HCS+: Basic Freeway	Segments Release	≘ 5.2	HCS+: Basic Free	way Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational An	alvsis		Operational	l Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Atlantic St/Tay Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - AM	lor Rd		Analyst: Arthur Black Agency or Company: LSA Date Performed: Analysis Time Period: Freeway/Direction: Freeway/Direction: Jurisdiction: Analysis Year: Description: 2025 Without Project -	(Taylor Rd	
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E-mail: P-mail: Operational Analysis	important	Analyst: Arthur I Agency or Company: LSA Date Performed: 8/07/200 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Atlantic Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Proje Flow In Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fNV Driver population factor, fp Flow rate, vp Speed: Itane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fI	ional Analysis Black 08 c St/Taylor Rd ect - AM nputs and Adjustments_ 6538 0.90 1816 6 0 Level 0.00 0.00 1.5 1.2 0.971	veh/h v % %	Le-ma Anal Agen Date Anal Free From Juri Anal Desc 	<pre>vyst:Op</pre>	thur Black A D7/2008 Blantic St/Taylor cklin Project - PM low Inputs and A	Adjustments 6710 0.90 1864 6 0 Level 0.00 0.00	veh/h v % %
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Free-flow speed:MeasuredMeasuredFFs or BFFS70.0mi/hLane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and PerformanceMeasuresFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hNumber of lanes, N41920Number of lanes, N67.0mi/hNumber of lanes, N4	Free-flow speed:MeasuredMeasuredFFS or BFFS70.0mi/hLane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and PerformanceMeasuresFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hNumber of lanes, N44	Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fI Interchange density adjustment, Number of lanes adjustment, fN		Incerchange/ml					Incerchange/ml
FFS or BFFS70.0mi/hLane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and PerformanceMeasures	FFS or BFFS70.0mi/hLane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and PerformanceMeasures	FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fI Interchange density adjustment, Number of lanes adjustment, fN	-					-	
Lane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hLateral clearance adjustment, fLC0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hInterchange density adjustment, fLC0.0mi/hNumber of lanes adjustment, fN1.5mi/hInterchange density adjustment, fID0.0mi/hFree-flow speed, FFS70.0mi/hNumber of lanes adjustment, fN1.5mi/hFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/h1920pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44Xerage passenger-car speed, S4	Lane width adjustment, fLW0.0mi/hLateral clearance adjustment, fLC0.0mi/hLateral clearance adjustment, fLC0.0mi/hLateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hInterchange density adjustment, fLC0.0mi/hNumber of lanes adjustment, fN1.5mi/hInterchange density adjustment, fID0.0mi/hFree-flow speed, FFS70.0mi/hNumber of lanes adjustment, fN1.5mi/hFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/h1920pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44Xerage passenger-car speed, S4	Lane width adjustment, fLW Lateral clearance adjustment, f: Interchange density adjustment, Number of lanes adjustment, fN							mi/h
Lateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and Performance MeasuresLoS and Performance MeasuresFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hNumber of lanes, N4Number of lanes, N	Lateral clearance adjustment, fLC0.0mi/hInterchange density adjustment, fID0.0mi/hNumber of lanes adjustment, fN1.5mi/hNumber of lanes adjustment, fN1.5mi/hFree-flow speed, FFS70.0mi/hLOS and Performance MeasuresLoS and Performance MeasuresFlow rate, vp1871pc/h/lnFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hNumber of lanes, N4Number of lanes, N	Lateral clearance adjustment, f Interchange density adjustment, Number of lanes adjustment, fN			Lane				
Number of lanes adjustment, fN 1.5 mi/h Free-flow speed, FFS 70.0 mi/h LOS and Performance Measures LOS and Performance Measures LOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Number of lanes, N 4	Number of lanes adjustment, fN 1.5 mi/h Free-flow speed, FFS 70.0 mi/h LOS and Performance Measures LOS and Performance Measures LOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Number of lanes, N 4	Number of lanes adjustment, fN	LC 0.0		Late	eral clearance adjustmen	nt, fLC		
Free-flow speed, FFS 70.0 mi/h LOS and Performance Measures LOS and Performance MeasuresLOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Yurban Freeway	Free-flow speed, FFS 70.0 mi/h LOS and Performance Measures LOS and Performance MeasuresLOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Yurban Freeway								
Urban Freeway Urban Freeway LOS and Performance Measures LOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Yurban Freeway	Urban Freeway Urban Freeway LOS and Performance MeasuresLOS and Performance MeasuresLOS and Performance MeasuresLOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Number of lanes, N 4	Free-flow speed, FFS							
LOS and Performance Measures LOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Number of lanes, N 4	LOS and Performance Measures LOS and Performance Measures Flow rate, vp 1871 pc/h/ln Free-flow speed, FFS 70.0 mi/h Average passenger-car speed, S 67.0 mi/h Number of lanes, N 4 Number of lanes, N 4				Free	-ilow speed, FFS			
