

Appendix A-1: Screening of Alternatives

Criteria				4			1		2						3,5			6-8	
8 Alternatives	11 Alternatives	16 Alternatives	Screening Alternative	Alignment			Track Configuration		Surface Transportation Modes						Location			Type	
				Existing	Existing Expanded	New	2 Track Existing	New Tracks	Streetcar	MetroRail	Shared General Purpose/Streetcar	General Purpose Lanes	Highway Lanes	Highway HOV/HOT	Bicycle/Pedestrian	Existing Right-of-Way	Upstream	Downstream	Tunnel
1	1	1	1 NB	X			2								X				
3	4	4	1A		X		2	2									X		
2	2	2	1A1	X				2							X				
			1B		X		2	2	1			4			1	X			
			1B1		X		2	2	1				4		1	X			
			1B2		X		2	2	1				2	2	1	X			
			1B3		X		2	2	1			2	2		1	X			
			1B4		X		2	2		2	4				1	X			X
			1B5		X		2	2	2			4			1	X			X
			1B6		x		2	2	2			2	2		1	x			x
			1C		X		2	2	1			4			1	X			X
			1C1		X		2	2	1			2	2		1	X			
			1C2		X			4			2	4			1	X			X
			1C3		X			4			2	2			1	X			X
	3	3	1D		X		2	1								X			
			1D1		X		2	1	1			4			1	X			
			1D2		X		2	1	1				4		1	X			
			1D3		X		2	1	1				2	2	1	X			
			1D4		X		2	1	1			2	2		1	X			
			1D5		X		2	1		2	4				1	X			X
			1D6		X		2	1	2			4			1	X			X
			1D7		x		2	1	2				2	2	1	x			x
			1D8		X		2	1	1			4			1	X			X
			1D9		X		2	1	1			2	2		1	X			
			1D10		X			3			2	4			1	X			X
			1D11		X			3			2	2			1	X			X
			2A	X		X	2	2	1			4			1				X
			2A1	X		X	2	2		2	2				1				X
			2A2	X		X	2	2	1				4		1				X
			2A3	X		X	2	2	1				2	2	1				X
			2A4	X		X	2	2	1			2	2		1				X
5	5	5B	2A5	X		X	2	2							1				X
			2A6	X		X	2	2	2			2	2		1				X
6	6	6B	2A7	X		X	2	2	2						1				X
7	7	7B	2A8	X		X	2	2		2					1				X
	8	8B	2A9	X		X	2	2	2			2			1				X
			2B	X		X		4	1			4			1				X
			2B1	X		X		4	1				4		1				X
			2B2	X		X		4	1				2	2	1				X
			2B3	X		X		4	1			2	2		1				X
			2B4	X		X		4	2			2	2		1				X

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				Existing	Existing Expanded	New	2 Track Existing	New Tracks	Streetcar	MetroRail	Shared General Purpose/Streetcar	General Purpose Lanes	Highway Lanes	Highway HOV/HOT	Bicycle/Pedestrian	Existing Right-of-Way	Upstream	Downstream	Tunnel	Bi-Level (Double Deck)	
			2B5	X		X		4	2				2			1			X		
			2C		X	X	2	2	1				4			1			X		
			2C1		X	X	2	2	1					4		1			X		
			2C2		X	X	2	2	1					2	2	1			X		
			2C3		X	X	2	2	1					2	2	1			X		
			2C4		X	X	2	2	2					2	2	1			X		
			2C5		X	X	2	2	2					2		1			X		
			2D			X		4	1					4		1			X	X	
	10	10	2D1	X		X		3											X	X	
4	11	11	2D2	X		X		4											X	X	
			2D3			X		4	1					4		1			X	X	
			2D4			X		4	1					2	2	1			X	X	
			2D5			X		4	1					2	2	1			X	X	
			2D6			X		4	2					2	2	1			X		
			2D7			X		4	2					2		1			X		
			2E			X		4	1					4		1			X	X	
			2E1			X		4	1					4		1			X	X	
			2E2			X		4	1					2	2	1			X	X	
			2E3			X		4	1					2	2	1			X	X	
			2E4			X		4	2					2	2	1			X		
			2E5			X		4	2					2		1			X		
			2F			X	2	2	1					4		1			X	X	
			2F1			X	2	2	1						4	1			X	X	
			2F2			X	2	2	1						2	2	1		X	X	
			2F3			X	2	2	1						2	2	1		X	X	
			2F4			X	2	2	2						2	2	1		X		
			2F5			X	2	2	2						2		1		X		
			2G	X		X	2	1	1					4		1			X		
			2G1	X		X	2	1				2		2		1			X		
			2G2	X		X	2	1	1					4		1			X		
			2G3	X		X	2	1	1					2	2	1			X		
			2G4	X		X	2	1	1					2	2	1			X		
		5A	2G5	X		X	2	1								1			X		
			2G6	X		X	2	1	2					2	2	1			X		
		8A	2G7	X		X	2	1	2					2		1			X		
		6A	2G8	X		X	2	1	2							1			X		
		7A	2G9	X		X	2	1				2				1			X		
			2G10	X		X		3	1					4		1			X		
			2G11	X		X		3	1						4	1			X		
			2G12	X		X		3	1					2	2	1			X		
			2G13	X		X		3	1					2	2	1			X		
			2G14	X		X		3	2					2	2	1			X		

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			2G15	X		X		3	2				2			1			X		
			2G16		X	X	2	1	1				4			1			X		
			2G17		X	X	2	1	1					4		1			X		
			2G18		X	X	2	1	1				2	2	1				X		
			2G19		X	X	2	1	1				2	2	1				X		
			2G20		X	X	2	1	2				2	2	1				X		
			2G21		X	X	2	1	2				2		1				X		
			2G22			X		3	1				4		1				X	X	
			2G23			X		3	1					4	1				X	X	
			2G24			X		3	1				2	2	1				X	X	
			2G25			X		3	1				2	2	1				X	X	
			2G26			X		3	2				2	2	1				X	X	
			2G27			X		3	2				2		1				X	X	
			2G28			X		3	1				4		1				X	X	
			2G29			X		3	1					4	1				X	X	
			2G30			X		3	1				2	2	1				X	X	
			2G31			X		3	1				2	2	1				X	X	
			2G32			X		3	2				2	2	1				X	X	
			2G33			X		3	2				2		1				X	X	
			2G34			X	2	1	1				4		1				X	X	
			2G35			X	2	1	1					4	1				X	X	
			2G36			X	2	1	1					2	2	1			X	X	
			2G37			X	2	1	1				2	2	1				X	X	
			2G38			X	2	1	2				2	2	1				X	X	
			2G39			X	2	1	2				2		1				X	X	
			3A		X		2	2	1				4		1			X			
			3A1		X		2	2	2				4		1			X			
			3A2		X		2	2	2	2			4		1			X			
		9B	3A3		X		2	2		2	2	2			1			X			
			3A4		X		2	2	1					4	1				X		
			3A5		X		2	2	2					4	1				X		
			3A6		X		2	2	1					2	2	1			X		
			3A7		X		2	2	2					2	2	1			X		
			3A8		X		2	2	1				2	2	1				X		
			3A9		X		2	2	2				2	2	1				X		
			3A10		X	X	2	2	1				4		1				X		
			3A11		X	X	2	2	2				4		1				X		
			3A12		X	X	2	2	2	2			4		1				X		
			3A13		X	X	2	2	1					4	1				X		
			3A14		X	X	2	2	2					4	1				X		
			3A15		X	X	2	2	1					2	2	1			X		

