, d2	34.8	0.9	1.5		11.1	0.2				45.2	47.7	4.4
Delay (s)	71.8	7.1	1.5		32.2	0.2				82.0	84.6	4.4
Level of Service	E	A	A		C	A				F	F	A
Approach Delay (s)		10.6			27.2			0.0			29.4	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



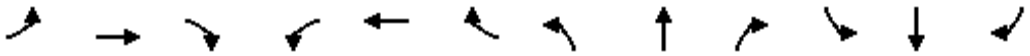
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	70	0	10	300	2010	0	0	200	520
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					1.00		1.00	0.91			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					0.96		0.95	1.00			1.00	1.00
Satd. Flow (prot)					1755		1770	5085			1863	1583
Flt Permitted					0.96		0.95	1.00			1.00	1.00
Satd. Flow (perm)					1755		1770	5085			1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	70	0	10	300	2010	0	0	200	520
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	0	283
Lane Group Flow (vph)	0	0	0	0	71	0	300	2010	0	0	200	237
Turn Type				Split			Prot					Perm
Protected Phases				8	8		5	2			6	
Permitted Phases												6
Actuated Green, G (s)					5.5		15.2	46.5			27.3	27.3
Effective Green, g (s)					5.5		15.2	46.5			27.3	27.3
Actuated g/C Ratio					0.09		0.25	0.78			0.46	0.46
Clearance Time (s)					4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					161		448	3941			848	720
v/s Ratio Prot					c0.04		c0.17	c0.40			0.11	
v/s Ratio Perm												0.15
v/c Ratio					0.44		0.67	0.51			0.24	0.33
Uniform Delay, d1					25.8		20.1	2.5			10.0	10.5
Progression Factor					1.00		1.00	1.04			1.00	1.00
Incremental Delay, d2					1.9		2.7	0.3			0.7	1.2
Delay (s)					27.7		22.9	3.0			10.6	11.7
Level of Service					C		C	A			B	B
Approach Delay (s)		0.0			27.7			5.6			11.4	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



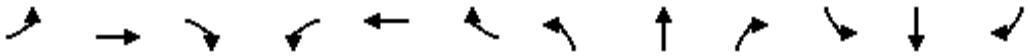
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	910	0	310	0	0	0	0	1400	1060	10	260	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor	0.94	1.00						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)	4990	1583						3539	1583	1770	3539	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	4990	1583						3539	1583	1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	910	0	310	0	0	0	0	1400	1060	10	260	0
RTOR Reduction (vph)	0	230	0	0	0	0	0	0	497	0	0	0
Lane Group Flow (vph)	910	80	0	0	0	0	0	1400	563	10	260	0
Turn Type	Split								Perm	Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	15.5	15.5						31.7	31.7	0.8	36.5	
Effective Green, g (s)	15.5	15.5						31.7	31.7	0.8	36.5	
Actuated g/C Ratio	0.26	0.26						0.53	0.53	0.01	0.61	
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1289	409						1870	836	24	2153	
v/s Ratio Prot	c0.18	0.05						c0.40		c0.01	0.07	
v/s Ratio Perm									0.36			
v/c Ratio	0.71	0.20						0.75	0.67	0.42	0.12	
Uniform Delay, d1	20.2	17.4						11.0	10.4	29.4	5.0	
Progression Factor	1.00	1.00						1.00	1.00	0.83	1.28	
Incremental Delay, d2	1.8	0.2						2.8	4.3	11.2	0.1	
Delay (s)	22.0	17.6						13.8	14.7	35.4	6.5	
Level of Service	C	B						B	B	D	A	
Approach Delay (s)		20.9			0.0			14.2			7.5	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



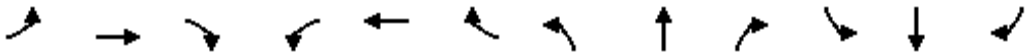
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized						Yes			Yes			
Volume (veh/h)	30	520	0	0	480	200	20	0	280	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	30	520	0	0	480	200	20	0	280	0	0	0
Approach Volume (veh/h)		550			480			20			0	
Crossing Volume (veh/h)		0			50			550			500	
High Capacity (veh/h)		1385			1332			897			933	
High v/c (veh/h)		0.40			0.36			0.02			0.00	
Low Capacity (veh/h)		1161			1113			722			754	
Low v/c (veh/h)		0.47			0.43			0.03			0.00	

Intersection Summary				
Maximum v/c High	0.40			
Maximum v/c Low	0.47			
Intersection Capacity Utilization	77.0%	ICU Level of Service	D	



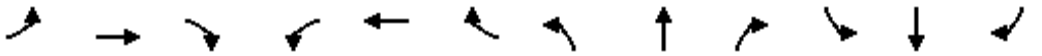
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized			Yes									
Volume (veh/h)	0	350	270	430	70	0	0	0	0	200	0	100
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	350	270	430	70	0	0	0	0	200	0	100
Approach Volume (veh/h)		350			500			0			300	
Crossing Volume (veh/h)		630			0			550			500	
High Capacity (veh/h)		841			1385			897			933	
High v/c (veh/h)		0.42			0.36			0.00			0.32	
Low Capacity (veh/h)		673			1161			722			754	
Low v/c (veh/h)		0.52			0.43			0.00			0.40	

Intersection Summary					
Maximum v/c High	0.42				
Maximum v/c Low	0.52				
Intersection Capacity Utilization	67.0%	ICU Level of Service		C	



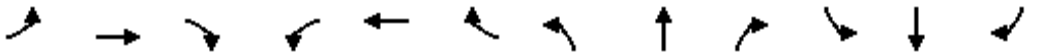
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	0	125	150	1260	0	0	1000	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1770	1583	1770	3539			3539	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1770	1583	1770	3539			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	10	0	125	150	1260	0	0	1000	350
RTOR Reduction (vph)	0	0	0	0	0	58	0	0	0	0	0	153
Lane Group Flow (vph)	0	0	0	0	10	67	150	1260	0	0	1000	197
Turn Type				Split		Perm	Prot					Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					7.0	7.0	7.2	45.0			33.8	33.8
Effective Green, g (s)					7.0	7.0	7.2	45.0			33.8	33.8
Actuated g/C Ratio					0.12	0.12	0.12	0.75			0.56	0.56
Clearance Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					207	185	212	2654			1994	892
v/s Ratio Prot					0.01		c0.08	0.36			c0.28	
v/s Ratio Perm						c0.04						0.12
v/c Ratio					0.05	0.36	0.71	0.47			0.50	0.22
Uniform Delay, d1					23.5	24.4	25.4	2.9			8.0	6.5
Progression Factor					1.00	1.00	0.99	1.53			1.69	4.40
Incremental Delay, d2					0.1	1.2	9.4	0.6			0.6	0.4
Delay (s)					23.6	25.6	34.5	5.0			14.1	29.1
Level of Service					C	C	C	A			B	C
Approach Delay (s)		0.0			25.5			8.2			18.0	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



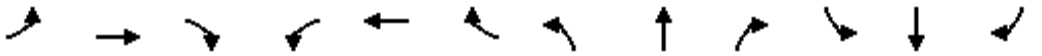
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	0	270	0	0	0	0	780	20	350	1125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					1.00		1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3526		1770	3539	
Flt Permitted	0.95	0.95	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1681	1681	1583					3526		1770	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	0	270	0	0	0	0	780	20	350	1125	0
RTOR Reduction (vph)	0	0	72	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	175	175	198	0	0	0	0	797	0	350	1125	0
Turn Type	Split		Perm							Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	12.3	12.3	12.3					21.2		14.5	39.7	
Effective Green, g (s)	12.3	12.3	12.3					21.2		14.5	39.7	
Actuated g/C Ratio	0.20	0.20	0.20					0.35		0.24	0.66	
Clearance Time (s)	4.0	4.0	4.0					4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0	3.0	
Lane Grp Cap (vph)	345	345	325					1246		428	2342	
v/s Ratio Prot	0.10	0.10						c0.23		c0.20	0.32	
v/s Ratio Perm			c0.13									
v/c Ratio	0.51	0.51	0.61					0.64		0.82	0.48	
Uniform Delay, d1	21.2	21.2	21.7					16.2		21.5	5.0	
Progression Factor	1.00	1.00	1.00					1.00		1.18	1.72	
Incremental Delay, d2	1.2	1.2	3.4					2.5		11.1	0.7	
Delay (s)	22.3	22.3	25.0					18.7		36.6	9.3	
Level of Service	C	C	C					B		D	A	
Approach Delay (s)		23.5			0.0			18.7			15.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



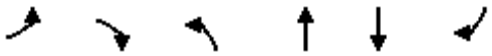
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	70	0	10	50	320	0	0	350	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	1.00			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1770	1583	1770	1863			3539	1583
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1770	1583	1770	1863			3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	70	0	10	50	320	0	0	350	230
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	77
Lane Group Flow (vph)	0	0	0	0	70	1	50	320	0	0	350	153
Turn Type				Split		Perm	Prot					Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					5.6	5.6	5.1	54.4			45.3	45.3
Effective Green, g (s)					5.6	5.6	5.1	54.4			45.3	45.3
Actuated g/C Ratio					0.08	0.08	0.08	0.80			0.67	0.67
Clearance Time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0	3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					146	130	133	1490			2358	1055
v/s Ratio Prot					c0.04		c0.03	c0.17			0.10	
v/s Ratio Perm						0.00						0.10
v/c Ratio					0.48	0.01	0.38	0.21			0.15	0.15
Uniform Delay, d1					29.8	28.6	29.9	1.6			4.2	4.2
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					2.5	0.0	1.8	0.3			0.1	0.3
Delay (s)					32.3	28.7	31.7	2.0			4.3	4.5
Level of Service					C	C	C	A			A	A
Approach Delay (s)		0.0			31.8			6.0			4.4	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	0	70	0	0	0	0	180	330	160	260	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00						0.95	1.00	1.00	1.00	
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)	1770	1583						3539	1583	1770	1863	
Flt Permitted	0.95	1.00						1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1583						3539	1583	1770	1863	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	190	0	70	0	0	0	0	180	330	160	260	0
RTOR Reduction (vph)	0	56	0	0	0	0	0	0	178	0	0	0
Lane Group Flow (vph)	190	14	0	0	0	0	0	180	152	160	260	0
Turn Type	Split								Perm	Prot		
Protected Phases	4	4						2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	11.6	11.6						27.6	27.6	8.8	40.4	
Effective Green, g (s)	11.6	11.6						27.6	27.6	8.8	40.4	
Actuated g/C Ratio	0.19	0.19						0.46	0.46	0.15	0.67	
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	342	306						1628	728	260	1254	
v/s Ratio Prot	c0.11	0.01						0.05		c0.09	c0.14	
v/s Ratio Perm									0.10			
v/c Ratio	0.56	0.04						0.11	0.21	0.62	0.21	
Uniform Delay, d1	21.9	19.7						9.2	9.7	24.0	3.7	
Progression Factor	1.00	1.00						1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	0.1						0.1	0.7	4.3	0.4	
Delay (s)	23.8	19.7						9.4	10.3	28.3	4.1	
Level of Service	C	B						A	B	C	A	
Approach Delay (s)		22.7			0.0			10.0			13.3	
Approach LOS		C			A			A			B	

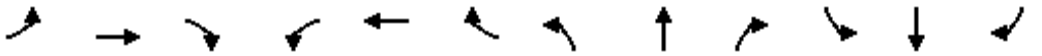
Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	50	30	50	40	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	50	30	50	40	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	150	40	40			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	150	40	40			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	98			
cM capacity (veh/h)	826	1031	1570			

