

# **2025 CAPACITY ANALYSIS WORKSHEETS**

Bay Bridge 2025 Summer Weekend Day Westbound Analysis

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 10 AM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and A	Adjustments	
	0.51.5	1 (1
Volume, V	2717	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	755	V
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Grade	_
Grade	3.50	8
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.943	
Driver population factor, vp	1.00	
Flow rate, vp	1067	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	,
LOS and Performan	nce Measures	
Flow rate are	1067	pc/h/ln
Flow rate, vp Free-flow speed, FFS	60.4	pc/n/in mi/h
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Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	/
Density, D	17.7	pc/mi/ln
Level of service, LOS	В	

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 11 AM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3160	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	878	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	8	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1241	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	4.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	0.8	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	61.2	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	1241	pc/h/ln	
Free-flow speed, FFS	61.2	mi/h	
Average passenger-car speed, S	61.2	mi/h	
Number of lanes, N	3	,	
Density, D	20.3	pc/mi/ln	
Level of service, LOS	C	<u> </u>	
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HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 12 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3474	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	965	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	96	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1364	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS Lane width adjustment, fLW	65.0 0.0	mi/h mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
rice flow speed, rib	Urban Freeway	1112/11	
LOS and Performance Measures			
Flow rate, vp	1364	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3		
Density, D	22.6	pc/mi/ln	
Level of service, LOS	C		

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 1 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3785	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1051	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1486	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performa	nce Measures		
Flow rate, vp	1486	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3	, <del>-</del>	
Density, D	24.6	pc/mi/ln	
Level of service, LOS	C	<u> </u>	
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HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 2 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3749	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1041	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1472	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performan	LOS and Performance Measures		
Flow rate, vp	1472	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3	•	
Density, D	24.4	pc/mi/ln	
Level of service, LOS	С	-	
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HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 3 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	4341	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1206	v	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1704	pc/h/ln	
Speed Inputs and A	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	1704	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.3	mi/h	
Number of lanes, N	3		
Density, D	28.2	pc/mi/ln	
Level of service, LOS	D		

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 4PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and	Adjustments	
	J	
Volume, V	4107	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1141	V
Trucks and buses	6	%
Recreational vehicles	0	90
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.943	
Driver population factor, vp	1.00	
Flow rate, vp	1612	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performa	nce Measures	
Flow rate, vp	1612	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	,
Density, D	26.7	pc/mi/ln
Level of service, LOS	D	F - //
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HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 5 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3658	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1016	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	8	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1436	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performan	ce Measures		
Flow rate, vp	1436	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3	•	
Density, D	23.8	pc/mi/ln	
Level of service, LOS	С	<u>-</u>	

#### \_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 6 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	3475	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	965	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	1364	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performan	ce Measures		
Flow rate, vp	1364	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3	/ <b></b>	
Density, D	22.6	pc/mi/ln	
Level of service, LOS	C	F - // 222	
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#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 7 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and	Adjustments	
-	•	
Volume, V	2988	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	830	V
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.943	
Driver population factor, vp	1.00	
Flow rate, vp	1173	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
-	Urban Freeway	
LOS and Perform	ance Measures	
Flow rate, vp	1173	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	1111
Density, D	19.4	pc/mi/ln
Level of service, LOS	19.4 C	PC/1111
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#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 8 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	2520	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	700	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	989	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	4.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	0.8	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	61.2	mi/h	
	Urban Freeway		
LOS and Perform	ance Measures		
Flow rate, vp	989	pc/h/ln	
Free-flow speed, FFS	61.2	mi/h	
Average passenger-car speed, S	61.2	mi/h	
Number of lanes, N	3		
Density, D	16.2	pc/mi/ln	
Level of service, LOS	В		

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 9 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 3 WB LANES

Flow Inputs and Adjustments			
Volume, V	2104	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	584	v	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.943		
Driver population factor, vp	1.00		
Flow rate, vp	826	pc/h/ln	
Speed Inputs and A	djustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	826	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3		
Density, D	13.7	pc/mi/ln	
Level of service, LOS	В		

Bay Bridge 2025 Summer Weekend Day Eastbound Analysis

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 10 AM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	4029	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1119	V	
Trucks and buses	6	8	
Recreational vehicles	0	8	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2305	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performa	nce Measures		
Flow rate, vp	2305	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F	_	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 11 AM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	4521	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1256	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2587	pc/h/ln	
Speed Inputs an	d Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Perform	ance Measures		
Flow rate, vp	2587	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F		

#### \_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 12 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Debeliperon: Z LD Limite			
Flow Inputs and A	djustments		
Volume, V	4784	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1329	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2738	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	2738	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2	•	
Density, D		pc/mi/ln	
Level of service, LOS	F	± , , , ,	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 1 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and	Adjustments	
Volume, V	4939	veh/h
Peak-hour factor, PHF	0.90	VE11/11
Peak 15-min volume, v15	1372	V
Trucks and buses	6	00
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, vp	1.00	
Flow rate, vp	2826	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performa	ance Measures	
Flow rate, vp	2826	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 2 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and	Adjustments	
77-1 77	F462	le / le
Volume, V	5462	veh/h
Peak-hour factor, PHF Peak 15-min volume, v15	0.90 1517	
Trucks and buses		V %
Recreational vehicles	6 0	6 6
	_	6
Terrain type: Grade	Grade 3.00	8
	0.70	•
Segment length Trucks and buses PCE, ET	1.5	mi
Recreational vehicle PCE, ER	3.0	
	0.971	
Heavy vehicle adjustment, fHV	1.00	
Driver population factor, vp		ng/h/ln
Flow rate, vp	3125	pc/h/ln
Speed Inputs an	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Perform	ance Measures	
Flow rate, vp	3125	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	•
Density, D	_	pc/mi/ln
Level of service, LOS	F	<u> </u>
	=	

#### \_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 3 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	5762	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1601	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00	4242	
Flow rate, vp	3297	pc/h/ln	
Speed Inputs and A	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	3297	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S	- <del></del>	mi/h	
Number of lanes, N	2	•	
Density, D		pc/mi/ln	
Level of service, LOS	F	_	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 4 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	5703	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1584	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	3263	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performan	nce Measures		
Flow rate, vp	3263	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F		

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 5 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and	Adjustments	
Volume, V	5759	veh/h
Peak-hour factor, PHF	0.90	VeII/II
Peak 15-min volume, v15	1600	V
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Grade	v
Grade	3.00	ଚ୍ଚ
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, vp	1.00	
Flow rate, vp	3295	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performa	nce Measures	
Flow rate, vp	3295	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 6 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	4517	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1255	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2585	pc/h/ln	
Speed Inputs and	d Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performa	ance Measures		
Flow rate, vp	2585	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F	_	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 7 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	4147	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1152	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2373	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performan	nce Measures		
Flow rate, vp	2373	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F		

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 8 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and	Adjustments		
_			
Volume, V	3983	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1106	V	
Trucks and buses	6	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2279	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performa	ance Measures		
Flow rate, vp	2279	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S	50.8	mi/h	
Number of lanes, N	2	1111	
Density, D	44.9	pc/mi/ln	
Level of service, LOS	44.9 E	PC/11111	
TEACT OF PETATCE, TOP	15		

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 9 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	4048	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	1124	V	
Trucks and buses	6	%	
Recreational vehicles	0	8	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.971		
Driver population factor, vp	1.00		
Flow rate, vp	2316	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performan	nce Measures		
Flow rate, vp	2316	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S		mi/h	
Number of lanes, N	2		
Density, D		pc/mi/ln	
Level of service, LOS	F		