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			3A16	X		X	2	2	2				2	2	1		X			
			3A17	X		X	2	2	1				2	2	1		X			
			3A18	X		X	2	2	2				2	2	1		X			
8	9		3A19		X		2	2				2	2		1	X				
			3B		X		2	2	1				4		1		X			
			3B1		X		2	2	1					4	1		X			
			3B2		X		2	2	1					2	2	1		X		
			3B3		X		2	2	1				2	2	1		X			
			3C		X	?	2	2	1				4		1		X		X	
			3C1		X	?	2	2	1					4	1		X		X	
			3C2		X	?	2	2	1					2	2	1		X		X
			3C3		X	?	2	2	1					2	2	1		X		X
			3D		X		2	2	1					4		1		X		
			3D1		X		2	1	2					4		1		X		
			3D2		X		2	1	2	2				4		1		X		
		9A	3D3		X		2	1		2	2	2			1	X				
			3D4		X		2	1	1					4	1		X			
			3D5		X		2	1	2					4	1		X			
			3D6		X		2	1	1					2	2	1		X		
			3D7		X		2	1	2					2	2	1		X		
			3D8		X		2	1	1					2	2	1		X		
			3D9		X		2	1	2					2	2	1		X		
			3D10	X		X	2	1	1					4		1		X		
			3D11	X		X	2	1	2					4		1		X		
			3D12	X		X	2	1	2	2				4		1		X		
			3D13	X		X	2	1	1					4	1		X			
			3D14	X		X	2	1	2					4	1		X			
			3D15	X		X	2	1	1					2	2	1		X		
			3D16	X		X	2	1	2					2	2	1		X		
			3D17	X		X	2	1	1					2	2	1		X		
			3D18	X		X	2	1	2					2	2	1		X		
			3D19		X		2	1	1					4		1		X		
			3D20		X		2	1	1					4		1		X		
			3D21		X		2	1	1					2	2	1		X		
			3D22		X		2	1	1					2	2	1		X		
			3D23		X	?	2	1	1					4		1		X		X
			3D24		X	?	2	1	1					4		1		X		X
			3D25		X	?	2	1	1					2	2	1		X		X
			3D26		X	?	2	1	1					2	2	1		X		X
			4A			X	2	2	1					4		1		X		
			4A1			X	2	2	1					4		1		X		

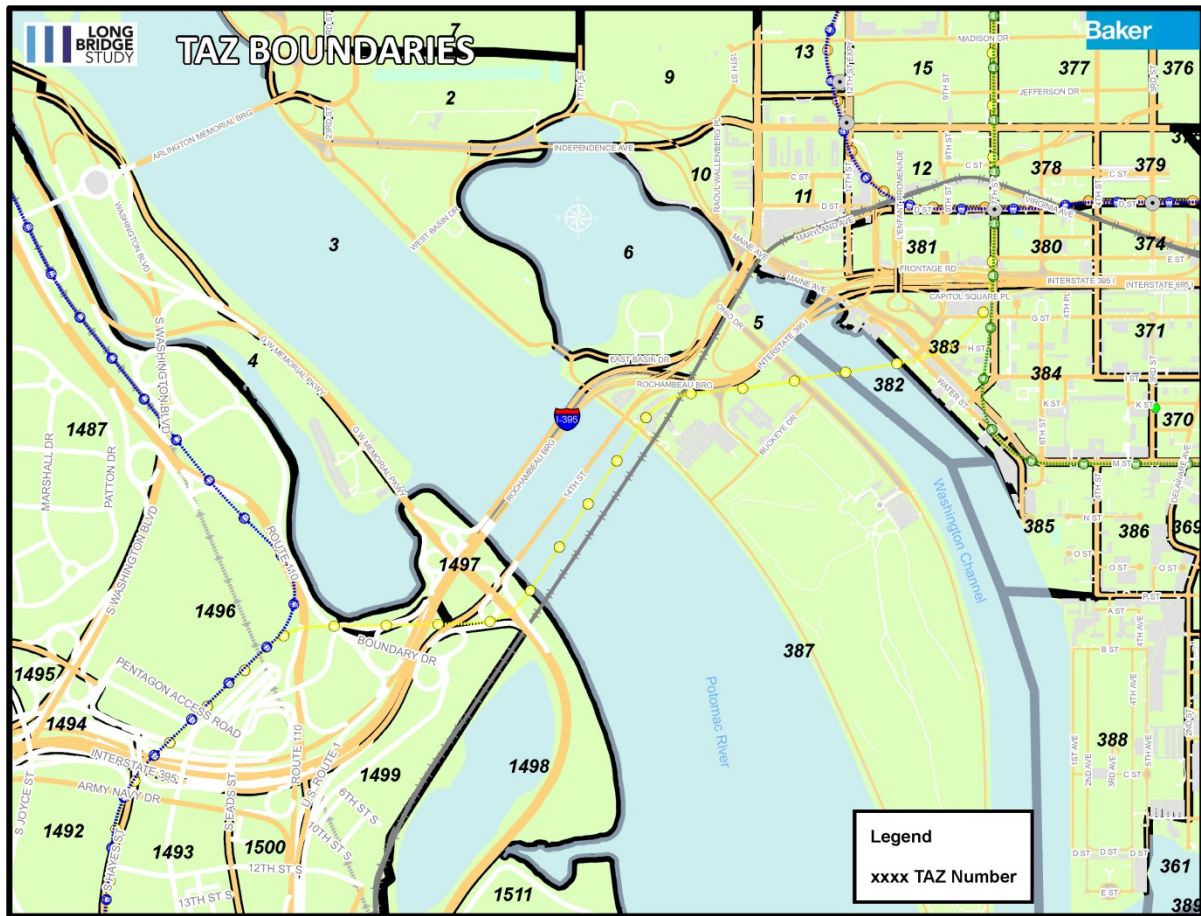
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			4A2			X	2	2	1				2	2	1		X			
			4A3			X	2	2	1				2	2	1		X			
			4B			X	2	2	1				4		1		X			
			4B1			X	2	2	1					4	1		X			
			4B2			X	2	2	1					2	2	1	X			
			4B3			X	2	2	1				2	2	1		X			
			4C			X	2	1	1				4		1		X			
			4C1			X	2	1	1					4	1		X			
			4C2			X	2	1	1					2	2	1	X			
			4C3			X	2	1	1				2	2	1		X			
			4C4			X	2	1	1				4		1		X			
			4C5			X	2	1	1					4	1		X			
			4C6			X	2	1	1					2	2	1	X			
			4C7			X	2	1	1				2	2	1		X			

* Alternatives in red identify those that were not retained.

