

DRAFT MEMORANDUM

To: Jordan Swisher
Brue Baukol Capital Partners

From: Emily Gross, PE

Date: November 14, 2019

Project: Nawatny Ridge

Subject: Conformance Letter for Parcel B

Pursuant to your request, the Fox Tuttle Hernandez Transportation Group, LLC has prepared a conformance letter for Parcel B located within the Nawatny Ridge project. This letter is consistent with the assumptions and methodology used to prepare the *Nawatny Ridge Traffic and Mobility Study*, dated September 30, 2019.

Parcel B is the central area in the planned development, located south of Campus Drive and north of Tape Drive, between the new Street A and Street B roadways. Parcel B is planned to be developed as a 500,000 square foot corporate office headquarters. Access to the corporate office is proposed along Street B. This is the first development that is planned to be constructed as part of the Nawatny Ridge project. As part of the initial phasing, the following roadways are planned to be constructed along with the Parcel B development:

- Extension of Campus Drive from where it dead ends 2,200 feet east of 88th Street to 96th Street
- Street B between Campus Drive and Tape Drive
- Tape Drive between Street B and Northwest Parkway

Note that Tape Drive between 88th Street and Street B is not planned to be constructed as part of this first phase nor is Street A between Campus Drive and the future Tape Drive. The purpose of this conformance letter is to evaluate the planned roadway network (bulleted above) with traffic generated by the corporate office in Parcel B.

Traffic Volume Assumptions

Trip generation estimates for the proposed 500,000 square foot office corporate headquarters in Parcel B were prepared for the Nawatny Ridge Traffic and Mobility Study. Those trip generation estimates are shown in **Table 1**.

Table 1 – Trip Generation Summary: Parcel B

Land Use	Size	Unit	Non-SOV	Internal Capture	Average Weekday Trips		Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips				
					Rate	Total	Rate	Total	In	Out	Rate	Total	In	Out
#710 General Office Building	500	KSF	25%	10%	9.74	3,287	1.16	392	337	55	1.15	388	62	326

As shown in **Table 1**, the corporate office is expected to generate approximately 3,287 daily, 392 AM peak hour, and 388 PM peak hour trips. Parcel B is approximately 30 to 35 percent of the total development generated traffic that was assumed to be completed prior to Year 2022 in the Nawatny Ridge Traffic and Mobility Study.

The trips generated by Parcel B were distributed to the roadway network based on the trip distribution assumptions developed for the Nawatny Ridge Traffic and Mobility Study. Trips that were routed to use the 88th Street/Tape Drive intersection were rerouted to use the 88th Street/Campus Drive intersection since under this initial phase Tape Drive between 88th Street and Street B will not be constructed.

Consistent with the Nawatny Ridge Traffic and Mobility Study, an annual growth rate of one (1) percent was applied to the existing traffic volumes to generate Year 2022 background traffic volumes. In addition, existing traffic volumes were rerouted through the study network to account for travel pattern changes once Campus Drive is extended to 96th Street, as Campus Drive will provide an alternative route for existing traffic to route through the roadway network.

Year 2022 + Parcel B Intersection Capacity Analysis

An intersection capacity analysis was performed for the Year 2022 + Parcel B project conditions. The results of the LOS calculations for the intersections are summarized in Table 2. Intersection LOS worksheets are included as an attachment. **Results of the peak hour intersection capacity analysis indicate that the Dillon Road/96th Street and the Northwest Parkway/96th Street/Via Varra intersections are expected operate at LOS E during the AM or PM peak hour. All of the other study intersections are expected to operate at an overall LOS D or better.**

Table 2. Year 2022 + Parcel B Level of Service Summary

Intersection	LOS (Delay)			
	AM Peak Hour		PM Peak Hour	
	Overall	Worst Movement	Overall	Worst Movement
Dillon Road/McCaslin Boulevard	C (32 sec)	E (78 sec)	C (33 sec)	E (66 sec)
Dillon Road/88th Street	C (23 sec)	F (99 sec)	C (25 sec)	F (87 sec)
Dillon Road/96th Street	E (60 sec)	F (>2 min)	E (70 sec)	F (>3 min)
88th Street/Campus Drive	D (54 sec)	F (100 sec)	C (30 sec)	E (60 sec)
88 th Street/Tape Drive	--	--	--	--
88th Street/Rock Creek Parkway ⁽¹⁾	A (9 sec)	B (14 sec)	A (7 sec)	A (8 sec)
96 th Street/Campus Drive	D (34 sec)	F (100 sec)	C (22 sec)	E (74 sec)
Northwest Parkway/96th Street/Via Varra	E (62 sec)	F (>2 min)	C (30 sec)	E (70 sec)
Northwest Parkway/Tape Drive/Via Varra	C (22 sec)	F (87 sec)	B (10 sec)	E (66 sec)
Northwest Parkway/US 36 North Ramps (WB)	B (13 sec)	F (92 sec)	B (16 sec)	E (71 sec)
Northwest Parkway/US 36 South Ramps (EB)	C (21 sec)	E (66 sec)	D (30 sec)	E (65 sec)

⁽¹⁾ Roundabout controlled intersection

To address the expected issues at the study intersections, the following improvements are recommended:

- 96th/Dillon intersection capacity improvements
 - Construct dual westbound left-turn lanes on Dillon Road –*also recommended under Year 2022 background conditions*
- Expand 96th Street to a four-lane section between Dillon Road to Northwest Parkway
- 96th Street/Campus Drive – signalize and construct a southbound right-turn lane, dual northbound left-turn lanes, and dual eastbound left-turn lanes
 - Construct three northbound through lanes that extend from the Northwest Parkway/96th Street/Via Varra intersection to the Campus Drive intersection. The three northbound through lanes will merge to two through lanes north of Campus Drive
- Northwest Parkway/96th Street intersection capacity improvements
 - Construct triple northbound left-turn lanes and modify the southbound right-turn lane movement to be controlled on Northwest Parkway at the 96th Street/Via Varra intersection – *also recommended under Year 2022 background conditions*
- Northwest Parkway/Tape Drive/Via Varra – note that this intersection was designed to accommodate higher traffic volumes from when Storage Tek was operating; no modifications (besides signal timing) were assumed under Year 2022 with Parcel B conditions.

The Year 2022 Background + Parcel B conditions were evaluated with the improvements listed above. The results of the LOS calculations for the intersections are summarized in **Table 3. Results of the peak hour intersection capacity analysis indicate that with the recommended capacity improvements all study intersections are expected to operate at an overall LOS D or better during the AM and PM peak hours.**

Table 1. Year 2022 + Parcel B Level of Service Summary – With Improvements

Intersection	LOS (Delay)			
	AM Peak Hour		PM Peak Hour	
	Overall	Worst Movement	Overall	Worst Movement
Dillon Road/McCaslin Boulevard	C (32 sec)	E (78 sec)	C (33 sec)	E (66 sec)
Dillon Road/88th Street	C (23 sec)	F (99 sec)	C (25 sec)	F (87 sec)
Dillon Road/96th Street*	D (38 sec)	E (68 sec)	D (47 sec)	F (87 sec)
88th Street/Campus Drive	C (21 sec)	E (63 sec)	C (30 sec)	E (60 sec)
88 th Street/Tape Drive	--	--	--	--
88th Street/Rock Creek Parkway ⁽¹⁾	A (9 sec)	B (14 sec)	A (7 sec)	A (8 sec)
96 th Street/Campus Drive *	C (21 sec)	E (63 sec)	B (16 sec)	E (65 sec)
Northwest Parkway/96th Street/Via Varra *	C (32 sec)	F (80 sec)	C (29 sec)	E (69 sec)
Northwest Parkway/Tape Drive/Via Varra	C (22 sec)	F (87 sec)	B (10 sec)	E (66 sec)
Northwest Parkway/US 36 North Ramps (WB)	B (13 sec)	F (92 sec)	B (16 sec)	E (71 sec)
Northwest Parkway/US 36 South Ramps (EB)	C (21 sec)	E (66 sec)	D (30 sec)	E (65 sec)

⁽¹⁾ Roundabout controlled intersection

* Intersections with a recommended improvement

The recommended improvements listed above are consistent with the *Nawatny Ridge Traffic and Mobility Study* for Year 2022 + Project Conditions, except 96th Street does not need to be expanded to a four-lane section for approximately one-half mile north of Dillon Road to accommodate the trips generated by Parcel B.

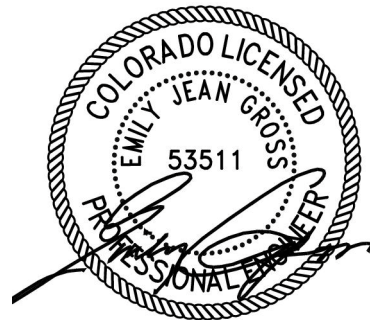
Hopefully the contents of this memorandum are helpful. If you have any questions, please give me a call.

Emily Gross, PE

Senior Transportation Engineer

Attachments:

Intersection Capacity Reports



5: McCaslin Blvd & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.3	3.9	0.5	0.6	2.9	2.1	0.2	0.3	2.3	0.1	2.3
Total Del/Veh (s)	74.6	70.0	2.2	77.7	58.7	3.4	71.8	25.5	3.8	74.8	21.0	3.0

5: McCaslin Blvd & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.7
Total Del/Veh (s)	32.2

10: 88th Street & Dillon Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	17.7	2.7	19.9	10.9	98.7	6.5	2.1	23.3

15: 96th St & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	39.6	58.3	7.8	43.8	37.8	7.9	48.9	30.9	2.3	88.5	168.2	33.0

15: 96th St & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	60.4

20: 88th Street & Campus Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.1	0.2	0.3	2.4	0.7	0.6	6.8	6.5	9.0	8.0	2.1	4.4
Total Del/Veh (s)	53.2	52.5	25.6	92.4	62.5	44.9	44.9	38.2	39.3	99.6	15.9	15.8

20: 88th Street & Campus Dr Performance by movement

Movement	All
Denied Del/Veh (s)	5.8
Total Del/Veh (s)	54.7

22: 88th Street & Tape Dr Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.7	0.0	0.5
Total Del/Veh (s)	1.1	2.2	1.4

23: 96th St & Campus Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	2.4	0.7	0.3	0.1	0.0	0.0	0.3
Total Del/Veh (s)	99.8	21.1	70.6	34.4	15.7	5.5	34.3