Bay Bridge 2025 Average Weekday Westbound Analysis

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 10 AM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and A	djustments		
	<u></u>		
Volume, V	2216	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	616	v	
Trucks and buses	14	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.877		
Driver population factor, vp	1.00		
Flow rate, vp	936	pc/h/ln	
Speed Inputs and	Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	936	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3		
Density, D	15.5	pc/mi/ln	
Level of service, LOS	В	<u>-</u> · · · · ·	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 11 AM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments		
Volume, V	2200	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	611	v	
Trucks and buses	14	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.50	%	
Segment length	0.60	mi	
Trucks and buses PCE, ET	2.0		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.877		
Driver population factor, vp	1.00		
Flow rate, vp	929	pc/h/ln	
Speed Inputs and	d Adjustments		
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	3		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	1.6	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	3.0	mi/h	
Free-flow speed, FFS	60.4	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	929	pc/h/ln	
Free-flow speed, FFS	60.4	mi/h	
Average passenger-car speed, S	60.4	mi/h	
Number of lanes, N	3		
Density, D	15.4	pc/mi/ln	
Level of service, LOS	В		

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 12 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
Volume, V	2201	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	611	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	929	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performa	nce Measures	
Flow rate, vp	929	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	
Density, D	15.4	pc/mi/ln
Level of service, LOS	В	

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 1 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
Volume, V	2166	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	602	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	915	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
-	Urban Freeway	
LOS and Performa	ance Measures	
Elev vete ve	015	ng/h/ln
Flow rate, vp	915	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	/ 1 / 3
Density, D	15.1	pc/mi/ln
Level of service, LOS	В	

#### \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 2 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and Ad	ljustments	
Volume, V	2370	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	658	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	1001	pc/h/ln
Speed Inputs and A	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performanc	ce Measures	
Flow rate, vp	1001	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	
Density, D	16.6	pc/mi/ln
Level of service, LOS	В	

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 3 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
77-1	2404	1- /1-
Volume, V	2484	veh/h
Peak-hour factor, PHF Peak 15-min volume, v15	0.90 690	
Trucks and buses	690 14	V %
Recreational vehicles	0	6 6
Terrain type:	Grade	6
Grade	3.50	ે
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	ШТ
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	1049	pc/h/ln
riow race, vp	1049	pe/11/111
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performa	ance Measures	
Flow rate, vp	1049	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	
Density, D	17.4	pc/mi/ln
Level of service, LOS	В	_

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 4PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

1		
Flow Inputs and A	djustments	
Volume, V	2471	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	686	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	1043	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performan	ce Measures	
Flow rate, vp	1043	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	/
Density, D	17.3	pc/mi/ln
Level of service, LOS	В	F 0 / / 111
20.01 01 001,100, 200	_	

HCS2000: Basic Freeway Segments Release 4.1a

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 5 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
Volume, V	2393	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	665	V
Trucks and buses	14	8
Recreational vehicles	0	8
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	1010	pc/h/ln
Speed Inputs an	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Perform	ance Measures	
Flow rate, vp	1010	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	/ 11
Density, D	16.7	pc/mi/ln
Level of service, LOS	В	PC/ MT/ 111
TOVEL OF DELATED TOD	D	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 6 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
_		
Volume, V	1925	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	535	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	813	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performa	ance Measures	
Flow rate, vp	813	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	1111
Density, D	13.5	pc/mi/ln
Level of service, LOS	13.5 B	PC/11111
HEACT OF PCTATCE, HOD	ם	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 7 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and	Adjustments	
_		
Volume, V	1418	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	394	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	599	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	_
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	·
LOS and Perform	ance Measures	
Elevanote m	E00	ng/h/ln
Flow rate, vp	599	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	/ /
Density, D	9.9	pc/mi/ln
Level of service, LOS	A	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 8 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and A	djustments	
Volume, V	1073	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	298	V
Trucks and buses	14	%
Recreational vehicles	0	8
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	453	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
	Urban Freeway	
LOS and Performan	ce Measures	
Flow rate, vp	453	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	
Density, D	7.5	pc/mi/ln
Level of service, LOS	A	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 9 PM

Freeway/Direction: BAY BRIDGE WESTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 3 WB LANES

Flow Inputs and A	Adjustments	
Volume, V	872	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	242	V
Trucks and buses	14	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.50	%
Segment length	0.60	mi
Trucks and buses PCE, ET	2.0	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.877	
Driver population factor, vp	1.00	
Flow rate, vp	368	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	1.6	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	60.4	mi/h
-	Urban Freeway	
LOS and Performan	nce Measures	
Flow rate, vp	368	pc/h/ln
Free-flow speed, FFS	60.4	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	3	m±/11
Density, D	6.1	pc/mi/ln
Level of service, LOS	0.1 A	PC/1111
HEACT OF BELATCE, HOD	A	

Bay Bridge 2025 Average Weekday Eastbound Analysis

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 10 AM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and A	djustments	
Volume, V	2136	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	593	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	1276	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performance Measures		
Flow rate, vp	1276	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	/ <b></b>
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	F - // 222
	-	

# \_\_\_Operational Analysis\_\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 11 AM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and Ad	ljustments	
Volume, V	2159	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	600	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	1289	pc/h/ln
Speed Inputs and A	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performanc	ce Measures	
Flow rate, vp	1289	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 12 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and	Adjustments	
	<u>-</u>	
Volume, V	2263	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	629	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	1352	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
_	Urban Freeway	
LOS and Performa	ance Measures	
Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	/ 11
Density, D	23.3	pc/mi/ln
Level of service, LOS	C C	PO, 1111

# \_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 1 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and Adjustments			
Volume, V	2210	veh/h	
Peak-hour factor, PHF	0.90		
Peak 15-min volume, v15	614	V	
Trucks and buses	15	%	
Recreational vehicles	0	%	
Terrain type:	Grade		
Grade	3.00	%	
Segment length	0.70	mi	
Trucks and buses PCE, ET	1.5		
Recreational vehicle PCE, ER	3.0		
Heavy vehicle adjustment, fHV	0.930		
Driver population factor, vp	1.00		
Flow rate, vp	1320	pc/h/ln	
Speed Inputs and Adjustments			
Lane width	12.0	ft	
Right-shoulder lateral clearance	2.0	ft	
Interchange density	0.50	interchange/mi	
Number of lanes, N	2		
Free-flow speed:	Ideal		
FFS or BFFS	65.0	mi/h	
Lane width adjustment, fLW	0.0	mi/h	
Lateral clearance adjustment, fLC	2.4	mi/h	
Interchange density adjustment, fID	0.0	mi/h	
Number of lanes adjustment, fN	4.5	mi/h	
Free-flow speed, FFS	58.1	mi/h	
	Urban Freeway		
LOS and Performance Measures			
Flow rate, vp	1320	pc/h/ln	
Free-flow speed, FFS	58.1	mi/h	
Average passenger-car speed, S	58.1	mi/h	
Number of lanes, N	2	/	
Density, D	22.7	pc/mi/ln	
Level of service, LOS	C C	F - , ,	
	-		

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_\_\_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 2 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and	Adjustments	
_		
Volume, V	2580	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	717	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	1541	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	3 .
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	,
LOS and Performa	ance Measures	
The water and	1 5 4 1	/1- /1
Flow rate, vp	1541	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	
Density, D	26.5	pc/mi/ln
Level of service, LOS	D	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 3 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and	Adjustments	
Volume, V	3402	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	945	v
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	2032	pc/h/ln
Speed Inputs and	l Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performa	nce Measures	
Flow rate, vp	2032	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	56.1	mi/h
Number of lanes, N	2	
Density, D	36.2	pc/mi/ln
Level of service, LOS	E	

# \_\_Operational Analysis\_\_\_\_\_

Analyst: Bala Akundi
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 4 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and	Adjustments	
Volume, V	4170	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1158	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	2490	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performa	nce Measures	
Flow rate, vp	2490	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 5 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and	Adjustments	
	41.00	1. /1.
Volume, V	4189	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1164	V •.
Trucks and buses	15	%
Recreational vehicles	0	8
Terrain type:	Grade 3.00	96
Grade		•
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	(1, (2,
Flow rate, vp	2502	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performa	ance Measures	
Flow rate, vp	2502	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	30.1	mi/h
Number of lanes, N	2	/ 11
Density, D	_	pc/mi/ln
Level of service, LOS	F	PC/ 1111
TOVEL OF DELATER! HOD	±	