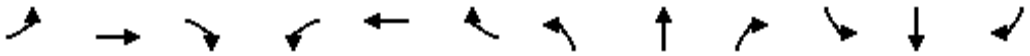
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	50	80	40
Volume Left	0	30	0
Volume Right	50	0	0
cSH	1031	1570	1700
Volume to Capacity	0.05	0.02	0.02
Queue Length 95th (ft)	4	1	0
Control Delay (s)	8.7	2.8	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	2.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	950	550	75	375	60	450	150	125	50	75	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.93		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	1824		3433	1736		1770	1751	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	1824		3433	1736		1770	1751	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	950	550	75	375	60	450	150	125	50	75	50
RTOR Reduction (vph)	0	0	0	0	7	0	0	42	0	0	35	0
Lane Group Flow (vph)	50	950	550	75	428	0	450	233	0	50	90	0
Turn Type	Prot		Free	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free									
Actuated Green, G (s)	5.1	25.4	75.0	7.1	27.4		12.4	22.7		3.8	14.1	
Effective Green, g (s)	5.1	25.4	75.0	7.1	27.4		12.4	22.7		3.8	14.1	
Actuated g/C Ratio	0.07	0.34	1.00	0.09	0.37		0.17	0.30		0.05	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	120	1199	1583	168	666		568	525		90	329	
v/s Ratio Prot	0.03	c0.27		0.04	0.23		c0.13	c0.13		0.03	0.05	
v/s Ratio Perm			c0.35									
v/c Ratio	0.42	0.79	0.35	0.45	0.64		0.79	0.44		0.56	0.27	
Uniform Delay, d1	33.5	22.4	0.0	32.1	19.7		30.1	21.1		34.8	26.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.10	0.69		1.00	1.00	
Incremental Delay, d2	2.3	3.7	0.6	1.9	2.1		6.1	2.2		7.2	2.1	
Delay (s)	35.9	26.1	0.6	34.0	21.9		39.3	16.8		42.0	28.1	
Level of Service	D	C	A	C	C		D	B		D	C	
Approach Delay (s)		17.4			23.7			30.7			32.1	
Approach LOS		B			C			C			C	

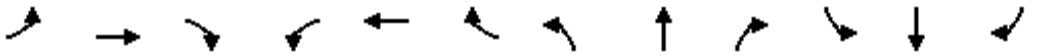
Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	420	150	40	10	25	50	25	20	25	50	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	25	420	150	40	10	25	50	25	20	25	50	25
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	35			570			698	660	495	680	722	22
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	35			570			698	660	495	680	722	22
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			96			83	93	97	92	85	98
cM capacity (veh/h)	1576			1002			294	362	575	320	333	1054

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	595	75	95	100
Volume Left	25	40	50	25
Volume Right	150	25	20	25
cSH	1576	1002	347	397
Volume to Capacity	0.02	0.04	0.27	0.25
Queue Length 95th (ft)	1	3	27	25
Control Delay (s)	0.5	4.8	19.2	17.1
Lane LOS	A	A	C	C
Approach Delay (s)	0.5	4.8	19.2	17.1
Approach LOS			C	C

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			

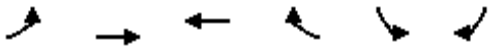


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	320	30	80	25	25	30	730	1290	25	630	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	1.00	0.88	1.00	1.00	
Frt	1.00	0.99		1.00	0.92		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1839		3433	1723		1770	1863	2787	1770	1850	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	1770	1839		3433	1723		1770	1863	2787	438	1850	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	320	30	80	25	25	30	730	1290	25	630	30
RTOR Reduction (vph)	0	5	0	0	21	0	0	0	0	0	2	0
Lane Group Flow (vph)	110	345	0	80	29	0	30	730	1290	25	658	0
Turn Type	Prot			Prot			Prot		Free	Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases									Free	6		
Actuated Green, G (s)	10.1	18.1		4.2	12.2		1.6	40.7	75.0	35.1	35.1	
Effective Green, g (s)	10.1	18.1		4.2	12.2		1.6	40.7	75.0	35.1	35.1	
Actuated g/C Ratio	0.13	0.24		0.06	0.16		0.02	0.54	1.00	0.47	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	444		192	280		38	1011	2787	205	866	
v/s Ratio Prot	0.06	c0.19		0.02	0.02		0.02	c0.39			0.36	
v/s Ratio Perm									c0.46	0.06		
v/c Ratio	0.46	0.78		0.42	0.10		0.79	0.72	0.46	0.12	0.76	
Uniform Delay, d1	29.9	26.6		34.2	26.7		36.5	12.9	0.0	11.3	16.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.4	8.4		1.5	0.2		67.6	4.5	0.6	1.2	6.2	
Delay (s)	31.4	34.9		35.7	26.9		104.1	17.4	0.6	12.5	22.7	
Level of Service	C	C		D	C		F	B	A	B	C	
Approach Delay (s)		34.1			32.3			8.1			22.3	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

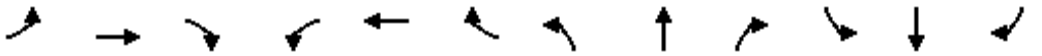
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	400	420	850	330	220	1020
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1863	1583	3433	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1863	1583	3433	1863	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	420	850	330	220	1020
RTOR Reduction (vph)	0	314	0	0	0	0
Lane Group Flow (vph)	400	106	850	330	220	1020
Turn Type		Over	Prot			Free
Protected Phases	4	2	3	8	2	
Permitted Phases						Free
Actuated Green, G (s)	15.4	15.1	17.5	36.9	15.1	60.0
Effective Green, g (s)	15.4	15.1	17.5	36.9	15.1	60.0
Actuated g/C Ratio	0.26	0.25	0.29	0.62	0.25	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	478	398	1001	1146	445	1583
v/s Ratio Prot	c0.21	0.07	c0.25	0.18	0.12	
v/s Ratio Perm						c0.64
v/c Ratio	0.84	0.27	0.85	0.29	0.49	0.64
Uniform Delay, d1	21.1	18.0	20.0	5.4	19.2	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.1	1.6	6.8	0.1	3.9	2.0
Delay (s)	33.2	19.6	26.8	5.5	23.1	2.0
Level of Service	C	B	C	A	C	A
Approach Delay (s)	26.2			20.9	5.8	
Approach LOS	C			C	A	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



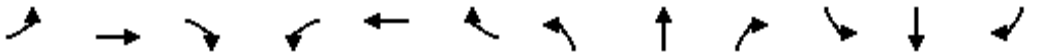
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	140	1070	1160	500	90	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	1070	1160	500	90	140
RTOR Reduction (vph)	0	0	0	83	0	114
Lane Group Flow (vph)	140	1070	1160	417	90	26
Turn Type	Prot			pm+ov		Perm
Protected Phases	7	4	8	6	6	
Permitted Phases				8		6
Actuated Green, G (s)	5.1	30.5	21.4	30.2	8.8	8.8
Effective Green, g (s)	5.1	30.5	21.4	30.2	8.8	8.8
Actuated g/C Ratio	0.11	0.64	0.45	0.64	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	191	2282	1601	1145	329	295
v/s Ratio Prot	c0.08	0.30	c0.33	c0.07	0.05	
v/s Ratio Perm				0.20		0.02
v/c Ratio	0.73	0.47	0.72	0.36	0.27	0.09
Uniform Delay, d1	20.4	4.3	10.5	4.0	16.5	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.5	0.2	1.7	0.2	0.5	0.1
Delay (s)	34.0	4.4	12.2	4.2	17.0	16.1
Level of Service	C	A	B	A	B	B
Approach Delay (s)		7.8	9.8		16.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	47.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



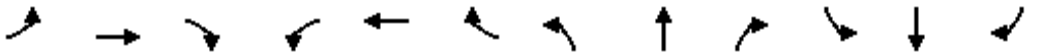
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	30	120	25	20	240	40	1330	25	470	680	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.91		0.97	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.97	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1806	1583		1812	1583	1770	5071		3433	3524	
Flt Permitted		0.78	1.00		0.81	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1459	1583		1512	1583	1770	5071		3433	3524	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	30	120	25	20	240	40	1330	25	470	680	20
RTOR Reduction (vph)	0	0	96	0	0	2	0	2	0	0	2	0
Lane Group Flow (vph)	0	80	24	0	45	238	40	1353	0	470	698	0
Turn Type	Perm		pm+ov	Perm		pm+ov	Prot			Prot		
Protected Phases		4	5		8	1	5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		9.2	15.3		9.2	25.5	6.1	37.5		16.3	47.7	
Effective Green, g (s)		9.2	15.3		9.2	25.5	6.1	37.5		16.3	47.7	
Actuated g/C Ratio		0.12	0.20		0.12	0.34	0.08	0.50		0.22	0.64	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		179	407		185	623	144	2536		746	2241	
v/s Ratio Prot			0.00			0.08	0.02	c0.27		c0.14	0.20	
v/s Ratio Perm		c0.05	0.01		0.03	0.07						
v/c Ratio		0.45	0.06		0.24	0.38	0.28	0.53		0.63	0.31	
Uniform Delay, d1		30.5	24.1		29.8	18.8	32.4	12.8		26.6	6.2	
Progression Factor		1.00	1.00		1.00	1.00	0.56	1.72		1.00	1.00	
Incremental Delay, d2		1.8	0.1		0.7	0.4	0.9	0.7		1.7	0.4	
Delay (s)		32.3	24.1		30.4	19.2	19.1	22.7		28.4	6.6	
Level of Service		C	C		C	B	B	C		C	A	
Approach Delay (s)		27.4			20.9			22.6			15.3	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



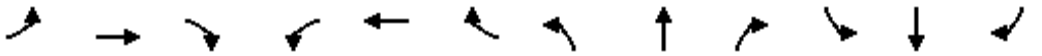
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	1000	975	180	900	160	575	850	175	450	750	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95		0.94	0.95	1.00	0.94	0.95	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)	1770	5085	1583	3433	3459		4990	3539	1583	4990	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	3433	3459		4990	3539	1583	4990	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	125	1000	975	180	900	160	575	850	175	450	750	250
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	7	0	0	0
Lane Group Flow (vph)	125	1000	975	180	1044	0	575	850	168	450	750	250
Turn Type	Prot		Free	Prot			Prot		pm+ov	Prot		Free
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			Free						2			Free
Actuated Green, G (s)	7.0	23.6	90.0	11.4	28.0		12.9	26.7	38.1	12.3	26.1	90.0
Effective Green, g (s)	7.0	23.6	90.0	11.4	28.0		12.9	26.7	38.1	12.3	26.1	90.0
Actuated g/C Ratio	0.08	0.26	1.00	0.13	0.31		0.14	0.30	0.42	0.14	0.29	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	138	1333	1583	435	1076		715	1050	670	682	1026	1583
v/s Ratio Prot	0.07	0.20		0.05	c0.30		c0.12	c0.24	0.03	0.09	0.21	
v/s Ratio Perm			c0.62						0.07			0.16
v/c Ratio	0.91	0.75	0.62	0.41	0.97		0.80	0.81	0.25	0.66	0.73	0.16
Uniform Delay, d1	41.2	30.5	0.0	36.2	30.6		37.3	29.3	16.7	36.9	28.8	0.0
Progression Factor	1.04	0.59	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.3	1.7	1.3	0.6	20.5		6.5	6.8	0.2	2.3	4.6	0.2
Delay (s)	81.3	19.8	1.3	36.9	51.1		43.9	36.0	16.9	39.2	33.4	0.2
Level of Service	F	B	A	D	D		D	D	B	D	C	A
Approach Delay (s)		14.8			49.1			36.8			29.5	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



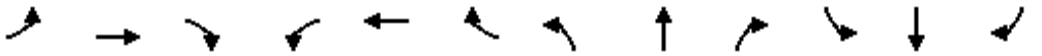
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	260	690	550	140	390	60	580	1140	170	140	800	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.5	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3468		3433	3470		1770	3480	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3468		3433	3470		1770	3480	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	260	690	550	140	390	60	580	1140	170	140	800	100
RTOR Reduction (vph)	0	0	49	0	10	0	0	10	0	0	8	0
Lane Group Flow (vph)	260	690	501	140	440	0	580	1300	0	140	892	0
Turn Type	Prot		pm+ov	Prot			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.6	27.8	48.4	12.3	22.5		20.6	44.8		9.5	33.7	
Effective Green, g (s)	18.1	28.3	48.4	12.8	23.0		21.1	45.8		10.0	34.7	
Actuated g/C Ratio	0.16	0.25	0.43	0.11	0.20		0.19	0.41		0.09	0.31	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	5.0		4.5	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	887	742	201	707		642	1408		157	1070	
v/s Ratio Prot	c0.15	c0.19	0.12	0.08	0.13		c0.17	c0.37		0.08	0.26	
v/s Ratio Perm			0.19									
v/c Ratio	0.92	0.78	0.68	0.70	0.62		0.90	0.92		0.89	0.83	
Uniform Delay, d1	46.6	39.4	25.9	48.2	41.0		44.9	31.9		50.9	36.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	31.9	4.3	2.4	10.0	1.7		16.1	10.4		41.9	5.7	
Delay (s)	78.6	43.7	28.4	58.2	42.7		61.0	42.2		92.8	42.1	
Level of Service	E	D	C	E	D		E	D		F	D	
Approach Delay (s)		44.1			46.4			48.0			48.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	112.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