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.7	0.2	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	96.1	90.1	7.3	77.4	80.5	1.7	131.2	11.4	1.0	97.3	75.3	3.2

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	61.7

30: Northwest Pkwy & Tape Drive/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.0	0.1	4.2	0.9	0.4	3.6	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	76.4	84.6	0.6	86.7	64.7	7.0	63.8	8.3	2.8	58.0	20.1	7.9

30: Northwest Pkwy & Tape Drive/Via Varra Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	22.2

35: Northwest Pkwy & US 36 WB (North Ramps) Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.1
Total Del/Veh (s)	83.5	91.8	2.4	27.6	7.4	8.7	7.0	13.3

40: Northwest Pkwy & US 36 EB (South Ramps) Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.7	1.1	3.4	0.3	2.5	0.1	0.0	0.6
Total Del/Veh (s)	64.9	66.0	1.8	14.8	4.0	74.1	5.7	20.9

Total Zone Performance

Denied Del/Veh (s)	2.1
Total Del/Veh (s)	1200.3

Intersection: 5: McCaslin Blvd & Dillon Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	L	L	T	R	L	L	T	T	R
Maximum Queue (ft)	80	128	87	344	584	322	115	149	186	474	432	171
Average Queue (ft)	8	48	27	223	282	108	4	35	98	228	206	20
95th Queue (ft)	42	103	69	355	473	222	66	112	163	407	377	86
Link Distance (ft)		750	750		1028	1028				893	893	893
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			285			285	510	510			
Storage Blk Time (%)	0	0	0	6	13	1				0		
Queuing Penalty (veh)	0	0	0	13	31	1				0		

Intersection: 5: McCaslin Blvd & Dillon Rd

Movement	SB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	T	R
Maximum Queue (ft)	187	204	264	244	208	78
Average Queue (ft)	75	109	159	138	89	4
95th Queue (ft)	169	190	267	243	195	45
Link Distance (ft)			1296	1296	1296	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190	190				100
Storage Blk Time (%)	0	1	5		5	
Queuing Penalty (veh)	1	2	9		5	

Intersection: 10: 88th Street & Dillon Rd

Movement	EB	EB	WB	WB	WB	B19	B19	NB	NB	NB
Directions Served	T	R	L	T	T	T		L	L	R
Maximum Queue (ft)	379	75	218	212	205	85	5	272	306	164
Average Queue (ft)	126	20	68	81	84	3	0	144	170	6
95th Queue (ft)	284	58	164	183	188	68	4	244	269	78
Link Distance (ft)	1552	1552		490	490	601	601		337	
Upstream Blk Time (%)								0	0	0
Queuing Penalty (veh)								0	0	0
Storage Bay Dist (ft)			400					200		200
Storage Blk Time (%)								6	11	
Queuing Penalty (veh)								15	28	

Intersection: 15: 96th St & Dillon Rd

Movement	EB	EB	EB	EB	B9	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	T	L	T	T	R	L	T	T
Maximum Queue (ft)	304	222	203	62	79	424	274	199	76	277	327	280
Average Queue (ft)	115	116	85	24	3	248	115	86	35	114	214	162
95th Queue (ft)	235	196	168	50	63	399	212	168	65	213	320	259
Link Distance (ft)		601	601		490		648	648			556	556
Upstream Blk Time (%)					0		0					
Queuing Penalty (veh)					0		0					
Storage Bay Dist (ft)	415			415		420			420	330		
Storage Blk Time (%)	0					2				0	0	
Queuing Penalty (veh)	0					3				0	1	

Intersection: 15: 96th St & Dillon Rd

Movement	B42	B42	SB	SB	SB	SB	B38
Directions Served	T		L	T	T	R	T
Maximum Queue (ft)	405	79	495	776	750	495	2263
Average Queue (ft)	31	3	403	720	674	407	1416
95th Queue (ft)	223	63	701	848	811	697	3068
Link Distance (ft)	444	444		682	682		2350
Upstream Blk Time (%)	0	0		34	14		29
Queuing Penalty (veh)	2	0		0	0		0
Storage Bay Dist (ft)			335			335	
Storage Blk Time (%)				90	57		
Queuing Penalty (veh)				85	146		

Intersection: 20: 88th Street & Campus Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	L	T	R
Maximum Queue (ft)	67	143	326	626	163	999	270	443	492	752	98
Average Queue (ft)	23	48	190	208	50	288	168	182	205	176	39
95th Queue (ft)	55	114	336	601	110	853	309	454	498	651	76
Link Distance (ft)		565		1724		1352				869	
Upstream Blk Time (%)										4	
Queuing Penalty (veh)										25	
Storage Bay Dist (ft)	125		210		170		170	400	400		200
Storage Blk Time (%)		2	21	5	0	2	22	8	17		
Queuing Penalty (veh)		1	53	16	3	13	51	19	41		

Intersection: 22: 88th Street & Tape Dr

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: 96th St & Campus Dr

Movement	EB	EB	EB	NB	NB	NB	NB	NB	SB	SB	SB	B42
Directions Served	L	L	R	L	L	T	T	T	T	T	R	T
Maximum Queue (ft)	349	396	296	156	350	752	733	720	127	486	400	11
Average Queue (ft)	214	160	61	68	212	483	430	67	43	244	75	0
95th Queue (ft)	357	384	308	130	431	837	847	409	96	421	217	7
Link Distance (ft)			1669			729	729	729	444	444		1467
Upstream Blk Time (%)						1	0	0		0		
Queuing Penalty (veh)						3	2	0		3		
Storage Bay Dist (ft)	300	300		250	250							300
Storage Blk Time (%)	12	4				28				4		
Queuing Penalty (veh)	8	3				46				15		

