

APPENDIX B

Intersection Capacity Analyses

HCM 6th TWSC
3: Old Stage Rd & Ballard Rd

2028 AM Peak Hour
No-Build

Intersection

Int Delay, s/veh 2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	➡			➡	➡	➡
Traffic Vol, veh/h	151	14	19	45	13	64
Future Vol, veh/h	151	14	19	45	13	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	151	14	19	45	13	64

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	165
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.15	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.245	-
Pot Cap-1 Maneuver	-	1395	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1395	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	840	-	-	1395	-
HCM Lane V/C Ratio	0.092	-	-	0.014	-
HCM Control Delay (s)	9.7	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
3: Old Stage Rd & Ballard Rd

2028 AM Peak Hour
Build

Intersection

Int Delay, s/veh 3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	151	19	21	45	15	70
Future Vol, veh/h	151	19	21	45	15	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	151	19	21	45	15	70

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	170
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.15
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.245
Pot Cap-1 Maneuver	-	-	1389
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1389
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	833	-	-	1389	-
HCM Lane V/C Ratio	0.102	-	-	0.015	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
3: Old Stage Rd & Ballard Rd

2028 PM Peak Hour
No-Build

Intersection

Int Delay, s/veh 2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	89	16	49	173	18	53
Future Vol, veh/h	89	16	49	173	18	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	89	16	49	173	18	53

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	105
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.15
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.245
Pot Cap-1 Maneuver	-	-	1468
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1468
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	815	-	-	1468	-
HCM Lane V/C Ratio	0.087	-	-	0.033	-
HCM Control Delay (s)	9.8	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection

Int Delay, s/veh 2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	89	18	53	173	22	56
Future Vol, veh/h	89	18	53	173	22	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	89	18	53	173	22	56

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	107	0	377	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	-	-	4.15	-	6.85	6.45
Critical Hdwy Stg 1	-	-	-	-	5.85	-
Critical Hdwy Stg 2	-	-	-	-	5.85	-
Follow-up Hdwy	-	-	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	1465	-	593	945
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1465	-	569	945
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	708	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	1.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
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Capacity (veh/h)	797	-	-	1465	-
HCM Lane V/C Ratio	0.098	-	-	0.036	-
HCM Control Delay (s)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-