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_\_\_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 6 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and Adjustments					
Volume, V	3520	veh/h			
Peak-hour factor, PHF	0.90				
Peak 15-min volume, v15	978	v			
Trucks and buses	15	%			
Recreational vehicles	0	%			
Terrain type:	Grade				
Grade	3.00	%			
Segment length	0.70	mi			
Trucks and buses PCE, ET	1.5				
Recreational vehicle PCE, ER	3.0				
Heavy vehicle adjustment, fHV	0.930				
Driver population factor, vp	1.00				
Flow rate, vp	2102	pc/h/ln			
Speed Inputs and	Adjustments				
Lane width	12.0	ft			
Right-shoulder lateral clearance	2.0	ft			
Interchange density	0.50	interchange/mi			
Number of lanes, N	2				
Free-flow speed:	Ideal				
FFS or BFFS	65.0	mi/h			
Lane width adjustment, fLW	0.0	mi/h			
Lateral clearance adjustment, fLC	2.4	mi/h			
Interchange density adjustment, fID	0.0	mi/h			
Number of lanes adjustment, fN	4.5	mi/h			
Free-flow speed, FFS	58.1	mi/h			
	Urban Freeway				
LOS and Performan	nce Measures				
Flow rate, vp	2102	pc/h/ln			
Free-flow speed, FFS	58.1	mi/h			
Average passenger-car speed, S	55.0	mi/h			
Number of lanes, N	2				
Density, D	38.2	pc/mi/ln			
Level of service, LOS	E				

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 7 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Flow Inputs and I	Adjustments	
_		
Volume, V	2130	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	592	V
Trucks and buses	15	8
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	1272	pc/h/ln
Speed Inputs and	Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Performan	nce Measures	
Elevinote in	1 272	ng/h/ln
Flow rate, vp	1272	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	/
Density, D	21.9	pc/mi/ln
Level of service, LOS	С	

HCS2000: Basic Freeway Segments Release 4.1a

# Operational Analysis\_\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 8 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

Volume, V Peak-hour factor, PHF Peak-hour factor, PHF Peak 15-min volume, v15 Peak 15 Peak 15-min volume, v15 Peak 15-min volume, v15 Peak 15-min volu	Flow Inputs and	Adjustments	
Peak-hour factor, PHF         0.90           Peak 15-min volume, v15         439         v           Trucks and buses         15         %           Recreational vehicles         0         %           Terrain type:         Grade         3.00         %           Grade         3.00         %         Segment length         0.70         mi           Trucks and buses PCE, ET         1.5         Recreational vehicle PCE, ER         3.0         Heavy vehicle adjustment, fHV         0.930         Description of Particular PCE, ER         3.0         Heavy vehicle adjustment, FM         0.930         Description PCE, ER         3.0         Heavy vehicle adjustment, FM         0.00         Description PCE, ER         3.0         Heavy vehicle adjustment, FM         4.5         mi/h         Minter Presential PCE, PRESENTIAL PROVED P		J	
Peak 15-min volume, v15	Volume, V	1579	veh/h
Trucks and buses	Peak-hour factor, PHF	0.90	
Recreational vehicles	Peak 15-min volume, v15	439	V
Terrain type:	Trucks and buses	15	०
Segment length	Recreational vehicles	0	%
Segment length 0.70 mi Trucks and buses PCE, ET 1.5 Recreational vehicle PCE, ER 3.0 Heavy vehicle adjustment, fHV 0.930 Driver population factor, vp 1.00 Flow rate, vp 943 pc/h/ln  Speed Inputs and Adjustments  Lane width 12.0 ft Right-shoulder lateral clearance 2.0 ft Interchange density 0.50 interchange/mi Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Free-flow speed, FFS 58.1 mi/h Free-flow speed, FFS 58.1 mi/h Pree-flow speed, FFS 58.1 mi/h	Terrain type:	Grade	
Trucks and buses PCE, ET  Recreational vehicle PCE, ER  Recreational vehicle place  Lane Width adjustments  Lane width adjustments  Los applied Inputs and Adjustments  Los applied Inputs	Grade	3.00	०
Recreational vehicle PCE, ER  Heavy vehicle adjustment, fHV  Driver population factor, vp  1.00  Flow rate, vp  Speed Inputs and Adjustments  Lane width  Right-shoulder lateral clearance Interchange density  Number of lanes, N  Free-flow speed:  Ideal  FFS or BFFS  Lane width adjustment, fLW  Lane width adjustment, fLW  Lane width adjustment, fLC  Interchange density adjustment, fLC  Interchange density adjustment, fLD  Lane width adjustment, fLD  Lane width adjustment, fLD  Lateral clearance adjustment, fLD  Interchange density adjustment, fID  Number of lanes adjustment, fN  Free-flow speed, FFS  LOS and Performance Measures  LOS and Performance Measures  Flow rate, vp  Free-flow speed, FFS  Average passenger-car speed, S  S8.1  mi/h  Mi/h  Pree-flow speed, FFS  S8.1  mi/h  Average passenger-car speed, S	Segment length	0.70	mi
Heavy vehicle adjustment, fHV Driver population factor, vp Flow rate, vp  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 0.0  FFS or BFFS FFS	Trucks and buses PCE, ET	1.5	
Driver population factor, vp 943 pc/h/ln  Speed Inputs and Adjustments  Lane width 12.0 ft Right-shoulder lateral clearance 2.0 ft Interchange density 0.50 interchange/mi Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Recreational vehicle PCE, ER	3.0	
Flow rate, vp 943 pc/h/ln  Speed Inputs and Adjustments  Lane width 12.0 ft Right-shoulder lateral clearance 2.0 ft Interchange density 0.50 interchange/mi Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Heavy vehicle adjustment, fHV	0.930	
Speed Inputs and Adjustments  Lane width Right-shoulder lateral clearance Interchange density Number of lanes, N Free-flow speed: FFS or BFFS Ideal FFS or BFFS Ideal FFS or BFFS Ideal FFS or BFFS Interchange density Interchange density adjustment, fLC Interchange density adjustment, fID Interchange density adjustment, fID Interchange density adjustment, fN Interchange density adjustment, fLC Interchange/mi I	Driver population factor, vp	1.00	
Lane width  Right-shoulder lateral clearance  2.0 ft Interchange density  0.50 interchange/mi  Number of lanes, N  Free-flow speed:  FFS or BFFS  65.0 mi/h  Lane width adjustment, fLW  Lane width adjustment, fLC  Interchange density adjustment, fLC  Interchange density adjustment, fLD  Interchange density adjustment, fLD  Interchange density adjustment, fN  Interchange density adjustment, fLC  Interchange/mi  Mi/h  Mi/h  Interchange/mi  Mi/h  Mi/h  Mi/h  Mi/h  Free-flow speed, FFS  Interchange/mi  Mi/h  Mi/h  Mi/h  Average passenger-car speed, S  S8.1 mi/h  Mi/h	Flow rate, vp	943	pc/h/ln
Right-shoulder lateral clearance 2.0 ft Interchange density 0.50 interchange/mi Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Speed Inputs an	d Adjustments	
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  LOS and Performance Measures  Flow rate, vp  Flow rate, vp  Free-flow speed, FFS  LOS and Performance Measures  Flow rate, vp  Free-flow speed, FFS  S8.1  mi/h  Average passenger-car speed, S  Ideal  Co.  mi/h  0.0  mi/h  4.5  mi/h  Wibh  Pree-flow speed, FFS  S8.1  mi/h  Number of lanes adjustment, fN  Free-flow speed, FFS  S8.1  mi/h  Mi/h  Number of lanes adjustment, fN  S8.1  Mi/h  Free-flow speed, FFS  S8.1  Mi/h  Average passenger-car speed, S	Lane width	12.0	ft
Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Right-shoulder lateral clearance	2.0	ft
Free-flow speed:  FFS or BFFS  G5.0  mi/h  Lane width adjustment, fLW  Lateral clearance adjustment, fLC  Interchange density adjustment, fID  Number of lanes adjustment, fN  Free-flow speed, FFS  LOS and Performance Measures  LOS and Performance Measures  Flow rate, vp  Free-flow speed, FFS  Average passenger-car speed, S  Ideal  65.0  mi/h  0.0  mi/h  74.5  mi/h  4.5  mi/h  78.1	Interchange density	0.50	interchange/mi
FFS or BFFS Lane width adjustment, fLW Lateral clearance adjustment, fLC L	Number of lanes, N	2	
Lane width adjustment, fLW  Lateral clearance adjustment, fLC  Interchange density adjustment, fID  Number of lanes adjustment, fN  Free-flow speed, FFS  LOS and Performance Measures  LOS and Performance Measures  Flow rate, vp  Free-flow speed, FFS  Average passenger-car speed, S  DO mi/h  4.5 mi/h  Urban Freeway  PC/h/ln  mi/h  Number of lanes adjustment, fN  4.5 mi/h  Mi/h  S8.1 mi/h  Mi/h  S8.1 mi/h	Free-flow speed:	Ideal	
Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	FFS or BFFS	65.0	mi/h
Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Lane width adjustment, fLW	0.0	mi/h
Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway  LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Lateral clearance adjustment, fLC	2.4	mi/h
Free-flow speed, FFS  LOS and Performance Measures  LOS and Performance Measures  Flow rate, vp  Free-flow speed, FFS  Average passenger-car speed, S  58.1 mi/h  mi/h  mi/h  58.1 mi/h	Interchange density adjustment, fID	0.0	mi/h
LOS and Performance Measures	Number of lanes adjustment, fN	4.5	mi/h
LOS and Performance Measures  Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Free-flow speed, FFS	58.1	mi/h
Flow rate, vp 943 pc/h/ln Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h		Urban Freeway	
Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	LOS and Perform	ance Measures	
Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 58.1 mi/h	Flow rate, vp	943	pc/h/ln
Average passenger-car speed, S 58.1 mi/h	· -		-
	<u>-</u>		
			•
Density, D 16.2 pc/mi/ln			pc/mi/ln
Level of service, LOS  B			<u>.</u>