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Appendix A-2.1: Study Area Traffic Analysis Zones



Appendix A-2.1: 2010 and 2040 Study Area Land Uses by Zone

Traffic Analysis Zone	2010 Round 8.2 MWC0G Land Use										2040 Round 8.2 MWC0G Land Use										Change (%) / year				
	Population			Employment			Other			Total	Population			Employment			Other			Total	Industrial	Retail	Office	Other	
		Industrial	Retail	Office	Other		Industrial	Retail	Office		Other		Industrial	Retail	Office	Other									
9	-	136	-	14	122	-	-	15	131	-	-	-	-	-	-	-	-	-	0.2%	0.0%	0.2%	0.0%	0.2%	0.0%	
10	-	2,572	8	26	2,469	69	-	29	2,543	70	-	7	29	2,543	70	-	29	2,543	0.1%	0.0%	0.1%	-0.4%	0.4%	0.1%	0.0%
11	-	10,633	52	84	10,040	457	-	108	13,002	593	-	66	108	13,002	593	-	108	13,002	1.0%	0.0%	1.0%	0.9%	1.0%	1.0%	1.0%
12	-	11,277	65	59	10,742	411	-	61	11,080	424	-	66	61	11,080	424	-	61	11,080	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
13	-	1,280	22	22	52	1,184	-	22	54	1,220	-	22	22	54	1,220	-	22	54	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%
15	-	2,587	26	16	320	2,225	-	18	329	2,292	-	26	18	329	2,292	-	18	329	0.1%	0.0%	0.1%	0.0%	0.4%	0.1%	0.1%
369	2,106	218	27	22	97	72	-	34	152	112	-	44	34	152	112	-	34	152	1.9%	1.4%	1.9%	2.1%	1.8%	1.9%	1.9%
370	657	574	55	63	243	213	-	77	290	254	-	66	77	290	254	-	77	290	0.7%	0.8%	0.7%	0.7%	0.7%	0.6%	0.6%
371	2,751	1,394	319	221	300	554	-	218	301	553	-	316	218	301	553	-	218	301	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
377	-	1,200	20	39	132	1,009	-	39	137	1,040	-	20	39	137	1,040	-	39	137	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%
378	-	10,569	100	222	9,724	523	-	104	10,891	538	-	104	229	10,020	538	-	229	10,020	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
380	20	6,831	305	202	5,919	405	-	209	7,049	417	-	314	209	6,109	417	-	209	6,109	0.1%	0.8%	0.1%	0.1%	0.1%	0.1%	0.1%
381	-	15,067	294	438	13,850	485	-	452	14,269	500	-	302	452	14,269	500	-	452	14,269	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
383	262	1,624	344	245	419	616	-	454	838	1,047	-	579	454	838	1,047	-	454	838	2.7%	11.1%	2.7%	2.3%	2.8%	3.3%	2.3%
384	2,042	5,845	157	521	4,458	709	-	828	7,103	1,131	-	251	828	7,103	1,131	-	828	7,103	2.0%	2.2%	2.0%	2.0%	2.0%	2.0%	2.0%
385	1,399	585	106	96	189	194	-	119	237	242	-	131	119	237	242	-	119	237	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
386	2,232	125	16	12	56	41	-	13	57	42	-	17	13	57	42	-	13	57	0.1%	0.8%	0.1%	0.2%	0.3%	0.1%	0.1%
387	-	577	59	13	466	39	-	15	479	39	-	61	15	479	39	-	15	479	0.1%	0.0%	0.1%	0.1%	0.5%	0.1%	0.0%
388	84	692	3	1	406	282	-	1	419	290	-	3	1	419	290	-	1	419	0.9%	0.9%	0.1%	0.0%	0.0%	0.1%	0.1%
Total	11,553	73,786	1,978	2,316	60,004	9,488	-	2,941	83,690	10,804	-	2,395	2,941	67,550	10,804	-	2,941	67,550	1.4%	1.4%	0.4%	0.7%	0.9%	0.4%	0.5%

Note: Zones 3, 5, 6, and 382 constitute parkland/water.

Appendix A-2.2: Roadway Network Revisions

Number of Lanes

Facility	Given Number of Lanes	DDOT Number of Lanes	Notes
Arlington Memorial Bridge (right before bridge when EB and WB traffic split)	3	3	
Independence Ave (between 23rd St and ramp from Arlington Memorial Bridge)	3	2	
Independence Ave SW (between 7th St and 4th St)	3	4	During peak
Independence Ave SW (between 4th St and above 3rd St Tunnel)	2	3	
Ohio Dr SW (from Maine Ave, across Potomac Park, then North up to 23rd St)	1	2	
17th St NW/SW (North of Independence Ave)	3	2	
Kutz Bridge	2	3	
14th St NW/SW (between C St and Madison)	4	Alternates between 3 and 4	
14th St NW/SW (North of Madison)	3	One side has 4 lanes	During peak
C St SW (between 14th St and 12th St)	4	2	
D St SW (between 6th St and 7th St)	2	One direction has 1 lane	
14th Street Bridge (Local)	6	6	
14th Street Bridge (I-395)			
Rochambeau Bridge (I-395 HOV)			
12th St SW (between D St and Independence Ave)	2	3	
Ramp from D St to 395	2	1	
9th St Expressway (small portion above 395)	3	2	
9th St Expressway (north of 395)	4	3	
7th St SW (between I St SW and H St SW)	3	2	1 parking lane all the time
7th St SW (North of Independence)	3	One direction has 4 lanes	During peak
4th St (between I St and Independence Ave)	3	1 or 2	Difficult to determine from map
4th St SW (between P St SW and M St SW)	3	2	1 parking lane all the time
3rd St Tunnel (I-395)	3	3	
E St SW (between 6th St and 7th St)	1	One direction has 2 lanes during peak	

Facility Type Classification















Facility	Given Classification	DDOT Classification	Given FFS	Posted Speed Limit
Rock Creek Parkway NW	Minor Arterial/Major Arterial	Major Arterial	35	25
23rd St NW	Minor Arterial/Major Arterial	Major Arterial	35	None posted
23rd St SW	Minor Arterial/Major Arterial	Major Arterial	35	None posted
Henry Bacon Dr NW	Minor Arterial	Major Arterial	35	25
Arlington Memorial Bridge	Freeway	Major Arterial	55	30
George Washington Memorial Parkway VA	Freeway	Major Arterial	55/60	50/40
Jefferson Davis Hwy VA	Freeway	Major Arterial	55	45
Memorial Dr VA	Freeway	Major Arterial	55	None posted
Washington Blvd VA	Freeway	Major Arterial	60	45/25
I-395	Freeway	Interstate	55	40
Independence Ave SW	Major Arterial	Major Arterial	35	30
Ohio Dr SW	Freeway/Major Arterial/Collector	Ramp/Major Arterial/Local	55/35/30	25
Ohio Dr SW (Potomac Park)	Collector/Minor Arterial	Unknown	30/35	25
Lincoln Memorial Circle NW	Minor Arterial	Major Arterial	35	None posted
17th St NW/SW	Major Arterial	Major Arterial	35	25
Maine Ave SW (West of 14th St Bridge)	Freeway/Minor Arterial	Major Arterial	55/35	25
Maine Ave SW (East of 14th St Bridge)	Freeway/Major Arterial	Major Arterial/Minor Arterial	55/35	25
14th St NW/SW	Major Arterial	Major Arterial	35	None posted
C St SW	Collector	Collector	30	None posted
D St SW	Minor Arterial	Collector	35	None posted
14th Street Bridge (Local)	Partially shown as Major Arterial	Show completely as Major Arterial	35	None posted
14th Street Bridge (I-395)	Not shown	Interstate		45
Rochambeau Bridge (I-395 HOV)	Freeway	Interstate	55	45
12th St SW	Minor Arterial/Collector	Local	35/30	None posted
12th St Expressway	Freeway	Expressway	55	30
9th St SW	Major Arterial	Collector	35	None posted
9th St Expressway	Freeway	Expressway	55	35
7th St NW/SW	Major Arterial/Minor Arterial	Major Arterial/Minor Arterial	35	None posted
6th St SW	Collector	Collector	30	None posted