Flow rate, vp1871pc/h/lnFlow rate, vp1920pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44	Flow rate, vp1871pc/h/lnFlow rate, vp1920pc/h/lnFree-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44			-					-
Free-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44	Free-flow speed, FFS70.0mi/hFree-flow speed, FFS70.0mi/hAverage passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N44						us and Performan		
Average passenger-car speed, S67.0mi/hAverage passenger-car speed, S66.2mi/hNumber of lanes, N4Number of lanes, N4	Average passenger-car speed, S 67.0 mi/h Average passenger-car speed, S 66.2 mi/h Number of lanes, N 4 Number of lanes, N 4	Flow rate, vp			Flow	rate, vp			
Number of lanes, N 4 Number of lanes, N 4	Number of lanes, N 4 Number of lanes, N 4	Free-flow speed, FFS	70.0		Free	-flow speed, FFS			
Number of lanes, N 4 Number of lanes, N 4 Density, D 27.9 pc/mi/ln Density, D 29.0 pc/mi/ln	Number of lanes, N 4 Density, D 27.9 pc/mi/ln Vumber of lanes, N 4 Density, D 27.9 pc/mi/ln 29.0 pc/mi/ln	Average passenger-car speed, S	67.0	mi/h	Aver	age passenger-car speed	i, s		mi/h
Density, D 27.5 pc/mi/in Density, D 25.0 pc/mi/in		Number of Lanes, N Density D		nc/mi/ln	Numb	er or lanes, N			pc/mi/lp
		Denoity, D		bc/mt/111	Dens	101, D		27.0	PC/ III / 11

HCS+: Basic Freeway :	Segments Releas	e 5.2	HCS+: Basic Freewa	y Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational Ana	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Taylor Rd/Rte 61 Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - AM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Taylor Rd/Rte Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - D		
Flow Inputs and	d Adjustments		Flow Inputs a	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs an Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLD Number of lanes adjustment, fN	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 1.5	ft ft interchange/mi mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 0.0 1.5	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h</pre>
Free-flow speed, FFS	70.0 Urban Free	mi/h way	Free-flow speed, FFS	70.0 Urban Freew	mi/h ay
LOS and Perform	mance Measures_		LOS and Perfe	ormance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1522 70.0 69.7 4 21.8	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1928 70.0 66.1 4 29.2	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Releas	e 5.2	HCS+: Basic Freewa	y Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational An	alysis		Operational .	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Taylor Rd/Rte 6 Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - AM	5		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Taylor Rd/Rte Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project -	65	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0	ft ft interchange/mi mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h</pre>
Interchange density adjustment, fiD Number of lanes adjustment, fN Free-flow speed, FFS	0.0 1.5 70.0 Urban Free	mi/h mi/h	Interchange density adjustment, fiD Number of lanes adjustment, fN Free-flow speed, FFS	0.0 1.5 70.0 Urban Freew	mi/h mi/h
LOS and Perfor	mance Measures_		LOS and Perf	ormance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1604 70.0 69.4 4 23.1	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1763 70.0 68.2 4 25.8	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Release	5.2	HCS+: Basic Freewa	ay Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational An	alysis		Operational	Analysis	
Analyst:Arthur BlackAgency or Company:LSADate Performed:8/07/2008Analysis Time Period:Freeway/Direction:Freeway/Direction:I-80 EBFrom/To:Rte 65/RocklinJurisdiction:RocklinAnalysis Year:Description:Description:2025 Without Project - PM			Analyst:Arthur BlackAgency or Company:LSADate Performed:8/07/2008Analysis Time Period:Freeway/Direction:Freeway/Direction:I-80 WBFrom/To:Rte 65/RocklinJurisdiction:RocklinAnalysis Year:Description:2025 Without Project -	.n Rd	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	4939 0.90 1372 6 0.00 0.00 1.5 1.2 0.971 1.00 1884 and Adjustments 12.0 6.0 0.50 3 Measured	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	4091 0.90 1136 6 0 Level 0.00 1.5 1.2 0.971 1.00 1561 s and Adjustments 12.0 6.0 0.50 3 Measured	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi</pre>
Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS LOS and Perfor	70.0 0.0 0.0 3.0 70.0 Urban Freew	-	Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS LOS and Perf	70.0 0.0 0.0 3.0 70.0 Urban Freew	-
Flow rate, vp Free-flow speed, FFS	1884 70.0 66.8 3 28.2	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1561 70.0	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Releas	se 5.2		HCS+: Basic Freewa	y Segments Releas	e 5.2
Phone: E-mail:	Fax:			Phone: E-mail:	Fax:	
Operational Ar	alysis			Operational 2	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Rte 65/Rocklin Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - PM				Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rocklin Rd/Sid Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - 2	erra College Blvd AM	
Flow Inputs an	d Adjustments			Flow Inputs a	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW	12.0 6.0 0.50 3 Measured 70.0 0.0	ft ft interchange/mi mi/h mi/h	_	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW	12.0 6.0 0.50 3 Measured 70.0 0.0	ft ft interchange/mi mi/h mi/h
Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	0.0 0.0 3.0 70.0 Urban Free	mi/h mi/h mi/h mi/h way		Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	0.0 0.0 3.0 70.0 Urban Free	mi/h mi/h mi/h mi/h way