HCS2000: Basic Freeway Segments Release 4.1a

# \_\_\_\_\_Operational Analysis\_\_\_\_\_

Analyst: BKA
Agency or Company: Parsons
Date Performed: 8/13/02
Analysis Time Period: 9 PM

Freeway/Direction: BAY BRIDGE EASTBOUND SPAN

From/To:

Jurisdiction:

Analysis Year: 2025 WEEKDAY

Description: 2 EB LANES

-		
Flow Inputs and	Adjustments	
Volume, V	1437	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	399	V
Trucks and buses	15	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	3.00	%
Segment length	0.70	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	3.0	
Heavy vehicle adjustment, fHV	0.930	
Driver population factor, vp	1.00	
Flow rate, vp	858	pc/h/ln
Speed Inputs and	d Adjustments	
Lane width	12.0	ft
Right-shoulder lateral clearance	2.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Ideal	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	2.4	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	58.1	mi/h
	Urban Freeway	
LOS and Perform	ance Measures	
Flow rate, vp	858	pc/h/ln
Free-flow speed, FFS	58.1	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	2	
Density, D	14.8	pc/mi/ln
Level of service, LOS	В	

Bay Bridge 2025 Summer Weekend Day Reversible Lane Operation Westbound Analysis

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 10 AM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED					
Direction	1		2		
Lane width	12.0	ft	12.0	ft	
Lateral clearance:					
Right edge	2.0	ft	2.0	ft	
Left edge	6.0	ft	2.0	ft	
Total lateral clearance	8.0	ft	4.0	ft	
Access points per mile	0		0		
Median type	Undivided	Ĺ			
Free-flow speed:	Base		Measured		
FFS or BFFS	60.0	mph	60.0	mph	
Lane width adjustment, FLW	0.0	mph	0.0	mph	
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph	
Median type adjustment, FM	1.6	mph	0.0	mph	
Access points adjustment, FA	0.0	mph	0.0	mph	
Free-flow speed	57.5	mph	60.0	mph	
	TACT TIME				
	_VOLUME				
Direction	1		2		
Volume, V	2717	vph	0	vph	
Peak-hour factor, PHF	0.90	_	0.90	_	
Peak 15-minute volume, v15	755		0		
Trucks and buses	6	%	6	%	
Recreational vehicles	0	%	0	%	
Terrain type	Grade		Grade		
Grade	3.50	%	3.00	%	
Segment length	0.60	mi	0.70	mi	
Number of lanes	2		2		
Driver population adjustment, fP	1.00		1.00		
Trucks and buses PCE, ET	2.0		1.5		
Recreational vehicles PCE, ER	3.0		3.0		
Heavy vehicle adjustment, fHV	0.943		0.971		
Flow rate, vp	1600	pcphpl	0	pcphpl	
	RESULTS				
Direction	1		2		
Flow rate, vp	1600	pcphpl	0	pcphpl	
Free-flow speed, FFS	57.5	mph	60.0	mph	
Avg. passenger-car travel speed, S	56.8	mph	60.0	mph	
Level of service, LOS	D	±	A	_	
Density, D	28.2	pc/mi/ln	0.0	pc/mi/ln	

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 11 AM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED						
Direction	1		2			
Lane width	12.0	ft	12.0	ft		
Lateral clearance:						
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivided					
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
	_VOLUME					
D1	1		0			
Direction	1	,	2	1		
Volume, V	3160	vph	0	vph		
Peak-hour factor, PHF	0.90		0.90			
Peak 15-minute volume, v15	878	0.	0	0.		
Trucks and buses	6 0	00	6 0	%		
Recreational vehicles	-	6	· ·	90		
Terrain type	Grade	0	Grade	0		
Grade	3.50	% <del>:</del>	3.00	% <del>'</del>		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		3.0			
Heavy vehicle adjustment, fHV	0.943	- a-b-1	0.971	n ambu l		
Flow rate, vp	1860	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Flow rate, vp	1860	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S	55.4	mph	60.0	mph		
Level of service, LOS	D	_	A	-		
Density, D	33.6	pc/mi/ln	0.0	pc/mi/ln		

#### \_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 12 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE	-FLOW SPEED	)				
Direction	1		2			
Lane width	12.0	ft.	12.0	ft.		
Lateral clearance:						
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivided	l				
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
VOLUME						
Direction	1		2			
Volume, V	3474	vph	0	vph		
Peak-hour factor, PHF	0.90		0.90			
Peak 15-minute volume, v15	965		0	_		
Trucks and buses	6	%	6	%		
Recreational vehicles	0	&	0	<b>ે</b>		
Terrain type	Grade	0	Grade	٥		
Grade	3.50	8	3.00	% .		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		3.0			
Heavy vehicle adjustment, fHV	0.943	1- 1	0.971	1- 1		
Flow rate, vp	2045	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Flow rate, vp	2045	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S	54.3	mph	60.0	mph		
Level of service, LOS	E	-	A	-		
Density, D	37.7	pc/mi/ln	0.0	pc/mi/ln		

#### \_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 1 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED						
Direction	1		2			
Lane width	12.0	ft.	12.0	ft.		
Lateral clearance:	12.0	10	12.0	10		
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivided	l				
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
	_VOLUME					
Direction	1		2			
Volume, V	3785	vph	0	vph		
Peak-hour factor, PHF	0.90	v P11	0.90	V P11		
Peak 15-minute volume, v15	1051		0			
Trucks and buses	6	%	6	00		
Recreational vehicles	0	%	0	%		
Terrain type	Grade		Grade			
Grade	3.50	%	3.00	%		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		3.0			
Heavy vehicle adjustment, fHV	0.943		0.971			
Flow rate, vp	2228	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Flow rate, vp	2228	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S	- · ·	mph	60.0	mph		
Level of service, LOS	F	T. ==	Α	£		
Density, D		pc/mi/ln		pc/mi/ln		