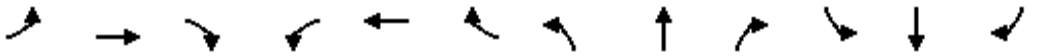
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	320	1390	120	20	180	90	110	610	60	50	580	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.95		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)	1770	3497		1770	3362		1770	3492		1770	3419	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3497		1770	3362		1770	3492		1770	3419	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	320	1390	120	20	180	90	110	610	60	50	580	170
RTOR Reduction (vph)	0	7	0	0	66	0	0	8	0	0	30	0
Lane Group Flow (vph)	320	1503	0	20	204	0	110	662	0	50	720	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.2	39.4		1.5	22.7		6.1	25.1		3.1	22.1	
Effective Green, g (s)	18.2	39.4		1.5	22.7		6.1	25.1		3.1	22.1	
Actuated g/C Ratio	0.21	0.46		0.02	0.27		0.07	0.29		0.04	0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	379	1619		31	897		127	1030		64	888	
v/s Ratio Prot	c0.18	c0.43		0.01	0.06		c0.06	c0.19		0.03	c0.21	
v/s Ratio Perm												
v/c Ratio	0.84	0.93		0.65	0.23		0.87	0.64		0.78	0.81	
Uniform Delay, d1	32.1	21.5		41.5	24.4		39.1	26.1		40.7	29.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.7	9.7		37.9	0.1		42.0	1.4		45.0	5.7	
Delay (s)	47.8	31.2		79.4	24.5		81.0	27.5		85.6	35.2	
Level of Service	D	C		E	C		F	C		F	D	
Approach Delay (s)		34.1			28.3			35.0			38.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	85.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



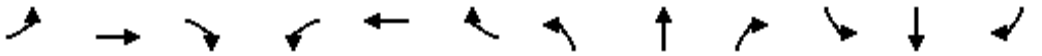
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	690	980	310	50	250	25	220	1280	70	25	260	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	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)	3433	3539	1583	1770	3491		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3491		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	690	980	310	50	250	25	220	1280	70	25	260	50
RTOR Reduction (vph)	0	0	87	0	8	0	0	0	28	0	0	38
Lane Group Flow (vph)	690	980	223	50	267	0	220	1280	42	25	260	12
Turn Type	Prot		pt+ov	Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4	4 5	3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	18.8	30.1	48.8	3.1	14.4		14.7	33.0	33.0	1.4	19.7	19.7
Effective Green, g (s)	18.8	30.1	48.8	3.1	14.4		14.7	33.0	33.0	1.4	19.7	19.7
Actuated g/C Ratio	0.22	0.36	0.58	0.04	0.17		0.18	0.39	0.39	0.02	0.24	0.24
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	772	1274	924	66	601		311	1397	625	30	834	373
v/s Ratio Prot	c0.20	c0.28	0.14	0.03	0.08		c0.12	c0.36		0.01	0.07	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.89	0.77	0.24	0.76	0.44		0.71	0.92	0.07	0.83	0.31	0.03
Uniform Delay, d1	31.4	23.7	8.4	39.9	31.0		32.4	24.0	15.7	41.0	26.4	24.6
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	12.8	2.9	0.1	38.4	0.5		7.2	9.6	0.0	95.9	0.2	0.0
Delay (s)	44.2	26.5	8.6	78.3	31.5		39.6	33.6	15.8	136.8	26.6	24.6
Level of Service	D	C	A	E	C		D	C	B	F	C	C
Approach Delay (s)		29.9			38.7			33.6			34.5	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	1500	975	520	1170	140	770	560	750	400	575	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.97	0.95	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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
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)	1770	5085	1583	3433	5085	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	70	1500	975	520	1170	140	770	560	750	400	575	75
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	70	1500	975	520	1170	140	770	560	750	400	575	75
Turn Type	Prot		Free	Prot		Free	Prot		Free	Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			Free			Free			Free			Free
Actuated Green, G (s)	7.2	24.0	90.0	13.0	29.8	90.0	19.6	22.4	90.0	14.6	17.4	90.0
Effective Green, g (s)	7.2	24.0	90.0	13.0	29.8	90.0	19.6	22.4	90.0	14.6	17.4	90.0
Actuated g/C Ratio	0.08	0.27	1.00	0.14	0.33	1.00	0.22	0.25	1.00	0.16	0.19	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	142	1356	1583	496	1684	1583	748	881	1583	557	684	1583
v/s Ratio Prot	0.04	c0.29		c0.15	0.23		c0.22	0.16		0.12	c0.16	
v/s Ratio Perm			c0.62			0.09			0.47			0.05
v/c Ratio	0.49	1.11	0.62	1.05	0.69	0.09	1.03	0.64	0.47	0.72	0.84	0.05
Uniform Delay, d1	39.7	33.0	0.0	38.5	26.1	0.0	35.2	30.2	0.0	35.7	35.0	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.89	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	59.0	1.8	53.7	2.4	0.1	34.2	1.0	0.7	4.4	9.2	0.1
Delay (s)	42.3	92.0	1.8	92.2	28.5	0.1	66.4	27.7	0.7	40.2	44.1	0.1
Level of Service	D	F	A	F	C	A	E	C	A	D	D	A
Approach Delay (s)		56.1			44.4			32.3			39.5	
Approach LOS		E			D			C			D	

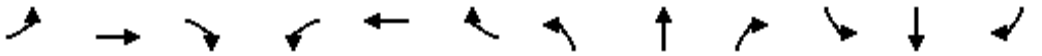
Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	870	1990	500	250	1470	600	210	1550	200	530	1370	540
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	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)	3433	5085	1583	3433	5085	1583	3433	5085	1583	3433	5085	1583
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)	3433	5085	1583	3433	5085	1583	3433	5085	1583	3433	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor (vph)	100%	100%	80%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Adj. Flow (vph)	870	1990	400	250	1470	600	210	1550	200	530	1370	540
RTOR Reduction (vph)	0	0	1	0	0	1	0	0	1	0	0	4
Lane Group Flow (vph)	870	1990	399	250	1470	599	210	1550	199	530	1370	536
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	7	1	6	3	7	4	1	3	8	5
Permitted Phases			2			6			4			8
Actuated Green, G (s)	25.0	50.0	60.4	8.0	33.0	48.0	10.4	31.0	39.0	15.0	35.6	60.6
Effective Green, g (s)	25.0	50.0	60.4	8.0	33.0	48.0	10.4	31.0	39.0	15.0	35.6	60.6
Actuated g/C Ratio	0.21	0.42	0.50	0.07	0.28	0.40	0.09	0.26	0.32	0.12	0.30	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	715	2119	797	229	1398	633	298	1314	514	429	1509	799
v/s Ratio Prot	c0.25	0.39	0.04	0.07	c0.29	0.12	0.06	c0.30	0.03	c0.15	c0.27	0.14
v/s Ratio Perm			0.21			0.26			0.10			0.20
v/c Ratio	1.22	0.94	0.50	1.09	1.05	0.95	0.70	1.18	0.39	1.24	0.91	0.67
Uniform Delay, d1	47.5	33.5	19.8	56.0	43.5	34.8	53.3	44.5	31.3	52.5	40.6	22.2
Progression Factor	1.00	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	110.1	8.8	0.5	86.1	38.9	23.2	7.4	89.0	0.5	124.7	8.2	2.2
Delay (s)	157.6	42.3	20.3	142.1	82.4	58.0	60.7	133.5	31.7	177.2	48.9	24.4
Level of Service	F	D	C	F	F	E	E	F	C	F	D	C
Approach Delay (s)		70.4			82.5			115.3			71.3	
Approach LOS		E			F			F			E	

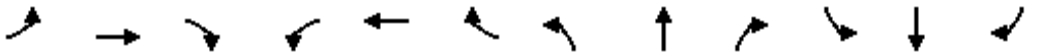
Intersection Summary			
HCM Average Control Delay	82.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



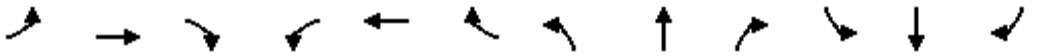
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	580	1650	280	390	1090	260	530	1160	370	290	1150	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	2.0	4.0	4.0	3.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	580	1650	280	390	1090	260	530	1160	370	290	1150	400
RTOR Reduction (vph)	0	0	2	0	0	3	0	0	2	0	0	5
Lane Group Flow (vph)	580	1650	279	390	1090	257	530	1160	368	290	1150	395
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	18.0	45.0	58.0	10.0	37.0	47.0	13.0	34.0	44.0	10.0	30.0	48.0
Effective Green, g (s)	19.0	47.0	60.0	11.0	39.0	51.0	14.0	36.0	48.0	10.0	32.0	50.0
Actuated g/C Ratio	0.16	0.39	0.50	0.09	0.32	0.42	0.12	0.30	0.40	0.08	0.27	0.42
Clearance Time (s)	5.0	6.0	5.0	5.0	6.0	4.0	5.0	6.0	5.0	4.0	6.0	5.0
Vehicle Extension (s)	2.0	2.5	2.0	2.0	2.5	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	544	1386	792	315	1150	673	401	1062	633	286	944	660
v/s Ratio Prot	c0.17	c0.47	0.04	c0.11	0.31	0.04	c0.15	0.33	0.06	0.08	c0.32	0.09
v/s Ratio Perm			0.13			0.12			0.17			0.15
v/c Ratio	1.07	1.19	0.35	1.24	0.95	0.38	1.32	1.09	0.58	1.01	1.22	0.60
Uniform Delay, d1	50.5	36.5	18.2	54.5	39.5	23.7	53.0	42.0	28.1	55.0	44.0	27.2
Progression Factor	1.00	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	57.4	93.2	0.1	131.4	16.6	0.4	161.3	56.3	0.9	56.8	107.9	1.0
Delay (s)	107.9	129.7	18.3	185.9	56.1	24.0	214.3	98.3	29.0	111.8	151.9	28.2
Level of Service	F	F	B	F	E	C	F	F	C	F	F	C
Approach Delay (s)		112.2			80.4			115.7			118.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	107.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	1290	140	40	1000	370	90	525	30	130	190	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3511		1770	3192	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3511		1770	3192	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	275	1290	140	40	1000	370	90	525	30	130	190	360
RTOR Reduction (vph)	0	0	60	0	0	52	0	5	0	0	262	0
Lane Group Flow (vph)	275	1290	80	40	1000	318	90	550	0	130	288	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	16.0	42.4	49.3	2.3	28.7	37.4	6.9	18.0		8.7	19.8	
Effective Green, g (s)	16.0	42.4	49.3	2.3	28.7	37.4	6.9	18.0		8.7	19.8	
Actuated g/C Ratio	0.18	0.49	0.56	0.03	0.33	0.43	0.08	0.21		0.10	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	324	1717	965	47	1162	750	140	723		176	723	
v/s Ratio Prot	c0.16	0.36	0.01	0.02	c0.28	0.04	0.05	c0.16		c0.07	0.09	
v/s Ratio Perm			0.04			0.16						
v/c Ratio	0.85	0.75	0.08	0.85	0.86	0.42	0.64	0.76		0.74	0.40	
Uniform Delay, d1	34.5	18.2	8.7	42.4	27.5	17.5	39.1	32.7		38.2	28.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	18.3	1.9	0.0	77.3	6.7	0.4	9.7	4.7		14.9	0.4	
Delay (s)	52.8	20.1	8.8	119.6	34.2	17.9	48.7	37.4		53.2	29.1	
Level of Service	D	C	A	F	C	B	D	D		D	C	
Approach Delay (s)		24.5			32.3			39.0			33.7	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