Intersection: 23: 96th St & Campus Dr

Movement	B49	B49
Directions Served	T	
Maximum Queue (ft)	611	565
Average Queue (ft)	138	37
95th Queue (ft)	541	265
Link Distance (ft)	556	556
Upstream Blk Time (%)	1	0
Queuing Penalty (veh)	7	1
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	L	L	T	T
Maximum Queue (ft)	78	94	125	119	29	83	247	231	786	848	725	171
Average Queue (ft)	25	46	55	50	4	22	129	86	567	534	230	68
95th Queue (ft)	68	86	100	98	20	60	215	195	873	926	847	138
Link Distance (ft)			729	729			1056	1056			941	941
Upstream Blk Time (%)												8
Queuing Penalty (veh)												35
Storage Bay Dist (ft)	280	280			180	180			700	700		
Storage Blk Time (%)							5	1	18	11	0	
Queuing Penalty (veh)							2	0	34	21	1	

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	B39	B39	B39	SB	SB	SB	SB	SB	B33
Directions Served	T	T	T	L	L	T	T	R	T
Maximum Queue (ft)	484	324	307	80	349	777	773	399	3
Average Queue (ft)	162	118	84	22	65	438	439	33	0
95th Queue (ft)	955	827	659	62	247	747	750	296	2
Link Distance (ft)	2050	2050	2050			877	877		1436
Upstream Blk Time (%)	1				0	0	0		
Queuing Penalty (veh)	4				0	0	0		
Storage Bay Dist (ft)				600	600			600	
Storage Blk Time (%)						6	6		
Queuing Penalty (veh)						3	17		

Intersection: 30: Northwest Pkwy & Tape Drive/Via Varra

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	L	L	T	R	L	L	T	T	R
Maximum Queue (ft)	35	41	31	230	282	33	69	129	229	316	279	106
Average Queue (ft)	7	7	6	115	159	5	24	45	75	124	92	18
95th Queue (ft)	27	27	23	216	247	22	50	98	124	252	214	46
Link Distance (ft)			716		680	680				652	652	
Upstream Blk Time (%)										0	0	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)	125	125		250			500	455	455			250
Storage Blk Time (%)				0	2					1	1	
Queuing Penalty (veh)				0	3					1	1	

Intersection: 30: Northwest Pkwy & Tape Drive/Via Varra

Movement	B29	B29	B29	SB	SB	SB	SB	B39	B39	B39
Directions Served	T	T		L	L	T	T	T	T	
Maximum Queue (ft)	185	319	57	61	85	514	508	950	948	638
Average Queue (ft)	9	12	2	10	39	259	275	110	157	46
95th Queue (ft)	102	124	45	38	77	439	458	603	730	383
Link Distance (ft)	370	370	370			2050	2050	941	941	941
Upstream Blk Time (%)	0	0						0	0	0
Queuing Penalty (veh)	0	1						1	2	1
Storage Bay Dist (ft)				550	550					
Storage Blk Time (%)						0	0			
Queuing Penalty (veh)						0	0			

Intersection: 35: Northwest Pkwy & US 36 WB (North Ramps)

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	L	T	T	T	T	T	R
Maximum Queue (ft)	276	436	198	245	219	235	253	282	197
Average Queue (ft)	55	255	89	76	62	81	100	115	70
95th Queue (ft)	234	425	165	166	155	189	203	220	161
Link Distance (ft)		1442		556	556		370	370	
Upstream Blk Time (%)				0	0				
Queuing Penalty (veh)				0	0				
Storage Bay Dist (ft)	330		190			300			300
Storage Blk Time (%)	0	8	1	0		0	0	0	0
Queuing Penalty (veh)	0	12	3	0		0	0	0	0

Intersection: 40: Northwest Pkwy & US 36 EB (South Ramps)

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	R	L	L	T	T
Maximum Queue (ft)	221	248	48	300	254	24	263	278	150	175
Average Queue (ft)	120	134	2	150	106	1	145	166	61	76
95th Queue (ft)	201	215	38	257	222	16	235	256	120	139
Link Distance (ft)		1037		1760	1760			556	556	556
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	330		150			300	180			
Storage Blk Time (%)	0	9			0		8	17		
Queuing Penalty (veh)	0	47			0		18	36		

Zone Summary

Zone wide Queuing Penalty: 897

Intersection						
Intersection Delay, s/veh	9.0					
Intersection LOS	A					
Approach	EB		WB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	605		977		436	
Demand Flow Rate, veh/h	618		996		445	
Vehicles Circulating, veh/h	296		384		329	
Vehicles Exiting, veh/h	478		530		1051	
Ped Vol Crossing Leg, #/h	5		12		0	
Ped Cap Adj	0.996		0.991		1.000	
Approach Delay, s/veh	6.7		11.6		6.0	
Approach LOS	A		B		A	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	L	TR	LT	R	L	TR
RT Channelized						
Lane Util	0.621	0.379	0.330	0.670	0.665	0.335
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	384	234	329	667	296	149
Cap Entry Lane, veh/h	1028	1104	948	1025	997	1074
Entry HV Adj Factor	0.979	0.980	0.980	0.981	0.980	0.980
Flow Entry, veh/h	376	229	323	654	290	146
Cap Entry, veh/h	1002	1078	921	995	977	1052
V/C Ratio	0.375	0.213	0.350	0.657	0.297	0.139
Control Delay, s/veh	7.6	5.3	7.8	13.5	6.7	4.7
LOS	A	A	A	B	A	A
95th %tile Queue, veh	2	1	2	5	1	0