#### \_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 2 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED						
Direction	1		2			
Lane width	12.0	ft.	12.0	ft.		
Lateral clearance:	12.0		12.0	10		
Right edge	2.0	ft	2.0	ft.		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft.		
Access points per mile	0		0			
Median type	Undivided	[				
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
		1		1		
	_VOLUME	<del> </del>				
Direction	1		2			
Volume, V	3749	vph	0	vph		
Peak-hour factor, PHF	0.90	-	0.90	-		
Peak 15-minute volume, v15	1041		0			
Trucks and buses	6	%	6	%		
Recreational vehicles	0	%	0	૪		
Terrain type	Grade		Grade			
Grade	3.50	%	3.00	%		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		3.0			
Heavy vehicle adjustment, fHV	0.943		0.971			
Flow rate, vp	2207	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Flow rate, vp	2207	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S		mph	60.0	mph		
Level of service, LOS	F	1	A	-		
Density, D		pc/mi/ln	==	pc/mi/ln		

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 3 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED						
Direction	1		2			
Lane width	12.0	ft	12.0	ft		
Lateral clearance:						
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivided					
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
	MOI IIME					
	_VOLUME					
Direction	1		2			
Volume, V	4341	vph	0	vph		
Peak-hour factor, PHF	0.90	_	0.90	_		
Peak 15-minute volume, v15	1206		0			
Trucks and buses	6	%	0	%		
Recreational vehicles	0	%	0	%		
Terrain type	Grade		Level			
Grade	3.50	%	3.00	%		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		1.2			
Heavy vehicle adjustment, fHV	0.943		1.000			
Flow rate, vp	2556	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Flow rate, vp	2556	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S	55	mph	60.0	mph		
Level of service, LOS	F		A	[-11		
Density, D	-	pc/mi/ln	==	pc/mi/ln		
		r = , + , +11	- • •	r 5, , 111		

#### \_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 4 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

Direction	1		2			
Lane width	12.0	ft	12.0	ft		
Lateral clearance:						
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivide	ed				
Free-flow speed:	Base		Measure	d		
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
rice from Speed	37.3	P11	00.0	mp11		
	VOLUME					
Direction	1		2			
Volume, V	4107	vph	0	vph		
Peak-hour factor, PHF	0.90		0.90			
Peak 15-minute volume, v15	1141		0			
Trucks and buses	6	%	0	%		
Recreational vehicles	0	%	0	%		
Terrain type	Grade		Level			
Grade	3.50	%	3.00	%		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		1.2			
Heavy vehicle adjustment, fHV	0.943		1.000			
Flow rate, vp	2418	pcphpl	0	pcphpl		
		F -FF -		F +FF -		
RESULTS						
Direction	1		2			
Flow rate, vp	2418	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S		mph	60.0	mph		
Level of service, LOS	F	_	A	-		
Density, D		pc/mi/ln	0.0	pc/mi/ln		

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 5 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE	-FLOW SPEED					
Direction	1		2			
Lane width	12.0	ft	12.0	ft		
Lateral clearance:						
Right edge	2.0	ft	2.0	ft		
Left edge	6.0	ft	2.0	ft		
Total lateral clearance	8.0	ft	4.0	ft		
Access points per mile	0		0			
Median type	Undivided					
Free-flow speed:	Base		Measured			
FFS or BFFS	60.0	mph	60.0	mph		
Lane width adjustment, FLW	0.0	mph	0.0	mph		
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph		
Median type adjustment, FM	1.6	mph	0.0	mph		
Access points adjustment, FA	0.0	mph	0.0	mph		
Free-flow speed	57.5	mph	60.0	mph		
-		-		-		
	_VOLUME					
Direction	1		2			
Volume, V	3658	vph	0	vph		
Peak-hour factor, PHF	0.90		0.90			
Peak 15-minute volume, v15	1016		0			
Trucks and buses	6	%	0	%		
Recreational vehicles	0	%	0	%		
Terrain type	Grade		Level			
Grade	3.50	%	3.00	%		
Segment length	0.60	mi	0.70	mi		
Number of lanes	2		2			
Driver population adjustment, fP	1.00		1.00			
Trucks and buses PCE, ET	2.0		1.5			
Recreational vehicles PCE, ER	3.0		1.2			
Heavy vehicle adjustment, fHV	0.943		1.000			
Flow rate, vp	2154	pcphpl	0	pcphpl		
RESULTS						
Direction	1		2			
Elemente m	2154	nanhn1	0	n anha l		
Flow rate, vp	2154	pcphpl	0	pcphpl		
Free-flow speed, FFS	57.5	mph	60.0	mph		
Avg. passenger-car travel speed, S	_	mph	60.0	mph		
Level of service, LOS	F	/ ' /3	A	/ /		
Density, D		pc/mi/ln	0.0	pc/mi/ln		

#### \_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 6 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE	-FLOW SPEED	)			
Direction	1		2		
Lane width	12.0	ft.	12.0	ft.	
Lateral clearance:	12.0	10	12.0		
Right edge	2.0	ft	2.0	ft.	
Left edge	6.0	ft	2.0	ft	
Total lateral clearance	8.0	ft	4.0	ft	
Access points per mile	0		0		
Median type	Undivided				
Free-flow speed:	Base	-	Measured		
FFS or BFFS	60.0	mph	60.0	mph	
Lane width adjustment, FLW	0.0	mph	0.0	mph	
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph	
Median type adjustment, FM	1.6	mph	0.0	mph	
Access points adjustment, FA	0.0	mph	0.0	mph	
Free-flow speed	57.5	mph	60.0	mph	
Tree rrem speed	37.0			<u>F</u>	
	_VOLUME				
Direction	1		2		
Volume, V	3475	rmh	0	rmh	
Peak-hour factor, PHF	0.90	vph	0.90	vph	
Peak 15-minute volume, v15	965		0.90		
Trucks and buses	6	%	0	%	
Recreational vehicles	0	%	0	%	
Terrain type	Grade	0	Level	0	
Grade	3.50	%	3.00	%	
Segment length	0.60	mi	0.70	mi	
Number of lanes	2	шт	2	шт	
Driver population adjustment, fP	1.00		1.00		
Trucks and buses PCE, ET	2.0		1.5		
Recreational vehicles PCE, ER	3.0		1.2		
Heavy vehicle adjustment, fHV	0.943		1.000		
Flow rate, vp	2046	pcphpl	0	pcphpl	
riow race, vp	2040	pcpiipi	O	рсрирт	
RESULTS					
Direction	1		2		
Flow rate, vp	2046	pcphpl	0	pcphpl	
Free-flow speed, FFS	57.5	mph	60.0	mph	
Avg. passenger-car travel speed, S	54.3	mph	60.0	mph	
Level of service, LOS	E	T	Α		
Density, D	37.7	pc/mi/ln	==	pc/mi/ln	

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_

Analyst: BA

Agency/Co:

Date: 8/18/02 Analsis Period: 7 AM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2001 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION

FREE	-FLOW SPEE	D			
Direction	1		2		
Lane width	12.0	ft	12.0	ft	
Lateral clearance:					
Right edge	4.0	ft	6.0	ft	
Left edge	6.0	ft	6.0	ft	
Total lateral clearance	10.0	ft	12.0	ft	
Access points per mile	0		0		
Median type	Undivide	f			
Free-flow speed:	Base		Measured		
FFS or BFFS	60.0	mph	60.0	mph	
Lane width adjustment, FLW	0.0	mph	0.0	mph	
Lateral clearance adjustment, FLC	0.4	mph	0.0	mph	
Median type adjustment, FM	1.6	mph	0.0	mph	
Access points adjustment, FA	0.0	mph	0.0	mph	
Free-flow speed	58.0	mph	60.0	mph	
Tice flow byced	30.0	mpii	00.0	mp11	
	VOLUME				
Direction	1		2		
Volume, V	1019	vph	0	vph	
Peak-hour factor, PHF	0.90		0.90		
Peak 15-minute volume, v15	283		0		
Trucks and buses	6	%	0	%	
Recreational vehicles	0	%	0	%	
Terrain type	Grade		Level		
Grade	3.00	%	0.00	%	
Segment length	0.70	mi	0.00	mi	
Number of lanes	2		2		
Driver population adjustment, fP	1.00		1.00		
Trucks and buses PCE, ET	1.5		1.5		
Recreational vehicles PCE, ER	3.0		1.2		
Heavy vehicle adjustment, fHV	0.971		1.000		
Flow rate, vp	583	pcphpl	0	pcphpl	
, -				1 1 1	
RESULTS					
Direction	1		2		
Flow rate, vp	583	pcphpl	0	pcphpl	
Free-flow speed, FFS	58.0	mph	60.0	mph	
Avg. passenger-car travel speed, S	58.0	mph	60.0	mph	
Level of service, LOS	38.0 A	шБш	A	m511	
Density, D	10.1	pc/mi/ln		pc/mi/ln	
Demotoj, D	10.1	PC/ III / 111		P = / 1111	