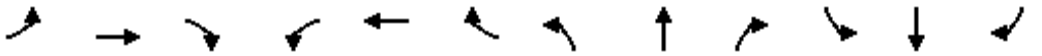
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	490	870	90	290	510	40	90	1060	510	10	460	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	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)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	1863	1583
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)	3433	3539	1583	1770	3539	1583	1770	3539	1583	1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	490	870	90	290	510	40	90	1060	510	10	460	810
RTOR Reduction (vph)	0	0	57	0	0	17	0	0	0	0	0	0
Lane Group Flow (vph)	490	870	33	290	510	23	90	1060	510	10	460	810
Turn Type	Prot		pt+ov	Prot		pt+ov	Prot		Free	Prot		Free
Protected Phases	7	4	4 5	3	8	8 1	5	2		1	6	
Permitted Phases									Free			Free
Actuated Green, G (s)	16.5	23.2	32.2	15.8	22.5	28.8	5.0	29.6	86.9	2.3	26.9	86.9
Effective Green, g (s)	16.5	23.2	32.2	15.8	22.5	28.8	5.0	29.6	86.9	2.3	26.9	86.9
Actuated g/C Ratio	0.19	0.27	0.37	0.18	0.26	0.33	0.06	0.34	1.00	0.03	0.31	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	652	945	587	322	916	525	102	1205	1583	47	577	1583
v/s Ratio Prot	0.14	c0.25	0.02	c0.16	0.14	0.01	c0.05	c0.30		0.01	0.25	
v/s Ratio Perm									0.32			c0.51
v/c Ratio	0.75	0.92	0.06	0.90	0.56	0.04	0.88	0.88	0.32	0.21	0.80	0.51
Uniform Delay, d1	33.3	31.0	17.6	34.8	27.9	19.7	40.7	27.0	0.0	41.4	27.5	0.0
Progression Factor	1.00	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	4.9	13.9	0.0	26.7	0.7	0.0	53.3	7.6	0.5	2.3	7.5	1.2
Delay (s)	38.1	44.8	17.6	61.4	28.6	19.7	94.0	34.6	0.5	43.7	35.0	1.2
Level of Service	D	D	B	E	C	B	F	C	A	D	D	A
Approach Delay (s)		40.9			39.5			27.3			13.7	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	86.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	40	130	310	20	50	470
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	40	130	310	20	50	470
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	880	310			330	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	880	310			330	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	82			96	
cM capacity (veh/h)	305	730			1229	

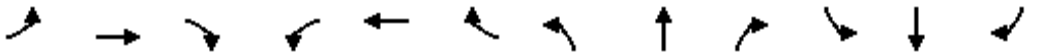
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	40	130	310	20	50	470
Volume Left	40	0	0	0	50	0
Volume Right	0	130	0	20	0	0
cSH	305	730	1700	1700	1229	1700
Volume to Capacity	0.13	0.18	0.18	0.01	0.04	0.28
Queue Length 95th (ft)	11	16	0	0	3	0
Control Delay (s)	18.6	11.0	0.0	0.0	8.1	0.0
Lane LOS	C	B			A	
Approach Delay (s)	12.8		0.0		0.8	
Approach LOS	B					

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		



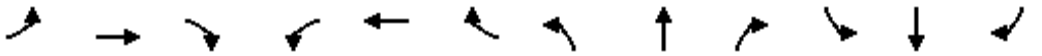
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	200	1000	150	50	450	150	50	125	50	200	200	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		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)	1770	3470		1770	1863	1583	1770	1783		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3470		1770	1863	1583	1770	1783		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	1000	150	50	450	150	50	125	50	200	200	125
RTOR Reduction (vph)	0	14	0	0	0	105	0	21	0	0	0	91
Lane Group Flow (vph)	200	1136	0	50	450	45	50	154	0	200	200	34
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Actuated Green, G (s)	9.9	28.5		2.3	20.9	20.9	3.4	12.6		9.9	19.1	19.1
Effective Green, g (s)	9.9	28.5		2.3	20.9	20.9	3.4	12.6		9.9	19.1	19.1
Actuated g/C Ratio	0.14	0.41		0.03	0.30	0.30	0.05	0.18		0.14	0.28	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	253	1427		59	562	477	87	324		253	513	436
v/s Ratio Prot	c0.11	c0.33		0.03	0.24		0.03	c0.09		c0.11	0.11	
v/s Ratio Perm						0.03						0.02
v/c Ratio	0.79	0.80		0.85	0.80	0.09	0.57	0.47		0.79	0.39	0.08
Uniform Delay, d1	28.7	17.9		33.3	22.3	17.4	32.2	25.4		28.7	20.4	18.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	3.2		64.8	8.0	0.1	8.9	1.1		15.4	0.5	0.1
Delay (s)	44.1	21.0		98.2	30.3	17.5	41.1	26.5		44.1	20.9	18.7
Level of Service	D	C		F	C	B	D	C		D	C	B
Approach Delay (s)		24.4			32.6			29.7			29.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



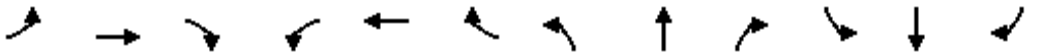
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	810	25	225	550	125	25	1900	300	260	2325	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3523		1770	3441		1770	5085	1583	1770	5085	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3523		1770	3441		1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	810	25	225	550	125	25	1900	300	260	2325	20
RTOR Reduction (vph)	0	2	0	0	16	0	0	0	18	0	0	4
Lane Group Flow (vph)	30	833	0	225	659	0	25	1900	282	260	2325	16
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	3.6	28.6		15.0	40.0		2.4	46.6	61.6	17.0	61.2	64.8
Effective Green, g (s)	3.6	28.6		15.0	40.0		2.4	46.6	61.6	17.0	61.2	64.8
Actuated g/C Ratio	0.03	0.23		0.12	0.32		0.02	0.38	0.50	0.14	0.50	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	52	818		216	1117		34	1923	843	244	2526	884
v/s Ratio Prot	0.02	c0.24		c0.13	0.19		0.01	c0.37	0.04	c0.15	0.46	0.00
v/s Ratio Perm									0.14			0.01
v/c Ratio	0.58	1.02		1.04	0.59		0.74	0.99	0.33	1.07	0.92	0.02
Uniform Delay, d1	59.0	47.3		54.1	34.8		60.1	38.0	18.5	53.1	28.7	14.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.6	36.3		72.6	0.8		57.7	17.6	0.2	76.0	6.1	0.0
Delay (s)	73.6	83.6		126.7	35.6		117.8	55.6	18.7	129.1	34.9	14.0
Level of Service	E	F		F	D		F	E	B	F	C	B
Approach Delay (s)		83.3			58.4			51.3			44.1	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM Average Control Delay	53.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	123.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



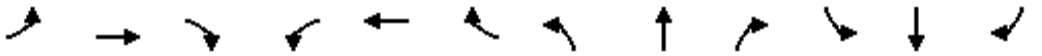
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	480	460	260	70	510	690	70	990	230	960	1100	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	3539	1583	1770	1863	1583	1770	3539	1583	3433	5037	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	3539	1583	1770	1863	1583	1770	3539	1583	3433	5037	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	480	460	260	70	510	690	70	990	230	960	1100	75
RTOR Reduction (vph)	0	0	171	0	0	0	0	0	143	0	7	0
Lane Group Flow (vph)	480	460	89	70	510	690	70	990	87	960	1168	0
Turn Type	Prot		Perm	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	20.9	40.1	40.1	8.6	27.8	117.5	12.3	29.8	29.8	23.0	40.5	
Effective Green, g (s)	20.9	40.1	40.1	8.6	27.8	117.5	12.3	29.8	29.8	23.0	40.5	
Actuated g/C Ratio	0.18	0.34	0.34	0.07	0.24	1.00	0.10	0.25	0.25	0.20	0.34	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	611	1208	540	130	441	1583	185	898	401	672	1736	
v/s Ratio Prot	c0.14	0.13		0.04	c0.27		0.04	c0.28		c0.28	0.23	
v/s Ratio Perm			0.06			0.44			0.05			
v/c Ratio	0.79	0.38	0.16	0.54	1.16	0.44	0.38	1.10	0.22	1.43	0.67	
Uniform Delay, d1	46.2	29.3	27.0	52.5	44.8	0.0	49.0	43.8	34.6	47.2	32.9	
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	6.6	0.2	0.1	4.2	93.2	0.9	1.3	62.1	0.3	201.4	1.0	
Delay (s)	52.7	29.5	27.2	56.8	138.0	0.9	50.3	106.0	34.9	248.7	33.9	
Level of Service	D	C	C	E	F	A	D	F	C	F	C	
Approach Delay (s)		38.3			59.0			90.3			130.5	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM Average Control Delay	87.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



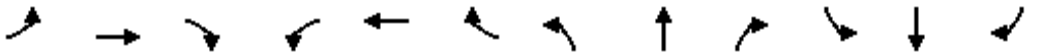
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	825	325	125	775	200	375	725	100	380	800	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		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)	1770	3539	1583	1770	3430		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3430		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	825	325	125	775	200	375	725	100	380	800	210
RTOR Reduction (vph)	0	0	28	0	25	0	0	0	73	0	0	179
Lane Group Flow (vph)	250	825	297	125	950	0	375	725	27	380	800	31
Turn Type	Prot		pm+ov	Prot			Prot		Over	Prot		Over
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases			4									
Actuated Green, G (s)	12.0	27.0	45.0	8.0	23.0		18.0	20.0	8.0	19.0	21.0	12.0
Effective Green, g (s)	12.0	27.0	45.0	8.0	23.0		18.0	20.0	8.0	19.0	21.0	12.0
Actuated g/C Ratio	0.13	0.30	0.50	0.09	0.26		0.20	0.22	0.09	0.21	0.23	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	1062	862	157	877		354	786	141	374	826	211
v/s Ratio Prot	c0.14	c0.23	0.07	0.07	c0.28		0.21	0.20	0.02	c0.21	c0.23	0.02
v/s Ratio Perm			0.12									
v/c Ratio	1.06	0.78	0.34	0.80	1.08		1.06	0.92	0.19	1.02	0.97	0.15
Uniform Delay, d1	39.0	28.8	13.6	40.2	33.5		36.0	34.2	38.0	35.5	34.2	34.5
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	75.1	3.6	0.2	23.7	55.4		64.4	16.2	0.7	50.7	23.6	0.3
Delay (s)	114.1	32.4	13.8	63.9	88.9		100.4	50.5	38.7	86.2	57.7	34.8
Level of Service	F	C	B	E	F		F	D	D	F	E	C
Approach Delay (s)		42.7			86.0			65.1			62.0	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	62.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



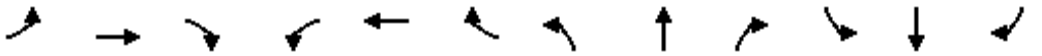
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	290	400	425	100	250	30	340	475	175	40	500	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1833		3433	3396		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1833		3433	3396		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	290	400	425	100	250	30	340	475	175	40	500	300
RTOR Reduction (vph)	0	0	216	0	5	0	0	40	0	0	0	63
Lane Group Flow (vph)	290	400	209	100	275	0	340	610	0	40	500	237
Turn Type	Prot		Perm	Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	16.7	26.9	26.9	6.1	16.3		10.8	35.2		3.4	27.8	44.5
Effective Green, g (s)	16.7	26.9	26.9	6.1	16.3		10.8	35.2		3.4	27.8	44.5
Actuated g/C Ratio	0.19	0.31	0.31	0.07	0.19		0.12	0.40		0.04	0.32	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	337	572	486	123	341		423	1365		69	591	876
v/s Ratio Prot	c0.16	0.21		0.06	c0.15		c0.10	0.18		0.02	c0.27	0.05
v/s Ratio Perm			0.13									0.10
v/c Ratio	0.86	0.70	0.43	0.81	0.81		0.80	0.45		0.58	0.85	0.27
Uniform Delay, d1	34.3	26.8	24.2	40.2	34.1		37.4	19.1		41.4	27.9	12.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	19.5	3.7	0.6	32.1	13.0		10.6	0.2		11.3	10.8	0.2
Delay (s)	53.8	30.5	24.8	72.3	47.2		48.0	19.3		52.7	38.7	12.5
Level of Service	D	C	C	E	D		D	B		D	D	B
Approach Delay (s)		34.4			53.8			29.2			30.0	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



