

# HOV Lanes in the Bay Area



Volumes, occupancies and violation rates for freeway High Occupancy Vehicle Lanes in the San Francisco Bay Area

2 0 0 2



California Department of Transportation  
District 4 Oakland  
Office of Highway Operations



# TABLE OF CONTENTS

## INTRODUCTION

Acknowledgements.....	1
Map of Existing HOV Lanes .....	3

## HOV FACILITIES SUMMARIES

Comparison of HOV Lanes vs. Mixed Flow Lanes.....	7
Existing Mainline HOV Lanes .....	9
Metered On-Ramps with HOV Bypasses .....	10
Non-Metered HOV Lane On-Ramp.....	11
Mainline HOV Lanes Under Construction .....	12
Programmed HOV Lane Projects .....	13
Proposed (not programmed) HOV Projects.....	14

## 2002 DATA SUMMARIES

HOV Lane Peak Hour Volumes.....	17
HOV & Non-HOV Lane Peak Hour Comparisons.....	18
HOV Lane Peak Period Violation Rates.....	19
HOV Lane Peak Hour Time Savings/Average Speeds.....	20

## GENERAL FACILITY INFORMATION

Mainline HOV Lanes .....	23
Toll Bridge HOV Bypass Lanes .....	34

## HOV VOLUME/PERSON DATA & VIOLATION HISTORY

<b>ALA-80</b>	San Francisco-Oakland Bay Bridge Toll Plaza.....	39
<b>ALA-80</b>	HOV Ramp Flyover [Powell Street to SFOBB].....	42
<b>ALA-80</b>	Contra Costa County Line to Powell St.....	45
<b>ALA-84</b>	Dumbarton Bridge Toll Plaza .....	51
<b>ALA-92</b>	San Mateo-Hayward Bridge Toll Plaza.....	54
<b>ALA-680</b>	Route 84 to Route 237/ Calaveras.....	57
<b>ALA-880</b>	South of Marina Boulevard to Whipple Road.....	59
<b>ALA-880</b>	Whipple Rd to Mission Blvd.....	65
<b>ALA-880</b>	16th Street to SFOBB Toll Plaza.....	71
<b>CC-4</b>	West of Railroad Ave. to Port Chicago Highway.....	74
<b>CC-80</b>	Rte 4 to Alameda County Line.....	78
<b>CC-680</b>	Livorna Road to Alcosta Boulevard .....	84
<b>MRN-101</b>	Richardson Bay Bridge to Greenbrae I/C.....	90
<b>MRN-101</b>	N. San Pedro to Route 37.....	94
<b>SON-101</b>	Rte 12 to Wilfred Avenue.....	98
<b>SCL-85</b>	Route 101 [Mountain View] to Route 280 .....	104
<b>SCL-85</b>	Route 280 to Almaden Expressway .....	110
<b>SCL-85</b>	Almaden Expressway to Route 101[So. San Jose] .....	116
<b>SCL-101</b>	SM/SCI Co. Line to Ellis Street .....	122
<b>SCL-101</b>	Ellis Street to Guadalupe Parkway .....	128
<b>SCL-101</b>	Guadalupe Parkway to Route 280/680 I/C .....	134
<b>SCL-101</b>	Route 280/680 I/C to Bernal Road .....	140
<b>SCL-237</b>	Mathilda Avenue to Route 880.....	146
<b>SCL-280</b>	Magdalena Avenue to Leland Avenue .....	152
<b>SF-80</b>	HOV-only on-ramp [Sterling Street on-ramp].....	158
<b>SM-101</b>	Whipple Avenue to SM/SCI Co. Line .....	160
<b>SOL-80</b>	Carquinez Bridge Toll Plaza.....	166

## HOV TOLL GATES

Richmond-San Rafael Bridge Toll Plaza .....	171
Antioch Bridge Toll Plaza .....	173
Benicia-Martinez Bridge Toll Plaza.....	175

# INTRODUCTION

**T**he ANNUAL HOVL REPORT is prepared by the Office of Highway Operations in District 4 of the California Department of Transportation (Caltrans). This report contains information concerning the High Occupancy Vehicle (HOV) lanes on the San Francisco Bay Area freeway system. Traffic performance data for calendar year 2002 for all mainline HOV lanes and HOV toll gates are provided, including volumes, vehicle occupancies, and violation rates. Data for this report is collected twice annually – once in the Spring and once in the Fall – when normal commute traffic patterns and conditions generally occur. Volumes and occupancy data for HOV bypass lanes at metered freeway on-ramps are not included in this annual report. However, general information on these ramps is included.

## Major changes in 2002:

- The southbound & northbound HOV lanes on Route 101 in Sonoma County opened to traffic on November 4, 2002. The limits of HOV lanes are between Route 12 interchange to Wilfred Avenue, a distance of about 10 miles.
- The entire 14 miles section of southbound HOV lane on Route 680 (Sunol Grade) between Route 84 in Alameda County and Route 237 in Santa Clara County was completed on December 5, 2002.

---

## HOV Report Website:

This report is available for Download at [www.dot.ca.gov/dist4/](http://www.dot.ca.gov/dist4/) by clicking on the Commute Help Link.

## ACKNOWLEDGMENTS

The following Caltrans personnel contributed to the preparation of this report:

**LANCE HALL**  
District 4 HOV Lane Coordinator

Maria L. Castro, Report Coordinator

Hassan Ahmadi  
Indra Bhattacharya  
Roberto Fuertes  
Jun Magbitang  
Marvin Maltez  
Joseline Morales  
Thuan Tran

## For more information, contact:

Mr. H. DAVID SERIANI  
District Office Chief  
California Department of Transportation  
District 4, Office of Highway Operations  
P.O. Box 23660  
Oakland, CA, 94623-0660  
e-mail: David\_Seriani@dot.ca.gov



Department of Transportation  
District 4  
Office of Highway Operations

December 2002

# High-Occupancy Vehicle Lanes in the Bay Area

---

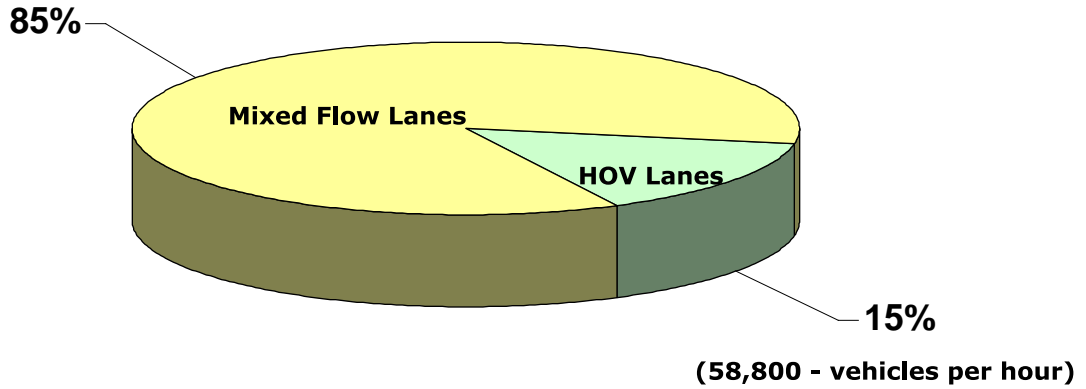
# HOV FACILITIES SUMMARIES

- **Comparison of HOV Lanes vs. Mixed Flow Lanes**
  - **Existing Mainline HOV Lanes**
  - **Metered On-Ramps with HOV Bypasses**
  - **Programmed HOV Lane Projects**
  - **Proposed (Not Programmed) HOV Lane Projects**
-

# COMPARISON OF HOV LANES VS. MIXED FLOW LANES (Peak-Hour)

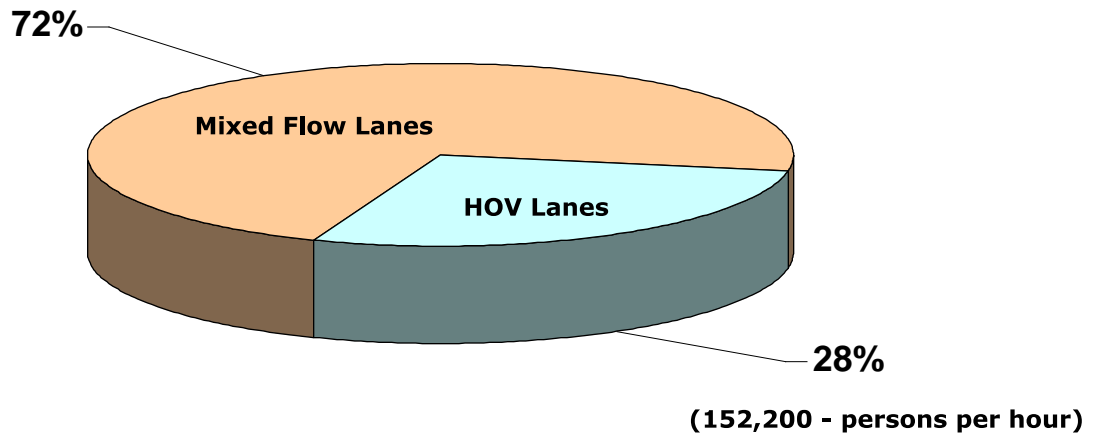
## VEHICLES

(342,900 - vehicles per hour)



## PEOPLE

(393,000 - persons per hour)



**NOTE:** Data shown is the relative proportion of vehicles or people in the mixed flow and carpool lanes averaged over all 82 count locations.

