CAP-X Results Summary Research Forest Drive and Grogans Mill Road At-Grade Alternatives Date: 2019-06-07

						2030 At-C	Grade CAP-	X Results -	- Research	Forest Dr	ive			
			AM Pe	ak Hour					PM Pe	eak Hour				
At Grade Alternatives	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Evaluation Status	Reason for Recommendation
Conventional (6-lane RFD)					0.80	0.80					0.82	0.82	Additional Modeling Recommended	
Conventional Shared RT LN (6-lane RFD)					0.83	0.83					0.88	0.88	Consider Dismissal by Project Team	Conventional provides better operations
Quadrant Roadway SW		0.57		0.55	0.63	0.63		0.71		0.62	0.61	0.71	Additional Modeling Recommended	
Quadrant Roadway NE	0.61		0.65		0.65	0.65	0.62		0.59		0.77	0.77	Consider Dismissal by Project Team	Large anticipated real estate impacts
Quadrant Roadway SE		0.57	0.57		0.70	0.70		0.81	0.81		0.70	0.81	Consider Dismissal by Project Team	Large anticipated real estate impacts
Quadrant Roadway NW	0.53			0.51	0.70	0.70	0.60			0.70	0.66	0.70	Consider Dismissal by Project Team	Large anticipated real estate impacts
Partial Displaced LT N-S	0.29	0.52			0.71	0.71	0.30	0.49			0.67	0.67	Additional Modeling Recommended	
Partial Displaced LT E-W			0.47	0.52	0.66	0.66			0.39	0.59	0.70	0.70	Consider Dismissal by Project Team	Partial DLT N-S provides better accomodation for heavy NBL
Displaced LT	0.17	0.39	0.61	0.52	0.51	0.61	0.18	0.59	0.46	0.59	0.79	0.79	Consider Dismissal by Project Team	Large anticipated real estate impacts and Partial DLT (N-S) acceptable operations operations
Restricted Crossing U-Turn N-S	0.96	0.88	1.84	1.26		1.84	0.89			1.20			Consider Dismissal by Project Team	Overall LOS greater than 1.00
Restricted Crossing U-Turn E-W	0.59	0.51	0.67	0.63		0.67	0.70	0.63	0.77	0.54		0.77	Consider Dismissal by Project Team	Median U-turn provides better operations
Median U-Turn N-S	0.44	0.41			0.51	0.51	0.54	0.59			0.70	0.70	Additional Modeling Recommended	
Median U-Turn E-W			0.66	0.69	0.59	0.69			0.75	0.54	0.75	0.75	Consider Dismissal by Project Team	Median U-turn N-S provides better operations
Partial Median U-Turn N-S	0.28	0.26			0.68	0.68	0.46	0.45			0.83	0.83	Consider Dismissal by Project Team	Median U-turn provides better operations
Partial Median U-Turn E-W			0.56	0.66	0.68	0.68			0.48	0.50	0.83	0.83	Consider Dismissal by Project Team	Median U-turn provides better operations

						2045 At-0	Grade CAP-	X Results	- Research	Forest Dr	ive			
			AM Pe	ak Hour					PM Pe	eak Hour				
At Grade Alternatives	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Evaluation Status	Reason for Recommendation
Conventional (6-lane RFD)					0.81	0.81					0.89	0.89	Additional Modeling Recommended	
Conventional Shared RT LN (6-lane RFD)					0.93	0.93					1.00	1.00	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Quadrant Roadway SW		0.64		0.61	0.71	0.71		0.81		0.70	0.69	0.81	Additional Modeling Recommended	
Quadrant Roadway NE	0.70		0.73		0.74	0.74	0.70		0.66		0.87	0.87	Consider Dismissal by Project Team	Large anticipated real estate impacts
Quadrant Roadway SE		0.64	0.64		0.79	0.79		0.91	0.91		0.78	0.91	Consider Dismissal by Project Team	Large anticipated real estate impacts
Quadrant Roadway NW	0.60			0.58	0.80	0.80	0.68			0.79	0.75	0.79	Consider Dismissal by Project Team	Large anticipated real estate impacts
Partial Displaced LT N-S	0.33	0.59			0.80	0.80	0.35	0.56			0.76	0.76	Additional Modeling Recommended	
Partial Displaced LT E-W			0.53	0.58	0.75	0.75			0.44	0.66	0.79	0.79	Consider Dismissal by Project Team	Partial DLT N-S provides better accomodation for heavy NBL
Displaced LT	0.19	0.35	0.68	0.58	0.55	0.68	0.20	0.41	0.51	0.66	0.63	0.66	Consider Dismissal by Project Team	Large anticipated real estate impacts and Partial DLT (N-S) acceptable operations operations
Restricted Crossing U-Turn N-S	1.08	0.99	2.05	1.40		2.05	1.00	1.16	2.01	1.33			Consider Dismissal by Project Team	Overall LOS greater than 1.00
Restricted Crossing U-Turn E-W	0.67	0.58	0.75	0.71		0.75	0.79	0.71	0.87	0.61		0.87	Consider Dismissal by Project Team	Median U-turn provides better operations
Median U-Turn N-S	0.50	0.47			0.58	0.58	0.61	0.67			0.79	0.79	Additional Modeling Recommended	
Median U-Turn E-W			0.74	0.77	0.67	0.77			0.84	0.60	0.84	0.84	Consider Dismissal by Project Team	Median U-turn N-S provides better operations
Partial Median U-Turn N-S	0.32	0.30			0.76	0.76	0.52	0.52			0.93	0.93		Median U-turn provides better operations
Partial Median U-Turn E-W			0.62	0.74	0.76	0.76			0.53	0.57	0.93	0.93	Consider Dismissal by Project Team	Median U-turn provides better operations