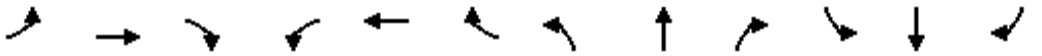
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	325	250	30	260	140	100	2310	75	300	2790	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	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)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5085	1583
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)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	325	250	30	260	140	100	2310	75	300	2790	25
RTOR Reduction (vph)	0	0	95	0	0	113	0	0	13	0	0	4
Lane Group Flow (vph)	25	325	155	30	260	27	100	2310	62	300	2790	21
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	2.4	22.9	22.9	2.4	22.9	22.9	8.6	56.7	56.7	22.0	70.1	70.1
Effective Green, g (s)	2.4	22.9	22.9	2.4	22.9	22.9	8.6	56.7	56.7	22.0	70.1	70.1
Actuated g/C Ratio	0.02	0.19	0.19	0.02	0.19	0.19	0.07	0.47	0.47	0.18	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	35	356	302	35	356	302	127	2403	748	325	2970	925
v/s Ratio Prot	0.01	c0.17		c0.02	0.14		0.06	0.45		c0.17	c0.55	
v/s Ratio Perm			0.10			0.02			0.04			0.01
v/c Ratio	0.71	0.91	0.51	0.86	0.73	0.09	0.79	0.96	0.08	0.92	0.94	0.02
Uniform Delay, d1	58.5	47.6	43.6	58.6	45.6	40.0	54.8	30.6	17.4	48.2	23.0	10.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.24	0.50	0.09
Incremental Delay, d2	51.0	26.9	1.5	94.8	7.5	0.1	26.7	11.3	0.2	24.0	5.5	0.0
Delay (s)	109.5	74.5	45.0	153.4	53.2	40.1	81.5	41.9	17.6	83.7	17.0	1.0
Level of Service	F	E	D	F	D	D	F	D	B	F	B	A
Approach Delay (s)		63.7			55.9			42.7			23.3	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



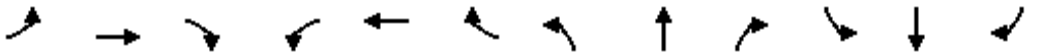
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	450	50	60	320	350	30	575	75	225	500	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		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)	1770	1835		1770	1863	1583	1770	3478		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1835		1770	1863	1583	1770	3478		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	450	50	60	320	350	30	575	75	225	500	250
RTOR Reduction (vph)	0	5	0	0	0	44	0	13	0	0	0	119
Lane Group Flow (vph)	250	495	0	60	320	306	30	637	0	225	500	131
Turn Type	Prot			Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Actuated Green, G (s)	11.1	25.0		3.1	17.0	27.1	1.9	19.4		10.1	27.6	38.7
Effective Green, g (s)	11.1	25.0		3.1	17.0	27.1	1.9	19.4		10.1	27.6	38.7
Actuated g/C Ratio	0.15	0.34		0.04	0.23	0.37	0.03	0.26		0.14	0.38	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	267	623		75	430	669	46	917		243	1327	918
v/s Ratio Prot	c0.14	c0.27		0.03	0.17	0.06	0.02	c0.18		c0.13	0.14	0.02
v/s Ratio Perm						0.13						0.06
v/c Ratio	0.94	0.79		0.80	0.74	0.46	0.65	0.69		0.93	0.38	0.14
Uniform Delay, d1	30.9	22.0		34.9	26.3	17.7	35.5	24.4		31.4	16.7	8.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	37.9	6.9		43.9	6.9	0.5	28.5	2.3		37.8	0.2	0.1
Delay (s)	68.8	28.9		78.8	33.1	18.2	64.1	26.7		69.2	16.9	9.0
Level of Service	E	C		E	C	B	E	C		E	B	A
Approach Delay (s)		42.2			29.7			28.4			27.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	73.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	475	20	75	450	125	20	650	70	150	725	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3518		3433	3539	1583	1770	3539	1583	1770	3436	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3518		3433	3539	1583	1770	3539	1583	1770	3436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	475	20	75	450	125	20	650	70	150	725	175
RTOR Reduction (vph)	0	3	0	0	0	108	0	0	58	0	22	0
Lane Group Flow (vph)	250	492	0	75	450	17	20	650	12	150	878	0
Turn Type	Prot			Prot		Over	Prot		Over	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	26.6		4.5	16.2	10.6	1.4	21.7	4.5	10.6	30.9	
Effective Green, g (s)	14.9	26.6		4.5	16.2	10.6	1.4	21.7	4.5	10.6	30.9	
Actuated g/C Ratio	0.19	0.34		0.06	0.20	0.13	0.02	0.27	0.06	0.13	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	332	1179		195	722	211	31	967	90	236	1337	
v/s Ratio Prot	c0.14	0.14		0.02	c0.13	0.01	0.01	0.18	0.01	c0.08	c0.26	
v/s Ratio Perm												
v/c Ratio	0.75	0.42		0.38	0.62	0.08	0.65	0.67	0.14	0.64	0.66	
Uniform Delay, d1	30.5	20.4		36.1	28.8	30.1	38.8	25.7	35.6	32.6	19.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.3	0.2		1.3	1.7	0.2	37.9	1.9	0.7	5.5	1.2	
Delay (s)	39.8	20.6		37.4	30.5	30.3	76.6	27.5	36.3	38.1	21.1	
Level of Service	D	C		D	C	C	E	C	D	D	C	
Approach Delay (s)		27.1			31.3			29.7			23.5	
Approach LOS		C			C			C			C	

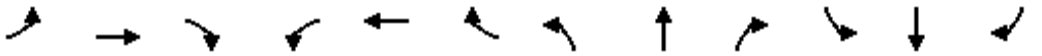
Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	320	70	20	170	70	80	270	40	270	340	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1203	1267	1077	1203	1211		1203	1242		1203	1267	1077
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1203	1267	1077	1203	1211		1203	1242		1203	1267	1077
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	320	70	20	170	70	80	270	40	270	340	260
RTOR Reduction (vph)	0	0	42	0	16	0	0	6	0	0	0	124
Lane Group Flow (vph)	120	320	28	20	224	0	80	304	0	270	340	136
Heavy Vehicles (%)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	10.0	29.0	36.1	1.6	20.6		7.1	24.1		21.0	38.0	48.0
Effective Green, g (s)	10.0	29.0	36.1	1.6	20.6		7.1	24.1		21.0	38.0	48.0
Actuated g/C Ratio	0.11	0.32	0.39	0.02	0.22		0.08	0.26		0.23	0.41	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	401	471	21	272		93	326		275	525	611
v/s Ratio Prot	c0.10	c0.25	0.00	0.02	0.18		0.07	c0.24		c0.22	0.27	0.02
v/s Ratio Perm			0.02									0.10
v/c Ratio	0.92	0.80	0.06	0.95	0.82		0.86	0.93		0.98	0.65	0.22
Uniform Delay, d1	40.4	28.7	17.3	45.0	33.8		41.8	33.0		35.2	21.5	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	53.3	10.6	0.1	173.4	17.8		51.0	32.7		49.0	2.8	0.2
Delay (s)	93.7	39.3	17.3	218.4	51.7		92.8	65.7		84.1	24.2	12.0
Level of Service	F	D	B	F	D		F	E		F	C	B
Approach Delay (s)		49.0			64.5			71.3			39.2	
Approach LOS		D			E			E			D	

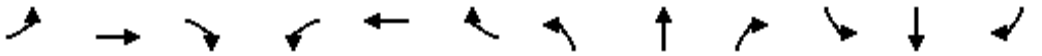
Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



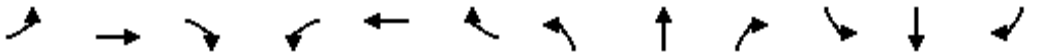
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	830	25	700	540	140	25	490	820	200	400	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.97		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)	1770	3524		3433	3430		1770	1863	1583	1770	1783	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3524		3433	3430		1770	1863	1583	1770	1783	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	830	25	700	540	140	25	490	820	200	400	160
RTOR Reduction (vph)	0	2	0	0	26	0	0	0	0	0	15	0
Lane Group Flow (vph)	250	853	0	700	654	0	25	490	820	200	545	0
Turn Type	Prot			Prot			Prot		Free	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									Free			
Actuated Green, G (s)	15.2	22.0		21.1	27.9		1.6	24.4	91.5	8.0	30.8	
Effective Green, g (s)	15.2	22.0		21.1	27.9		1.6	24.4	91.5	8.0	30.8	
Actuated g/C Ratio	0.17	0.24		0.23	0.30		0.02	0.27	1.00	0.09	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	847		792	1046		31	497	1583	155	600	
v/s Ratio Prot	0.14	c0.24		c0.20	0.19		0.01	c0.26		c0.11	0.31	
v/s Ratio Perm									0.52			
v/c Ratio	0.85	1.01		0.88	0.63		0.81	0.99	0.52	1.29	0.91	
Uniform Delay, d1	37.0	34.8		34.0	27.3		44.8	33.4	0.0	41.8	29.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	20.3	32.6		11.5	1.2		83.8	36.4	1.2	170.3	17.6	
Delay (s)	57.4	67.3		45.5	28.5		128.6	69.8	1.2	212.0	46.6	
Level of Service	E	E		D	C		F	E	A	F	D	
Approach Delay (s)		65.1			37.1			28.8			90.1	
Approach LOS		E			D			C			F	

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	91.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



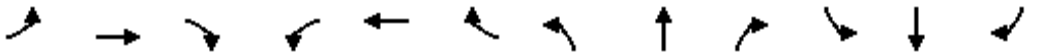
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	560	1240	30	30	770	90	20	40	50	110	50	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.98			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (prot)	3433	3527		1770	3484			1733			1801	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.97	1.00
Satd. Flow (perm)	3433	3527		1770	3484			1733			1801	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	560	1240	30	30	770	90	20	40	50	110	50	590
RTOR Reduction (vph)	0	2	0	0	9	0	0	35	0	0	0	488
Lane Group Flow (vph)	560	1268	0	30	851	0	0	75	0	0	160	102
Turn Type	Prot			Prot			Split			Split		Over
Protected Phases	7	4		3	8		2	2		6	6	7
Permitted Phases												
Actuated Green, G (s)	15.1	36.6		2.3	23.8			7.5			25.1	15.1
Effective Green, g (s)	15.1	36.6		2.3	23.8			7.5			25.1	15.1
Actuated g/C Ratio	0.17	0.42		0.03	0.27			0.09			0.29	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	592	1475		47	948			149			517	273
v/s Ratio Prot	c0.16	c0.36		0.02	0.24			c0.04			c0.09	0.06
v/s Ratio Perm												
v/c Ratio	0.95	0.86		0.64	0.90			0.51			0.31	0.37
Uniform Delay, d1	35.8	23.1		42.2	30.7			38.2			24.4	32.0
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	24.1	5.3		25.1	11.0			2.7			0.3	0.9
Delay (s)	59.9	28.4		67.3	41.7			40.9			24.8	32.9
Level of Service	E	C		E	D			D			C	C
Approach Delay (s)		38.0			42.6			40.9			31.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



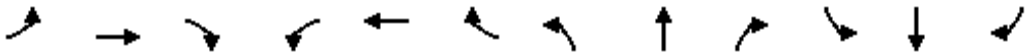
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	350	75	40	1525	120	100	25	50	75	25	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	4951		1770	5030		1770	1676		1770	1863	1583
Flt Permitted	0.11	1.00		0.49	1.00		0.74	1.00		0.71	1.00	1.00
Satd. Flow (perm)	211	4951		922	5030		1380	1676		1319	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	175	350	75	40	1525	120	100	25	50	75	25	300
RTOR Reduction (vph)	0	27	0	0	14	0	0	38	0	0	0	27
Lane Group Flow (vph)	175	398	0	40	1631	0	100	37	0	75	25	273
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	38.1	38.1		38.1	38.1		13.9	13.9		13.9	13.9	13.9
Effective Green, g (s)	38.1	38.1		38.1	38.1		13.9	13.9		13.9	13.9	13.9
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.23	0.23		0.23	0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	134	3144		585	3194		320	388		306	432	367
v/s Ratio Prot		0.08			0.32			0.02			0.01	
v/s Ratio Perm	c0.83			0.04			0.07			0.06		c0.17
v/c Ratio	1.31	0.13		0.07	0.51		0.31	0.09		0.25	0.06	0.74
Uniform Delay, d1	11.0	4.3		4.2	5.9		19.1	18.1		18.8	18.0	21.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	181.2	0.1		0.2	0.6		0.6	0.1		0.4	0.1	8.0
Delay (s)	192.2	4.4		4.4	6.5		19.7	18.2		19.2	18.0	29.4
Level of Service	F	A		A	A		B	B		B	B	C
Approach Delay (s)		59.2			6.5			19.0			26.7	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