# District 4

## EXISTING MAINLINE HOV LANES

Route	Dir	Limits	Lane-miles	Min. occ.	Period of operation *
ALA-80	W/B	Bay Bridge Toll Plaza	2.9	3+	5-10 AM 3- 7 PM
ALA-80	W/B	Contra Costa Co Line to Powell St	4.2	3+	5-10 AM 3- 7 PM
	E/B	Powell St to Contra Costa Co Line	4.2	3+	5-10 AM 3- 7 PM
ALA-84	W/B	East approach to Dumbarton Bridge	1.8	2+	5-10 AM 3- 6 PM
ALA-92	W/B	Hesperian Blvd. To San Mateo Bridge Toll Plaza	3.0	2+	5-10 AM 3- 6 PM
ALA-680	S/B	Route 84 to Route 237 Calaveras Blvd.	14.0	2+	5- 9 AM 3- 7 PM
ALA-880	S/B	Marina Blvd to Mission Blvd	20.3	2+	5- 9 AM 3- 7 PM
	N/B	Mission Blvd to South of Rte 238 I/C	16.9	2+	5- 9 AM 3- 7 PM
ALA-880	N/B	16th Street to SFOBB Toll Plaza	1.2	3+	5- 10 AM 3- 7 PM
CC-04	W/B	West of Railroad Ave. to Port Chicago Hwy	6.5	2+	6- 9 AM
	E/B	Port Chicago Hwy to West of Railroad Ave.	7.0	2+	3- 7 PM
CC-80	W/B	Rte 4 to Alameda County Line	9.7	3+	5-10 AM 3- 7 PM
	E/B	Alameda County Line to Rte 4	9.9	3+	5-10 AM 3- 7 PM
CC-680	S/B	Livorna Rd to Alcosta Blvd	11.9	2+	6- 9 AM 3- 6 PM
	N/B	Alcosta Blvd to Livorna Rd	12.9	2+	6- 9 AM 3- 6 PM
MRN-101	S/B	Greenbrae ped o/c to Strawberry ped o/c	3.7	2+	6:30-8:30 AM
	N/B	S/O Richardson Bay Br to Corte Madera	3.5	2+	4:30-7:00 PM
	S/B	Rte 37 to San Pedro Rd	6.1	2+	6:30-8:30 AM
	N/B	San Pedro Rd to Rte 37	6.1	2+	4:30-7:00 PM
SON-101	S/B	Route 12 to Wilfred Avenue	5.0	2+	6:30- 9:30 3- 7 PM
	N/B	Wilfred Avenue to Route 12	5.0	2+	6:30- 9:30 3- 7 PM
SCL-85	S/B	Rte 101 (Mountain View) to Bernal Rd	23.3	2+	5- 9 AM 3- 7 PM
	N/B	Rte 101 (So. San Jose) to Rte 101 (Mt. View)	23.8	2+	5- 9 AM 3- 7 PM
SCL-101	S/B	San Mateo Co. Line to Bernal Rd	25.0	2+	5- 9 AM 3- 7 PM
	N/B	Bernal Rd to San Mateo Co. Line	24.2	2+	5- 9 AM 3- 7 PM
SCL-237	W/B	Rte 880 to Mathilda Ave	5.2	2+	5- 9 AM 3- 7 PM
	E/B	Mathilda Ave to one mile w/o Rte 880	5.1	2+	5- 9 AM 3- 7 PM
SCL-280	S/B	Magdalena Ave to Meridian Ave	11.2	2+	5- 9 AM 3- 7 PM
	N/B	Leland Ave to Magdalena Ave	10.7	2+	5- 9 AM 3- 7 PM
SM-101	S/B	Whipple Ave to Santa Clara Co. Line	6.6	2+	5- 9 AM 3- 7 PM
	N/B	Santa Clara Co. Line to Whipple Ave	6.6	2+	5- 9 AM 3- 7 PM
SOL-80	E/B	Carquinez Bridge Toll Plaza	0.1	3+	5-10 AM 3- 7 PM

**TOTAL EXISTING LANE-MILES 297.6**

\* **NOTE:** All HOV lanes currently operate Monday thru Friday.

\* **NOTE:** All HOV lanes currently operate Monday thru Friday.



# District 4

## METERED ON-RAMPS with HOV BYPASS LANES

Route	Dir	Ramp	Hours	HOVL metered?	Date opened	Notes
SCI-85	NB	NB Rte 101 connector	5-9am & 3-7pm	Yes	Aug 26, 1994	Monday - Friday
SCI-85	NB	Bernal Rd diag	24 hrs	Yes	Aug 26, 1994	7 days/week
SCI-85	NB	Great Oaks Blvd diag	24 hrs	Yes	Aug 19, 1994	7 days/week
SCI-85	NB	Cottle Rd diag	24 hrs	Yes	Aug 19, 1994	7 days/week
SCI-85	NB	Blossom Hill Rd loop	24 hrs	Yes	Aug 19, 1994	7 days/week
SCI-85	NB	Santa Teresa Blvd loop	24 hrs	Yes	Oct 19, 1994	7 days/week
SCI-85	NB	Almaden Expwy (nb) loop	24 hrs	Yes	Mar 19, 1999	7 days/week
SCI-85	NB	Bascom Ave diag	24 hrs	Yes	Oct 19, 1994	7 days/week
SCI-85	NB	Winchester Blvd diag	24 hrs	Yes	Nov 14, 1994	7 days/week
SCI-85	NB	Saratoga Ave diag	24 hrs	Yes	Oct 20, 1994	7 days/week
SCI-85	SB	Almaden Expwy diag	24 hrs	Yes	Oct. 19, 1994	7 days/week
SCI-85	SB	Bascom Ave diag	24 hrs	Yes	Oct 19, 1994	7 days/week
SCI-85	SB	Camden Ave diag	24 hrs	Yes	Apr 4, 1995	7 days/week
SCI-85	SB	Stevens Creek diag	24 hrs	Yes	Oct 19, 1994	7 days/week
SCI-101	NB	Bernal Rd loop	24 hrs	Yes	Jun 10, 1996	7 days/week
SCI-101	NB	Blossom Hill diag	24 hrs	Yes	Jun 23, 1992	7 days/week
SCI-101	NB	Capitol Expwy diag	24 hrs	Yes	Jul 11, 1997	7 days/week
SCI-101	NB	SB Rte 680 connector	5:30-9am	No	Sep 2, 1982	Monday - Friday
SCI-101	NB	Guadalupe Pkwy connector	5:30-9am	Yes	Feb 12, 1980	Monday - Friday
SCI-101	NB	Trimble Rd diag	24 hrs	Yes	Nov 1, 1991	7 days/week
SCI-101	NB	Montague Expwy diag	24 hrs	Yes	Feb 12, 1980	7 days/week
SCL-101	NB	Lawrence Expwy (nb) loop	24 hrs	Yes	Mar 8, 1999	7 days/week
SCL-101	NB	Lawrence Expwy (sb)diag	24 hrs	Yes	Mar 8, 1999	7 days/week
SCI-101	NB	San Tomas Expwy loop	5:30-9 am	No	Feb 12, 1980	Monday - Friday
SCI-237	EB	Lawrence Expwy diag	24 hrs	Yes	Aug. 14, 1998	7 days/week
SCI-237	EB	Great America Pkwy diag	24 hrs	Yes	Sep 24, 1996	7 days/week
SCI-237	EB	N. First Street diag	24 hrs	Yes	Sep 24, 1996	7 days/week
SCI-237	EB	Zanker Rd diag	24 hrs	Yes	Sep 24, 1996	7 days/week
SCI-280	NB	Wolfe Rd loop	6-9 am	Yes	Jun 8, 1976	Monday - Friday
SCI-280	SB	Wolfe Rd loop	24 hrs	Yes	Apr 27, 1993	7 days/week
SCI-280	SB	Wolfe Rd diag	24 hrs	Yes	Apr 27, 1993	7 days/week
SCI-280	SB	De Anza Blvd diag	24 hrs	Yes	Apr 27, 1993	7 days/week
Ala-880	NB	Fremont Blvd loop	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Auto Mall Pkwy(Durham) loop	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Auto Mall Pkwy(Durham)diag	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Stevenson Blvd. diagonal	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	E/B Mowry Ave loop	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Thornton Ave loop	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Thornton Ave diagonal	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Alvarado-Fremont Blvd diag	24 hrs	Yes	Oct 20, 1999	

# District 4

## METERED ON-RAMPS with HOV BYPASS LANES

Route	Dir	Ramp	Hours	HOVL metered?	Date opened	Notes
Ala-880	NB	Alvarado-Niles Rd diagonal	24 hrs	Yes	Oct 20, 1999	
Ala-880	NB	Industrial Parkway diagonal	24 hrs	Yes	Dec 3, 1996	
Ala-880	NB	Tennyson Rd diag	24 hrs	Yes	Dec 3, 1996	
Ala-880	NB	West A-Street diag	24 hrs	Yes	Dec 3, 1996	
Ala-880	NB	Lewelling Blvd diagonal	24 hrs	Yes	Apr 28, 1999	
Ala-880	NB	98th Ave loop	24 hrs	Yes	Apr 28, 1999	
Ala-880	NB	E/B 23rd Ave. diag	24 hrs	Yes	Apr 28, 1999	
Ala-880	SB	Fremont Blvd. diag	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Fremont Blvd. loop	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Auto Mall Pkwy(Durham)Diag	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Auto Mall Pkwy(Durham)loop	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	W/B Mowry Ave loop	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Thornton Ave. diagonal	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Thornton Ave. loop	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Alvarado-Fremont Blvd diag	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Alvarado-Niles Rd diagonal	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Alvarado-Niles Rd loop	24 hrs	Yes	Oct 19, 1999	
Ala-880	SB	Whipple Rd diag	24 hrs	Yes	Oct 29, 1996	
Ala-880	SB	Tennyson Rd diag	24 hrs	Yes	Oct 29, 1996	
Ala-880	SB	Winton Ave diag	24 hrs	Yes	Oct 29, 1996	
Ala-880	SB	West A-Street diag	24 hrs	Yes	Oct 29, 1996	
Ala-880	SB	E/B Davis St(Route 112) diag	24 hrs	Yes	Apr 27, 1999	
Ala-880	SB	W/B Davis St(Route 112)loop	24 hrs	Yes	Apr 27, 1999	
Ala-880	SB	98th Ave diagonal	24 hrs	Yes	Apr 27, 1999	
Ala-880	SB	Hegenberger diagonal	24 hrs	Yes	Apr 27, 1999	
Ala-880	SB	Oak St. diagonal	24 hrs	Yes	Apr 27, 1999	