15: 96th St & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.0	0.0	0.0
Total Del/Veh (s)	37.0	41.0	18.0	67.5	37.0	9.6	46.9	52.2	8.4	35.2	42.4	7.2

15: 96th St & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	37.6

23: 96th St & Campus Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	2.4	0.6	0.1	0.0	0.0	0.0	0.3
Total Del/Veh (s)	54.1	16.8	63.2	15.2	14.3	6.3	20.6

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.8	0.2	3.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	76.4	80.3	6.8	64.5	63.8	1.5	58.1	8.0	1.0	68.4	33.3	3.4

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	31.8

Total Zone Performance

Denied Del/Veh (s)	1.9
Total Del/Veh (s)	1206.9

Intersection: 15: 96th St & Dillon Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	T
Maximum Queue (ft)	272	187	163	104	305	352	237	216	93	401	585	549
Average Queue (ft)	113	100	70	30	165	203	116	88	34	123	294	249
95th Queue (ft)	224	169	139	78	276	323	186	163	74	275	482	435
Link Distance (ft)		600	600				650	650			2073	2073
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	415			415	420	420			420	330		
Storage Blk Time (%)						0				0	10	4
Queuing Penalty (veh)						0				0	17	23

Intersection: 15: 96th St & Dillon Rd

Movement	NB	B42	B42	SB	SB	SB	SB	B38
Directions Served	R	T	T	L	T	T	R	T
Maximum Queue (ft)	196	87	172	144	381	435	262	18
Average Queue (ft)	14	0	0	60	212	284	51	1
95th Queue (ft)	149	0	0	116	322	394	158	13
Link Distance (ft)		444	444		472	472		2556
Upstream Blk Time (%)			0			0	0	
Queuing Penalty (veh)			0			0	0	
Storage Bay Dist (ft)	330			335			335	
Storage Blk Time (%)					1	4		
Queuing Penalty (veh)					1	11		

Intersection: 23: 96th St & Campus Dr

Movement	EB	EB	EB	NB	NB	NB	NB	NB	SB	SB	SB	B42
Directions Served	L	L	R	L	L	T	T	T	T	T	R	T
Maximum Queue (ft)	206	244	71	205	302	477	552	396	211	520	399	131
Average Queue (ft)	106	133	21	71	112	137	164	64	42	235	100	5
95th Queue (ft)	186	209	53	148	230	333	383	239	134	454	300	50
Link Distance (ft)			1669			729	729	729	444	444		2073
Upstream Blk Time (%)							0			1		
Queuing Penalty (veh)							0			8		
Storage Bay Dist (ft)	300	300		250	250							300
Storage Blk Time (%)				0	0	1				5		
Queuing Penalty (veh)				0	1	2				20		

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	L	L	L	T
Maximum Queue (ft)	85	99	110	106	34	75	183	183	418	426	404	120
Average Queue (ft)	22	42	53	47	6	22	98	74	209	241	201	37
95th Queue (ft)	61	80	93	94	24	58	165	152	344	385	341	101
Link Distance (ft)			729	729			1056	1056				941
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	280	280			180	180			700	700	700	
Storage Blk Time (%)							1	1				
Queuing Penalty (veh)							0	0				

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	NB	SB	SB	SB	SB	SB
Directions Served	T	L	L	T	T	R
Maximum Queue (ft)	156	60	86	431	431	187
Average Queue (ft)	55	11	43	259	260	32
95th Queue (ft)	123	38	81	398	396	118
Link Distance (ft)	941			865	865	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		600	600		600	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Zone Summary

Zone wide Queuing Penalty: 84

5: McCaslin Blvd & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.3	0.7	3.3	0.5	0.5	2.7	2.1	0.3	0.4	2.1	0.2	1.9
Total Del/Veh (s)	50.9	51.8	3.5	53.1	40.9	2.8	66.2	37.3	4.3	54.0	26.5	3.9

5: McCaslin Blvd & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	32.5

10: 88th Street & Dillon Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	29.8	2.0	30.9	11.2	86.6	2.8	2.0	25.2

15: 96th St & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	41.1	200.8	15.0	82.1	37.7	14.3	42.0	69.2	4.8	81.7	67.2	7.4

15: 96th St & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	70.1

20: 88th Street & Campus Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.7	0.6	0.5	2.3	0.4	0.4	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	41.2	54.2	28.8	39.5	60.1	18.3	29.4	40.1	6.3	28.4	30.9	5.3

20: 88th Street & Campus Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.8
Total Del/Veh (s)	30.4

22: 88th Street Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.3	0.0	0.1
Total Del/Veh (s)	0.4	3.1	2.0