LOS and Perfor	mance Measures_			LOS and Perfe	ormance Measures_	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1806 70.0 67.8 3 26.6	pc/h/ln mi/h mi/h pc/mi/ln		Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1382 70.0 70.0 3 19.7	pc/h/ln mi/h mi/h pc/mi/ln

1001.	: Basic Freeway Se	Symptics Refease			: Basic Freeway Se	Symetrics herease	
Phone:		Fax:		Phone:		Fax:	
E-mail:				E-mail:			
	Operational Anal	ysis			Operational Anal	ysis	
Agency or Company: Date Performed: Analysis Time Period: Freeway/Direction: From/To:	Rocklin Rd/Sierra Rocklin	a College Blvd		Agency or Company: Date Performed: Analysis Time Period: Freeway/Direction: From/To:	Arthur Black LSA 8/07/2008 I-80 WB Rocklin Rd/Sierra Rocklin Dut Project - AM	a College Blvd	
	Flow Inputs and	Adjustments			Flow Inputs and	Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCF Heavy vehicle adjustment Driver population factor Flow rate, vp Lane width Right-shoulder lateral of Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, f Lateral clearance adjust	r 2, ER 2, fHV c, fp Speed Inputs and clearance	0 Level 0.00 1.5 1.2 0.971 1.00 1879 Adjustments 12.0 6.0 0.50 3 Measured	ft ft interchange/mi mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCF Heavy vehicle adjustment Driver population factor Flow rate, vp Lane width Right-shoulder lateral of Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, f	T E, ER t, fHV r, fp Speed Inputs and clearance	0 0 Level 0.00 1.5 1.2 0.971 1.00 1760 A Adjustments 12.0 6.0 0.50 3 Measured	ft ft interchange/mi mi/h mi/h
Lateral clearance adjust Interchange density adju Number of lanes adjustme Free-flow speed, FFS	istment, IID ent, fN	0.0 0.0 3.0 70.0 Urban Freewa	mi/h mi/h mi/h mi/h	FFS or BFFS Lane width adjustment, f Lateral clearance adjust Interchange density adju Number of lanes adjustme Free-flow speed, FFS	tment, fLC ustment, fID ent, fN	0.0 0.0 3.0 70.0 Urban Freew	mi/h mi/h mi/h mi/h
	_LOS and Performa	ince Measures			_LOS and Performa	ance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car sp Number of lanes, N Density, D	peed, S	1879 70.0 66.9 3 28.1	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car sp Number of lanes, N Density, D	peed, S	1760 70.0 68.3 3 25.8	pc/h/ln mi/h mi/h pc/mi/ln

	asic Freeway Seo				: Basic Freeway Se	-		
Phone:		Fax:		Phone:		Fax:		
E-mail:				E-mail:				
0	perational Anal	ysis			Operational Anal	ysis		
Agency or Company: LS Date Performed: 8/ Analysis Time Period: Freeway/Direction: I-	07/2008 80 WB	7/2008 0 WB klin Rd/Sierra College Blvd		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB				
	cklin	College Blvd		From/To: Jurisdiction: Analysis Year: Description: 2025 With	Sierra College Bl Rocklin out Project - AM	vd/Horseshoe		
F	low Inputs and A	Adjustments			Flow Inputs and	Adjustments		
Volume, V Peak-hour factor, PHF		4285 0.90	veh/h	Volume, V Peak-hour factor, PHF		3313 0.90	veh/h	
Peak 15-min volume, v15 Trucks and buses Recreational vehicles		6 0	V % %	Peak 15-min volume, v15 Trucks and buses Recreational vehicles		6 0	V ६ ६	
Terrain type: Grade Segment length		Level 0.00 0.00	% mi	Terrain type: Grade Segment length		Level 0.00 0.00	% mi	
Trucks and buses PCE, ET Recreational vehicle PCE, Heavy vehicle adjustment, Driver population factor,	ER fhV	1.5 1.2 0.971 1.00		Segment length Trucks and buses PCE, E Recreational vehicle PCI Heavy vehicle adjustment Driver population factor Flow rate, yp	T E, ER t, fHV r, fp	1.5 1.2 0.971 1.00		
Flow rate, vp		1635	pc/h/ln	Flow rate, vp		1264	pc/h/ln	
S	peed Inputs and	Adjustments			Speed Inputs and	Adjustments		
Lane width Right-shoulder lateral cle Interchange density Number of lanes, N Free-flow speed:		12.0 6.0 0.50 3 Measured	ft ft interchange/mi	Lane width Right-shoulder lateral Interchange density Number of lanes, N Free-flow speed:		12.0 6.0 0.50 3 Measured		
FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustme Interchange density adjust	nt, fLC	70.0 0.0 0.0 0.0	mi/h mi/h mi/h mi/h	FFS or BFFS Lane width adjustment, Lateral clearance adjus Interchange density adju	fLW tment, fLC ustment, fID	70.0 0.0 0.0 0.0	mi/h mi/h mi/h mi/h	
Number of lanes adjustment Free-flow speed, FFS		3.0 70.0 Urban Freewa	-	Number of lanes adjustme Free-flow speed, FFS	ent, fN	3.0 70.0 Urban Freewa	mi/h mi/h ay	
L	OS and Performan	nce Measures			LOS and Performa	nce Measures		
Flow rate, vp Free-flow speed, FFS Average passenger-car spee Number of lanes, N	d, S	1635 70.0 69.2 3	pc/h/ln mi/h mi/h	Flow rate, vp Free-flow speed, FFS Average passenger-car sp Number of lanes, N	peed, S	1264 70.0 70.0 3	pc/h/ln mi/h mi/h	
Density, D		23.6	pc/mi/ln	Density, D		18.1	pc/mi/ln	

HCS+: Ba	sic Freeway Segm	ments Release	5.2		HCS+: Basic Fr	eeway Segments Release	5.2
Phone:		Fax:		Phone:		Fax:	
E-mail:				E-mail:			
0p	erational Analys	sis		-	Operatic	onal Analysis	
Agency or Company: LSA Date Performed: 8/C Analysis Time Period: Freeway/Direction: I-8 From/To: Sie	7/2008 30 EB erra College Blvd sklin	l/Horseshoe		Freeway/Di From/To: Jurisdicti Analysis Y	rmed: 8/07/2008 ime Period: rection: I-80 WB Sierra Cc on: Rocklin) bllege Blvd/Horseshoe	
F1	ow Inputs and Ad	ljustments			Flow Inp	outs and Adjustments	
Volume, V Peak-hour factor, PHF		5075 0.90	veh/h	Volume, V Peak-hour	factor, PHF	4641 0.90	veh/h
Peak 15-min volume, v15		1410	v	Peak 15-mi	n volume, v15	1289	v
Trucks and buses		6	\$ -	Trucks and	buses	6	<u>ତ</u>
Recreational vehicles		0	8		al vehicles	0	8
Terrain type:		Level	ě		pe:	Level	8
Grade Segment length		0.00	-	Grade	t length	0.00	-