**NOTES**

- (a) *Minimum occupancy requirement for all HOV bypass lanes is two persons per vehicle.*
- (b) *Motorcycles are permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.*
- (c) *Bypass lane restrictions are in effect 7 days a week unless noted otherwise.*

## NON-METERED HOV LANE ON-RAMP

Route	Dir	Ramp	Hours	HOVL metered?	Date opened	Notes
SF-80	EB	Sterling St on-ramp to SFOBB	3:30-7:00 PM	No	Aug 30, 1982	

**NOTES**

- (a) *Minimum occupancy requirement is 3 or more persons per vehicle.*
- (b) *2 - seater vehicles with 2 persons, and motorcycles are permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.*

## District 4

### HOV LANES UNDER CONSTRUCTION

Est. Opening	Route	Limits	Lane-miles	Min. Occ.
Dec-03	SB SCL-87	Rte 101 I/C to Julian Street	2.8	2+
Dec-03	NB SCL-87	Julian Street to Rte 101 I/C	2.8	2+
May-03	NB SCL-101	Cochrane Road to Bernal Road	9.8	2+
May-03	SB SCL-101	Bernal Road to Cochrane Road	9.8	2+
Summer 2006	SCL-85/101	Rte 85 and 101 Connectors (Mountain View)	1.4	2+
Summer 2004	SCL-85/101	Rte 85 and 101 Connectors (San Jose)	0.5	2+
Oct-03	SB MRN-101	Corte Madera Cr. to 580/101 Separation	1.3	2+
Oct-03	NB MRN-101	Corte Madera Cr. to 580/101 Separation	1.3	2+
Summer 2004	SCL-237	Rte 237 and 880 Connectors	0.3	2+

**TOTAL LANE-MILES UNDER CONSTRUCTION      30.0**

## District 4 PROGRAMMED HOVL PROJECTS (From 2002 STIP)

County Route	EA	Location	Construct year	Cost (Prog. year)	Lane miles
ALA-80	254800	SFOBB Toll Plaza to Powell St.-EB	2003	\$3,420,000	1.1
ALA-84	443900	Westbound HOV On-ramp at Newark Ave	2004	\$760,000	0.5
ALA-84	44400K	Newark Ave to I-880/SR 84 I/C	2004	\$940,000	1
SCL/ALA-680	286000	Rte 237 to Rte 84 - NB	2006	\$42,300,000	14.0
SCL/ALA-880	233220/U1	Rte 237 to Mission Blvd (Rte 262)	2003	\$58,400,000	8
CC-4	229011	w/o Railroad Avenue to w/o Loveridge	2004	\$29,700,000	1.6
CC-80	263700	Rte 4 to Carquinez Bridge.- WB	2004	\$36,500,000	2.7
CC-680	228561	N. Main St to Marina Vista Blvd.	2003	\$42,300,000	24.3
MRN/SON-101	264000	Route 37 to Old Redwood Highway	2006	\$21,000,000	32.9
MRN-101	226131	Greenbrae POC to Corte Madera Cr.	2004	\$7,400,000	0.2
MRN-101	226141	Coleman School POC to N. San Pedro Rd.	2004	\$40,000,000	3.2
MRN-101	226151	580/101 Separation to Coleman School POC	2005	\$28,300,000	3
SON-101	0A180K	Old Redwood Highway to Rohnert Park Expwy	2009	\$6,000,000	12.8
SON-101	129650	Rohnert Park Expwy to Wilfred Ave	2007	\$47,800,000	2.6
SON-101	263900	Steel Lane to Bicentennial Way	2004	\$9,900,000	1.2
SON-101	0A100K	Bicentennial Way to Windsor	2009	\$6,000,000	14.2
SON-101	245400	Rte 12 to Steele Lane	2004	\$61,600,000	2.8

<b>TOTAL</b>	<b>\$442,320,000</b>	<b>126.1</b>
--------------	----------------------	--------------

## PROGRAMMED HOVL PROJECTS (Locally Funded)

County Route	EA	Location	Construct year	Cost (Prog. year)	Lane miles
SCL-87	43960K	Julian St. to Rte 280 I/C (NB,SB)	Sep-03	\$33,000,000	2.4
SCL-87	43960K	Rte 280 I/C to Santa Teresa Bl.(NB,SB)	Sep-03	\$27,000,000	9.8

<b>TOTAL</b>	<b>\$60,000,000</b>	<b>12.2</b>
--------------	---------------------	-------------

# District 4 PROPOSED HOVL PROJECTS

County Route	EA	Location	Post-Mile	Cost (Prog. year)	Lane miles
ALA-580	29080K	Tassajara Rd to Vasco Rd (EB, WB)	9.6/17.9	\$60,500,000	16.6
			<b>TOTAL</b>	<b>\$60,500,000</b>	<b>16.6</b>

---

## **2002 DATA SUMMARIES**

- **HOV Lane Peak Hour Volumes**
  - **HOV & Non-HOV Lane Peak Hour Comparisons**
  - **HOV Lane Peak Period Violation Rates**
  - **HOV Lane Peak Hour Time Savings**
-

# HOV LANE PEAK HOUR VOLUMES

			A.M.	P.M.
			Peak Hr (veh)	Peak Hr (veh)
<b>ALA-80</b>	WB	Bay Bridge Toll Plaza	3730	1057
<b>ALA-80</b>	WB	Contra Costa County Line to Powell St	1698	689
	EB	Powell St to Contra Costa County Line	199	1070
<b>ALA-84</b>	WB	Dumbarton Bridge Toll Plaza	1229	354
<b>ALA-92</b>	WB	San Mateo Bridge Toll Plaza	839	492
<b>ALA-680</b>	SB	Route 84 to Route 237 Calaveras Blvd.	420	N/A
			—	—
<b>ALA-880</b>	SB	Marina Blvd to Whipple Road	1196	1280
		Whipple Road to Mission Blvd.	912	690
	NB	Mission Blvd to Whipple Road	370	912
		Whipple Road to South of Rte 238 I/C	1070	1264
<b>ALA-880</b>	NB	16th St to SFOBB Toll Plaza	718	108
<b>CC-04</b>	WB	West of Railroad Ave. to Port Chicago Hwy	854	—
	EB	Port Chicago Hwy to West of Railroad Ave.	—	644
<b>CC-80</b>	WB	Route 4 to Alameda County Line	1285	350
	EB	Alameda County Line to Route 4	164	1059
<b>CC-680</b>	SB	Livorna Rd. to Alcosta Blvd.	962	819
	NB	Alcosta Blvd. to Livorna Rd.	729	1374
<b>MRN-101</b>	SB	Rte 37 to N. San Pedro Rd	1361	—
		Greenbrae I/C to Richardson Bay Bridge	760	—
	NB	Richardson Bay Bridge to Greenbrae I/C	—	607
		N. San Pedro Rd to Rte 37	—	731
<b>SON-101</b>	S/B	Route 12 to Wilfred Avenue	319	429
	N/B	Wilfred Avenue to Route 12	304	618
<b>SCL-85</b>	SB	Rte 101 (Mountain View) to Rte 280	342	907
		Rte 280 to Almaden Expwy	141	1052
		Almaden Expwy to Rte 101 (So. San Jose)	310	684
	NB	Rte 101 (So. San Jose) to Almaden Expwy	514	389
		Almaden Expwy to Rte 280	1173	396
		Rte 280 to Rte 101 (Mountain View)	750	284
<b>SCL-101</b>	SB	San Mateo Co. Line to Ellis St	620	760
		Ellis St to Guadalupe Pkwy	234	1058
		Guadalupe Pkwy to 101/280/680 I/C	113	879
		101/280/680 I/C to Bernal Rd	296	539
	NB	Bernal Rd to 101/280/680 I/C	764	251
		101/280/680 I/C to Guadalupe Pkwy	1490	417
		Guadalupe Pkwy to Ellis St	582	597
		Ellis St to San Mateo Co. Line	715	1249
<b>SCL-237</b>	WB	Rte 880 to Mathilda Ave	554	403
	EB	Mathilda Ave to Rte 880	330	552
<b>SCL-280</b>	SB	Magdalena Ave to Leland Ave	216	744
	NB	Leland Ave to Magdalena Ave	643	483
<b>SM-101</b>	SB	Whipple Ave to Santa Clara Co. Line	704	700
	NB	Santa Clara Co. Line to Whipple Ave	446	703
<b>SOL-80</b>	EB	Carquinez Bridge Toll Plaza	195	986