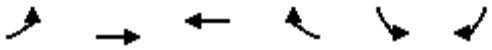
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	90	820	320	90	130	670	1150	200	90	630	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.88	1.00	1.00	1.00	0.94	0.91	1.00	1.00	0.91	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)	1770	1863	2787	1770	1863	1583	4990	5085	1583	1770	5085	1583
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)	1770	1863	2787	1770	1863	1583	4990	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	90	820	320	90	130	670	1150	200	90	630	80
RTOR Reduction (vph)	0	0	612	0	0	115	0	0	159	0	0	60
Lane Group Flow (vph)	110	90	208	320	90	15	670	1150	41	90	630	20
Turn Type	Prot		Over	Prot		Over	Prot		Over	Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases												6
Actuated Green, G (s)	7.7	7.9	16.5	15.5	15.7	8.8	16.5	26.8	15.5	8.8	19.1	19.1
Effective Green, g (s)	7.7	7.9	16.5	15.5	15.7	8.8	16.5	26.8	15.5	8.8	19.1	19.1
Actuated g/C Ratio	0.10	0.11	0.22	0.21	0.21	0.12	0.22	0.36	0.21	0.12	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	182	196	613	366	390	186	1098	1817	327	208	1295	403
v/s Ratio Prot	0.06	c0.05	0.07	c0.18	0.05	0.01	c0.13	c0.23	0.03	0.05	0.12	
v/s Ratio Perm												0.01
v/c Ratio	0.60	0.46	0.34	0.87	0.23	0.08	0.61	0.63	0.13	0.43	0.49	0.05
Uniform Delay, d1	32.2	31.5	24.7	28.8	24.6	29.5	26.4	20.0	24.2	30.8	23.8	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.42	0.41	0.86	1.46	2.85
Incremental Delay, d2	5.6	1.7	0.3	20.0	0.3	0.2	0.6	1.1	0.1	1.4	1.3	0.2
Delay (s)	37.8	33.2	25.0	48.8	24.9	29.7	30.6	29.5	10.1	27.7	36.1	60.4
Level of Service	D	C	C	D	C	C	C	C	B	C	D	E
Approach Delay (s)		27.1			40.2			28.0			37.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



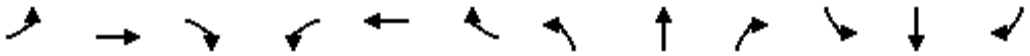
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized						Yes						
Volume (veh/h)	0	0	0	0	0	325	0	200	0	0	450	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	0	0	325	0	200	0	0	450	50
Approach Volume (veh/h)		0			0			200			500	
Crossing Volume (veh/h)		450			200			0			0	
High Capacity (veh/h)		971			1184			1385			1385	
High v/c (veh/h)		0.00			0.00			0.14			0.36	
Low Capacity (veh/h)		788			979			1161			1161	
Low v/c (veh/h)		0.00			0.00			0.17			0.43	

Intersection Summary					
Maximum v/c High	0.36				
Maximum v/c Low	0.43				
Intersection Capacity Utilization	53.5%	ICU Level of Service		A	



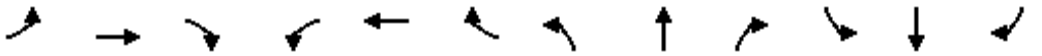
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Right Turn Channelized						
Volume (veh/h)	200	0	0	0	450	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	200	0	0	0	450	0
Approach Volume (veh/h)		200	0		450	
Crossing Volume (veh/h)		450	200		0	
High Capacity (veh/h)		971	1184		1385	
High v/c (veh/h)		0.21	0.00		0.33	
Low Capacity (veh/h)		788	979		1161	
Low v/c (veh/h)		0.25	0.00		0.39	

Intersection Summary			
Maximum v/c High	0.33		
Maximum v/c Low	0.39		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	150	100	50	180	20	150	900	75	100	1100	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.98		1.00	0.99		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)	1770	1751		1770	1835		1770	3498		1770	3495	
Flt Permitted	0.55	1.00		0.38	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1016	1751		711	1835		1770	3498		1770	3495	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	30	150	100	50	180	20	150	900	75	100	1100	100
RTOR Reduction (vph)	0	34	0	0	5	0	0	7	0	0	8	0
Lane Group Flow (vph)	30	216	0	50	195	0	150	968	0	100	1192	0
Turn Type	pm+pt			pm+pt			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	15.1	13.7		16.5	14.4		8.2	29.9		5.3	27.0	
Effective Green, g (s)	15.1	13.7		16.5	14.4		8.2	29.9		5.3	27.0	
Actuated g/C Ratio	0.23	0.20		0.25	0.21		0.12	0.45		0.08	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	245	358		208	394		217	1561		140	1408	
v/s Ratio Prot	0.00	c0.12		c0.01	0.11		c0.08	c0.28		0.06	c0.34	
v/s Ratio Perm	0.03			0.05								
v/c Ratio	0.12	0.60		0.24	0.49		0.69	0.62		0.71	0.85	
Uniform Delay, d1	20.5	24.2		19.8	23.1		28.2	14.2		30.1	18.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	2.9		0.6	1.0		9.1	0.7		15.9	4.9	
Delay (s)	20.7	27.0		20.4	24.1		37.3	14.9		46.0	23.0	
Level of Service	C	C		C	C		D	B		D	C	
Approach Delay (s)		26.4			23.3			17.9			24.8	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

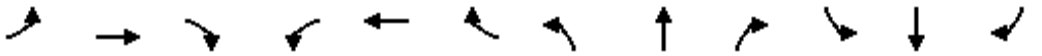


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	25	25	250	25	125	25	260	140	120	580	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	1.00		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.88		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)	1770	3539	1583	3433	1630		1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	3433	1630		1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	25	25	250	25	125	25	260	140	120	580	25
RTOR Reduction (vph)	0	0	24	0	97	0	0	0	107	0	0	24
Lane Group Flow (vph)	25	25	1	250	53	0	25	260	33	120	580	1
Turn Type	Prot		Over	Prot			Prot		Over	Prot		Over
Protected Phases	7	4	5	3	8		5	2	3	1	6	7
Permitted Phases												
Actuated Green, G (s)	1.4	0.9	1.4	10.2	9.7		1.4	13.4	10.2	3.0	15.0	1.4
Effective Green, g (s)	1.4	0.9	1.4	10.2	9.7		1.4	13.4	10.2	3.0	15.0	1.4
Actuated g/C Ratio	0.03	0.02	0.03	0.23	0.22		0.03	0.31	0.23	0.07	0.34	0.03
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	57	73	51	805	363		57	1090	371	237	1220	51
v/s Ratio Prot	0.01	0.01	0.00	c0.07	c0.03		0.01	0.07	0.02	c0.03	c0.16	0.00
v/s Ratio Perm												
v/c Ratio	0.44	0.34	0.02	0.31	0.15		0.44	0.24	0.09	0.51	0.48	0.02
Uniform Delay, d1	20.7	21.0	20.4	13.7	13.6		20.7	11.2	13.0	19.5	11.2	20.4
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	5.3	2.8	0.1	0.2	0.2		5.3	0.1	0.1	1.7	0.3	0.1
Delay (s)	26.0	23.8	20.5	14.0	13.8		26.0	11.4	13.1	21.2	11.5	20.5
Level of Service	C	C	C	B	B		C	B	B	C	B	C
Approach Delay (s)		23.4			13.9			12.8			13.4	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	200	490	400	40	300	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
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)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.48	1.00
Satd. Flow (perm)	1770	1583	1863	1583	903	1863
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	490	400	40	300	320
RTOR Reduction (vph)	0	208	0	21	0	0
Lane Group Flow (vph)	200	282	400	19	300	320
Turn Type		custom		Perm	Perm	
Protected Phases			2			6
Permitted Phases	8	8		2	6	
Actuated Green, G (s)	10.5	10.5	16.2	16.2	16.2	16.2
Effective Green, g (s)	10.5	10.5	16.2	16.2	16.2	16.2
Actuated g/C Ratio	0.30	0.30	0.47	0.47	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	536	479	870	739	422	870
v/s Ratio Prot			0.21			0.17
v/s Ratio Perm	0.11	c0.18		0.01	c0.33	
v/c Ratio	0.37	0.59	0.46	0.03	0.71	0.37
Uniform Delay, d1	9.5	10.3	6.3	5.0	7.4	6.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	1.9	0.4	0.0	5.6	0.3
Delay (s)	10.0	12.1	6.7	5.0	13.0	6.2
Level of Service	A	B	A	A	B	A
Approach Delay (s)	11.5		6.5			9.5
Approach LOS	B		A			A

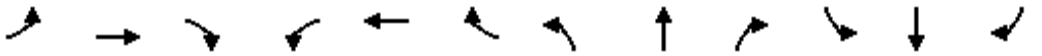
Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	34.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	740	660	710	800	130	440	160	790	170	200	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.97	0.95		0.97	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	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	3433	3465		3433	1863	1583	1770	1816	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	3433	3465		3433	1863	1583	1770	1816	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	150	740	660	710	800	130	440	160	790	170	200	40
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	0	0	7	0
Lane Group Flow (vph)	150	740	660	710	919	0	440	160	790	170	233	0
Turn Type	Prot		Free	Prot			Prot		Free	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free						Free			
Actuated Green, G (s)	13.9	42.0	109.7	22.0	50.1		14.0	16.4	109.7	13.3	15.7	
Effective Green, g (s)	13.9	42.0	109.7	22.0	50.1		14.0	16.4	109.7	13.3	15.7	
Actuated g/C Ratio	0.13	0.38	1.00	0.20	0.46		0.13	0.15	1.00	0.12	0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	713	1583	688	1582		438	279	1583	215	260	
v/s Ratio Prot	0.08	c0.40		c0.21	0.27		c0.13	0.09		0.10	c0.13	
v/s Ratio Perm			0.42						c0.50			
v/c Ratio	0.67	1.04	0.42	1.03	0.58		1.00	0.57	0.50	0.79	0.90	
Uniform Delay, d1	45.7	33.8	0.0	43.8	22.0		47.8	43.4	0.0	46.8	46.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.4	43.9	0.8	42.8	0.5		44.1	2.8	1.1	17.7	30.1	
Delay (s)	53.1	77.7	0.8	86.6	22.6		92.0	46.2	1.1	64.6	76.3	
Level of Service	D	E	A	F	C		F	D	A	E	E	
Approach Delay (s)		42.6			50.3			35.1			71.4	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	45.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	775	675	225	175	800	250	125	280	140	300	175	625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.94	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	1.00	0.85	1.00	0.95		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)	4990	3539	1583	1770	3539	1583	1770	1770		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	4990	3539	1583	1770	3539	1583	1770	1770		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	775	675	225	175	800	250	125	280	140	300	175	625
RTOR Reduction (vph)	0	0	131	0	0	64	0	20	0	0	0	0
Lane Group Flow (vph)	775	675	94	175	800	186	125	400	0	300	175	625
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Free
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						Free
Actuated Green, G (s)	18.2	25.4	36.9	12.8	20.0	35.0	11.5	19.1		15.0	22.6	88.3
Effective Green, g (s)	18.2	25.4	36.9	12.8	20.0	35.0	11.5	19.1		15.0	22.6	88.3
Actuated g/C Ratio	0.21	0.29	0.42	0.14	0.23	0.40	0.13	0.22		0.17	0.26	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1029	1018	733	257	802	699	231	383		301	477	1583
v/s Ratio Prot	c0.16	0.19	0.02	0.10	c0.23	0.05	0.07	c0.23		c0.17	0.09	
v/s Ratio Perm			0.04			0.07						c0.39
v/c Ratio	0.75	0.66	0.13	0.68	1.00	0.27	0.54	1.05		1.00	0.37	0.39
Uniform Delay, d1	32.9	27.7	15.8	35.8	34.1	18.0	35.9	34.6		36.6	27.0	0.0
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	3.2	1.6	0.1	7.2	30.9	0.2	2.6	58.3		50.6	0.5	0.7
Delay (s)	36.1	29.3	15.9	43.0	65.1	18.2	38.5	92.9		87.3	27.5	0.7
Level of Service	D	C	B	D	E	B	D	F		F	C	A
Approach Delay (s)		30.7			52.3			80.5			28.6	
Approach LOS		C			D			F			C	