Facility Type Classification (continued)

Facility	Given Classification	DDOT Classification	Given FFS	Posted Speed Limit
4th St NW/SW	Minor Arterial/Collector	Minor Arterial	30	25/15(school zone)
3rd St SW	Collector	Major Arterial/Collector	30	None posted
3rd St Tunnel (I-395)	Freeway	Interstate	55	45
Maryland Ave SW	Collector	Collector	30	None posted
Virginia Ave SW	Partially shown as a Collector	Local	30	None posted
E St SW	Collector	Local	30	None posted
I St SW	Collector	Minor Arterial	30	25/15(school zone)
M St SW	Major Arterial	Minor Arterial	35	25
Delaware St SW	Collector	Collector	30	None posted
Canal St SW	Collector	Collector	30	None posted
P St SW	Collector	Minor Arterial	30	25

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Appendix A-3.1: 2013 PM Peak Hour Level of Service















HCM 2000 Results – Existing Conditions			Delay (sec/veh)	LOS
#1: Maine Ave SW & 15 th St SW		Overall	28.6	C
#2: Maine Ave SW & Ohio Dr. SW		Overall	32.8	C
#3: Maine Ave SW & US 1 NB off-ramp		Overall	12.1	B
#4: 14 th St SW & C St SW		Overall	18.9	B
#5: 12 th St SW & Maine Ave SW		Overall	33.6	C
#6: 12th St SW & Maryland Ave SW		Overall	19.2	B
#7: 12th St SW & D St SW		Overall	20.3	C
#8: 12th St SW & C St SW		Overall	122.1	F
#9: D St SW & 10th St SW		Overall	16.4	B
#10: D St SW & I-395 ramps		WB	19.7	B
		EB	2.1	A
#11: Frontage Road SW & 10th St SW		SB Left	11.0	B
		SB Right	9.3	A
#12: US 1/14th St SW & D St SW		WB Right	12.6	B
#13: C St SW & 13th St SW		NB	18.9	C
#14: D St SW & 13th St SW		SB	13.1	B

NB – Northbound, SB – Southbound, EB – Eastbound, WB – Westbound

For unsignalized intersections, level of service is for stop sign controlled minor approach.

 **Signalized Intersection**  **Unsignalized Intersection**

Appendix A-3.2: 2040 PM Peak Hour Level of Service – Alternatives 1 through 6















HCM 2000 Results – 2040 Future No Build PM Peak			Delay (sec/veh)	LOS
#1: Maine Ave SW & 15 th St SW		Overall	37.7	D
#2: Maine Ave SW & Ohio Dr. SW		Overall	57.2	E
#3: Maine Ave SW & US 1 NB off-ramp		Overall	31.9	C
#4: 14 th St SW & C St SW		Overall	33.3	C
#5: 12 th St SW & Maine Ave SW		Overall	29.8	C
#6: 12th St SW & Maryland Ave SW		Overall	29.3	C
#7: 12th St SW & D St SW		Overall	21.1	C
#8: 12th St SW & C St SW		Overall	245.2	F
#9: D St SW & 10th St SW		Overall	15.7	B
#10: D St SW & I-395 ramps		WB	29.6	C
		EB	1.7	A
#11: Frontage Road SW & 10th St SW		SB Left	11.8	B
		SB Right	9.5	A
#12: US 1/14th St SW & D St SW		WB Right	14.4	B
#13: C St SW & 13th St SW		NB	28.6	D
#14: D St SW & 13th St SW		SB	15.0	C

NB – Northbound, SB – Southbound, EB – Eastbound, WB – Westbound

For unsignalized intersections, level of service is for stop sign controlled minor approach.

 Signalized Intersection  Unsignalized Intersection

Appendix A-3.3: 2040 PM Peak Hour Level of Service – Alternatives 7 and 8







HCM 2000 Results – 2040 Alternative 5 PM Peak			Delay (sec/veh)	LOS
#1: Maine Ave SW & 15 th St SW		Overall	40.5	D
#2: Maine Ave SW & Ohio Dr. SW		Overall	57.5	E
#3: Maine Ave SW & US 1 NB off-ramp		Overall	33.4	C
#4: 14 th St SW & C St SW		Overall	30.7	C
#5: 12 th St SW & Maine Ave SW		Overall	29.9	C
#6: 12 th St SW & Maryland Ave SW		Overall	29.2	C
#7: 12 th St SW & D St SW		Overall	20.2	C
#8: 12 th St SW & C St SW		Overall	177.7	F
#9: D St SW & 10 th St SW		Overall	19.6	B
#10: D St SW & I-395 ramps		Westbound	39.2	D
		Eastbound	2.5	A
#11: Frontage Road SW & 10 th St SW		SB Left	11.7	B
		SB Right	9.5	A
#12: US 1/14 th St SW & D St SW		WB Right	13.7	B
#13: C St SW & 13 th St SW		NB	21.4	C
#14: D St SW & 13 th St SW		SB	14.8	B

NB – Northbound, SB – Southbound, EB – Eastbound, WB – Westbound

For unsignalized intersections, level of service is for stop sign controlled minor approach.

 Signalized Intersection  Unsignalized Intersection

Appendix A-3.4: Highway Capacity Manual Level of Service Definitions

<h3 style="text-align: center;">LEVELS OF SERVICE</h3> <p style="text-align: center;">for Intersections with Traffic Signals</p>		
Level of Service	Delay per Vehicle (seconds)	
A		≤10
B		11-20
C		21-35
D		36-55
E		56-80
F		>80

Factors Affecting LOS of Signalized Intersections

Traffic Signal Conditions:

- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

Geometric Conditions:

- Left- and right-turn lanes
- Number of lanes
- Etc.