## 2002 PEAK HOUR HOV & non-HOV LANE COMPARISONS

			% of all Vehicles		% of all Persons				
			in HOVL	in Non-HOVL	in HOVL	in Non-HOVL	Number of Non-HOV Lanes	in Non-HOVL (Avg per Lane)	
<b>ALA-80</b>	WB	Bay Bridge Toll Plaza	AM	* 39%	** 61%	* 67%	** 33%	18	2%
			PM	* 13%	** 87%	* 30%	** 70%	18	4%
<b>SOL-80</b>	EB	Carquinez Bridge	AM	7%	93%	19%	81%	11	7%
			PM	18%	82%	42%	58%	11	5%
<b>ALA-84</b>	WB	Dumbarton Bridge Toll Plaza	AM	24%	76%	41%	59%	3	30%
			PM	20%	80%	36%	64%	3	32%
<b>ALA-92</b>	WB	San Mateo Bridge Toll Plaza	AM	23%	77%	42%	58%	3	29%
			PM	18%	82%	35%	65%	3	33%
<b>ALA-80</b>	WB	Contra Costa County Line to Powell Street	AM	18%	82%	36%	64%	4	16%
			PM	10%	90%	19%	81%	4	20%
	EB	Powell Street to Contra Costa County Line	AM	3%	97%	8%	92%	4	23%
			PM	13%	87%	31%	69%	4	17%
<b>ALA-680</b>	SB	Route 84 to Route 237 Calaveras Blvd	AM	7%	93%	11%	89%	3	30%
<b>ALA-880</b>	SB	Marina Blvd to Whipple Rd	AM	20%	80%	35%	65%	3	22%
			PM	22%	78%	35%	65%	3	22%
		Whipple Rd to Mission Blvd	AM	16%	84%	27%	73%	3	24%
			PM	14%	86%	24%	76%	3	25%
	NB	Mission Blvd to Whipple Rd	AM	10%	90%	18%	82%	3	27%
			PM	15%	85%	24%	76%	3	25%
		Whipple Rd to South of Rte 238 I/C	AM	20%	80%	36%	64%	3	21%
			PM	21%	79%	35%	65%	3	22%
<b>ALA-880</b>	NB	16th Street to SFOBB	AM	35%	65%	65%	35%	2	18%
			PM	6%	94%	13%	87%	2	44%
<b>CC-04</b>	WB	W of Railroad Ave to Port Chicago Hwy	AM	13%	87%	21%	79%	2	39%
			PM	18%	82%	29%	71%	2	36%
<b>CC-80</b>	EB	Alameda County Line to Route 4	AM	4%	96%	10%	90%	3	30%
			PM	15%	85%	41%	59%	3	20%
	WB	Route 4 to Alameda County Line	AM	21%	79%	45%	55%	3	18%
			PM	7%	93%	17%	83%	3	28%
<b>CC-680</b>	SB	Livorna Rd to Alcosta Blvd	AM	14%	86%	29%	71%	3	24%
			PM	14%	86%	23%	77%	3	26%
	NB	Alcosta Blvd to Livorna Rd	AM	13%	87%	23%	77%	3	26%
			PM	24%	76%	38%	62%	3	21%
<b>MRN-101</b>	SB	Rte 37 to N. San Pedro Rd	AM	14%	86%	28%	72%	3	24%
			PM	23%	77%	41%	59%	3	20%
	NB	Richardson Bay Brdg to Greenbrae I/C	AM	12%	88%	33%	67%	3	22%
			PM	11%	89%	27%	73%	3	24%
	SB	N. San Pedro Rd to Rte 37	AM	9%	91%	18%	82%	2	41%
			PM	11%	89%	19%	81%	2	41%
<b>SON-101</b>	SB	Route 12 to Wilfred Avenue	AM	9%	91%	18%	82%	2	41%
			PM	11%	89%	19%	81%	2	41%
	NB	Wilfred Avenue to Route 12	AM	12%	88%	23%	77%	2	38%
			PM	19%	81%	30%	70%	2	35%
<b>SM-101</b>	SB	Whipple Ave to Santa Clara Co. Line	AM	12%	88%	22%	78%	3	26%
			PM	12%	88%	21%	79%	3	26%
	NB	Santa Clara Co. Line to Whipple Ave	AM	7%	93%	13%	87%	3	29%
			PM	15%	85%	26%	74%	3	25%
<b>SCL-85</b>	SB	Rte 101 (Mtn View) to Rte 280	AM	14%	86%	25%	75%	2	38%
			PM	21%	79%	26%	74%	2	37%
		Rte 280 to Almaden Expwy	AM	4%	96%	7%	93%	2	47%
			PM	22%	78%	35%	65%	2	32%
		Almaden Expwy to Rte 101 (So. San Jose)	AM	9%	91%	16%	84%	2	42%
			PM	16%	84%	28%	72%	2	36%
	NB	Rte 101 (So. San Jose) to Almaden Expwy	AM	14%	86%	22%	78%	2	39%
			PM	9%	91%	15%	85%	2	42%
		Almaden Expwy to Rte 280	AM	28%	72%	42%	58%	2	29%
			PM	10%	90%	16%	84%	2	42%
		Rte 280 to Rte 101 (Mtn View)	AM	17%	83%	29%	71%	2	35%
			PM	9%	91%	14%	86%	2	43%
<b>SCL-101</b>	SB	San Mateo Co. Line to Ellis St	AM	11%	89%	18%	82%	3	27%
			PM	12%	88%	21%	79%	3	26%
		Ellis St to Guadalupe Pkwy	AM	6%	94%	10%	90%	3	30%
			PM	19%	81%	31%	69%	3	23%
		Guadalupe Pkwy to 101/280/680 I/C	AM	5%	95%	10%	90%	3	30%
			PM	17%	83%	31%	69%	3	23%
		101/280/680 I/C to Bernal Rd	AM	8%	92%	14%	86%	3	29%
			PM	13%	87%	18%	82%	3	27%
	NB	Bernal Rd to 101/280/680 I/C	AM	14%	86%	23%	77%	3	26%
			PM	8%	92%	13%	87%	3	29%
		101/280/680 I/C to Guadalupe Pkwy	AM	20%	80%	32%	68%	3	23%
			PM	9%	91%	17%	83%	3	28%
		Guadalupe Pkwy to Ellis St	AM	11%	89%	20%	80%	3	27%
			PM	11%	89%	19%	81%	3	27%
		Ellis St to San Mateo Co. Line	AM	15%	85%	22%	78%	3	26%
			PM	19%	81%	32%	68%	3	23%
<b>SCL-237</b>	WB	Rte 880 to Mathilda Ave	AM	12%	88%	21%	79%	2	39%
			PM	10%	90%	19%	81%	2	40%
	EB	Mathilda Ave to Rte 880	AM	11%	89%	19%	81%	2	40%
			PM	14%	86%	27%	73%	2	37%
<b>SCL-280</b>	SB	Magdalena Ave to Leland Ave	AM	5%	95%	11%	89%	3	30%
			PM	14%	86%	23%	77%	3	26%
	NB	Leland Ave to Magdalena Ave	AM	11%	89%	20%	80%	3	27%
			PM	9%	91%	15%	85%	3	28%

\* Total in all 4 HOVL's combined.

\*\* Total in all 18 Non HOVL's combined.



## HOV LANE PEAK PERIOD VIOLATION RATE SUMMARY

			A.M.	P.M.
<b>ALA-80</b>	WB	Bay Bridge Toll Plaza	9.5%	11.7%
<b>ALA-80</b>	WB	Contra Costa County Line to Powell St	8.7%	18.9%
	EB	Powell St to Contra Costa County Line	17.6%	2.7%
<b>ALA-84</b>	WB	Dumbarton Bridge Toll Plaza	3.5%	4.4%
<b>ALA-92</b>	WB	San Mateo Bridge Toll Plaza	3.1%	4.4%
<b>ALA-680</b>	SB	Route 84 to Route 237 Calaveras Blvd	4.4%	—
<b>ALA-880</b>	SB	Marina Blvd to Whipple Road	7.5%	5.2%
		Whipple Road to Mission Blvd.	3.2%	5.8%
	NB	Mission Blvd to Whipple Road	2.9%	6.0%
		Whipple Road to South of Rte 238 I/C	8.8%	8.4%
<b>ALA-880</b>	NB	16th St to SFOBB Toll Plaza	4.8%	6.8%
<b>CC-04</b>	WB	West of Railroad Ave. to Port Chicago Hwy.	4.5%	—
	EB	Port Chicago Hwy to West of Railroad Ave.	—	4.4%
<b>CC-80</b>	WB	Rte 4 to Alameda County Line	6.4%	25.7%
	EB	Alameda County Line to Rte 4	19.8%	9.0%
<b>CC-680</b>	SB	Livorna Rd. to Alcosta Blvd.	1.7%	7.8%
	NB	Alcosta Blvd. to Livorna Rd.	6.9%	4.5%
<b>MRN-101</b>	SB	Rte 37 to N. San Pedro Rd	1.2%	—
		Greenbrae I/C to Richardson Bay Bridge	1.9%	—
	NB	Richardson Bay Bridge to Greenbrae I/C	—	1.5%
		N. San Pedro Rd to Rte 37	—	2.6%
<b>SON-101</b>	S/B	Route 12 to Wilfred Avenue	5.8%	2.9%
	N/B	Wilfred Avenue to Route 12	6.6%	1.9%
<b>SCL-85</b>	SB	Rte 101 (Mountain View) to Rte 280	10.0%	4.4%
		Rte 280 to Almaden Expwy	9.0%	3.4%
		Almaden Expwy to Rte 101 (So. San Jose)	0.3%	3.8%
	NB	Rte 101 (So. San Jose) to Almaden Expwy	2.6%	5.0%
		Almaden Expwy to Rte 280	4.6%	7.5%
		Rte 280 to Rte 101 (Mountain View)	1.5%	2.2%
<b>SCL-101</b>	SB	San Mateo Co. Line to Ellis St	6.6%	0.7%
		Ellis St to Guadalupe Pkwy	2.8%	1.2%
		Guadalupe Pkwy to 101/280/680 I/C	3.5%	1.3%
		101/280/680 I/C to Bernal Rd	5.6%	2.0%
	NB	Bernal Rd to 101/280/680 I/C	2.7%	3.1%
		101/280/680 I/C to Guadalupe Pkwy	2.7%	1.6%
		Guadalupe Pkwy to Ellis St	7.5%	3.8%
		Ellis St to San Mateo Co. Line	2.4%	2.1%
<b>SCL-237</b>	WB	Rte 880 to Mathilda Ave	3.7%	2.2%
	EB	Mathilda Ave to one mile w/o Rte 880	12.1%	1.9%
<b>SCL-280</b>	SB	Magdalena Ave to Leland Ave	4.6%	0.6%
	NB	Leland Ave to Magdalena Ave	5.4%	1.5%
<b>SM-101</b>	SB	Whipple Ave to Santa Clara Co. Line	3.5%	3.2%
	NB	Santa Clara Co. Line to Whipple Ave	5.7%	3.4%
<b>SOL-80</b>	EB	Carquinez Bridge Toll Plaza	10.1%	9.5%