Segment length Trucks and buses PCE, ET		1.5	mi	Segmen	t length buses PCE, ET	1.5	mi
Recreational vehicle PCE, E	'D	1.2		Irucks and	DUSES PCE, EI	1.5	
Heavy vehicle adjustment, f		0.971		Heavy vehi	al vehicle PCE, ER	0.971	
Driver population factor, f		1.00		Driver pop	al vehicle PCE, ER cle adjustment, fHV ulation factor, fp	1.00	
Flow rate, vp		1936	pc/h/ln	Flow rate,	vp	1770	pc/h/ln
Sr	eed Inputs and A	Adjustments			Speed In	puts and Adjustments	
	-						
Lane width Right-shoulder lateral clea		12.0 6.0	ft ft	Lane width	lder lateral clearance	12.0	ft ft
Right-shoulder lateral clea Interchange density		6.U 0.50	interchange/mi	Interchang	e density		It interchange/mi
Number of lanes, N		3	THEET CHANGE/ MT	Number of	lanes, N	3	Incerchange/ml
Free-flow speed:		Measured		Free-flow	speed:	Measured	
FFS or BFFS		70.0	mi/h		r BFFS	70.0	mi/h
Lane width adjustment, fLW		0.0	mi/h		adjustment, fLW		mi/h
Lateral clearance adjustmen	nt, fLC	0.0	mi/h	Lateral cl	earance adjustment, fLC	0.0	mi/h
Interchange density adjustm	nent, fID	0.0	mi/h	Interchang	e density adjustment, f	ID 0.0	mi/h
Number of lanes adjustment,	fN	3.0	mi/h		lanes adjustment, fN		mi/h
Free-flow speed, FFS		70.0	mi/h	Free-flow	speed, FFS	70.0	mi/h
		Urban Freewa	a			Urban Freew	-
LC	S and Performanc	ce Measures		-	LOS and	Performance Measures	
Flow rate, vp		1936	pc/h/ln	Flow rate,		1770	pc/h/ln
Free-flow speed, FFS		70.0	mi/h		speed, FFS	70.0	mi/h
Average passenger-car speed	l, S	66.0	mi/h	Average pa	ssenger-car speed, S	68.2	mi/h
Number of lanes, N		3 29.3	pc/mi/ln	Number of	lanes, N	3 26.0-	
Density, D				Density, D			pc/mi/ln

HCS+: Basic Freeway	segments kelease	5.2	nust: basic rieewo	ay Segments Release	2 5.2
Phone:	Fax:		Phone: E-mail:	Fax:	
E-mail:					
Operational An	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Sierra College Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: I-80 to Hardi Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project -	ng Blvd	
-			Flow Inputs		
FIOW INPUtS an	a Aujustments	veh/h			veh/h
Flow Inputs an Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp 	0.00 0.00 1.5 1.2 0.971 1.00 1522	% mi pc/h/ln	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs	Level 0.00 1.5 1.2 0.930 1.00 1874	% mi pc/h/ln
Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS		ft interchange/mi mi/h mi/h mi/h mi/h mi/h ay	Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	3 Measured 70.0 0.0 0.0 0.0 3.0 70.0 Urban Freew	mi/h mi/h mi/h mi/h mi/h mi/h
LOS and Perfor	mance Measures		LOS and Perf	formance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1522 70.0 69.7 3 21.8	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1874 70.0 66.9 3 28.0	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway :	Segments Releas	e 5.2	HCS+: Basic Freewa	y Segments Release	5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational Ana	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: I-80 to Harding Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: I-80 to Hardi Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project -	2	
Flow Inputs and	d Adjustments		Flow Inputs	and Adjustments	
Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs an Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0	ft ft interchange/mi mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0	ft ft interchange/mi mi/h mi/h mi/h mi/h
Free-flow speed, FFS	70.0 Urban Free	mi/h way	Free-flow speed, FFS	70.0 Urban Freew	mi/h ay
LOS and Perform		-	LOS and Perf		
	_				
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1978 70.0 65.3 3 30.3	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1712 70.0 68.7 3 24.9	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Release	5.2	HCS+: Basic Freewa	y Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational An	alvsis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: I-80 to Harding Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - PM	Blvd		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: Harding Blvd/ Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project -	Blue Oaks	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 3.0 70.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0 70.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h
LOS and Perfor	Urban Freew	-	LOS and Perf	Urban Freew	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1642 70.0 69.2 3 23.7	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1785 70.0 68.0 3 26.2	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Releas	se 5.2	HCS+: Basic Freeway	/ Segments Releas	e 5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational #	Analysis	
Analyst:Arthur BlackAgency or Company:LSADate Performed:8/07/2008Analysis Time Period:Freeway/Direction:Freeway/Direction:Rte-65 NBFrom/To:Harding Blvd/BlJurisdiction:RocklinAnalysis Year:Description:2025 Without Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: Harding Blvd/F Jurisdiction: Rocklin Analysis Year: Description: 2025 Without Project - 7		
Flow Inputs an			Flow Inputs a		
<pre>Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLD Number of lanes adjustment, fN</pre>	4808 0.90 1336 15 0 Level 0.00 1.5 1.2 0.930 1.00 1914 nd Adjustments 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.5 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fID Number of lanes adjustment, fID	4454 0.90 1237 15 0 Level 0.00 1.5 1.2 0.930 1.00 1.773 and Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h</pre>
Number of lanes adjustment, fN Free-flow speed, FFS	3.0 70.0 Urban Free	mi/h	Number of lanes adjustment, fN Free-flow speed, FFS	3.0 70.0 Urban Free	mi/h