Traffic Conditions:

- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections

Unsignalized Intersections

A ≤10 sec

B 10-15 sec

C 15-25 sec

D 25-35 sec

E 35-50 sec

F ≥50 sec

Appendix A-3.5: 2010-2012 Crash Summaries at Study Intersections

Total Number of Accident:	134	Collision Type		#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	1	Right Angle:		16	11.9%	Fixed Object:	6	4.5%
Total Number of Injuries:	41	Left Turn:		11	8.2%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	2	Right Turn:		5	3.7%	Ped. Involved:	6	4.5%
Total Number of NonDisabling Injuries:	12	Rear End:		31	23.1%	Backing:	7	5.2%
Total Number of Pedestrians Involved:	6	Side Swiped:		35	26.1%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	2	Head On:		4	3.0%	Under/Over Ride	0	0.0%
Total Number of Motorcycles Involved:	3	Parked:		5	3.7%	Unspecified:	8	6.0%
Time of Day			Day of Week					
	#ACC	%				#ACC	%	
07:30 ~ 09:30:	5	3.7%	Sunday:	14	10.4%			
09:30 ~ 11:30:	10	7.5%	Monday:	19	14.2%			
11:30 ~ 13:30:	14	10.4%	Tuesday:	23	17.2%			
13:30 ~ 16:00:	17	12.7%	Wednesday:	18	13.4%			
16:00 ~ 18:30:	46	34.3%	Thursday:	33	24.6%			
18:30 ~ 07:30:	42	31.3%	Friday:	18	13.4%			
Unspecified:	0	0.0%	Saturday:	9	6.7%			
Weather Condition			Surface Condition					
	#ACC	%		#ACC	%			
Clear:	111	82.8%	Dry:	115	85.8%			
Rain:	13	9.7%	Wet:	14	10.4%			
Snow:	3	2.2%	Snow/Ice:	3	2.2%			
Sleet/Hail:	0	0.0%	Slush:	0	0.0%			
Fog/Mist:	2	1.5%	Water/Sand:	0	0.0%			
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%			
Unspecified:	5	3.7%	Unspecified:	2	1.5%			
Type of Vehicle			Accident Severity Type					
	#VEH	%		#ACC	%			
Passenger Car:	158	67.5%	Fatal Collision:	1	0.7%			
Bus:	20	8.5%	Injury Collision:	31	23.1%			
Truck:	20	8.5%	PDO Collision:	102	76.1%			
Taxi:	26	11.1%	Light Condition			#ACC	%	
Minivan:	0	0.0%	Daylight:	91	67.9%			
Police/Emergency Vehicle:	0	0.0%	Dawn/Dusk:	5	3.7%			
Motorcycle/Moped:	4	1.7%	Dark(Lighted):	34	25.4%			
Bicycle:	4	1.7%	Dark(Not Lighted):	2	1.5%			
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%			
Unspecified:	2	0.9%	Unspecified:	2	1.5%			
Contributing Factor			Pedestrian Actions					
	#VEH	%		#ACC	%			
Driver: Speed:	6	2.3%	In Crosswalk with Signal:	2	33.3%			
Driver: Alcohol/Drug:	1	0.4%	In Crosswalk against Signal:	0	0.0%			
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%			
Driver: Others:	56	21.7%	In Unmarked Crosswalk:	0	0.0%			
Vehicle:	0	0.0%	Not in Crosswalk:	1	16.7%			
Roadway:	4	1.6%	From Between Parked Cars:	0	0.0%			
Unspecified:	191	74.0%	Unspecified:	3	50.0%			
Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles	
2010	45	0	11	7	3	1	0	
2011	46	1	21	3	2	1	2	
2012	43	0	9	2	1	0	1	

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Appendix A-4: MWCOG Non-Mototrizd Person Trip Productions by Work and Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Growth 2010-2040
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work
3	-	-	-	-	-	-	0	0	0	-
5	-	-	-	-	-	-	0	0	0	-
6	-	-	-	-	-	-	0	0	0	-
9	-	-	-	-	-	-	0	0	0	-
10	-	-	-	-	-	-	0	0	0	-
11	-	-	-	-	-	-	0	0	0	-
12	-	-	-	-	-	-	0	0	0	-
13	-	-	-	-	-	-	0	0	0	-
15	-	-	-	-	-	-	0	0	0	-
369	424	1,058	1,482	726	2,016	2,742	726	2,016	2,742	85%
370	92	257	349	127	378	506	127	378	506	45%
371	880	1,722	2,602	1,203	2,616	3,818	1,203	2,616	3,818	47%
377	-	-	-	-	-	-	0	0	0	-
378	-	-	-	-	-	-	0	0	0	-
380	-	-	-	-	-	-	0	0	0	-
381	-	-	-	-	-	-	0	0	0	-
382	-	-	-	-	-	-	0	0	0	-
383	73	134	208	349	702	1,051	349	702	1,051	406%
384	547	935	1,482	1,029	1,946	2,974	1,029	1,946	2,974	101%
385	513	811	1,324	740	1,306	2,046	740	1,306	2,046	54%
386	461	962	1,423	661	1,535	2,196	661	1,535	2,196	54%
387	-	-	-	-	-	-	0	0	0	-
388	-	-	-	-	-	-	0	0	0	-
1492	1,376	2,868	4,244	1,695	4,077	5,772	1,695	4,077	5,772	36%
1493	173	328	501	1,560	3,140	4,700	1,560	3,140	4,700	838%
1499	127	208	335	197	353	550	197	353	550	64%
1500	593	1,116	1,710	696	1,419	2,115	696	1,419	2,115	24%
Total	5,259	10,401	15,659	8,984	19,487	28,471	8,984	19,487	28,471	82%

Appendix A-4: MWCOG Non-Mototrizd Person Trip Attractions by Work and Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Growth 2010-2040
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work
3	-	-	-	-	-	-	0	0	0	-
5	-	-	-	-	-	-	0	0	0	-
6	-	-	-	-	-	-	0	0	0	-
9	93	12	105	106	14	120	106	14	120	14%
10	1,024	135	1,159	1,133	164	1,297	1,133	164	1,297	12%
11	5,966	491	6,457	8,436	753	9,189	8,436	753	9,189	42%
12	6,682	691	7,373	7,508	825	8,334	7,508	825	8,334	13%
13	1,042	83	1,125	1,170	99	1,269	1,170	99	1,269	13%
15	1,926	164	2,090	2,192	200	2,392	2,192	200	2,392	14%
369	93	665	758	185	1,344	1,529	185	1,344	1,529	102%
370	251	260	511	367	424	790	367	424	790	55%
371	639	1,027	1,666	739	1,572	2,311	739	1,572	2,311	39%
377	849	105	955	1,003	132	1,135	1,003	132	1,135	19%
378	6,147	932	7,078	7,136	1,152	8,289	7,136	1,152	8,289	17%
380	3,490	567	4,057	4,124	733	4,857	4,124	733	4,857	20%
381	8,047	1,134	9,181	9,155	1,400	10,555	9,155	1,400	10,555	15%
382	-	-	-	-	-	-	0	0	0	-
383	608	243	851	1,263	712	1,975	1,263	712	1,975	132%
384	2,246	889	3,135	4,259	1,868	6,127	4,259	1,868	6,127	95%
385	239	391	630	364	638	1,003	364	638	1,003	59%
386	47	482	529	60	833	893	60	833	893	69%
387	57	18	74	110	22	132	110	22	132	78%
388	101	71	172	191	68	259	191	68	259	51%
1492	1,866	4,141	6,007	2,500	6,207	8,706	2,500	6,207	8,706	45%
1493	1,670	830	2,500	6,837	3,285	10,122	6,837	3,285	10,122	305%
1499	1,797	422	2,219	2,942	792	3,734	2,942	792	3,734	68%
1500	480	743	1,222	1,290	1,090	2,380	1,290	1,090	2,380	95%
Total	45,360	14,494	59,854	63,071	24,326	87,397	63,071	24,326	87,397	46%