## 2002 HOV LANE PEAK HOUR AVERAGE SPEEDS AND TRAVEL TIMES

				Travel Time		HOV Time Saving (minutes)	Avg. Speed	
				(minutes) Non-HOVL	(minutes) HOVL		(mph) Non-HOVL	(mph) HOVL
ALA-80	WB	Bay Bridge Toll Plaza	AM	23	4	19	5	33
			PM	9	2	7	14	65
ALA-80	WB	Contra Costa County Line to Powell St	AM	10	7	3	26	36
			PM	9	4	5	29	65
	EB	Powell St to Contra Costa County Line	AM	5	5	0	65	65
			PM	15	5	10	17	65
ALA-84	WB	Dumbarton Bridge Toll Plaza	AM	21	2	19	6	65
			PM	3	2	1	44	65
ALA-92	WB	San Mateo Bridge Toll Plaza	AM	13	3	10	15	65
			PM	4	3	1	49	65
ALA-680	SB	Route 84 to Route 237 Calaveras Blvd.	AM	18	13	5	47	65
ALA-880	SB	Marina Blvd. to Whipple Road	AM	20	8	12	26	65
			PM	10	8	2	52	65
		Whipple Road to Mission Blvd	AM	51	11	40	14	65
			PM	12	11	1	60	65
	NB	Mission Blvd. to Whipple Road	AM	15	10	5	43	65
			PM	25	10	15	26	65
	Whipple Road to South of Rte 238 I/C	AM	11	11	0	65	65	
		PM	12	11	1	60	65	
ALA-880	NB	16th St to SFOBB Toll Plaza	AM	26	3	23	5	44
			PM	3	2	1	44	65
CC-04	WB	West of Railroad to Port Chicago Hwy	AM	6	6	0	65	65
			PM	9	7	2	50	65
CC-80	WB	Rte 4 to Alameda County Line	AM	25	13	12	23	45
			PM	11	11	0	65	65
	EB	Alameda County Line to Rte 4	AM	10	10	0	65	65
			PM	21	10	11	28	65
CC-680	SB	Livorna Rd to Alcosta Blvd	AM	20	12	8	39	65
			PM	12	12	0	65	65
	NB	Alcosta Blvd to Livorna Rd	AM	14	11	3	51	65
			PM	18	11	7	40	65
MRN-101	SB	Rte 37 to N. San Pedro Rd Greenbrae I/C to Richardson Bay Brdg	AM	22	14	8	15	23
			AM	5	4	1	53	65
	NB	Richardson Bay Brdg to Greenbrae I/C N. San Pedro Rd to Rte 37	PM	11	5	6	24	52
			PM	5	5	0	65	65
SON-101	SB	Rte 12 to Wilfred Avenue	AM	4	4	0	65	65
			PM	5	4	1	52	65
	NB	Wilfred Ave to Rte 12	AM	10	4	6	26	65
			PM	20	5	15	13	52
SCL-85	SB	Rte 101 (Mtn View) to Rte 280	AM	6	5	1	54	65
			PM	14	5	9	23	65
		Rte 280 to Almaden Expwy	AM	11	11	0	65	65
			PM	22	11	11	33	65
		Almaden Expwy to Rte 101 (So. San Jose)	AM	6	5	1	54	65
			PM	7	5	2	46	65
	NB	Rte 101 (So. San Jose) to Almaden Expwy	AM	13	6	7	30	65
			PM	6	6	0	65	65
		Almaden Expwy to Rte 280	AM	22	13	9	35	60
			PM	13	12	1	60	65
		Rte 280 to Rte 101 (Mtn View)	AM	18	5	13	18	65
			PM	6	5	1	54	65
SCL-101	SB	San Mateo Co. Line to Ellis St	AM	11	5	6	30	65
			PM	14	5	9	23	65
		Ellis St to Guadalupe Pkwy	AM	7	6	1	56	65
			PM	14	7	7	33	65
		Guadalupe Pkwy to 101/280/680 I/C	AM	6	5	1	54	65
			PM	21	9	12	14	30
	101/280/680 I/C to Bernal Rd	AM	8	7	1	57	65	
		PM	11	7	4	41	65	
	NB	Bernal Rd to 101/280/680 I/C	AM	17	8	9	31	65
			PM	9	8	1	58	65
		101/280/680 I/C to Guadalupe Pkwy	AM	20	7	13	13	36
			PM	5	5	0	65	65
		Guadalupe Pkwy to Ellis St	AM	9	6	3	43	65
			PM	11	6	5	35	65
Ellis St to San Mateo Co. Line		AM	7	5	2	46	65	
		PM	14	5	9	23	65	
SCL-237	WB	Rte 880 to Mathilda Ave	AM	12	7	5	38	65
			PM	9	7	2	50	65
	EB	Mathilda Ave to Rte 880	AM	8	6	2	49	65
			PM	14	12	2	28	33
SCL-280	SB	Magdalena Ave to Leland Ave	AM	11	10	1	59	65
			PM	16	10	6	41	65
	NB	Leland Ave to Magdalena Ave	AM	16	10	6	41	65
			PM	12	10	2	54	65
SM-101	SB	Whipple Ave to Santa Clara Co. Line	AM	15	7	8	30	65
			PM	10	7	3	46	65
	NB	Santa Clara Co. Line to Whipple Ave	AM	10	6	4	39	65
			PM	16	6	10	24	65
SOL-80	EB	Carquinez Bridge Toll Plaza	AM	1	1	0	65	65
			PM	1	1	0	65	65
<b>Overall Average Speed</b>							<b>40.5</b>	<b>61.6</b>

---

# **GENERAL FACILITY INFORMATION**

- **Mainline HOV Lanes**
  - **Toll Bridge HOV Bypass Lanes**
-

# District 4

## MAINLINE HOV LANES

### ALA-80: San Francisco-Oakland Bay Bridge Toll Plaza

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, 2-seat vehicles with 2 persons, inherently low-emission vehicles (ILEVs) with DMV issued decal.	
WESTBOUND	HOURS: 5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday	
	LIMITS:	<p>Lane 1: Route 880 left side HOV ramp to metering signals Length = 0.4 mile</p> <p>Lane 2: Route 580 connector to metering signals Length = 1.1 miles</p> <p>Lane 21: Route 880 right side HOV ramp to metering signals Length = 0.6 mile</p> <p>Lane 22: HOV slip ramp to metering signals Length = 0.8 miles</p>
	DATES:	<p>Apr 17, 1970 Opened; Buses only</p> <p>Dec 8, 1971 Carpools permitted; min. occ. three persons per vehicle</p> <p>Feb 2, 1979 Buses only in lane 17; 6:30-8:30, Mon-Fri-only lane on W. Grand Ave, approached from Maritime on-ramp to toll plaza; temporary measure in response to BART tube closure</p> <p>Apr 17, 1979 Bus-only in lane 17 &amp; W. Grand Ave approach made permanent; W. Grand Ave slip ramp designated for buses only; hours of operation changed to 6:00-9:00 AM, Mon-Fri; lane 8 reverted to mixed flow; carpools permitted to use lane 10 during AM peak</p> <p>Oct 12, 1981 Opened; lanes 18 &amp; 19; buses only, 24 hours/day, 7 days/week; carpools permitted, 6:00-9:00 AM, Mon-Fri; lane 17 reverted to mixed flow</p> <p>Jul 18, 1983 Lanes 8 &amp; 9 reverted to mixed flow; lane 1 converted to HOV; lanes 18/19 merge moved from downstream of toll plaza to downstream of metering signals</p> <p>Apr 22, 1986 Mini toll plaza (lane 18, 19, 20) opened; right side HOV lanes designated as lanes 21 &amp; 22</p> <p>Nov 3, 1989 Lane 2 converted to HOV; left HOVL extended upstream to 32nd St on-ramp; AM HOV hours changed to 5:00- 10:00 AM, Mon-Fri</p> <p>Mar 1, 1992 Motorcycles permitted</p> <p>Oct 1, 1995 Two-seat vehicles with two occupants permitted</p> <p>Apr 8, 1997 HOV slip ramp approaching right side of toll plaza opened; buses only, 24 hours/day, 7 days/week; carpools/motorcycles OK, 5:00-10:00 AM, 3:00-6:00 PM, Mon-Fri</p> <p>Jul 23, 1997 Route 880 right side HOV ramp opened; buses only, 24 hours/day, 7 days/week; carpools/motorcycles OK, 5:00-10:00 AM; 3:00-6:00 PM, Mon-Fri</p> <p>Feb. 2, 1998 PM Hours of operation changed to 3:00-7:00 PM</p> <p>May 16, 1998 Route 880 left side HOV ramp opened; buses/carpools/ motorcycles only, 5:00-10:00 AM, 3:00-7:00 PM, Mon-Fri</p> <p>Jul 1, 2000 Inherently low-emission vehicles with DMV issued decals permitted.</p>

---

## ALA-80: Contra Costa County Line to Powell St

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, 2-seat vehicles with 2 persons, inherently low-emission vehicles (ILEVs) with DMV issued decal.	
WESTBOUND	HOURS:	5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS:	Contra Costa County Line (MP 8.0) to Powell St (MP 3.8) Length = 4.2 miles
	DATES:	Feb. 2, 1998      Opened; Contra Costa County Line to Powell St; HOV flyover opened; hours of operation 5:00 AM-7:00 PM, Monday thru Friday Aug 3, 1998      Hours of operation changed to 5-10 AM, 3-7 PM, Mon-Fri
EASTBOUND	HOURS:	5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS:	Powell St (MP 3.8) to Contra Costa County Line (MP 8.0) Length = 4.2 miles
	DATES:	Jul 31, 1998      Opened; Gilman St to Contra Costa County Line Aug 3, 1998      Hours of operation changed to 5-10 AM, 3-7 PM, Mon-Fri Nov 20, 1998     Extended; Powell St to Gilman St

---

## ALA-84: Dumbarton Bridge Toll Plaza

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.	
WESTBOUND	HOURS:	5:00 - 10:00 AM, 3:00 - 6:00 PM, Monday thru Friday
	LIMITS:	Newark Blvd U/C (MP 4.9) to west of Toll Plaza (MP 3.1) Length = 1.8 miles
	DATES:	Oct 6, 1982      Opened with new bridge; 1000-ft long bypass lane at booths Nov 22, 1989     Extended due to Loma Prieta quake; Newark Blvd to University Ave Nov 17, 1990     Shortened; Newark Blvd to west of Toll Plaza Jan 1, 1992      Minimum occupancy reduced from three to two persons per vehicle
	NOTE:	HOV lane is located on the left side.