LOS and Perfor	mance Measures_		LOS and Perfo	ormance Measures_	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1914 70.0 66.3 3 28.9	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1773 70.0 68.1 3 26.0+	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Releas	e 5.2	HCS+: Basic Freewa	y Segments Release	9 5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: Harding Blvd/Bl Jurisdiction: Rocklin Analysis Year:			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rte 65/Rockli Jurisdiction: Rocklin Analysis Year:		
Description: 2025 Without Project - PM			Description: 2025 Without Project -	AM	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
<pre>Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vpSpeed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS</pre>	4155 0.90 1154 15 0 Level 0.00 0.00 1.5 1.2 0.930 1.00 1654 nd Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h mi/h</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	3995 0.90 1110 6 0 Level 0.00 1.5 1.2 0.971 1.00 1524 and Adjustments 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h mi/h</pre>
	Urban Free	wау		Urban Freew	Jay
LOS and Perfor	_		LOS and Perf		
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1654 70.0 69.1 3 23.9	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1524 70.0 69.7 3 21.9	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway Segments Release 5.2			HCS+: Basic Freew	ay Segments Release	5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational	Analysis	
Analyst:Arthur BlackAgency or Company:LSADate Performed:8/07/2008Analysis Time Period:Freeway/Direction:Freeway/Direction:I-80 EBFrom/To:Atlantic St/TayJurisdiction:RocklinAnalysis Year:Description:Description:2025 With Project - AM	lor Rd		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Atlantic St/ Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM	Taylor Rd	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density	12.0 6.0 0.50	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Input Lane width Right-shoulder lateral clearance Interchange density	12.0 6.0 0.50	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi</pre>
Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	4 Measured 70.0 0.0 0.0 1.5 70.0 Urban Freev	mi/h mi/h mi/h mi/h mi/h mi/h	Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	4 Measured 70.0 0.0 0.0 0.0 1.5 70.0 Urban Freew	mi/h mi/h mi/h mi/h mi/h mi/h
LOS and Perfor	mance Measures		LOS and Per	formance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1545 70.0 69.7 4 22.2	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	2123 70.0 62.2 4 34.2	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Releas	e 5.2	HCS+: Basic Freewa	y Segments Release	5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Atlantic St/Tay			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Atlantic St/T		
Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	lor ka		Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM		
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15	6546 0.90 1818	veh/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15	6764 0.90 1879	veh/h
Trucks and buses Recreational vehicles Terrain type:	6 0 Level	8 8	Trucks and buses Recreational vehicles Terrain type:	6 0 Level	8 8
Grade Segment length Trucks and buses PCE, ET	0.00 0.00 1.5	% mi	Grade Segment length Trucks and buses PCE, ET	0.00 0.00 1.5	% mi
Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp	1.2 0.971 1.00		Heavy vehicle adjustment, fHV Driver population factor, fp	1.2 0.971 1.00	
Flow rate, vp	1873	pc/h/ln	Flow rate, vp	1935	pc/h/ln
Speed Inputs a	nd Adjustments_		Speed Inputs	and Adjustments	
Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 1.5 70.0 Urban Free	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h way	Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 1.5 70.0 Urban Freew	<pre>ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h ay</pre>
LOS and Perfor	mance Measures_		LOS and Perf	ormance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1873 70.0 66.9 4 28.0	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1935 70.0 66.0 4 29.3	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway	Segments Release	5.2	HCS+: Basic Freew	ay Segments Release	5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Taylor Rd/Rte 6 Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	5		Analyst:Arthur BlackAgency or Company:LSADate Performed: $8/07/2008$ Analysis Time Period:Freeway/Direction:Freeway/Direction:I-80 EBFrom/To:Taylor Rd/RtJurisdiction:RocklinAnalysis Year:Description:2025 With Project - PM	e 65	
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a: Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	5338 0.90 1483 6 0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1527 nd Adjustments_ 12.0 6.0 0.50 4 Measured	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Input Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	6809 0.90 1891 6 0 Level 0.00 1.5 1.2 0.971 1.00 1948 s and Adjustments 12.0 6.0 0.50 4 Measured	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi</pre>
FFG=FIOW Speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	70.0 0.0 0.0 1.5 70.0 Urban Freet	mi/h mi/h mi/h mi/h mi/h mi/h	Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	Measured 70.0 0.0 0.0 1.5 70.0 Urban Freew	mi/h mi/h mi/h mi/h mi/h mi/h