23: 96th St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	2.3	0.5	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	54.8	17.3	74.0	25.3	13.1	3.5	21.7

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.8	0.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	70.2	70.6	7.1	53.7	62.4	1.3	51.0	6.9	0.9	66.9	39.5	1.1

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	30.4

30: Northwest Pkwy & Tape Drive/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	3.9	0.5	3.8	1.2	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	62.9	72.0	0.6	64.8	7.5	63.5	6.7	3.0	65.6	6.4	3.4	9.6

35: Northwest Pkwy & US 36 WB (North Ramps) Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	70.8	64.3	1.6	36.3	9.3	16.6	8.6	16.3

40: Northwest Pkwy & US 36 EB (South Ramps) Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	1.9	1.9	3.2	0.0	0.0	0.0	0.0	0.5
Total Del/Veh (s)	62.1	65.2	3.4	35.9	13.2	45.3	11.1	29.7

45: Rock Creek Pkwy & 88th Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.3	0.1	0.1	0.2	0.7	3.3	0.7
Total Del/Veh (s)	6.0	5.5	3.9	2.9	6.0	4.5	4.9

101: Northwest Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.9	0.3	2.9	2.7	0.2	2.6	1.4	0.5	1.2	0.1	0.0	0.1
Total Del/Veh (s)	62.1	42.6	18.0	54.6	41.9	49.6	53.6	15.6	5.4	278.9	7.9	6.4

101: Northwest Pkwy Performance by movement

Movement	All
Denied Del/Veh (s)	0.9
Total Del/Veh (s)	34.3

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	81.5

Intersection: 5: McCaslin Blvd & Dillon Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	L	T	L	L	T	T	R
Maximum Queue (ft)	166	190	201	43	338	396	196	179	194	456	432	174
Average Queue (ft)	40	103	95	3	210	257	88	75	128	298	279	46
95th Queue (ft)	127	168	170	44	307	356	162	172	193	416	395	125
Link Distance (ft)		750	750			1028	1028			893	893	893
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			120	285			510	510			
Storage Blk Time (%)	0	4	8		0	4						
Queuing Penalty (veh)	0	3	19		1	13						

Intersection: 5: McCaslin Blvd & Dillon Rd

Movement	SB	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	T	R
Maximum Queue (ft)	192	283	330	307	257	190
Average Queue (ft)	88	135	201	185	148	15
95th Queue (ft)	170	222	277	261	225	98
Link Distance (ft)			1296	1296	1296	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	190	190				100
Storage Blk Time (%)	0	1	10		14	
Queuing Penalty (veh)	0	3	25		17	

Intersection: 10: 88th Street & Dillon Rd

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	R	L	T	T	L	L
Maximum Queue (ft)	621	153	206	196	216	217	245
Average Queue (ft)	316	17	82	68	74	107	128
95th Queue (ft)	593	136	159	156	174	177	197
Link Distance (ft)	1552	1552		490	490		324
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			400			200	
Storage Blk Time (%)						1	1
Queuing Penalty (veh)						2	5

Intersection: 15: 96th St & Dillon Rd

Movement	EB	EB	EB	EB	B19	B9	WB	WB	WB	WB	B37	NB
Directions Served	L	T	T	R	T	T	L	T	T	R	T	L
Maximum Queue (ft)	483	606	608	396	324	396	556	589	404	104	666	314
Average Queue (ft)	251	461	438	154	88	24	390	302	157	48	319	100
95th Queue (ft)	591	687	671	495	423	200	634	731	437	89	1309	330
Link Distance (ft)		601	601		4320	490		648	648		1613	
Upstream Blk Time (%)		7	6			0		14	0		7	
Queuing Penalty (veh)		35	26			0		0	0		0	
Storage Bay Dist (ft)	415			415			420			420		330
Storage Blk Time (%)		40	33				25					
Queuing Penalty (veh)		100	61				47					

Intersection: 15: 96th St & Dillon Rd

Movement	NB	NB	NB	B11	B46	B46	SB	SB	SB	SB	B44
Directions Served	T	T	R	T	T		L	T	T	R	T
Maximum Queue (ft)	578	572	196	82	513	205	337	477	444	153	45
Average Queue (ft)	388	345	59	17	48	11	140	306	249	61	6
95th Queue (ft)	592	573	323	128	293	133	375	536	493	261	56
Link Distance (ft)	621	621		1348	496	496		621	621		2411
Upstream Blk Time (%)	1	2			0	0		2	1		
Queuing Penalty (veh)	6	10			2	0		0	0		
Storage Bay Dist (ft)			330				335			335	
Storage Blk Time (%)	29	12						15	7		
Queuing Penalty (veh)	23	43						17	14		

Intersection: 20: 88th Street & Campus Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	L	L	T	R
Maximum Queue (ft)	174	252	218	197	46	196	93	90	106	277	63
Average Queue (ft)	93	97	104	70	10	98	45	24	48	132	17
95th Queue (ft)	164	196	187	155	32	172	78	64	84	240	47
Link Distance (ft)		565		1724		1352				1558	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	125		210		170		170	400	400		200
Storage Blk Time (%)	5	5	0	0		2				3	
Queuing Penalty (veh)	7	7	0	1		3				5	