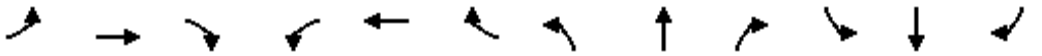
Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1950	1175	125	1670	1310	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	0.88	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	2787	1770	5085	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	2787	1770	5085	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1950	1175	125	1670	1310	125
RTOR Reduction (vph)	0	0	0	0	0	75
Lane Group Flow (vph)	1950	1175	125	1670	1310	50
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	35.0	90.0	7.1	46.1	35.9	35.9
Effective Green, g (s)	35.0	90.0	7.1	46.1	35.9	35.9
Actuated g/C Ratio	0.39	1.00	0.08	0.51	0.40	0.40
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1978	2787	140	2605	1369	631
v/s Ratio Prot	c0.38		c0.07	0.33	c0.38	
v/s Ratio Perm		0.42				0.03
v/c Ratio	0.99	0.42	0.89	0.64	0.96	0.08
Uniform Delay, d1	27.3	0.0	41.1	15.9	26.3	16.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.8	0.5	45.4	0.5	16.0	0.2
Delay (s)	44.1	0.5	86.5	16.5	42.3	17.0
Level of Service	D	A	F	B	D	B
Approach Delay (s)	27.7			21.4	40.1	
Approach LOS	C			C	D	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

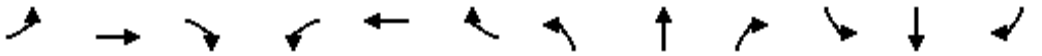
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	50	75	2150	70	100	2475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	5085	1583	1770	5085
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	5085	1583	1770	5085
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	75	2150	70	100	2475
RTOR Reduction (vph)	0	68	0	13	0	0
Lane Group Flow (vph)	50	7	2150	57	100	2475
Turn Type		Over		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases				2		
Actuated Green, G (s)	4.9	7.6	54.2	54.2	7.6	65.8
Effective Green, g (s)	4.9	7.6	54.2	54.2	7.6	65.8
Actuated g/C Ratio	0.06	0.10	0.69	0.69	0.10	0.84
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	110	153	3502	1090	171	4251
v/s Ratio Prot	c0.03	0.00	c0.42		0.06	c0.49
v/s Ratio Perm				0.04		
v/c Ratio	0.45	0.05	0.61	0.05	0.58	0.58
Uniform Delay, d1	35.6	32.3	6.6	4.0	34.0	2.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.1	0.3	0.0	5.0	0.2
Delay (s)	38.6	32.4	6.9	4.0	39.1	2.3
Level of Service	D	C	A	A	D	A
Approach Delay (s)	34.9		6.8			3.7
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	78.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	25	590	50	50	50	240	2125	65	50	2450	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.91	1.00	1.00	0.91	1.00
Frt		1.00	0.85		0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.98		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1817	1583		1750		1770	5085	1583	1770	5085	1583
Flt Permitted		0.71	1.00		0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1317	1583		1553		1770	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	25	590	50	50	50	240	2125	65	50	2450	25
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	11	0	0	4
Lane Group Flow (vph)	0	50	590	0	135	0	240	2125	54	50	2450	21
Turn Type	Perm		Free	Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		Free	8					2			6
Actuated Green, G (s)		14.3	120.0		14.3		20.1	87.3	87.3	6.4	73.6	73.6
Effective Green, g (s)		14.3	120.0		14.3		20.1	87.3	87.3	6.4	73.6	73.6
Actuated g/C Ratio		0.12	1.00		0.12		0.17	0.73	0.73	0.05	0.61	0.61
Clearance Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		157	1583		185		296	3699	1152	94	3119	971
v/s Ratio Prot							c0.14	0.42		0.03	c0.48	
v/s Ratio Perm		0.04	0.37		c0.09				0.03			0.01
v/c Ratio		0.32	0.37		0.73		0.81	0.57	0.05	0.53	0.79	0.02
Uniform Delay, d1		48.4	0.0		51.0		48.1	7.7	4.6	55.3	17.3	9.1
Progression Factor		1.00	1.00		1.00		1.47	0.03	0.00	1.00	1.00	1.00
Incremental Delay, d2		1.2	0.7		13.4		7.0	0.3	0.0	5.7	2.1	0.0
Delay (s)		49.6	0.7		64.4		77.7	0.5	0.0	61.0	19.4	9.1
Level of Service		D	A		E		E	A	A	E	B	A
Approach Delay (s)		4.5			64.4			8.1			20.1	
Approach LOS		A			E			A			C	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

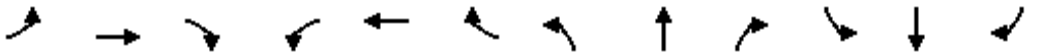


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	130	450	40	70	260	200	2190	60	360	2700	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frt	1.00	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	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5078	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	5085	1583	1770	5078	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	130	450	40	70	260	200	2190	60	360	2700	25
RTOR Reduction (vph)	0	0	117	0	0	205	0	0	10	0	1	0
Lane Group Flow (vph)	50	130	333	40	70	55	200	2190	50	360	2724	0
Turn Type	Prot		pt+ov	Prot		Over	Prot		Perm	Prot		
Protected Phases	7	4	4 5	3	8	1	5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	7.2	16.1	33.2	5.3	14.2	23.1	13.1	49.2	49.2	23.1	59.2	
Effective Green, g (s)	7.2	16.1	33.2	5.3	14.2	23.1	13.1	49.2	49.2	23.1	59.2	
Actuated g/C Ratio	0.07	0.15	0.30	0.05	0.13	0.21	0.12	0.45	0.45	0.21	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	116	273	479	86	241	333	211	2281	710	373	2740	
v/s Ratio Prot	c0.03	0.07	c0.21	0.02	0.04	0.03	0.11	0.43		c0.20	c0.54	
v/s Ratio Perm									0.03			
v/c Ratio	0.43	0.48	0.69	0.47	0.29	0.16	0.95	0.96	0.07	0.97	0.99	
Uniform Delay, d1	49.3	42.9	33.8	50.8	43.2	35.4	48.0	29.3	17.2	42.9	25.1	
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	2.6	1.3	4.3	3.9	0.7	0.2	46.8	11.0	0.0	37.1	15.7	
Delay (s)	51.8	44.2	38.1	54.8	43.9	35.6	94.8	40.3	17.3	80.0	40.8	
Level of Service	D	D	D	D	D	D	F	D	B	F	D	
Approach Delay (s)		40.5			39.3			44.2			45.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

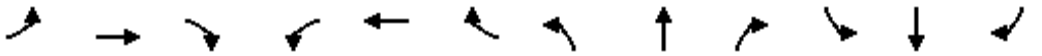
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	430	490	1950	460	810	2380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.91	1.00	0.94	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	5085	1583	4990	5085
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	5085	1583	4990	5085
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	430	490	1950	460	810	2380
RTOR Reduction (vph)	0	343	0	0	0	0
Lane Group Flow (vph)	430	147	1950	460	810	2380
Turn Type		Over		Free	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases				Free		
Actuated Green, G (s)	19.0	13.0	31.0	75.0	13.0	48.0
Effective Green, g (s)	19.0	13.0	31.0	75.0	13.0	48.0
Actuated g/C Ratio	0.25	0.17	0.41	1.00	0.17	0.64
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	448	274	2102	1583	865	3254
v/s Ratio Prot	c0.24	0.09	c0.38		c0.16	0.47
v/s Ratio Perm				0.29		
v/c Ratio	0.96	0.54	0.93	0.29	0.94	0.73
Uniform Delay, d1	27.6	28.3	20.9	0.0	30.6	9.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	31.9	2.0	7.7	0.5	17.1	0.9
Delay (s)	59.6	30.3	28.7	0.5	47.6	10.0
Level of Service	E	C	C	A	D	B
Approach Delay (s)	44.0		23.3			19.6
Approach LOS	D		C			B

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



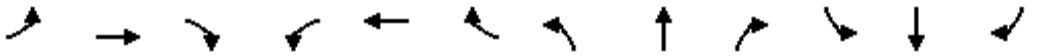
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	20	100	100	20	680	50	1280	60	760	1620	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.88		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)	3433	1630		1770	1863	1583	1770	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1630		1770	1863	1583	1770	3539	1583	3433	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	450	20	100	100	20	680	50	1280	60	760	1620	430
RTOR Reduction (vph)	0	91	0	0	0	0	0	0	13	0	0	0
Lane Group Flow (vph)	450	29	0	100	20	680	50	1280	47	760	1620	430
Turn Type	Prot			Prot		Free	Prot		Perm	Prot		Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						Free			2			Free
Actuated Green, G (s)	19.5	11.0		12.1	3.6	120.0	9.7	42.5	42.5	38.4	71.2	120.0
Effective Green, g (s)	19.5	11.0		12.1	3.6	120.0	9.7	42.5	42.5	38.4	71.2	120.0
Actuated g/C Ratio	0.16	0.09		0.10	0.03	1.00	0.08	0.35	0.35	0.32	0.59	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	558	149		178	56	1583	143	1253	561	1099	2100	1583
v/s Ratio Prot	c0.13	0.02		0.06	0.01		0.03	c0.36		c0.22	c0.46	
v/s Ratio Perm						c0.43			0.03			0.27
v/c Ratio	0.81	0.20		0.56	0.36	0.43	0.35	1.02	0.08	0.69	0.77	0.27
Uniform Delay, d1	48.4	50.4		51.4	57.1	0.0	52.2	38.7	25.8	35.6	18.3	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.04	0.91	0.88	1.00	1.00	1.00
Incremental Delay, d2	8.3	0.6		4.0	3.9	0.9	1.4	29.9	0.3	1.9	2.8	0.4
Delay (s)	56.8	51.1		55.4	60.9	0.9	55.6	65.1	22.8	37.5	21.1	0.4
Level of Service	E	D		E	E	A	E	E	C	D	C	A
Approach Delay (s)		55.6			9.2			62.9			22.4	
Approach LOS		E			A			E			C	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



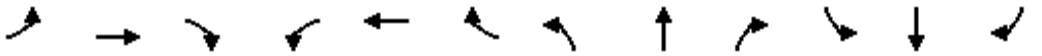
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	2600	460	250	2070	50	160	70	160	40	110	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1803	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1863	1583	1770	1803	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	2600	460	250	2070	50	160	70	160	40	110	30
RTOR Reduction (vph)	0	0	104	0	0	10	0	0	137	0	8	0
Lane Group Flow (vph)	100	2600	356	250	2070	40	160	70	23	40	132	0
Turn Type	Prot		pm+ov	Prot		Over	Prot		Over	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4									
Actuated Green, G (s)	11.1	60.0	71.0	17.0	65.9	5.6	11.0	21.4	17.0	5.6	16.0	
Effective Green, g (s)	11.1	60.0	71.0	17.0	65.9	5.6	11.0	21.4	17.0	5.6	16.0	
Actuated g/C Ratio	0.09	0.50	0.59	0.14	0.55	0.05	0.09	0.18	0.14	0.05	0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	2543	989	251	2793	74	162	332	224	83	240	
v/s Ratio Prot	0.06	c0.51	0.03	c0.14	0.41	0.02	c0.09	0.04	0.01	0.02	c0.07	
v/s Ratio Perm			0.19									
v/c Ratio	0.61	1.02	0.36	1.00	0.74	0.53	0.99	0.21	0.10	0.48	0.55	
Uniform Delay, d1	52.4	30.0	12.7	51.5	20.6	55.9	54.4	42.1	44.8	55.8	48.6	
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	6.3	23.8	0.2	55.3	1.1	7.2	66.4	1.4	0.2	4.4	8.8	
Delay (s)	58.7	53.8	12.9	106.8	21.7	63.1	120.8	43.5	45.0	60.1	57.5	
Level of Service	E	D	B	F	C	E	F	D	D	E	E	
Approach Delay (s)		48.0			31.5			75.9			58.0	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM Average Control Delay	43.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



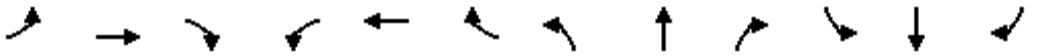
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	300	1090	40	30	600	80	20	80	30	210	120	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3520		1770	3477		1770	1787		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.68	1.00		0.69	1.00	1.00
Satd. Flow (perm)	1770	3520		1770	3477		1266	1787		1278	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	1090	40	30	600	80	20	80	30	210	120	250
RTOR Reduction (vph)	0	4	0	0	17	0	0	23	0	0	0	192
Lane Group Flow (vph)	300	1126	0	30	663	0	20	87	0	210	120	58
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	12.2	28.3		1.7	17.8		12.8	12.8		12.8	12.8	12.8
Effective Green, g (s)	12.2	28.3		1.7	17.8		12.8	12.8		12.8	12.8	12.8
Actuated g/C Ratio	0.22	0.52		0.03	0.32		0.23	0.23		0.23	0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	394	1818		55	1129		296	417		299	435	370
v/s Ratio Prot	c0.17	c0.32		0.02	0.19			0.05			0.06	
v/s Ratio Perm							0.02			c0.16		0.04
v/c Ratio	0.76	0.62		0.55	0.59		0.07	0.21		0.70	0.28	0.16
Uniform Delay, d1	19.9	9.4		26.2	15.4		16.4	16.9		19.3	17.2	16.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.4	0.6		10.6	0.8		0.1	0.3		7.3	0.3	0.2
Delay (s)	28.4	10.1		36.8	16.2		16.4	17.2		26.5	17.5	16.9
Level of Service	C	B		D	B		B	B		C	B	B
Approach Delay (s)		13.9			17.1			17.1			20.5	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