LOS and Perform	mance Measures_		LOS and Per	formance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1527 70.0 69.7 4 21.9	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1948 70.0 65.8 4 29.6	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway :	Segments Release	e 5.2	HCS+: Basic Freeway	Segments Release	5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational Ana	alysis		Operational A	nalysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Taylor Rd/Rte 6 Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	5		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Taylor Rd/Rte Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM	65	
Flow Inputs and	d Adjustments		Flow Inputs a	nd Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs an Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID	5616 0.90 1560 6 0 Level 0.00 1.5 1.2 0.971 1.00 1607 nd Adjustments_ 12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi mi/h mi/h mi/h mi/h</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fLD	6236 0.90 1732 6 0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1784 and Adjustments 12.0 6.0 0.50 4 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h</pre>
Number of lanes adjustment, fN Free-flow speed, FFS	1.5 70.0 Urban Free	mi/h mi/h	Number of lanes adjustment, fN Free-flow speed, FFS	1.5 70.0 Urban Freew	mi/h mi/h
LOS and Perform	mance Measures_		LOS and Perfc	rmance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1607 70.0 69.4 4 23.2	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1784 70.0 68.0 4 26.2	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway S	Segments Releas	e 5.2	HCS+: Basic Freeway	Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational Ana	alysis		Operational #	nalysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rte 65/Rocklin H Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM	Rd		Analyst:Arthur BlackAgency or Company:LSADate Performed: $8/07/2008$ Analysis Time Period:Freeway/Direction:I-80 WBFrom/To:Rte 65/RocklirJurisdiction:RocklinAnalysis Year:Description:Description:2025 With Project - AM	Rd	
Flow Inputs and	d Adjustments		Flow Inputs a	nd Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs an Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	5052 0.90 1403 6 0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1927 nd Adjustments_ 12.0 6.0 0.50 3 Meesured	<pre>veh/h v % % mi pc/h/ln ft ft interchange/mi</pre>	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed:	4109 0.90 1141 6 0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1568 and Adjustments 12.0 6.0 0.50 3 Measured	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi</pre>
Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	Measured 70.0 0.0 0.0 3.0 70.0 Urban Free	mi/h mi/h mi/h mi/h mi/h mi/h	Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	Measured 70.0 0.0 0.0 3.0 70.0 Urban Freew	mi/h mi/h mi/h mi/h mi/h ay
LOS and Perform	mance Measures_		LOS and Perfo	rmance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1927 70.0 66.1 3 29.1	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1568 70.0 69.6 3 22.5	pc/h/ln mi/h mi/h pc/mi/ln

	.2	HCS+: Basic Freeway	y Segments Release	2 5.2	
Phone: E-mail: Operational Analysi	Fax:		Phone: E-mail:	Fax:	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Rte 65/Rocklin Rd Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rocklin Rd/Sid Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	erra College Blvd	
Peak-hour factor, PHF	4852 0.90	veh/h	Flow Inputs a Volume, V Peak-hour factor, PHF	3654 0.90	veh/h
Trucks and buses Recreational vehicles Terrain type:	1348 6 0 Level 0.00	V 8 8	Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade	1015 6 0 Level 0.00	V 9 9
Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV	0.00 1.5 1.2 0.971 1.00	° mi	Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp	0.00 0.00 1.5 1.2 0.971 1.00	° mi
	1851	pc/h/ln	Flow rate, vp	1394	pc/h/ln
Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 3.0	ft ft interchange/mi mi/h mi/h mi/h mi/h	Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 3.0	ft ft interchange/mi mi/h mi/h mi/h mi/h
	70.0 Urban Freeway Measures	mi/h	Free-flow speed, FFS	70.0 Urban Freew ormance Measures_	mi/h zay
Free-flow speed, FFS Average passenger-car speed, S	1851 70.0 67.2 3 27.5	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1394 70.0 70.0 3 19.9	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway Segments Release 5.2			HCS	:+: Basic Freeway S	egments Release	5.2	
Phone: E-mail:		Fax:		Phone: E-mail:		Fax:	
	Operational Anal	ysis			Operational Ana	lysis	
Analyst: Agency or Company: Date Performed: Analysis Time Period: Freeway/Direction: From/To:	Arthur Black LSA 8/07/2008 I-80 EB Rocklin Rd/Sierra Rocklin			Analyst: Agency or Company: Date Performed: Analysis Time Period: Freeway/Direction: From/To: Jurisdiction: Analysis Year: Description: 2025 Wit	Arthur Black LSA 8/07/2008 I-80 WB Rocklin Rd/Sierra Rocklin		
	Flow Inputs and	Adjustments			Flow Inputs and	Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE Heavy vehicle adjustment Driver population factor Flow rate, vp Lane width Right-shoulder lateral of Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, f Lateral clearance adjust Interchange density adju Number of lanes adjustme Free-flow speed, FFS	The second secon	0 Level 0.00 1.5 1.2 0.971 1.00 1922 Adjustments 12.0 6.0 0.50 3 Measured 70.0 0.0	ft ft interchange/mi mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v1 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, Recreational vehicle P Heavy vehicle adjustme Driver population fact Flow rate, vp Lane width Right-shoulder lateral Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, Lateral clearance adjuu Interchange density ad Number of lanes adjust Free-flow speed, FFS	ET PCE, ER ent, fHV er, fp Speed Inputs and clearance fLW istment, fLC ijustment, fID	0 Level 0.00 1.5 1.2 0.971 1.00 1767 d Adjustments 12.0 6.0 0.50 3	ft ft interchange/mi mi/h mi/h