Appendix A-4: MWCOG MotORIZED Person Trip Productions by Work and Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Growth 2010-2040
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	
3	-	-	-	-	-	-	0	0	0	-
5	-	-	-	-	-	-	0	0	0	-
6	-	-	-	-	-	-	0	0	0	-
9	-	-	-	-	-	-	0	0	0	-
10	-	-	-	-	-	-	0	0	0	-
11	-	-	-	-	-	-	0	0	0	-
12	-	-	-	-	-	-	0	0	0	-
13	-	-	-	-	-	-	0	0	0	-
15	-	-	-	-	-	-	0	0	0	-
369	1,193	2,835	4,028	1,487	3,236	4,723	1,487	3,236	4,723	17%
370	253	718	971	269	710	979	269	710	979	1%
371	2,074	4,048	6,122	2,326	4,393	6,719	2,326	4,393	6,719	10%
377	-	-	-	-	-	-	0	0	0	-
378	-	-	-	-	-	-	0	0	0	-
380	-	-	-	-	-	-	0	0	0	-
381	-	-	-	-	-	-	0	0	0	-
382	-	-	-	-	-	-	0	0	0	-
383	218	465	683	882	1,874	2,755	882	1,874	2,755	304%
384	1,717	3,347	5,065	2,638	5,117	7,756	2,638	5,117	7,756	53%
385	1,437	2,468	3,906	1,614	2,740	4,353	1,614	2,740	4,353	11%
386	1,433	3,154	4,587	1,580	3,295	4,874	1,580	3,295	4,874	6%
387	-	-	-	-	-	-	0	0	0	-
388	-	-	-	-	-	-	0	0	0	-
1492	5,521	9,495	15,016	5,413	8,667	14,080	5,413	8,667	14,080	-6%
1493	668	1,193	1,862	4,804	8,048	12,852	4,804	8,048	12,852	590%
1499	508	879	1,387	617	1,002	1,619	617	1,002	1,619	17%
1500	2,228	3,843	6,071	2,095	3,488	5,582	2,095	3,488	5,582	-8%
Total	17,250	32,447	49,698	23,724	42,569	66,293	23,724	42,569	66,293	33%

Appendix A-4: MWCOG MotORIZED Person Trip Attractions by Work and Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Growth 2010-2040
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	
3	-	-	-	-	-	-	0	0	0	-
5	-	-	-	-	-	-	0	0	0	-
6	-	-	-	-	-	-	0	0	0	-
9	189	76	265	197	80	278	197	80	278	5%
10	3,039	1,243	4,282	3,053	1,260	4,313	3,053	1,260	4,313	1%
11	15,640	4,976	20,616	19,544	6,325	25,869	19,544	6,325	25,869	25%
12	16,203	5,065	21,268	16,095	5,112	21,207	16,095	5,112	21,207	0%
13	1,694	592	2,286	1,647	595	2,242	1,647	595	2,242	-2%
15	3,582	1,160	4,742	3,483	1,166	4,649	3,483	1,166	4,649	-2%
369	349	2,395	2,745	508	3,051	3,559	508	3,051	3,559	30%
370	931	1,028	1,959	1,048	1,153	2,201	1,048	1,153	2,201	12%
371	2,138	3,798	5,936	2,027	4,194	6,220	2,027	4,194	6,220	5%
377	1,712	553	2,265	1,635	545	2,180	1,635	545	2,180	-4%
378	15,372	4,697	20,069	15,037	4,648	19,685	15,037	4,648	19,685	-2%
380	10,285	3,181	13,466	10,093	3,141	13,233	10,093	3,141	13,233	-2%
381	22,550	7,061	29,610	22,369	7,044	29,412	22,369	7,044	29,412	-1%
382	-	-	-	-	-	-	0	0	0	-
383	2,637	1,281	3,917	4,594	2,962	7,556	4,594	2,962	7,556	93%
384	9,829	5,613	15,442	14,979	8,670	23,649	14,979	8,670	23,649	53%
385	943	1,977	2,920	1,109	2,291	3,400	1,109	2,291	3,400	16%
386	206	2,692	2,898	201	3,074	3,274	201	3,074	3,274	13%
387	829	306	1,136	1,063	298	1,361	1,063	298	1,361	20%
388	1,014	412	1,427	1,288	440	1,727	1,288	440	1,727	21%
1492	9,696	11,649	21,345	9,730	10,507	20,237	9,730	10,507	20,237	-5%
1493	9,979	4,162	14,141	32,780	15,073	47,853	32,780	15,073	47,853	238%
1499	11,890	3,952	15,842	14,802	4,923	19,725	14,802	4,923	19,725	25%
1500	2,717	3,609	6,327	5,927	4,240	10,166	5,927	4,240	10,166	61%
Total	143,424	71,479	214,903	183,207	90,789	273,996	183,207	90,789	273,996	27%

Appendix A-4: MWCOG Non-MotORIZED Person Trip Productions by Trip Purpose by Alternative

TAZ	2010				2040 No-Build, Alternatives 2,3,4,5				2040 Alternatives 6,7,8				
	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-
369	297	382	565	127	111	1,482	553	761	1,104	761	1,104	173	2,742
370	68	80	153	24	25	349	100	123	227	100	123	27	506
371	627	677	864	253	181	2,602	908	1,047	1,353	908	1,047	295	3,818
377	-	-	-	-	-	-	-	-	-	-	-	-	-
378	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
381	-	-	-	-	-	-	-	-	-	-	-	-	-
382	-	-	-	-	-	-	-	-	-	-	-	-	-
383	49	45	73	25	16	208	246	240	392	246	240	103	69
384	353	350	452	194	133	1,482	723	748	982	723	748	306	2,974
385	339	312	396	173	104	1,324	537	515	665	537	515	203	2,046
386	304	367	468	157	127	1,423	478	615	771	478	615	184	2,196
387	-	-	-	-	-	-	-	-	-	-	-	-	-
388	-	-	-	-	-	-	-	-	-	-	-	-	-
1492	756	1,293	1,189	619	385	4,244	1,064	1,921	1,761	1,064	1,921	632	5,772
1493	98	144	138	76	47	501	990	1,454	1,341	990	1,454	346	4,700
1499	68	89	86	33	33	1499	335	121	161	335	121	42	550
1500	337	499	462	256	155	1,710	444	658	608	444	658	252	2,115
Total	3,296	4,239	4,845	1,963	1,317	15,659	6,164	8,244	9,355	6,164	8,244	2,820	28,471

Note: Zones 3, 5, 6, and 382 constitute parkland/water.