Intersection: 22: 88th Street

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 23: 96th St

Movement	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB	B46	B11
Directions Served	L	L	R	L	L	T	T	T	T	R	T	T
Maximum Queue (ft)	218	181	118	44	349	650	628	220	450	198	37	655
Average Queue (ft)	121	60	43	6	57	275	213	91	240	28	1	84
95th Queue (ft)	186	137	84	28	216	593	542	168	384	106	27	436
Link Distance (ft)			1679			729	729	496	496		1348	621
Upstream Blk Time (%)						0			0			1
Queuing Penalty (veh)						0			1			4
Storage Bay Dist (ft)	300	300		250	250					300		
Storage Blk Time (%)						0	14		3			
Queuing Penalty (veh)						0	5		4			

Intersection: 23: 96th St

Movement	B11
Directions Served	
Maximum Queue (ft)	251
Average Queue (ft)	13
95th Queue (ft)	163
Link Distance (ft)	621
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	L	L	T	T
Maximum Queue (ft)	152	172	161	179	39	76	162	137	504	419	196	212
Average Queue (ft)	93	102	92	93	6	25	101	51	340	277	73	91
95th Queue (ft)	142	154	149	153	25	61	157	129	472	392	157	175
Link Distance (ft)			729	729			1056	1056			941	941
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	280	280			180	180			700	700		
Storage Blk Time (%)							0					
Queuing Penalty (veh)							0					

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	SB	SB	SB	SB
Directions Served	L	L	T	T
Maximum Queue (ft)	46	73	315	294
Average Queue (ft)	5	28	180	174
95th Queue (ft)	28	63	269	264
Link Distance (ft)			877	877
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	600	600		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 30: Northwest Pkwy & Tape Drive/Via Varra

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	NB	B29
Directions Served	L	L	T	L	L	R	L	L	T	T	R	T
Maximum Queue (ft)	41	73	35	130	143	57	30	63	299	272	56	226
Average Queue (ft)	8	20	7	46	75	17	2	17	139	128	23	13
95th Queue (ft)	30	56	26	98	127	40	13	45	243	234	51	124
Link Distance (ft)			716		680				722	722		370
Upstream Blk Time (%)												0
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	125	125		250		500	455	455				250
Storage Blk Time (%)												0
Queuing Penalty (veh)												1

Intersection: 30: Northwest Pkwy & Tape Drive/Via Varra

Movement	B29	SB	SB	SB	SB	B39	B39	B39
Directions Served	T	L	L	T	T	T	T	
Maximum Queue (ft)	374	34	69	215	204	548	911	182
Average Queue (ft)	28	3	30	73	75	32	32	7
95th Queue (ft)	185	17	61	170	169	308	309	133
Link Distance (ft)	370			2050	2050	941	941	941
Upstream Blk Time (%)	0					0	0	
Queuing Penalty (veh)	1					0	0	
Storage Bay Dist (ft)		550	550					
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 35: Northwest Pkwy & US 36 WB (North Ramps)

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	L	T	T	T	T	T	R
Maximum Queue (ft)	153	319	342	405	323	299	293	276	235
Average Queue (ft)	13	184	195	84	69	140	136	148	80
95th Queue (ft)	84	283	321	248	202	266	247	256	174
Link Distance (ft)		1442		556	556		370	370	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	330		190			300			300
Storage Blk Time (%)		0	15	0		0	0	0	
Queuing Penalty (veh)		0	124	1		1	1	1	

Intersection: 37: Bend

Movement	EB	EB
Directions Served	T	
Maximum Queue (ft)	589	510
Average Queue (ft)	109	61
95th Queue (ft)	455	357
Link Distance (ft)	648	648
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Northwest Pkwy & US 36 EB (South Ramps)

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	R	T	T	R	L	L	T	T
Maximum Queue (ft)	321	369	298	574	546	390	262	274	315	333
Average Queue (ft)	192	218	34	387	358	56	154	168	116	139
95th Queue (ft)	281	313	190	534	509	274	236	250	260	278
Link Distance (ft)		1036		1843	1843			556	556	556
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	330		150			300	180			
Storage Blk Time (%)	0	33			16		4	9		
Queuing Penalty (veh)	0	225			25		9	19		

Intersection: 44: Bend

Movement	NB	NB
Directions Served	T	
Maximum Queue (ft)	639	590
Average Queue (ft)	396	144
95th Queue (ft)	794	504
Link Distance (ft)	621	621
Upstream Blk Time (%)	1	0
Queuing Penalty (veh)	4	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 45: Rock Creek Pkwy & 88th Street

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	104	26	58	42	113	74
Average Queue (ft)	49	1	16	3	43	14
95th Queue (ft)	86	19	45	21	87	56
Link Distance (ft)	807	807	1051	1051	793	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						50
Storage Blk Time (%)					4	0
Queuing Penalty (veh)					6	0

Intersection: 101: Northwest Pkwy

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	158	170	93	79	217	152	173	113	75	355	141	145
Average Queue (ft)	80	92	34	20	92	62	105	44	24	172	57	79
95th Queue (ft)	144	155	74	53	178	136	162	91	59	315	112	130
Link Distance (ft)			1264	1264				1297	1297			
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500	500			500	500	500			500	500	500
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 101: Northwest Pkwy