---

## ALA-92: San Mateo Bridge Toll Plaza

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.
WESTBOUND	HOURS: 5:00 - 10:00 AM, 3:00 - 6:00 PM, Monday thru Friday
	LIMITS: Hesperian on-ramp (MP 5.6) to west of Toll Plaza (MP 2.5) Length = 3.0 miles
	DATES: Oct 23, 1989 Opened; Clawiter Rd on-ramp to east of Toll Plaza Jan 1, 1992 Minimum occupancy reduced from three to two persons per vehicle Jan 15, 1992 Extended; Clawiter Rd on-ramp to west of Toll Plaza Jul 2, 2001 Extended and relocated; Hesperian Blvd. To West of Toll Plaza
	NOTE: HOV lane is now located on the left side.

---

## ALA/SCL-680: Route 84 to Route 237 Calaveras Blvd.

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.
SOUTHBOUND	HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS: Route 84 on-ramp (MP R11.5) to Route 237 Calaveras Blvd. On-ramp (MP M7.6) Length = 14.0 miles
	DATES: Nov 26, 2002 Opened; Washington Blvd. On-ramp to Route 237 Calaveras Blvd. On-ramp Dec 5, 2002 Extended; Route 84 on-ramp to Route 237 Calaveras Blvd. On-ramp

---

## ALA 880: Marina Blvd to Mission Blvd (Rte 262)

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.
SOUTHBOUND	HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS: Marina Blvd. (MP 22.7) to Mission Blvd. (Rte 262) (MP 2.4) Length = 20.3 miles
	DATES: Sep 22, 1991 Opened; A-Street to north of Tennyson Nov 6, 1991 Extended; Tennyson to Industrial Pkwy Jun 26, 1992 Extended; Rte 238 to A-Street Nov 18, 1993 Extended; Industrial Pkwy to Whipple Rd Dec 1994 Hours of operation changed from 5-10 AM and 3-6 PM to 5-9 AM, 3-7 PM respectively Mar 17, 1995 Extended; Marina Blvd to Rte 238 Jun 15, 1998 Extended; Whipple Rd. to Alvarado/ Fremont Blvd. Oct 23, 1998 Extended; Alvarado/Fremont Blvd. to Mowry Ave. Dec 11, 1998 Extended; Mowry Ave. to Mission Blvd. (Rte 262)

NORTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Mission Blvd. (MP 2.4) to one mile south of Rte 238 (MP 19.3)  
Length = 16.7 miles

DATES: Sep 19, 1991 Opened; north of Tennyson to A-Street  
Nov 8, 1991 Extended; Industrial Pkwy to Tennyson  
Jun 26, 1992 Extended; A-Street to Rte 238  
Dec 3, 1993 Extended; Whipple Rd to Industrial Pkwy  
Dec 1994 Hours of operation changed from 5-10 AM and 3-6 PM to  
5-9 AM, 3-7 PM respectively  
Sep 23, 1996 Shortened; Whipple Rd to one mile south of Rte 238  
Jun 15, 1998 Extended; Alvarado/Fremont Blvd. to Whipple Rd.  
Oct 30, 1998 Extended; Mowry Ave. to Alvarado/Fremont Blvd.  
Nov 30, 1998 Extended; Mission Blvd. (Rte 262) to Mowry Ave.

---

### **ALA-880: 16th Street to SFOBB Toll Plaza**

OCCUPANCY Three or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

NORTHBOUND HOURS: 5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: 16th Street to SFOBB Toll Plaza  
Length = 1.2 miles

DATES: May 16, 1998 Opened; 16th Street to left HOV ramp at SFOBB Toll Plaza

---

### **CC-4: West of Railroad Ave. to Port Chicago Highway**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

WESTBOUND HOURS: 6:00 - 9:00 AM, Monday thru Friday

LIMITS: West of Railroad Ave. (MP 22.6) to Port Chicago Highway (MPR16.2)  
Length = 6.5 miles

DATES: May 1, 2000 Opened; Bay Point to Port Chicago Highway; 6-9 AM, Mon-Fri  
May 5, 2000 Extended: Bailey Road to Port Chicago Highway  
Jul 23, 2001 Extended: West of Railroad Ave. to Port Chicago Highway

EASTBOUND HOURS: 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Port Chicago Highway (MPR 16.2) to West of Railroad Ave. (MPR22.5)  
Length = 7.0 miles

DATES: Aug 6, 2001 Opened; Port Chicago Highway to West of Railroad Ave.;  
3-7 PM. Mon-Fri.

---

## CC-80 Route 4 to Alameda County Line

OCCUPANCY Three or more persons per vehicle, motorcycles permitted, 2-seat vehicles with 2 persons, inherently low-emission vehicles (ILEVs) with DMV issued decal.

WESTBOUND HOURS: 5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Route 4 (MP 9.67) to Alameda County Line (MP 0.0)  
Length = 9.7 miles

DATES: Mar 5, 1997 Opened; Pinole Valley Rd to Cutting Blvd; 5-10 AM, Mon-Fri  
Apr 18, 1997 2-seat vehicles with 2 persons permitted to use HOVL  
May 3, 1997 Extended: Cutting Blvd to Central Ave  
Sep 20, 1997 Extended; Route 4 to Pinole Valley Rd  
Feb 2, 1998 Extended; Central Ave to Alameda County Line;  
Hours of operation changed to 5:00 AM-7:00 PM, Mon-Fri  
Aug 3, 1998 Hours of operation changed to 5-10 AM, 3-7 PM, Mon-Fri

EASTBOUND HOURS: 5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Alameda County Line (MP 0.0) to West of Route 4 off-ramp (MP 9.9)  
Length = 9.9 miles



DATES: Feb 12, 1997 Opened; San Pablo Dam Rd to Pinole Valley Rd; 3-7 PM, Mon-Fri  
Feb 13, 1997 Extended; Cutting Blvd to San Pablo Dam Rd  
Apr 18, 1997 2-seat vehicles with 2 persons permitted to use HOVL  
May 3, 1997 Extended; Central Ave to Cutting Blvd  
Aug 30, 1997 Extended; Pinole Valley Rd to Route 4  
Feb 2, 1998 Hours of operation changed to 5:00 AM-7:00 PM, Mon-Fri  
Aug 3, 1998 Hours of operation changed to 5-10 AM, 3-7 PM, Mon-Fri  
Extended; Central Ave to Alameda County Line

---

**CC-680: Livorna Rd to Alcosta Blvd.**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

NORTHBOUND HOURS: 6:00 - 9:00 AM, 3:00 - 6:00 PM, Monday thru Friday

LIMITS: 0.4 miles south of Alcosta on-ramp (MP R21.6) to Livorna on-ramp (MP R11.9)  
Length = 12.9 miles

DATES: Oct 3, 1994 Opened; Alcosta Blvd on-ramp to Stone Valley Rd on-ramp  
Feb 6, 1995 Extended; Alcosta Blvd to Livorna Rd on-ramp

SOUTHBOUND HOURS: 6:00 - 9:00 AM, 3:00 - 6:00 PM, Monday thru Friday

LIMITS: 0.5 miles north of Livorna Rd off-ramp (MP R11.9) to 0.6 miles south of Alcosta Blvd on-ramp (MP R21.6)  
Length = 11.9 miles

DATES: Oct 3, 1994 Opened; Stone Valley Rd on-ramp to Alcosta Blvd on-ramp  
Feb 6, 1995 Extended; Livorna Rd on-ramp to Alcosta Blvd  
May 5, 1999 Shortened; Livorna Rd on-ramp to north of Alcosta Blvd off-ramp

---

**MRN-101: Richardson Bay Bridge to Greenbrae I/C**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 6:30 - 8:30 AM, Monday thru Friday

LIMITS: North of Greenbrae ped OC (MP 8.4) to south of Strawberry ped OC (MP 4.7)  
Length = 3.7 miles

DATES: Dec 23, 1974 Opened; buses only  
 Jun 16, 1976 Carpools permitted; min. occ. three persons per vehicle  
 Oct 1, 1988 Minimum occupancy reduced from three to two persons per vehicle  
 Sep 23, 1990 Motorcycles permitted  
 Jul 13, 1998 HOV hours extended to 5:00-9:00 AM  
 Dec 14, 1998 Extended hours cancelled

NORTHBOUND HOURS: 4:30 - 7:00 PM, Monday thru Friday

LIMITS: South of Richardson Bay Bridge (MP 4.0) to north of Corte  
 Madera O/C (MP 7.5)  
 Length = 3.5 miles

DATES: Dec 20, 1974 Opened; buses only  
 Jun 15, 1976 Carpools permitted; min. occ. three persons per vehicle  
 Oct 1, 1988 Minimum occupancy reduced from three to two persons per vehicle  
 Sep 23, 1990 Motorcycles permitted  
 Jul 13, 1998 HOV hours extended to 3:00-7:00 PM  
 Dec 14, 1998 Extended hours cancelled

---

### MRN-101: North San Pedro Rd to Rte 37

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 6:30 - 8:30 AM, Monday thru Friday

LIMITS: Route 37/S. Novato Blvd (MP 18.9) to north of San Pedro U/C (MP 12.8)  
 Length = 6.1 miles

DATES: Jul 24, 1987 Opened; Marinwood to North San Pedro Rd  
 Oct 1, 1988 Minimum occupancy reduced from three to two persons per vehicle  
 Sep 23, 1990 Motorcycles permitted  
 Feb 8, 1991 Extended; Marinwood to Rte 37  
 Jul 13, 1998 HOV hours extended to 5:00-9:00 AM  
 Dec 14, 1998 Extended hours cancelled

NORTHBOUND HOURS: 4:30 - 7:00 PM, Monday thru Friday

LIMITS: North of San Pedro U/C (MP 12.8) to Route 37/S. Novato Blvd (MP 18.9)  
 Length = 6.1 miles

DATES: Aug 12, 1986 Opened; North San Pedro to Marinwood  
 Oct 1, 1988 Minimum occupancy reduced from three to two persons per vehicle  
 Sep 23, 1990 Motorcycles permitted  
 Feb 21, 1991 Extended; Marinwood to Rte 37  
 Jul 13, 1998 HOV hours extended to 3:00-7:00 PM  
 Dec 14, 1998 Extended hours cancelled

---

### **SON-101: Rte 12 to Wilfred Avenue**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 6:30 - 9:30 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Route 12 to Wilfred Avenue  
 Length = 5 miles

DATES: Nov 4, 2002 Opened.