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 8 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED				
Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	2.0	ft	2.0	ft
Left edge	6.0	ft	2.0	ft
Total lateral clearance	8.0	ft	4.0	ft
Access points per mile	0		0	
Median type	Undivided			
Free-flow speed:	Base		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph
Median type adjustment, FM	1.6	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	57.5	mph	60.0	mph
	MOT LIME			
	_VOLUME			
Direction	1		2	
Volume, V	2520	vph	0	vph
Peak-hour factor, PHF	0.90	_	0.90	_
Peak 15-minute volume, v15	700		0	
Trucks and buses	6	%	0	%
Recreational vehicles	0	%	0	%
Terrain type	Grade		Level	
Grade	3.50	%	3.00	%
Segment length	0.60	mi	0.70	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	2.0		1.5	
Recreational vehicles PCE, ER	3.0		1.2	
Heavy vehicle adjustment, fHV	0.943		1.000	
Flow rate, vp	1484	pcphpl	0	pcphpl
	_RESULTS			
Direction	1		2	
Flow rate, vp	1484	pcphpl	0	pcphpl
Free-flow speed, FFS	57.5	mph	60.0	mph
Avg. passenger-car travel speed, S	57.3	mph	60.0	mph
Level of service, LOS	C		A	
Density, D	25.9	pc/mi/ln	0.0	pc/mi/ln

#### \_\_\_OPERATIONAL ANALYSIS\_\_\_\_

Analyst: BA
Agency/Co: Parsons
Date: 8/18/02
Analsis Period: 9 PM

Highway: BAY BRIDGE WESTBOUND SPAN

From/To:
Jurisdiction:

Analysis Year: 2025 SUMMER WEEKEND

Project ID: REVERSIBLE LANE OPERATION - 2 WB Lanes

FREE-FLOW SPEED				
Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	2.0	ft	2.0	ft
Left edge	6.0	ft	2.0	ft
Total lateral clearance	8.0	ft	4.0	ft
Access points per mile	0		0	
Median type	Undivided	L		
Free-flow speed:	Base		Measured	
FFS or BFFS	60.0	mph	60.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.9	mph	1.8	mph
Median type adjustment, FM	1.6	mph	0.0	mph
Access points adjustment, FA	0.0	mph	0.0	mph
Free-flow speed	57.5	mph	60.0	mph
-		-		-
	_VOLUME			
Direction	1		2	
Volume, V	2104	vph	0	vph
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	584		0	
Trucks and buses	6	%	0	%
Recreational vehicles	0	%	0	왕
Terrain type	Grade		Level	
Grade	3.50	%	3.00	%
Segment length	0.60	mi	0.70	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	2.0		1.5	
Recreational vehicles PCE, ER	3.0		1.2	
Heavy vehicle adjustment, fHV	0.943		1.000	
Flow rate, vp	1239	pcphpl	0	pcphpl
		_		
	_RESULTS			
Direction	1		2	
Flow rate, vp	1239	pcphpl	0	pcphpl
Free-flow speed, FFS	57.5	mph	60.0	mph
Avg. passenger-car travel speed, S	57.5	mph	60.0	mph
Level of service, LOS	C C	mp11	A	L.
Density, D	21.5	pc/mi/ln		pc/mi/ln
DCIIDICY, D	41.0	Pc/ mr/ TII	0.0	PC/1111

Bay Bridge 2025 Summer Weekend Day Reversible Lane Operation Eastbound Analysis (2 Lanes, 80 Percent Traffic)

HCS2000: Basic Freeway Segments Release 4.1a

·	Operational Ana	lysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
Date Performed:	8/13/02		
Analysis Time Period:	10 AM		
Freeway/Direction: From/To:		OUND	
Jurisdiction:	Anne Arundel Cou	nty	
Analysis Year:	2025		
Description: REVERSIBI	E OPERATION 2 LAN	ES 80% EB TRAFFIC	
	Flow Inputs and	Adjustments	
Volume, V		3223	veh/h
Peak-hour factor, PHF		0.90	
Peak 15-min volume, v15		895	V
Trucks and buses		10	%
Recreational vehicles		4	%
Terrain type:		Grade	
Grade		3.00	8
Segment length		4.00	mi
Trucks and buses PCE, E	T	2.0	
Recreational vehicle PC	E, ER	1.5	
Heavy vehicle adjustmen		0.893	
Driver population factor	or, vp	1.00	
Flow rate, vp		2005	pc/h/ln
	Speed Inputs an	d Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density		0.50	interchange/mi
Number of lanes, N		2	
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus		2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm	nent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
	LOS and Perform	ance Measures	
Flow rate, vp		2005	pc/h/ln
Free-flow speed, FFS		58.1	mi/h
Average passenger-car s	speed, S	56.5	mi/h
Number of lanes, N		2	
Density, D		35.5	pc/mi/ln
Level of service, LOS		E	

#### \_\_\_\_\_Operational Analysis\_\_\_\_\_ Bala Aku Parsons Date Performed: 8/12/00 Analysis Time Analyst: Bala Akundi Freeway/Direction: BAY BRIDGE EASTBOUND From/To: Jurisdiction: Anne Arundel County Analysis Year: 2025 Description: REVERSIBLE OPERATION 2 LANES 80% EB TRAFFIC \_\_\_\_Flow Inputs and Adjustments\_\_\_ Volume, V 3617 veh/h Peak-hour factor, PHF 0.90 Peak 15-min volume, v15 1005 Trucks and buses 10 Recreational vehicles 4 Terrain type: Grade 3.00 용 Grade Segment length 4.00 Trucks and buses PCE, ET 2.0 Recreational vehicle PCE, ER 1.5 Heavy vehicle adjustment, fHV 0.893 Driver population factor, vp 1.00 Flow rate, vp 2251 pc/h/ln \_\_\_\_\_Speed Inputs and Adjustments\_\_\_\_ Lane width 12.0 £t. Right-shoulder lateral clearance 2.0 ft Interchange density 0.50 interchange/mi Number of lanes, N 2 Free-flow speed: Ideal FFS or BFFS 65.0 mi/h Lane width adjustment, fLW 0.0 mi/h Lateral clearance adjustment, fLC 2.4 mi/h Interchange density adjustment, fID 0.0 mi/h Number of lanes adjustment, fN 4.5 mi/h Free-flow speed, FFS 58.1 mi/h Urban Freeway LOS and Performance Measures\_\_\_\_\_ pc/h/ln Flow rate, vp 2251 Free-flow speed, FFS 58.1 mi/h Average passenger-car speed, S 51.6 mi/h Number of lanes, N 2 Density, D 43.6 pc/mi/ln Level of service, LOS

