



Appendix A

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Traffic Counts and Analysis at Monte Vista/Richmond Intersection

2/15/17

Time Range: 8:45-9:00 am

28 8 24  
 ↓ ↓ ↓  
 144 →  
 120 →  
 20 →

AM Peak  
 from  
 5st.

Traffic Counts @ Monte Vista and Richmond

	Northbound (Richmond)			Eastbound (Monte Vista)			Southbound (Richmond)			Westbound (Monte Vista)		
	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike
Thru				                						           		
							2					35
Right				 						 		
							6					15
Left				      						 		
							2					6

2/15/17

Time Range: 8:30 - 8:45 am

Traffic Counts @ Monte Vista and Richmond

	Northbound (Richmond)			Eastbound (Monte Vista)			Southbound (Richmond)			Westbound (Monte Vista)		
	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike
Thru				      						                		
	4			22			1			42		
Right										 		
	1			1			6			14		
Left												
	2			1			2			2		

**Intersection**

Int Delay, s/veh 4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	144	120	20	24	150	60	8	16	24	24	8	28
Future Vol, veh/h	144	120	20	24	150	60	8	16	24	24	8	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	144	120	20	24	150	60	8	16	24	24	8	28

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	210	0	0	140	0	0	664	676	130	666	656	180
Stage 1	-	-	-	-	-	-	418	418	-	228	228	-
Stage 2	-	-	-	-	-	-	246	258	-	438	428	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1361	-	-	1443	-	-	374	375	920	373	385	863
Stage 1	-	-	-	-	-	-	612	591	-	775	715	-
Stage 2	-	-	-	-	-	-	758	694	-	597	585	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1361	-	-	1443	-	-	319	326	920	315	334	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	319	326	-	315	334	-
Stage 1	-	-	-	-	-	-	542	523	-	686	701	-
Stage 2	-	-	-	-	-	-	711	681	-	499	518	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4	0.8	13.4	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	479	1361	-	-	1443	-	-	453
HCM Lane V/C Ratio	0.1	0.106	-	-	0.017	-	-	0.132
HCM Control Delay (s)	13.4	8	0	-	7.5	0	-	14.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.4	-	-	0.1	-	-	0.5

Thursday Feb 16/17

2/16/17

3:30-3:45 pm

Traffic Counts @ Monte Vista and Richmond

Time Range: 3:30-3:45 pm

	Northbound (Richmond)			Eastbound (Monte Vista)			Southbound (Richmond)			Westbound (Monte Vista)		
	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike
Thru	 4			                     59			0			           30		
Right	 10			 5			2			 5		
Left	 1			 7			1			 7		



2/16/17

3:45-4pm

PM Peak Flow Est.

28 → 24 ↓ 28 40  
 250 → 20 ↓ 9 ↑ 16 40  
 ← 180  
 ↓ 50

Traffic Counts @ Monte Vista and Richmond

Time Range: 3:45-4pm

	Northbound (Richmond)			Eastbound (Monte Vista)			Southbound (Richmond)			Westbound (Monte Vista)		
	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike	Vehicle	Ped	Bike
Thru												
	3			67			7			58		
Right												
	10			2			6			5		
Left												
	1			7			10			19		

**Intersection**

Int Delay, s/veh 4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	250	20	50	180	20	4	16	40	40	28	24
Future Vol, veh/h	28	250	20	50	180	20	4	16	40	40	28	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	250	20	50	180	20	4	16	40	40	28	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	200	0	0	270	0	0	632	616	260	634	616	190
Stage 1	-	-	-	-	-	-	316	316	-	290	290	-
Stage 2	-	-	-	-	-	-	316	300	-	344	326	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1372	-	-	1293	-	-	393	406	779	392	406	852
Stage 1	-	-	-	-	-	-	695	655	-	718	672	-
Stage 2	-	-	-	-	-	-	695	666	-	671	648	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1372	-	-	1293	-	-	342	379	779	342	379	852
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	379	-	342	379	-
Stage 1	-	-	-	-	-	-	678	639	-	701	642	-
Stage 2	-	-	-	-	-	-	618	637	-	606	632	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1.6	12.1	16
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	570	1372	-	-	1293	-	-	420
HCM Lane V/C Ratio	0.105	0.02	-	-	0.039	-	-	0.219
HCM Control Delay (s)	12.1	7.7	0	-	7.9	0	-	16
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.8



Appendix B

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Cost Estimates for Curb Modifications