Appendix A-4: MWCOG Non-MotORIZED Person Trip Attractions by Trip Purpose by Alternative

TAZ	2010				2040 No-Build, Alternatives 2,3,4,5				2040 Alternatives 6,7,8				
	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-
9	11	3	4	83	4	105	11	94	5	120	5	120	120
10	109	916	23	1,159	112	1,297	27	1,297	112	131	1,021	27	1,297
11	833	17	331	5,133	143	6,457	1,079	26	507	1,079	26	219	9,189
12	884	17	476	5,798	198	7,373	912	20	569	8,334	912	237	8,334
13	100	6	52	1,125	25	1,125	103	7	1,269	103	7	30	1,269
15	203	5	112	1,723	47	2,090	209	6	136	1,983	6	58	2,392
369	17	147	340	687	76	758	27	296	687	27	296	158	1,529
370	45	62	120	206	78	511	54	101	195	54	101	128	790
371	109	254	467	530	306	1,666	109	381	732	109	381	459	2,311
377	94	13	58	755	34	955	97	16	74	1,135	97	43	1,135
378	828	80	563	5,318	289	7,078	854	99	696	6,283	99	358	8,289
380	535	65	320	2,955	182	4,057	552	84	414	4,857	84	235	4,857
381	1,181	127	643	6,867	363	9,181	1,217	157	794	7,939	157	448	10,555
382	-	-	-	-	-	-	-	-	-	-	-	-	-
383	127	74	79	481	29	851	229	205	257	1,975	205	250	1,975
384	458	209	389	1,788	91	3,135	730	439	821	3,529	439	609	6,127
385	46	96	180	193	115	680	57	156	294	1,003	57	188	1,003
386	10	106	249	37	128	529	10	182	430	893	10	220	893
387	24	1	13	32	3	74	43	2	13	132	2	7	132
388	29	3	57	72	11	172	56	5	44	173	5	19	259
1492	419	2,257	750	1,448	1,135	6,007	441	3,397	1,105	2,058	3,397	1,704	8,706
1493	469	349	258	1,202	222	2,500	1,617	939	1,588	5,220	939	758	10,122
1499	560	101	220	1,237	102	2,219	726	195	405	2,216	195	192	3,734
1500	128	285	289	352	169	1,222	294	362	482	2,380	294	246	2,380
Total	7,219	4,279	6,078	38,142	4,137	59,854	9,541	7,086	10,439	53,530	6,801	6,801	87,397

Appendix A-4: MWCOG Motorized Person Trip Productions by Trip Purpose by Alternative

TAZ	2010					2040 No-Build, Alternatives 2,3,4,5					2040 Alternatives 6,7,8				
	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
369	833	275	1,752	359	807	4,028	997	138	2,007	490	4,723	997	138	2,007	490
370	1,167	430	1,952	551	966	5,065	1,770	531	3,023	869	7,756	1,770	531	3,023	869
384	945	290	1,427	492	751	3,906	1,088	223	1,038	576	4,353	1,038	223	1,038	576
385	988	392	1,840	445	923	4,587	1,059	287	1,926	521	4,874	1,059	287	1,926	521
386	988	392	1,840	445	923	4,587	1,059	287	1,926	521	4,874	1,059	287	1,926	521
387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1492	3,763	1,382	5,116	1,758	2,797	15,016	3,620	1,055	4,745	1,793	14,080	3,620	1,055	4,745	1,793
1493	454	203	653	214	338	1,862	3,186	1,152	4,389	1,618	12,852	3,186	1,152	4,389	1,618
1499	340	158	483	168	239	1,387	399	153	547	218	1,619	399	153	547	218
1500	1,501	649	2,072	728	1,122	6,071	1,380	481	1,902	715	5,582	1,380	481	1,902	715
Total	11,680	4,471	18,424	5,571	9,553	49,698	15,720	4,459	24,413	8,004	66,293	15,720	4,459	24,413	8,004

Note: Zones 3, 5, 6, and 382 constitute parkland/water.

Appendix A-4: MWCOG Motorized Person Trip Attractions by Trip Purpose by Alternative

TAZ	2010					2040 No-Build, Alternatives 2,3,4,5					2040 Alternatives 6,7,8				
	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total	Home-based Shopping	Home-based Other	Non-home-based Work	Non-home-based Non-work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
369	272	177	1,961	78	257	2,745	426	169	2,617	82	3,559	426	169	2,617	82
370	715	93	797	138	138	1,959	856	89	926	192	2,201	856	89	926	192
371	1,736	352	2,944	402	502	5,936	1,729	320	3,397	298	4,729	1,729	320	3,397	298
377	1,495	24	454	218	74	2,265	1,539	21	455	96	2,180	1,539	21	455	96
378	13,164	132	4,007	2,208	558	20,069	13,565	119	4,013	1,472	19,685	13,565	119	4,013	1,472
380	8,508	130	2,629	1,777	422	13,466	8,780	118	2,633	1,313	8,780	8,780	118	2,633	1,313
381	18,766	290	5,818	3,784	953	29,610	19,334	273	5,862	3,035	29,412	19,334	273	5,862	3,035
382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
382	2,023	197	806	614	278	3,917	3,634	389	2,022	960	7,556	3,634	389	2,022	960
383	7,280	580	4,110	2,549	923	15,442	11,599	836	6,486	3,379	23,649	11,599	836	6,486	3,379
385	729	197	1,507	214	274	2,920	908	205	1,792	201	3,400	908	205	1,792	201
386	156	227	2,149	50	317	2,898	161	226	2,522	40	3,274	161	226	2,522	40
387	577	16	231	252	60	1,136	740	12	243	323	1,361	740	12	243	323
388	692	15	329	382	69	1,427	888	11	382	400	1,727	888	11	382	400
1492	6,654	3,877	5,495	3,042	2,277	21,345	7,016	3,152	5,424	2,714	20,237	7,016	3,152	5,424	2,714
1493	7,447	909	2,589	2,532	663	14,141	25,702	1,656	11,858	7,078	47,853	25,702	1,656	11,858	7,078
1499	8,898	396	3,104	2,992	453	15,842	11,540	482	3,896	3,262	19,725	11,540	482	3,896	3,262
1500	2,032	685	2,549	692	430	6,327	4,668	441	3,246	1,259	10,166	4,668	441	3,246	1,259
Total	115,990	8,408	52,854	27,434	10,217	214,903	152,513	8,815	70,439	30,694	273,996	152,513	8,815	70,439	30,694