CAP-X Results Summary Research Forest Drive and Grogans Mill Road Grade Separated Alternatives Date: 2019-06-07

						20	45 Grade S	Separated	CAP-X Resu	ults - Resea	arch Forest	Drive				
				AM Peak Hour							PM Peak Hour					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6			
At Grade Alternatives	(Rt Mrg)	(Lt Mrg)	(Ctr. 1)	(Ctr. 2)	(Lt Mrg)	(Lt Mrg)	Overall v/c	(Rt Mrg)	(Lt Mrg)	(Ctr. 1)	(Ctr. 2)	(Lt Mrg)	(Lt Mrg)	Overall v/c	Evaluation Status	Reason for Recommendation
Diamond N-S			0.70	0.68			0.70			0.70	0.52			0.70	Additional Modeling Recommended	
Diamond E-W			0.62	0.64			0.64			0.75	0.67			0.75	Consider Dismissal by Project Team	Does not remove heavy RFD thru traffic from signals
Double Crossover Diamond N-S	0.36	0.43	0.26	0.42	0.31	0.49	0.49	0.26	0.26	0.25	0.48	0.46	0.30	0.48	Additional Modeling Recommended	
Double Crossover Diamond E-W Single Point N-S	0.62	0.84	0.45	0.57	0.84	0.54	0.84	0.78	0.92	0.44	0.68	0.78	0.63	0.92 0.81		Does not remove heavy RFD thru traffic from signals Diamond and DCD provide better operations
Single Point E-W	0.62		0.79			0.54	0.79	0.78		0.78			0.63	0.78		Does not remove heavy RFD thru traffic from signals

CAP-X Results Summary Lake Woodlands Drive and Grogans Mill Road At-Grade Alternatives Date: 2019-06-07

	2030 At-Grade CAP-X Results - Lake Woodlands Drive														
			AM Pe	ak Hour					PM P6	eak Hour					
At Grade Alternatives	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Evaluation Status	Reason for Recommendation	
Conventional (4-lane LWB)					0.76	0.76					0.92	0.92	Additional Modeling Recommended		
Conventional Shared RT LN (4-lane LWB)					1.05	1.05					1.22	1.22	Consider Dismissal by Project Team	Overall LOS greater than 1.00	
Quadrant Roadway SW		0.44		0.53	0.70	0.70		0.58		0.76	0.79	0.79	Consider Dismissal by Project Team	Large anticipated real estate impacts	
Quadrant Roadway NE	0.67		0.54		0.90	0.90	0.57		0.72		1.06	1.06	Consider Dismissal by Project Team	Overall LOS greater than 1.00	
Quadrant Roadway SE		0.45	0.45		0.78	0.78		0.62	0.62		0.93	0.93	Consider Dismissal by Project Team	Quadrant SW provides better operations	
Quadrant Roadway NW	0.47			0.55	0.83	0.83	0.54			0.86	0.95	0.95	Consider Dismissal by Project Team	Quadrant SW provides better operations	
Partial Displaced LT N-S	0.36	0.37			0.70	0.70	0.41	0.55			0.70	0.70	Additional Modeling Recommended		
Partial Displaced LT E-W			0.33	0.56	0.71	0.71			0.52	0.63	0.86	0.86	Consider Dismissal by Project Team	Partial DLT (N-S) provides better operations	
														Large anticipated real estate impacts and Partial DLT (N-S)	
Displaced LT	0.36	0.37	0.38	0.56	0.66	0.66	0.41	0.55	0.61	0.63	0.63	0.63	Consider Dismissal by Project Team	provides similar operations	
Restricted Crossing U-Turn N-S	0.78	0.80	1.19	1.25		1.25	0.95	1.03	1.53	1.48		1.53	Consider Dismissal by Project Team	Overall LOS greater than 1.00	
Restricted Crossing U-Turn E-W	0.70	0.76	1.08	0.69		1.08	0.90	0.98	1.08	0.98		1.08	Consider Dismissal by Project Team	Overall LOS greater than 1.00	
Median U-Turn N-S	0.46	0.54			0.78	0.78	0.73	0.68			0.86	0.86	Consider Dismissal by Project Team	Median U-turn E-W is a better fit for existing R/W	
Median U-Turn E-W			0.77	0.51	0.70	0.77			0.80	0.78	0.87	0.87	Additional Modeling Recommended		
Partial Median U-Turn N-S	0.40	0.55			0.76	0.76	0.63	0.77			0.94	0.94	Consider Dismissal by Project Team	Median U-turn provides better operations	
Partial Median U-Turn E-W			0.64	0.53	0.76	0.76			0.54	0.78	0.94	0.94	Consider Dismissal by Project Team	Median U-turn provides better operations	