NORTHBOUND HOURS: 6:30 - 9:30 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Wilfred Avenue to Rte 12  
 Length = 5 miles

DATES: Nov 4, 2002 Opened.

---

### **SCL-85: Rte 101 (Mountain View) to Rte 101 (So. San Jose)**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Rte 101 (MP 23.8) to Bernal Rd (MP 0.5)  
 Length = 23.3 miles

DATES: Apr 25, 1990 Opened; Rte 237 to Rte 280  
 Aug 12, 1994 New section; Almaden Expwy to Bernal Rd  
 Oct 19, 1994 Extended; Rte 280 to Almaden Expwy  
 Nov 13, 1998 Extended; Rte 101 (Mountain View) to Rte 237

NORTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Rte 85/101 connector ramp in So. San Jose (MP 0.0) to  
 Rte 101 in Mountain View (MP 23.8)  
 Length = 23.8 miles

DATES: Feb 22, 1990 Opened; Rte 280 to Rte 237  
 Aug 12, 1994 New section; Rte 101 (So. San Jose) to Almaden Expwy  
 Oct 19, 1994 Extended; Almaden Expwy to Rte 280  
 Nov 6, 1998 Extended; Rte 237 to Rte 101 (Mountain View)

---

**SCL-101: San Mateo County Line to Bernal Rd**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: San Mateo County Line (M 52.6) to 0.5 mile north of Bernal Rd off-ramp (MP 27.6)  
 Length = 25.0 miles

DATES: Nov 10, 1986 Opened; Lawrence Expwy to De La Cruz Blvd  
 Aug 8, 1988 Extended; Ellis St to Lawrence Expwy  
 Oct 10, 1988 Extended; N. Rengstorff Ave to Ellis St  
 Dec 12, 1988 Extended; San Mateo Co. Line to N. Rengstorff Ave  
 Jun 15, 1990 New section; Rte 101/280/680 I/C to north of Bernal Rd  
 Jan 29, 1993 Extended; Rte 880 to Rte 101/280/680 I/C  
 Apr 5, 1993 Extended; De La Cruz Blvd to Rte 880

NORTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Bernal Rd loop on-ramp (MP 27.0) to San Mateo County Line (MP 51.2)  
 Length = 24.2 miles

DATES: Nov 7, 1986 Opened; Guadalupe Pkwy to Great America Pkwy  
 Oct 10, 1988 Extended; Great America Pkwy to N. Rengstorff Ave  
 Dec 12, 1988 Extended; N. Rengstorff Ave to San Mateo Co. Line  
 Jun 7, 1990 New section; Bernal Rd to Rte 101/280/680 I/C  
 Feb 1, 1993 Extended; Rte 101/280/680 I/C to Old Oakland Rd  
 Apr 5, 1993 Extended; Old Oakland Rd to Guadalupe Pkwy

---

**SCL-237: Rte 880 to Mathilda Ave**

OCCUPANCY Two or more persons per vehicle, motorcycles permitted (Motorcycles were permitted on Apr 7, 1986), inherently low-emission vehicles (ILEVs) with DMV issued decal.

WESTBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Rte 880/237 merge (MP 9.5) to east of Mathilda Ave (MP 4.3)  
 Length = 5.2 miles

DATES: Oct 31, 1984 Opened; Rte 880 to Lawrence Expwy; right side HOVL  
 Nov/Dec 1991 Extended; Lawrence Expwy to east of Mathilda Ave; right side HOVL  
 May 1, 1995 Rte 237 upgraded to fwy; HOVL relocated to left lane;  
 hours expanded to include the PM peak (3-7 PM)

EASTBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Mathilda Ave (MP 3.0) to 1.1 mile west of Rte 880 (MP 8.1)  
 Length = 5.1 miles

DATES: Oct 31, 1984 Opened; Lawrence Expwy to Rte 880; right side HOVL  
 Nov/Dec 1991 Extended; Mathilda Ave to Rte 880  
 May 1, 1995 Rte 237 upgraded to fwy; HOVL relocated to left lane;  
 hours expanded to include the AM peak (5-9 AM)  
 Oct 2, 1996 Shortened; Mathilda Ave to 1.1 miles west of Rte 880

## SCL-280: Magdalena Ave to Leland Ave

OCCUPANCY Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.

SOUTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: Magdalena Ave on-ramp (MP 14.0) to north of Meridian Ave (MP R4.2)  
 Length = 11.2 miles

DATES: Dec 1, 1990 Opened; Magdalena Ave to north of Meridian Ave

NORTHBOUND HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday

LIMITS: South of Leland Ave (MP L4.7) to Magdalena Ave off-ramp (MP 14.0)  
 Length = 10.7 miles

DATES: Nov 21, 1990 Opened; south of Leland Ave to Magdalena Ave

---

## SM-101: Whipple Ave to Santa Clara County Line

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.
SOUTHBOUND	HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS: Whipple Ave (MP 6.6) to Santa Clara Co. Line (MP 0.0) Length = 6.6 miles
	DATES: Jul 18, 1991      Opened
NORTHBOUND	HOURS: 5:00 - 9:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS: Santa Clara Co. Line (MP 0.0) to Whipple Ave (MP 6.6) Length = 6.6 miles
	DATES: Jul 16, 1991      Opened

---

## SOL-80: Carquinez Bridge Toll Plaza

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, 2-seat vehicles with 2 persons, inherently low-emission vehicles (ILEVs) with DMV issued decals.
EASTBOUND	HOURS: 5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday
	LIMITS: 0.1 miles West of Toll Plaza (MP 0.5) to east of Toll Plaza (MP 0.6) Length = 0.1 mile
	DATES: Jul 1, 1991      Reduced 10c toll tickets for HOVs (with purchase of 50-ticket book) Oct 1, 1995      Toll-free passage in designated booth only; Two-seat vehicles with two occupants permitted Jul 30, 1997      Opened; West of Toll Plaza to east of Toll Plaza
NOTE:	HOV lane is located in toll booth #6

# District 4

## TOLL BRIDGE HOV BYPASS LANES

---

### Benicia, Antioch Bridges

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, two-seat vehicles with two occupants, inherently low-emission vehicles (ILEVs) with DMV issued decals.	
HOURS	5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday	
TOLL-FREE BOOTH	Benicia	#4, #5
	Antioch	Any booth
DATES	Jul 1, 1991	Reduced 10¢ toll tickets for HOVs (with purchase of 50-ticket book)
	Oct 1, 1995	Toll-free passage in designated booth only; Two-seat vehicles with two occupants permitted

---

### Richmond-San Rafael Bridge

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, two-seat vehicles with two occupants, inherently low-emission vehicles (ILEVs) with DMV issued decals.	
HOURS	5:00 - 10:00 AM, 3:00 - 6:00 PM, Monday thru Friday	
TOLL-FREE BOOTH	#7	
DATES	Oct. 23, 1989	Toll-free passage in designated booth only;
	Oct 1, 1995	Two-seat vehicles with two occupants permitted

---

### San Mateo, Dumbarton Bridges

OCCUPANCY	Two or more persons per vehicle, motorcycles permitted, inherently low-emission vehicles (ILEVs) with DMV issued decal.	
HOURS	5:00 - 10:00 AM, 3:00 - 6:00 PM, Monday thru Friday	
TOLL-FREE BOOTH	San Mateo	Right side bypass lane
	Dumbarton	Left side bypass lane
DATES	See information in Mainline HOV Lane section	

# District 4

## TOLL BRIDGE HOV BYPASS LANES

---

### San Francisco-Oakland Bay Bridge

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, two-seat vehicles with two occupants, inherently low-emissions vehicles (ILEVs) with DMV issued decal.
HOURS	5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday
TOLL-FREE BOOTHS	#1, #2, Lanes 21 & 22
DATES	See information in Ala-80 Mainline HOV Lane section

---

### Carquinez Bridge

OCCUPANCY	Three or more persons per vehicle, motorcycles permitted, two-seat vehicles with two occupants, inherently low-emissions vehicles (ILEVs) with DMV issued decal.
HOURS	5:00 - 10:00 AM, 3:00 - 7:00 PM, Monday thru Friday
TOLL-FREE BOOTHS	# 6
DATES	See information in Sol-80 Mainline HOV lane section



---

# **MAINLINE HOV LANES**

## **VOLUME/PERSON DATA and VIOLATION HISTORY**

---

# ALAMEDA-80

San Francisco-Oakland Bay Bridge Toll Plaza

# Westbound A.M.

Typical data for 2002<sup>(6)</sup>

VEHICLES	PEAK PERIOD <sup>(5)</sup> 5:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lanes	Mixed Flow Lanes	HOV Lanes	Mixed Flow Lanes
Motorcycles	641	—	165	—
Buses <sup>(4)</sup>	294	—	105	—
Carpools <sup>(1)</sup>	6910	—	2457	—
2 - seaters <sup>(2)</sup>	2337	—	677	—
Vanpools	214	—	48	—
Violators	1085	—	278	—
<b>TOTAL</b>	<b>11481</b>	<b>31885</b>	<b>3730</b>	<b>5818</b>

PERSONS	PEAK PERIOD <sup>(5)</sup> 5:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lanes	Mixed Flow Lanes	HOV Lanes	Mixed Flow Lanes
Motorcycles	641	—	165	—
Buses <sup>(4)</sup>	10290	—	3675	—
Carpools <sup>(1)</sup>	21421	—	7617	—
2 - seaters <sup>(2)</sup>	4674	—	1354	—
Vanpools	2140	—	480	—
Violators	1719	—	458	—
<b>TOTAL</b>	<b>40885</b>	<b>36668</b>	<b>13749</b>	<b>6691</b>

RATES	PEAK PERIOD <sup>(5)</sup> 5:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane occupancy rate	3.6 persons/veh		3.7 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	9.5 %		7.5 %	

**NOTES:**

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) Assumed AM bus occupancy = 35 persons/vehicle.
- (5) HOV lanes in operation from 5:00 to 10:00 AM.
- (6) Observations conducted 5/9/02 at the SFOBB Toll Plaza.