		Urban Freewa	ау			Urban Freew	ау
	_LOS and Performa	ince Measures			LOS and Perform	ance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car sp Number of lanes, N Density, D	peed, S	1922 70.0 66.2 3 29.0	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car Number of lanes, N Density, D	speed, S	1767 70.0 68.2 3 25.9	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Fre	eway Segments Release	5.2	HCS+: Basic Freewa	ay Segments Release	5.2
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operation	al Analysis		Operational	Analysis	
Analyst: Arthur Bla Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Rocklin Ro Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project -	/Sierra College Blvd		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Sierra Colleg Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	ge Blvd/Horseshoe	
Flow Inpu	ts and Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inp Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fN Free-flow speed, FFS	0.00 0.00 1.5 1.2 0.971 1.00 1683 uts and Adjustments 12.0 6.0 0.50 3 Measured	% mi pc/h/ln ft ft interchange/mi	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1267 and Adjustments 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 3.0 70.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h
LOS and F			LOS and Peri	Urban Freew formance Measures	-
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1683	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1267	

	Segments Release		HCS+: Basic Freeway	y Segments Release	. 5.2
Phone:	Fax:		Phone:	Fax:	
E-mail:			E-mail:		
Operational An	alysis		Operational #	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Sierra College Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM	3lvd/Horseshoe		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB From/To: Sierra College Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	e Blvd/Horseshoe	
Flow Inputs an	d Adjustments		Flow Inputs a	and Adjustments	
Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID	6 0 Level 0.00 1.5 1.2 0.971 1.00 1949 nd Adjustments 12.0 6.0 0.50 3 Measured 70.0	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi mi/h mi/h mi/h mi/h</pre>	Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID	and Adjustments	<pre>veh/h v % % % mi pc/h/ln ft ft interchange/mi mi/h mi/h mi/h mi/h</pre>
Interchange density adjustment, fib Number of lanes adjustment, fN Free-flow speed, FFS	0.0 3.0 70.0 Urban Freew	mi/h mi/h	Number of lanes adjustment, fN Free-flow speed, FFS		mi/h mi/h
LOS and Perfor	mance Measures		LOS and Perfo	ormance Measures	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Jensity, D	1949 70.0 65.8 3 29.6	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1773 70.0 68.1 3 26.0+	pc/h/ln mi/h mi/h pc/mi/ln

	Segments Release	5 5.2	HCS+: Basic Freewa	y Segments Releas	
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:	
Operational An	nalysis		Operational	Analysis	
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 WB	Blvd/Horseshoe		Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: I-80 to Hardi Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM		
Flow Inputs as	nd Adjustments		Flow Inputs	and Adjustments	
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Frucks and buses Recreational vehicles Terrain type: Grade Segment length Frucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Speed Inputs a Gane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Gane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fN Free-flow speed FFS	<pre>b 0 Level 0.00 0.00 1.5 1.2 0.971 1.00 1536 and Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 </pre>	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	0 Level 0.00 1.5 1.2 0.930 1.00 1879 and Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0	<pre>veh/h v % % % mi pc/h/ln ft ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h</pre>
Free-flow speed, FFS	Urban Free	vay		Urban Free	way
LOS and Perfo	rmance Measures_		LOS and Perf	ormance Measures_	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Jensity, D	1536 70.0 69.7 3 22.0	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1879 70.0 66.9 3 28.1	pc/h/ln mi/h mi/h pc/mi/ln

HCS+: Basic Freeway S	Segments Release	3 5.2	HCS+: Basic Freewa	y segments kerease	2 3.2	
Phone:	Fax:		Phone:	Fax:		
E-mail:			E-mail:			
Operational Ana	alysis		Operational	Analysis		
Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: I-80 to Harding Blvd Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: I-80 to Harding Blvd Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM			
Flow Inputs and	d Adjustments		Flow Inputs	and Adjustments		
Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp	5010 0.90 1392 15 0 Level 0.00 0.00 1.5 1.2 0.930 1.00	veh/h v % % mi	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp	Level 0.00 0.00 1.5 1.2 0.930 1.00	veh/h v % % mi	
Flow rate, vp	1995	pc/h/ln	Flow rate, vp	1715	pc/h/ln	
Speed Inputs ar	nd Adjustments		Speed Inputs	and Adjustments		
Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0 70.0 Urban Freew	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h ay	Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	0.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h mi/h mi/h	
LOS and Perform	nance Measures_		LOS and Perf	ormance Measures		