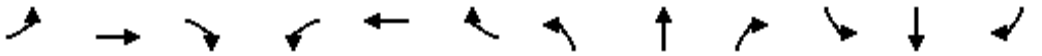
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	800	50	50	300	150	50	100	50	250	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.95		1.00	0.95		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3508		1770	3362		1770	1770		1770	1723	
Flt Permitted	0.95	1.00		0.30	1.00		0.50	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3508		567	3362		931	1770		1770	1723	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	50	800	50	50	300	150	50	100	50	250	50	50
RTOR Reduction (vph)	0	7	0	0	100	0	0	33	0	0	38	0
Lane Group Flow (vph)	50	843	0	50	350	0	50	117	0	250	62	0
Turn Type	Prot			Perm			Perm			Split		
Protected Phases	7	4			8			2		6	6	
Permitted Phases				8			2					
Actuated Green, G (s)	1.4	18.6		13.2	13.2		8.0	8.0		11.8	11.8	
Effective Green, g (s)	1.4	18.6		13.2	13.2		8.0	8.0		11.8	11.8	
Actuated g/C Ratio	0.03	0.37		0.26	0.26		0.16	0.16		0.23	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	49	1295		149	881		148	281		414	403	
v/s Ratio Prot	0.03	c0.24			0.10			c0.07		c0.14	0.04	
v/s Ratio Perm				0.09			0.05					
v/c Ratio	1.02	0.65		0.34	0.40		0.34	0.42		0.60	0.15	
Uniform Delay, d1	24.5	13.2		15.1	15.3		18.8	19.1		17.2	15.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	134.5	1.2		1.3	0.3		1.4	1.0		2.5	0.2	
Delay (s)	159.0	14.4		16.4	15.6		20.2	20.1		19.7	15.5	
Level of Service	F	B		B	B		C	C		B	B	
Approach Delay (s)		22.4			15.7			20.1			18.5	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



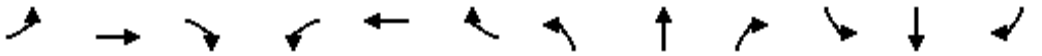
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	690	360	1010	90	300	50	640	1400	100	25	1675	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.91	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)	3433	1863	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
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)	3433	1863	1583	1770	1863	1583	3433	5085	1583	1770	5085	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	690	360	1010	90	300	50	640	1400	100	25	1675	380
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	48	0	0	0
Lane Group Flow (vph)	690	360	1010	90	300	16	640	1400	52	25	1675	380
Turn Type	Prot		Free	Prot		Perm	Prot		pm+ov	Prot		Free
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases			Free			8			2			Free
Actuated Green, G (s)	16.0	25.0	90.0	6.9	15.9	15.9	15.1	40.1	47.0	2.0	27.0	90.0
Effective Green, g (s)	16.0	25.0	90.0	6.9	15.9	15.9	15.1	40.1	47.0	2.0	27.0	90.0
Actuated g/C Ratio	0.18	0.28	1.00	0.08	0.18	0.18	0.17	0.45	0.52	0.02	0.30	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	610	518	1583	136	329	280	576	2266	897	39	1526	1583
v/s Ratio Prot	c0.20	0.19		0.05	c0.16		c0.19	0.28	0.00	0.01	c0.33	
v/s Ratio Perm			0.64			0.01			0.03			0.24
v/c Ratio	1.13	0.69	0.64	0.66	0.91	0.06	1.11	0.62	0.06	0.64	1.10	0.24
Uniform Delay, d1	37.0	29.1	0.0	40.4	36.4	30.8	37.4	19.1	10.6	43.6	31.5	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.20	1.17	1.00
Incremental Delay, d2	78.2	4.0	2.0	11.5	28.3	0.1	71.8	1.3	0.0	19.8	50.9	0.2
Delay (s)	115.2	33.1	2.0	51.9	64.6	30.9	109.2	20.4	10.6	72.4	87.9	0.2
Level of Service	F	C	A	D	E	C	F	C	B	E	F	A
Approach Delay (s)		45.4			58.2			46.5			71.7	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	54.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



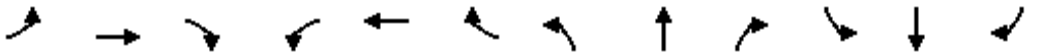
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1370	290	510	25	275	750	450	1510	25	580	1990	1130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	1.00	1.00	1.00	1.00	1.00	0.97	0.86	1.00	0.97	0.91	0.88
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)	4990	1863	1583	1770	1863	1583	3433	6408	1583	3433	5085	2787
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)	4990	1863	1583	1770	1863	1583	3433	6408	1583	3433	5085	2787
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1370	290	510	25	275	750	450	1510	25	580	1990	1130
RTOR Reduction (vph)	0	0	156	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	1370	290	354	25	275	750	450	1510	20	580	1990	1130
Turn Type	Split		pt+ov	Split		Free	Prot		pt+ov	Prot		Free
Protected Phases	4	4	4 5	8	8		5	2	2 8	1	6	
Permitted Phases						Free						Free
Actuated Green, G (s)	30.0	30.0	45.0	16.0	16.0	120.0	15.0	34.9	50.9	23.1	43.0	120.0
Effective Green, g (s)	30.0	30.0	45.0	16.0	16.0	120.0	15.0	34.9	50.9	23.1	43.0	120.0
Actuated g/C Ratio	0.25	0.25	0.38	0.13	0.13	1.00	0.12	0.29	0.42	0.19	0.36	1.00
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1248	466	594	236	248	1583	429	1864	671	661	1822	2787
v/s Ratio Prot	c0.27	0.16	0.22	0.01	c0.15		c0.13	0.24	0.01	0.17	c0.39	
v/s Ratio Perm						0.47						0.41
v/c Ratio	1.10	0.62	0.60	0.11	1.11	0.47	1.05	0.81	0.03	0.88	1.09	0.41
Uniform Delay, d1	45.0	40.0	30.2	45.7	52.0	0.0	52.5	39.5	20.1	47.1	38.5	0.0
Progression Factor	1.00	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	56.6	2.6	1.6	0.2	89.5	1.0	56.9	3.9	0.0	12.6	51.0	0.4
Delay (s)	101.6	42.6	31.8	45.9	141.5	1.0	109.4	43.4	20.2	59.7	89.5	0.4
Level of Service	F	D	C	D	F	A	F	D	C	E	F	A
Approach Delay (s)		77.3			38.9			58.1			57.6	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM Average Control Delay	60.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1375	40	890	1250	840	150	300	1175	575	260	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91		0.94	0.95	1.00	1.00	1.00	0.88	0.97	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	5064		4990	3539	1583	1770	1863	2787	3433	1852	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	5064		4990	3539	1583	1770	1863	2787	3433	1852	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	1375	40	890	1250	840	150	300	1175	575	260	10
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	5	0	2	0
Lane Group Flow (vph)	20	1413	0	890	1250	840	150	300	1170	575	268	0
Turn Type	Prot			Prot		Free	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases						Free			2			
Actuated Green, G (s)	1.6	35.4		27.7	61.5	120.0	13.1	19.9	47.6	21.0	27.8	
Effective Green, g (s)	1.6	35.4		27.7	61.5	120.0	13.1	19.9	47.6	21.0	27.8	
Actuated g/C Ratio	0.01	0.30		0.23	0.51	1.00	0.11	0.17	0.40	0.18	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	24	1494		1152	1814	1583	193	309	1198	601	429	
v/s Ratio Prot	0.01	c0.28		0.18	0.35		0.08	0.16	c0.23	c0.17	0.14	
v/s Ratio Perm						0.53			0.19			
v/c Ratio	0.83	0.95		0.77	0.69	0.53	0.78	0.97	0.98	0.96	0.63	
Uniform Delay, d1	59.1	41.4		43.2	22.0	0.0	52.0	49.8	35.7	49.0	41.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	110.4	12.5		3.3	1.1	1.3	17.6	44.3	20.4	26.1	6.7	
Delay (s)	169.5	53.9		46.5	23.2	1.3	69.7	94.1	56.0	75.1	48.2	
Level of Service	F	D		D	C	A	E	F	E	E	D	
Approach Delay (s)		55.5			24.0			64.3			66.5	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	400	1090	490	25	820	10	790	90	25	25	25	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3533		3433	1802		1770	1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3533		3433	1802		1770	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	1090	490	25	820	10	790	90	25	25	25	30
RTOR Reduction (vph)	0	0	0	0	1	0	0	12	0	0	27	0
Lane Group Flow (vph)	400	1090	490	25	829	0	790	103	0	25	28	0
Turn Type	Prot		Free	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free									
Actuated Green, G (s)	19.0	39.9	85.9	1.6	22.5		19.0	26.8		1.6	9.4	
Effective Green, g (s)	19.0	39.9	85.9	1.6	22.5		19.0	26.8		1.6	9.4	
Actuated g/C Ratio	0.22	0.46	1.00	0.02	0.26		0.22	0.31		0.02	0.11	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	392	1644	1583	33	925		759	562		33	187	
v/s Ratio Prot	c0.23	0.31		0.01	c0.23		c0.23	0.06		0.01	0.02	
v/s Ratio Perm			c0.31									
v/c Ratio	1.02	0.66	0.31	0.76	0.90		1.04	0.18		0.76	0.15	
Uniform Delay, d1	33.4	17.8	0.0	42.0	30.6		33.4	21.6		42.0	34.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	50.7	1.0	0.5	65.1	11.2		43.8	0.2		65.1	0.4	
Delay (s)	84.2	18.8	0.5	107.1	41.8		77.2	21.7		107.1	35.0	
Level of Service	F	B	A	F	D		E	C		F	D	
Approach Delay (s)		27.5			43.7			70.2			57.5	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	85.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX C

TRACY TRAVEL DEMAND MODEL ADJUSTMENTS:

4D VARIABLE DEFINITIONS AND ELASTICITIES

(SOURCE: FEHR & PEERS ASSOCIATES)

TABLE A-1
4D VARIABLE DEFINITIONS AND ELASTICITIES

Variable	Formulation	VT Elasticity
Density	$\text{Density} = \frac{(e + p)}{z}$ where : e = employees within 0.5 mile radius of parcel/TAZ p = population within 0.5 mile radius of parcel/TAZ z = area (in square miles) of residential and employment zoning within 0.5 mile radius of parcel/TAZ	- 0.04
Diversity	$\text{Diversity} = 1 - \left\lvert \frac{(b \cdot p) - e}{(b \cdot p) + e} \right\rvert$ where : b = regional employement / regional population p = population 0.5 mile radius of parcel/TAZ e = employment within 0.5 mile radius of parcel/TAZ	- 0.06
Design	$\text{Design} = 0.0195 \cdot \text{street density} + 1.18 \cdot \text{sidewalk completeness} + 3.63 \cdot \text{route directness}$ where : $\text{street density} = \frac{l}{a}$ $\text{sidewalk completeness} = \frac{s}{l}$ $\text{route directness} = \frac{d}{l}$ where : l = length of street (centerline) in miles a = area of neighborhood in square miles s = length of sidewalk in miles d = airline distance in miles $= \sqrt{(X_2 - X_1)^2 + (Y_2 - Y_1)^2}$	- 0.02

Source: *INDEX® 4D Method: A Quick-Response Method of Estimating Travel Impacts from Land-Use Changes*, Criterion Planners/Engineers and Fehr & Peers, U.S. EPA, October, 2001.

VT Elasticity means that a 100% increase in the variable listed would result in a reduction of trips by the indicated elasticity. For example, an increase of 100% in the density of a TAZ would result in a 4% reduction in trips for that TAZ.