Appendix A-4: MWCOG % and Difference Non-Mototized Person Trip Productions by Work / Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Trip Increase			% Increase		
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
369	26%	27%	27%	33%	38%	37%	33%	38%	37%	302	958	1260	71%	91%	85%
370	27%	26%	26%	32%	35%	34%	32%	35%	34%	36	121	157	39%	47%	45%
371	30%	30%	30%	34%	37%	36%	34%	37%	36%	322	894	1216	37%	52%	47%
377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
383	25%	22%	23%	28%	27%	28%	28%	27%	28%	276	568	843	375%	423%	406%
384	24%	22%	23%	28%	28%	28%	28%	28%	28%	482	1011	1493	88%	108%	101%
385	26%	25%	25%	31%	32%	32%	31%	32%	32%	227	495	722	44%	61%	54%
386	24%	23%	24%	30%	32%	31%	30%	32%	31%	201	572	773	44%	59%	54%
387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1492	20%	23%	22%	24%	32%	29%	24%	32%	29%	320	1209	1529	23%	42%	36%
1493	21%	22%	21%	25%	28%	27%	25%	28%	27%	1387	2812	4199	801%	857%	838%
1499	20%	19%	19%	24%	26%	25%	24%	26%	25%	71	145	215	56%	69%	64%
1500	21%	23%	22%	25%	29%	27%	25%	29%	27%	103	303	406	17%	27%	24%
Total	23%	24%	24%	27%	31%	30%	27%	31%	30%	3725	9086	12812	71%	87%	82%

Appendix A-4: MWCOG Percentage and Differenc Non-Mototized Person Trip Attractions by Work / Non-Work by Alternative

TAZ	2010			2040 No-Build, Alts 2,3,4,5			2040 Alts 6,7,8			Trip Increase			% Increase		
	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total	Work	Non-Work	Total
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	33%	13%	28%	35%	15%	30%	35%	15%	30%	12	2	15	13%	20%	14%
10	25%	10%	21%	27%	11%	23%	27%	11%	23%	109	29	138	11%	21%	12%
11	28%	9%	24%	30%	11%	26%	30%	11%	26%	2470	262	2732	41%	53%	42%
12	29%	12%	26%	32%	14%	28%	32%	14%	28%	826	134	960	12%	19%	13%
13	38%	12%	33%	42%	14%	36%	42%	14%	36%	129	16	145	12%	19%	13%
15	35%	12%	31%	39%	15%	34%	39%	15%	34%	267	36	302	14%	22%	14%
369	21%	22%	22%	27%	31%	30%	27%	31%	30%	92	679	771	99%	102%	102%
370	21%	20%	21%	26%	27%	26%	26%	27%	26%	116	164	279	46%	63%	55%
371	23%	21%	22%	27%	27%	27%	27%	27%	27%	100	545	645	16%	53%	39%
377	33%	16%	30%	38%	20%	34%	38%	20%	34%	154	27	180	18%	25%	19%
378	29%	17%	26%	32%	20%	30%	32%	20%	30%	990	221	1210	16%	24%	17%
380	25%	15%	23%	29%	19%	27%	29%	19%	27%	633	167	800	18%	29%	20%
381	26%	14%	24%	29%	17%	26%	29%	17%	26%	1108	266	1374	14%	23%	15%
382	-	-	-	-	-	-	-	-	-	0	0	0	0%	0%	0%
383	19%	16%	18%	22%	19%	21%	22%	19%	21%	655	469	1124	108%	193%	132%
384	19%	14%	17%	22%	18%	21%	22%	18%	21%	2013	979	2992	90%	110%	95%
385	20%	17%	18%	25%	22%	23%	25%	22%	23%	125	247	373	52%	63%	59%
386	19%	15%	15%	23%	21%	21%	23%	21%	21%	13	351	364	28%	73%	69%
387	6%	5%	6%	9%	7%	9%	9%	7%	9%	53	4	58	94%	25%	78%
388	9%	15%	11%	13%	13%	13%	13%	13%	13%	91	-3	87	90%	-5%	51%
1492	16%	26%	22%	20%	37%	30%	20%	37%	30%	634	2065	2699	34%	50%	45%
1493	14%	17%	15%	17%	18%	17%	17%	18%	17%	5166	2455	7622	309%	296%	305%
1499	13%	10%	12%	17%	14%	16%	17%	14%	16%	1145	370	1515	64%	88%	68%
1500	15%	17%	16%	18%	20%	19%	18%	20%	19%	811	347	1158	169%	47%	95%
Total	24%	17%	22%	26%	21%	24%	26%	21%	24%	17711	9832	27543	39%	68%	46%

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As part of the transportation analysis for the Long Bridge Study, the version 2.3.52 MWCOG TPB travel demand model was used to estimate future travel across the Potomac River and within the study area for autos, Metrorail, streetcar and bus. Key model outputs that provide the source data for the information summarized in this study are described below. Electronic files are available for each of the following alternatives {Alt}:

2010 Base Year Alternative

2040 No Build, Alternative 4, and Alternative 5

2040 Alternative 6 - Streetcar

2040 Alternative 7 – Streetcar and shared auto

2040 Alternative 8 – Streetcar, shared auto, and auto only

Highway Network (I4_HWY_{Alt}.net) – The 2010 model highway network which includes network attributes and the daily traffic volumes as well as A.M., P.M., midday, and night period traffic volumes.

CUBE Project File for Highway Network (I4_HWY_{Alt}.vpr) – The CUBE project file that provides display settings and background GIS layers when viewing the model network using Citilabs CUBE software.

Peak Period Transit Network (PK_VOL.dbf) – A database file containing the peak period transit network links and volumes which can be viewed using Citilabs CUBE software.

Off-peak Period Transit Network (OP_VOL.dbf) – A database file containing the off-peak period transit network links and volumes which can be viewed using Citilabs CUBE software.

Transit Support Nodes (I4_Transit_nodes.dbf) – A database file containing the coordinates of the transit network nodes that support viewing the model transit network using Citilabs CUBE software.

Metro Rail Transit Line Summary (LineSum_MR_line.prn) – A report file generated by the model which list Metrorail transit line summaries which include peak, off-peak, and daily ridership between Metro stops.

Commuter Rail Transit Line Summary (LineSum_CR_line.prn) – A report file generated by the model which list commuter rail transit line summaries which include peak, off-peak, and daily ridership between commuter rail stops.

Bus Transit Line Summary (LineSum_BS_link.prn) – A report file generated by the model which lists bus transit link volumes crossing the Potomac River on 14th Street/I-395 and includes peak, off-peak, and daily ridership for each bus line.

Street Car Transit Line Summary (LineSum_SC_line.prn) – A report file generated by the model which list street car transit line summaries which include peak, off-peak, and daily ridership between commuter rail stops.

A Geographic Information System (GIS) is used in conjunction with the transportation model for the analysis of alternatives. Specific files that were used include:

MWCOG Traffic Analysis Zones (TPBTAZ3722_TPBMod.shp) – An ArcGIS polygon shapefile containing MWCOG region traffic analysis zone (TAZ) geography and attributes.

District of Columbia Street Layer (StreetCenterlineLn_Project.shp) – An ArcGIS link shapefile containing street centerline geography and attributes in the District of Columbia.

Arlington County Street Layer (Streetnetwork_arc_Project.shp) – An ArcGIS link shapefile containing street centerline geography and attributes in Arlington County, Virginia.

Water Feature Layer (WaterPly.shp) – An ArcGIS polygon shapefile containing water feature geography in the study area.