Movement	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	T	R
Maximum Queue (ft)	268	264	60	409	427	305	173	111	72
Average Queue (ft)	178	169	24	217	227	40	49	47	19
95th Queue (ft)	266	261	51	431	440	204	155	94	51
Link Distance (ft)	2637	2637				1843	1843	1843	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			500	500	500				500
Storage Blk Time (%)				0	1	0			
Queuing Penalty (veh)				0	5	1			

Network Summary

Network wide Queuing Penalty: 936

Intersection						
Intersection Delay, s/veh	6.5					
Intersection LOS	A					
Approach	EB		WB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	571		496		673	
Demand Flow Rate, veh/h	582		506		686	
Vehicles Circulating, veh/h	458		159		222	
Vehicles Exiting, veh/h	450		881		443	
Ped Vol Crossing Leg, #/h	2		2		0	
Ped Cap Adj	0.999		0.998		1.000	
Approach Delay, s/veh	7.4		4.9		6.8	
Approach LOS	A		A		A	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	LT	TR	LT	R	L	TR
RT Channelized						
Lane Util	0.471	0.529	0.439	0.561	0.668	0.332
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	274	308	222	284	458	228
Cap Entry Lane, veh/h	886	962	1166	1241	1101	1176
Entry HV Adj Factor	0.979	0.982	0.980	0.979	0.980	0.982
Flow Entry, veh/h	268	302	218	278	449	224
Cap Entry, veh/h	866	944	1141	1212	1079	1155
V/C Ratio	0.310	0.321	0.191	0.229	0.416	0.194
Control Delay, s/veh	7.6	7.2	4.9	5.0	7.8	4.8
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	2	1

15: 96th St & Dillon Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Del/Veh (s)	87.2	72.4	18.1	56.5	51.1	12.6	34.6	61.5	9.4	39.3	27.5	5.7

15: 96th St & Dillon Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	46.5

23: 96th St Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	2.4	0.5	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	52.5	18.0	65.3	15.4	9.8	3.4	16.1

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	3.7	0.2	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	68.7	69.9	6.4	61.5	60.9	1.5	55.1	6.5	0.9	59.5	28.3	1.7

25: Northwest Pkwy & 96th St/Via Varra Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	29.3

Total Zone Performance

Denied Del/Veh (s)	1.8
Total Del/Veh (s)	2078.6

Intersection: 15: 96th St & Dillon Rd

Movement	EB	EB	EB	EB	B19	B9	WB	WB	WB	WB	WB	NB
Directions Served	L	T	T	R	T	T	L	L	T	T	R	L
Maximum Queue (ft)	433	455	406	151	12	297	295	317	272	244	132	333
Average Queue (ft)	231	267	216	66	0	24	185	213	162	139	49	72
95th Queue (ft)	423	436	365	125	9	199	262	298	244	223	94	244
Link Distance (ft)		602	602		4320	490			648	648		
Upstream Blk Time (%)		0	0			0						
Queuing Penalty (veh)		2	0			0						
Storage Bay Dist (ft)	415			415			420	420			420	330
Storage Blk Time (%)	3	1	0									
Queuing Penalty (veh)	8	3	0									

Intersection: 15: 96th St & Dillon Rd

Movement	NB	NB	NB	B46	B46	SB	SB	SB	SB
Directions Served	T	T	R	T	T	L	T	T	R
Maximum Queue (ft)	561	565	294	94	381	146	247	294	86
Average Queue (ft)	355	319	28	3	14	69	130	164	30
95th Queue (ft)	539	513	214	69	145	119	208	257	62
Link Distance (ft)	2020	2020		496	496		533	533	
Upstream Blk Time (%)					0				
Queuing Penalty (veh)					0				
Storage Bay Dist (ft)			330			335		335	
Storage Blk Time (%)	21	8						0	
Queuing Penalty (veh)	17	30						0	

Intersection: 23: 96th St

Movement	EB	EB	EB	NB	NB	NB	NB	NB	SB	SB	SB	B46
Directions Served	L	L	R	L	L	T	T	T	T	T	R	T
Maximum Queue (ft)	167	169	116	39	294	623	614	423	185	376	200	9
Average Queue (ft)	74	99	40	8	49	118	150	72	72	182	33	0
95th Queue (ft)	147	160	86	30	160	367	432	273	151	332	127	5
Link Distance (ft)			1679			729	729	729	496	496		2020
Upstream Blk Time (%)						0	0	0				
Queuing Penalty (veh)						0	0	0				
Storage Bay Dist (ft)	300	300		250	250							300
Storage Blk Time (%)					0	1				1		
Queuing Penalty (veh)					0	0				2		

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	L	L	L	T
Maximum Queue (ft)	183	182	172	164	39	62	144	136	333	367	318	197
Average Queue (ft)	98	105	89	94	7	23	73	53	216	249	206	69
95th Queue (ft)	158	164	146	147	28	57	125	103	304	340	287	157
Link Distance (ft)			729	729			1056	1056				941
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	280	280			180	180			700	700	700	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 25: Northwest Pkwy & 96th St/Via Varra

Movement	NB	SB	SB	SB	SB	SB
Directions Served	T	L	L	T	T	R
Maximum Queue (ft)	202	34	61	239	248	55
Average Queue (ft)	82	3	22	147	147	2
95th Queue (ft)	165	18	53	220	225	17
Link Distance (ft)	941			865	865	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		600	600		600	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Zone Summary

Zone wide Queuing Penalty: 65