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	Operational A	Analysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
Date Performed:	8/13/02		
Analysis Time Period:			
Freeway/Direction:	BAY BRIDGE EAS	STROIND	
From/To:			
Jurisdiction:	Anne Arundel	County	
Analysis Year:	2025		
Description: REVERSIBL	E OPERATION 2	LANES 80% EB TRAFFIC	
	Flow Inputs a	and Adjustments	
Volume, V		3827	veh/h
Peak-hour factor, PHF		0.90	, 555, 55
Peak 15-min volume, v15		1063	V
Trucks and buses		10	ତ୍ୱ
Recreational vehicles		4	0/0
Terrain type:		Grade	0
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	т	2.0	
Recreational vehicle PC		1.5	
Heavy vehicle adjustmen		0.893	
Driver population factor		1.00	
Flow rate, vp	1, VP	2381	pc/h/ln
Tiow race, vp		2301	PC/11/111
	Speed Inputs	and Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density		0.50	interchange/mi
Number of lanes, N		2	
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus	tment, fLC	2.4	mi/h
Interchange density adj	ustment, fID	0.0	mi/h
Number of lanes adjustm	ent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
- <u></u>	LOS and Perfo	ormance Measures	
Flow rate		2201	ng/h/ln
Flow rate, vp		2381	pc/h/ln
Free-flow speed, FFS	O	58.1	mi/h
Average passenger-car s	peea, S	2	mi/h
Number of lanes, N		2	( / 1
Density, D		-	pc/mi/ln
Level of service, LOS		F	

HCS2000: Basic Freeway Segments Release 4.1a

	Operational	Analysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:	BAY BRIDGE EA	STROUND	
From/To:			
Jurisdiction:	Anne Arundel	County	
Analysis Year:	2025		
Description: REVERSIBL	E OPERATION 2	LANES 80% EB TRAFFIC	
	Flow Inputs	and Adjustments	
Volume, V		3951	veh/h
Peak-hour factor, PHF		0.90	,
Peak 15-min volume, v15		1098	V
Trucks and buses		10	00
Recreational vehicles		4	90
Terrain type:		Grade	ů
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	т	2.0	
Recreational vehicle PC		1.5	
Heavy vehicle adjustmen		0.893	
Driver population facto		1.00	
Flow rate, vp	-, vp	2458	pc/h/ln
	_		
	Speed Inputs	and Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density		0.50	interchange/mi
Number of lanes, N		2	
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus	tment, fLC	2.4	mi/h
Interchange density adj	ustment, fID	0.0	mi/h
Number of lanes adjustm	ent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
	LOS and Perf	formance Measures	
Elevanote		2450	ng/h/ln
Flow rate, vp		2458	pc/h/ln
Free-flow speed, FFS		58.1	mi/h
Average passenger-car s	peea, S	2	mi/h
Number of lanes, N		2	( / 1
Density, D			pc/mi/ln
Level of service, LOS		F	

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Anal	lysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:		NUND	
From/To:			
Jurisdiction:	Anne Arundel Cour	ıty	
Analysis Year:	2025		
Description: REVERSIBL	E OPERATION 2 LANE	ES 80% EB TRAFFIC	
	Flow Inputs and	Adjustments	
Volume, V		4370	veh/h
Peak-hour factor, PHF		0.90	
Peak 15-min volume, v15		1214	V
Trucks and buses		10	%
Recreational vehicles		4	%
Terrain type:		Grade	
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	Т	2.0	
Recreational vehicle PC	E, ER	1.5	
Heavy vehicle adjustmen	t, fHV	0.893	
Driver population facto	r, vp	1.00	
Flow rate, vp		2719	pc/h/ln
	Speed Inputs and	d Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density	0100101100	0.50	interchange/mi
Number of lanes, N		2	3 - ,
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus		2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm	ent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
	LOS and Performa	ance Measures	
Flow rate, vp		2719	pc/h/ln
Free-flow speed, FFS		58.1	mi/h
TICC TIOW DPCCG, TID		JU. 1	•
Average passenger-car s	peed. S		mi/h
Average passenger-car s Number of lanes, N	peed, S	2	mi/h
Number of lanes, N	peed, S	2	
	peed, S	2 F	mi/h pc/mi/ln

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Anal	ysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:		DUND	
From/To:			
Jurisdiction:	Anne Arundel Cour	ity	
Analysis Year:	2025		
Description: REVERSIBL	E OPERATION 2 LANE	S 80% EB TRAFFIC	
	Flow Inputs and	Adjustments	
Volume, V		4610	veh/h
Peak-hour factor, PHF		0.90	
Peak 15-min volume, v15		1281	V
Trucks and buses		10	%
Recreational vehicles		4	%
Terrain type:		Grade	
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	Т	2.0	
Recreational vehicle PC	E, ER	1.5	
Heavy vehicle adjustmen	t, fHV	0.893	
Driver population facto	r, vp	1.00	
Flow rate, vp		2868	pc/h/ln
	Speed Inputs and	l Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density		0.50	interchange/mi
Number of lanes, N		2	_
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus	tment, fLC	2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm	ent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		30.1	III / II
		Urban Freeway	1117 11
	LOS and Performa	Urban Freeway	
Flow rate, vp	LOS and Performa	Urban Freeway	
Flow rate, vp Free-flow speed, FFS	LOS and Performa	Urban Freeway  ince Measures  2868	pc/h/ln
Free-flow speed, FFS		Urban Freeway	
Free-flow speed, FFS Average passenger-car s		Urban Freeway  ince Measures  2868	pc/h/ln mi/h
Free-flow speed, FFS		Urban Freeway  ince Measures  2868 58.1	pc/h/ln mi/h
Free-flow speed, FFS Average passenger-car s Number of lanes, N		Urban Freeway  ince Measures  2868 58.1	pc/h/ln mi/h mi/h

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Anal	ysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:		UND	
From/To:			
Jurisdiction:	Anne Arundel Coun	ity	
Analysis Year:	2025	10 000 ED EDITETO	
Description: REVERSIBL	E OPERATION 2 LANE	S 80% EB TRAFFIC	
	Flow Inputs and	Adjustments	
Volume, V		4562	veh/h
Peak-hour factor, PHF		0.90	
Peak 15-min volume, v15		1267	V
Trucks and buses		10	%
Recreational vehicles		4	%
Terrain type:		Grade	
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	T	2.0	
Recreational vehicle PC	E, ER	1.5	
Heavy vehicle adjustmen	t, fHV	0.893	
Driver population facto	er, vp	1.00	
Flow rate, vp		2839	pc/h/ln
	Speed Inputs and	Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density	0100101100	0.50	interchange/mi
Number of lanes, N		2	5 5 5 5 5
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus		2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm		4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
<del></del>	LOS and Performa	nce Measures	
Flow rate, vp		2839	pc/h/ln
Free-flow speed, FFS		58.1	mi/h
Average passenger-car s	meed. S	50.1	mi/h
Number of lanes, N	-F	2	/ 44
Density, D		=	
Delibity, D			pc/mi/ln
Level of service, LOS		F	pc/mi/ln

HCS2000: Basic Freeway Segments Release 4.1a

	Operational	Analysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:		STBOUND	
From/To:			
Jurisdiction:	Anne Arundel	County	
Analysis Year:	2025		
Description: REVERSIBE	E OPERATION 2	LANES 80% EB TRAFFIC	
	Flow Inputs	and Adjustments	
Volume, V		4607	veh/h
Peak-hour factor, PHF		0.90	V C11/ 11
Peak 15-min volume, v15		1280	V
Trucks and buses		10	%
Recreational vehicles		4	00
Terrain type:		Grade	•
Grade		3.00	<b>ે</b>
Segment length		4.00	mi
Trucks and buses PCE, E	T	2.0	
Recreational vehicle PC		1.5	
Heavy vehicle adjustmen	t, fHV	0.893	
Driver population facto	or, vp	1.00	
Flow rate, vp		2867	pc/h/ln
	Speed Inputs	and Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density	CICALATICC	0.50	interchange/mi
Number of lanes, N		2	incer enange, mi
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus		2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm		4.5	mi/h
Free-flow speed, FFS	•	58.1	mi/h
<u>.</u>		Urban Freeway	
	LOS and Perf	ormance Measures	
Til		2067	/b /l
Flow rate, vp		2867	pc/h/ln
Free-flow speed, FFS	D boom	58.1	mi/h
Average passenger-car s	peea, s	2	mi/h
Number of lanes, N Density, D		۷	ng/mi/ln
Level of service, LOS		F	pc/mi/ln
TEACT OF SCIATCE, TOP		P	