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1995 70.0 64.9 3 30.7	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1715 70.0 68.7 3 25.0	pc/h/ln mi/h mi/h pc/mi/ln	

HCS+: Basic Freeway Segments Release 5.2			HCS+: Basic Freewa	HCS+: Basic Freeway Segments Release 5.2			
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:			
Operational An	alveic		Operational	Analysis			
Operational An Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: I-80 to Harding Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: Harding Blvd/ Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM	'Blue Oaks			
Flow Inputs an	d Adjustments		Flow Inputs	and Adjustments			
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0 70.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 3.0 70.0	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h		
LOS and Perfor	Urban Freew	4	LOS and Perf	Urban Freew	-		
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1660	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1738	pc/h/ln mi/h mi/h pc/mi/ln		

HCS+: Basic Freeway Segments Release 5.2			HCS+: Basic Freeway Segments Release 5.2			
Phone: E-mail:	Fax:		Phone: E-mail:	Fax:		
Operational Ar	nalvsis		Operational	Analysis		
Operational Analysis Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 NB From/To: Harding Blvd/Blue Oaks Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - PM			Operational Analysis Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: Rte-65 SB From/To: Harding Blvd/Blue Oaks Jurisdiction: Rocklin Analysis Year: Description: 2025 With Project - AM			
Flow Inputs ar	nd Adjustments		Flow Inputs	and Adjustments		
Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs a Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	4825 0.90 1340 15 0 Level 0.00 1.5 1.2 0.930 1.00 1921 and Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	ft ft interchange/mi mi/h mi/h mi/h mi/h mi/h	Volume, V Peak-hour factor, PHF Peak 15-min volume, v15 Trucks and buses Recreational vehicles Terrain type: Grade Segment length Trucks and buses PCE, ET Recreational vehicle PCE, ER Heavy vehicle adjustment, fHV Driver population factor, fp Flow rate, vp Speed Inputs Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC Interchange density adjustment, fID Number of lanes adjustment, fN Free-flow speed, FFS	4299 0.90 1194 15 0 Level 0.00 0.00 1.5 1.2 0.930 1.00 1712 and Adjustments_ 12.0 6.0 0.50 3 Measured 70.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	ft ft interchange/mi mi/h mi/h mi/h mi/h	
LOS and Perfor		-	LOS and Perf.		-	
Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1921 70.0 66.2 3 29.0	pc/h/ln mi/h mi/h pc/mi/ln	Flow rate, vp Free-flow speed, FFS Average passenger-car speed, S Number of lanes, N Density, D	1712 70.0 68.7 3 24.9	pc/h/ln mi/h mi/h pc/mi/ln	

HCS+: Basic Freeway Segments Release 5.2			HCS+: Basic Freeway	HCS+: Basic Freeway Segments Release 5.2			
Phone:	Fax:		Phone:	Fax:			
E-mail:			E-mail:				
Operational An	alysis		Operational #	Analysis			
Analyst:Arthur BlackAgency or Company:LSADate Performed:8/07/2008Analysis Time Period:Freeway/Direction:Freeway/Direction:Rte-65 SBFrom/To:Harding Blvd/Blue OaksJurisdiction:Rocklin			Analyst: Arthur Black Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rte 65/Rocklin Jurisdiction: Rocklin	Agency or Company: LSA Date Performed: 8/07/2008 Analysis Time Period: Freeway/Direction: I-80 EB From/To: Rte 65/Rocklin Rd			
Analysis Year: Description: 2025 With Project - PM			Analysis Year: Description: 2025 With Project - AM				
Flow Inputs an	d Adjustments		Flow Inputs a	and Adjustments			
Volume, V	4023	veh/h	Volume, V	4025	veh/h		
Peak-hour factor, PHF Peak 15-min volume, v15	0.90	V	Peak-hour factor, PHF Peak 15-min volume, v15	0.90	77		
Trucks and buses	15	× &	Trucks and buses	6	v S		
Recreational vehicles	0	ş	Recreational vehicles	Ő	9 8		
Terrain type:	Level	-	Terrain type:	Level	-		
Grade	0.00	8	Grade	0.00	옹		
Segment length	0.00	mi	Segment length	0.00	mi		
Trucks and buses PCE, ET	1.5		Trucks and buses PCE, ET	1.5			
Recreational vehicle PCE, ER	1.2		Recreational vehicle PCE, ER	1.2			
Heavy vehicle adjustment, fHV	0.930		Heavy vehicle adjustment, fHV	0.971			
Driver population factor, fp	1.00		Driver population factor, fp	1.00			
Flow rate, vp	1602	pc/h/ln	Flow rate, vp	1535	pc/h/ln		
Speed Inputs a	nd Adjustments		Speed Inputs	and Adjustments			
Lane width	12.0	ft	Lane width	12.0	ft		
Right-shoulder lateral clearance	6.0	ft	Right-shoulder lateral clearance	6.0	ft		
Interchange density	0.50	interchange/mi	Interchange density	0.50	interchange/mi		
Number of lanes, N	3	· · ·	Number of lanes, N	3			
Free-flow speed:	Measured		Free-flow speed:	Measured			
FFS or BFFS	70.0	mi/h	FFS or BFFS	70.0	mi/h		
Lane width adjustment, fLW	0.0	mi/h	Lane width adjustment, fLW	0.0	mi/h		
Lateral clearance adjustment, fLC	0.0	mi/h	Lateral clearance adjustment, fLC	0.0	mi/h		
Interchange density adjustment, fID	0.0	mi/h	Interchange density adjustment, fID	0.0	mi/h		
Number of lanes adjustment, fN	3.0	mi/h	Number of lanes adjustment, fN	3.0	mi/h		
Free-flow speed, FFS	70.0 Urban Free	mi/h	Free-flow speed, FFS	70.0 Urban Freew	mi/h		
		*			ay		
LOS and Perform	-			ormance Measures			
Flow rate, vp	1602	pc/h/ln	Flow rate, vp	1535	pc/h/ln		
Free-flow speed, FFS	70.0	mi/h	Free-flow speed, FFS	70.0	mi/h		
Average passenger-car speed, S	69.4	mi/h	Average passenger-car speed, S	69.7	mi/h		
Number of lanes, N Density, D	3 23.1		Number of lanes, N Density, D	3 22.0	pc/mi/ln		
	23 1	pc/mi/ln	L Longity D	22.0			