						2045 At-G	Grade CAP-	X Results -	Lake Woo	dlands Dr	ive			
			AM Pe	ak Hour					PM Pe	eak Hour				
At Grade Alternatives	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Zone 1 (N)	Zone 2 (S)	Zone 3 (E)	Zone 4 (W)	Zone 5 (Center)	Overall v/c	Evaluation Status	Reason for Dismissal
Conventional (6-lane LWB)					0.77	0.77					0.93	0.93	Additional Modeling Recommended	
Conventional Shared RT LN (6-lane LWB)					0.97	0.97					1.14	1.14	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Quadrant Roadway SW		0.50		0.50	0.78	0.78		0.81		0.82	0.87	0.87	Consider Dismissal by Project Team	Large anticipated real estate impacts
Quadrant Roadway NE	0.76		0.59		1.00	1.00	0.65		0.78		1.18	1.18	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Quadrant Roadway SE		0.51	0.51		0.86	0.86		0.70	0.70		1.03		Consider Dismissal by Project Team	Overall LOS greater than 1.00
Quadrant Roadway NW	0.53			0.59	0.92	0.92	0.59			0.93	1.07		Consider Dismissal by Project Team	Overall LOS greater than 1.00
Partial Displaced LT N-S	0.42	0.42			0.78	0.78	0.47	0.62			0.76	0.76	Additional Modeling Recommended	
Partial Displaced LT E-W			0.35	0.60	0.78	0.78			0.56	0.68	0.95	0.95	Consider Dismissal by Project Team	Partial DLT (N-S) provides better operations
														Large anticipated real estate impacts and Partial DLT (N-S)
Displaced LT	0.42	0.42	0.41	0.60	0.72	0.72	0.47	0.62	0.65	0.68	0.70	0.70	Consider Dismissal by Project Team	provides similar operations
Restricted Crossing U-Turn N-S	0.85	0.88	1.28	1.34		1.34	1.04		1.63	1.58		1.63	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Restricted Crossing U-Turn E-W	0.76	0.86	1.19	0.76		1.19	0.98		1.20	1.08		1.20	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Median U-Turn N-S	0.52	0.61			0.86	0.86	0.82	0.77			0.94	0.94	Consider Dismissal by Project Team	Median U-turn E-W is a better fit for existing R/W
Median U-Turn E-W			0.83	0.55	0.78	0.83			0.87	0.84	0.94	0.94	Additional Modeling Recommended	
Partial Median U-Turn N-S	0.45	0.63			0.83	0.83	0.71	0.87			1.04	1.04	Consider Dismissal by Project Team	Overall LOS greater than 1.00
Partial Median U-Turn E-W			0.69	0.57	0.83	0.83			0.58	0.84	1.04	1.04	Consider Dismissal by Project Team	Overall LOS greater than 1.00

CAP-X Results Summary Lake Woodlands Drive and Grogans Mill Road Grade Separated Alternatives Date: 2019-06-07

	2045 Grade Separated CAP-X Results - Lake Woodlands Drive															
				AM Peak Hour							PM Peak Hour					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6			
At Grade Alternatives	(Rt Mrg)	(Lt Mrg)	(Ctr. 1)	(Ctr. 2)	(Lt Mrg)	(Lt Mrg)	Overall v/c	(Rt Mrg)	(Lt Mrg)	(Ctr. 1)	(Ctr. 2)	(Lt Mrg)	(Lt Mrg)	Overall v/c	Evaluation Status	Reason for Recommendation
Diamond N-S			0.54	0.43			0.54			0.71	0.57			0.71	Consider Dismissal by Project Team	
Diamond E-W			0.49	0.64			0.64			0.74	0.84			0.84	Consider Dismissal by Project Team	Does not remove heavy LWD thru traffic from signals
Double Crossover Diamond N-S	0.57	0.37	0.49	0.58	0.36	0.44	0.58	0.29	0.55	0.56	0.71	0.36	0.61	0.71	Consider Dismissal by Project Team	Diamond and Single Point provide better operations.
Double Crossover Diamond E-W	0.40	0.64	0.36	0.45	0.60	0.48	0.64	0.54	0.83	0.58	0.59	0.81	0.77	0.83	Consider Dismissal by Project Team	Does not remove heavy LWD thru traffic from signals
Single Point N-S	0.72		0.52			0.46	0.72	0.40		0.62			0.64	0.64	Additional Modeling Recommended	
Single Point E-W	0.58		0.61			0.48	0.61	0.76		0.76			0.77	0.77	Consider Dismissal by Project Team	Does not remove heavy LWD thru traffic from signals