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Ana	lysis	
Analyst:	Bala Akundi		
Agency or Company:	Parsons		
	8/13/02		
Analysis Time Period:			
Freeway/Direction:		DUND	
From/To:			
Jurisdiction:	Anne Arundel Cour	nty	
Analysis Year:	2025		
Description: REVERSIBL	E OPERATION 2 LAN	ES 80% EB TRAFFIC	
	Flow Inputs and	Adjustments	
Volume, V		3614	veh/h
Peak-hour factor, PHF		0.90	
Peak 15-min volume, v15		1004	V
Trucks and buses		10	%
Recreational vehicles		4	%
Terrain type:		Grade	
Grade		3.00	%
Segment length		4.00	mi
Trucks and buses PCE, E	Т	2.0	
Recreational vehicle PC	E, ER	1.5	
Heavy vehicle adjustmen	t, fHV	0.893	
Driver population factor	r, vp	1.00	
Flow rate, vp		2249	pc/h/ln
	Speed Inputs and	d Adjustments	
Lane width		12.0	ft
Right-shoulder lateral	clearance	2.0	ft
Interchange density	orcar arroc	0.50	interchange/mi
Number of lanes, N		2	111001 011011130,
Free-flow speed:		Ideal	
FFS or BFFS		65.0	mi/h
Lane width adjustment,	fLW	0.0	mi/h
Lateral clearance adjus		2.4	mi/h
Interchange density adj		0.0	mi/h
Number of lanes adjustm	ent, fN	4.5	mi/h
Free-flow speed, FFS		58.1	mi/h
		Urban Freeway	
	LOS and Performa	ance Measures	
Flow rate, vp		2249	pc/h/ln
Free-flow speed, FFS		58.1	mi/h
Average passenger-car s	peed. S	51.6	mi/h
Number of lanes, N	F	2	/ 44
Density, D			4 1 43
		43.6	pc/m1/ln
Level of service, LOS		43.6 E	pc/mi/ln

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Ar	nalysis				
Analyst:	Bala Akundi					
Agency or Company:	Parsons					
Date Performed:	8/13/02					
Analysis Time Period:						
Freeway/Direction:	BAY BRIDGE EASTBOUND					
From/To:						
Jurisdiction:	Anne Arundel County					
Analysis Year:	2025					
Description: REVERSIBI	JE OPERATION 2 LA	ANES 80% EB TRAFFIC				
	Flow Inputs ar	nd Adjustments				
Volume, V		3317	veh/h			
Peak-hour factor, PHF		0.90				
Peak 15-min volume, v15		921	V			
Trucks and buses		10	%			
Recreational vehicles		4	%			
Terrain type:		Grade				
Grade		3.00	%			
Segment length	Segment length		mi			
Trucks and buses PCE, I	Trucks and buses PCE, ET					
Recreational vehicle PO	CE, ER	1.5				
Heavy vehicle adjustmen	nt, fHV	0.893				
Driver population factor, vp		1.00				
Flow rate, vp		2064	pc/h/ln			
	Speed Inputs a	and Adjustments				
Lane width		12.0	ft			
Right-shoulder lateral clearance		2.0	ft			
Interchange density		0.50	interchange/mi			
Number of lanes, N		2				
Free-flow speed:		Ideal				
FFS or BFFS		65.0	mi/h			
Lane width adjustment, fLW		0.0	mi/h			
Lateral clearance adjustment, fLC		2.4	mi/h			
Interchange density adjustment, fID		0.0	mi/h			
Number of lanes adjustment, fN		4.5	mi/h			
Free-flow speed, FFS		58.1	mi/h			
		Urban Freeway				
LOS and Performance Measures						
Flow rate, vp		2064	pc/h/ln			
Free-flow speed, FFS		58.1	mi/h			
Average passenger-car speed, S		55.7	mi/h			
Number of lanes, N		2	•			
Density, D		37.1	pc/mi/ln			
Level of service, LOS		E				

	Operational Ana	alysis					
Analyst:	Bala Akundi						
Agency or Company:	Parsons						
Date Performed: 8/13/02							
Analysis Time Period:							
Freeway/Direction:	<del>-</del>						
From/To:	To:						
Jurisdiction:	<u>-</u>						
Analysis Year:	2025 RSIBLE OPERATION 2 LANES 80% EB TRAFFIC						
Description: REVERSIBL	E OPERATION 2 LAD	NES 80% EB TRAFFIC					
	Flow Inputs and	d Adjustments					
Volume, V		3186	veh/h				
Peak-hour factor, PHF		0.90	V 322, 22				
Peak 15-min volume, v15		885	V				
Trucks and buses		10	8				
Recreational vehicles		4	%				
Terrain type:		Grade					
Grade		3.00	%				
Segment length		4.00	mi				
Trucks and buses PCE, ET		2.0					
Recreational vehicle PC	E, ER	1.5					
Heavy vehicle adjustmen	it, fHV	0.893					
Driver population factor, vp		1.00					
Flow rate, vp		1982	pc/h/ln				
Speed Inputs and Adjustments							
Lane width		12.0	ft				
	aloarango	2.0	ft				
Right-shoulder lateral clearance Interchange density		0.50	interchange/mi				
Number of lanes, N		2	Tircer change/ iii				
Free-flow speed:		Ideal					
FFS or BFFS		65.0	mi/h				
Lane width adjustment, fLW		0.0	mi/h				
Lateral clearance adjustment, fLC		2.4	mi/h				
Interchange density adjustment, fID		0.0	mi/h				
Number of lanes adjustment, fN		4.5	mi/h				
Free-flow speed, FFS		58.1	mi/h				
		Urban Freeway					
	LOS and Perform	nance Measures					
T1		1000	/1- /1				
Flow rate, vp		1982	pc/h/ln				
Free-flow speed, FFS		58.1	mi/h				
Average passenger-car speed, S		56.7	mi/h				
Number of lanes, N		2 34.9	ng/mi/ln				
Density, D Level of service, LOS		34.9 D	pc/mi/ln				
TOVEL OF BELVICE, DOS		D					

HCS2000: Basic Freeway Segments Release 4.1a

	Operational Ar	nalysis				
Analyst:	Bala Akundi					
Agency or Company:	Parsons					
Date Performed:	8/13/02					
Analysis Time Period:						
Freeway/Direction:						
From/To:						
Jurisdiction:	Anne Arundel County					
Analysis Year:	2025					
Description: REVERSIBL	E OPERATION 2 LA	NES 80% EB TRAFFIC				
	Flow Inputs ar	nd Adjustments				
Volume, V		3238	veh/h			
Peak-hour factor, PHF		0.90	,			
Peak 15-min volume, v15		899	V			
Trucks and buses		10	୧			
Recreational vehicles		4	90			
Terrain type:		Grade				
Grade		3.00	%			
Segment length		4.00	mi			
Trucks and buses PCE, ET		2.0				
Recreational vehicle PC		1.5				
Heavy vehicle adjustmen		0.893				
Driver population factor		1.00				
Flow rate, vp		2015	pc/h/ln			
Speed Inputs and Adjustments						
Lane width		12.0	ft			
		2.0	ft.			
Right-shoulder lateral clearance		0.50	interchange/mi			
Interchange density		2	Tiller Change/ III			
Number of lanes, N		Ideal				
Free-flow speed: FFS or BFFS		65.0	mi/h			
Lane width adjustment, fLW		0.0	mi/h			
Lateral clearance adjustment, fLC		2.4	mi/h			
Interchange density adjustment, fID		0.0	mi/h			
	Number of lanes adjustment, fN		mi/h			
Free-flow speed, FFS	CIIC, III	4.5 58.1	mi/h			
rice riow speca, ris		Urban Freeway	1117 11			
		-				
LOS and Performance Measures						
Flow rate, vp		2015	pc/h/ln			
Free-flow speed, FFS		58.1	mi/h			
Average passenger-car speed, S		56.4	mi/h			
Number of lanes, N		2				
Density, D		35.8	pc/mi/ln			
Level of service, LOS		E				