# ALAMEDA-80

San Francisco-Oakland Bay Bridge Toll Plaza

# Westbound P.M.

Typical data for 2002 <sup>(6)</sup>

VEHICLES	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lanes	Mixed Flow Lanes	HOV Lanes	Mixed Flow Lanes
Motorcycles	280	—	94	—
Buses <sup>(4)</sup>	291	—	60	—
Carpools <sup>(1)</sup>	1873	—	618	—
2 - seaters <sup>(2)</sup>	413	—	111	—
Vanpools	81	—	18	—
Violators	389	—	156	—
<b>TOTAL</b>	<b>3327</b>	<b>27957</b>	<b>1057</b>	<b>7127</b>

PERSONS	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lanes	Mixed Flow Lanes	HOV Lanes	Mixed Flow Lanes
Motorcycles	280	—	94	—
Buses <sup>(4)</sup>	4656	—	960	—
Carpools <sup>(1)</sup>	5806	—	1916	—
2 - seaters <sup>(2)</sup>	826	—	222	—
Vanpools	648	—	144	—
Violators	642	—	257	—
<b>TOTAL</b>	<b>12858</b>	<b>33548</b>	<b>3593</b>	<b>8552</b>

RATES	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lanes	Mixed Flow Lanes	HOV Lanes	Mixed Flow Lanes
HOV Lane occupancy rate	3.9 persons/veh		3.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	11.7 %		14.8 %	

### NOTES:

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) Assumed PM bus occupancy = 16 persons/vehicle.
- (5) HOV lanes in operation from 3:00 to 7:00 P.M.
- (6) Observations conducted 9/18/02 at the SFOBB Toll Plaza.

# ALAMEDA-80

San Francisco-Oakland Bay Bridge

## Violation History

Westbound

	DATE	TOTAL HOVL VOLUME	VIOLATION RATE	By Lane		By Time				
				Lanes 1 & 2	Lanes 21&22	5 - 6 AM	6 - 7 AM	7 - 8 AM	8 - 9 AM	9 - 10 AM
<b>A.M. PEAK</b>	Thu May 9, 2002	11481	<b>9.5%</b>	4.9%	13.8%	22.4%	12.0%	7.5%	3.8%	10.5%
	Wed May 23, 2001	13100	<b>10.0%</b>	7.2%	12.8%	22.3%	12.2%	5.8%	6.9%	10.4%
	Thu Nov 9, 2000	12991	<b>14.7%</b>	8.9%	19.9%	37.8%	16.9%	10.4%	6.4%	14.3%
	Thu Oct 14, 1999	11644	<b>19.5%</b>	9.8%	29.7%	60.1%	32.6%	7.7%	6.9%	11.5%
	Tue Apr 21, 1998	9696	<b>10.6%</b>	7.6%	12.5%	14.2%	22.7%	6.4%	4.1%	9.2%
	Wed Jun 11, 1997	7655	<b>10.9%</b>	1.0%	12.4%	20.9%	10.6%	8.1%	6.0%	21.5%
	Tue Apr 23, 1996	7258	<b>10.6%</b>	10.9%	9.6%	17.1%	12.5%	8.2%	7.5%	16.9%
	Tue Oct 17, 1995	6985	<b>7.3%</b>	8.1%	5.5%	7.6%	2.6%	8.0%	8.1%	9.7%
	Tue May 17, 1994	6035	<b>10.6%</b>	8.9%	12.2%	31.4%	19.9%	6.0%	5.7%	12.5%
	Thu Nov 4, 1993	6182	<b>6.0%</b>	5.0%	7.0%	11.5%	8.9%	3.1%	3.4%	10.1%
	Wed May 6, 1992	7127	<b>7.5%</b>	4.5%	10.5%	23.9%	9.5%	5.1%	3.6%	11.2%
	Tue Apr 16, 1991	7320	<b>8.8%</b>	9.6%	7.8%	25.1%	15.4%	6.2%	2.9%	10.0%
	Tue Oct 16, 1990	6399	<b>8.3%</b>	10.2%	6.6%	22.0%	13.2%	6.2%	3.8%	10.6%
	Tue Apr 25, 1989	7832	<b>3.8%</b>	5.1%	3.3%	15.0%	6.2%	1.7%	1.8%	10.4%
<b>P.M. PEAK</b>	Wed Sep 18, 2002	3327	<b>11.7%</b>	12.7%	15.0%		<b>3 - 4 PM</b>	<b>4 - 5 PM</b>	<b>5 - 6 PM</b>	<b>6 - 7 PM</b>
	Wed Oct 3, 2001	3602	<b>9.8%</b>	10.6%	8.8%		16.5%	11.6%	10.9%	15.8%
	Thu Oct 19, 2000	3673	<b>25.6%</b>	17.0%	33.3%		12.6%	7.6%	9.3%	10.1%
	Thu Oct 14, 1999	3193	<b>10.6%</b>	12.0%	9.0%		32.0%	24.4%	21.1%	25.3%
	Tue Oct 20, 1998	2335	<b>19.1%</b>	15.6%	21.6%		15.6%	10.4%	7.6%	9.7%
	Wed Jun 11, 1997	1905	<b>17.0%</b>	19.2%	12.5%		26.6%	24.9%	10.1%	0.17
	Tue Apr 23, 1996	1737	<b>14.7%</b>	17.2%	7.7%		23.0%	14.3%	13.7%	—
	Tue Oct 17, 1995	1660	<b>15.8%</b>	15.5%	16.4%		16.1%	12.5%	15.7%	—
	Tue May 17, 1994	1539	<b>12.3%</b>	12.6%	11.9%		18.4%	14.0%	15.3%	—
	Thu Oct 14, 1993	1579	<b>5.6%</b>	3.5%	9.9%		16.8%	11.1%	9.9%	—
	Wed May 6, 1992	1554	<b>5.2%</b>	5.4%	5.0%		7.6%	4.9%	4.9%	—
	Tue Apr 16, 1991	1466	<b>8.2%</b>	7.3%	10.2%		7.1%	3.4%	5.4%	—
	Sat Oct 6, 1990	1165	<b>5.4%</b>	4.9%	6.1%		9.4%	7.5%	7.9%	—
	Tue Apr 25, 1989	1498	<b>3.2%</b>	2.9%	3.7%		6.7%	5.3%	4.6%	—

- NOTES:** (a) Hours of operation were extended from 6-9 AM to 5-10 AM on September 7, 1988.  
 (b) The HOVL violation fine increased in early 1989.  
 (c) Lane 2 changed to HOV after the October 17, 1989 Earthquake.  
 (d) Two-seater vehicles with 2 persons allowed in HOVL effective October 1, 1995.  
 (e) Hours of operation were extended from 3-6 PM to 3-7 PM on February 2, 1998.  
 (f) Hours of operation from 5:00 to 10:00 AM and 3:00 to 7:00 PM.

# HOV FLYOVER RAMP

Powell Street to SFOBB  
ALAMEDA-80

# Westbound A.M.

Typical data for 2002 <sup>(5)</sup>

## PEAK PERIOD <sup>(4)</sup>

6:00 - 10:00 AM

## PEAK HOUR

7:00 - 8:00 AM

### VEHICLES

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	122	—	23	—
Buses	81	—	21	—
Carpool <sup>(1)</sup>	3226	—	1094	—
2 - seaters <sup>(2)</sup>	1004	—	291	—
Vanpools	78	—	15	—
Violators	133	—	41	—
<b>TOTAL</b>	<b>4644</b>	<b>N/A</b>	<b>1485</b>	<b>N/A</b>

### PERSONS

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	122	—	23	—
Buses	2835	—	735	—
Carpool <sup>(1)</sup>	10001	—	3391	—
2 - seaters <sup>(2)</sup>	2008	—	582	—
Vanpools	780	—	150	—
Violators	191	—	66	—
<b>TOTAL</b>	<b>15937</b>	<b>N/A</b>	<b>4947</b>	<b>N/A</b>

### RATES

HOV Lane occupancy rate	3.4 persons/veh	3.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	2.9 %	2.8 %

#### NOTES:

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 AM.
- (5) Observations conducted 5/29/02 at the downstream touchdown of the flyover.

# HOV FLYOVER RAMP

Powell Street to SFOBB  
ALAMEDA-80

# Westbound P.M.

Typical data for 2002 <sup>(5)</sup>

## PEAK PERIOD <sup>(4)</sup>

3:00 - 7:00 PM

## PEAK HOUR

5:00 - 6:00 PM

### VEHICLES

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	81	—	19	—
Buses	90	—	27	—
Carpool <sup>(1)</sup>	586	—	164	—
2 - seaters <sup>(2)</sup>	121	—	42	—
Vanpools	16	—	2	—
Violators	229	—	46	—
<b>TOTAL</b>	<b>1123</b>	<b>N/A</b>	<b>300</b>	<b>N/A</b>

### PERSONS

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	81	—	19	—
Buses	1440	—	432	—
Carpool <sup>(1)</sup>	1817	—	508	—
2 - seaters <sup>(2)</sup>	242	—	84	—
Vanpools	128	—	16	—
Violators	368	—	64	—
<b>TOTAL</b>	<b>4076</b>	<b>N/A</b>	<b>1123</b>	<b>N/A</b>

### RATES

HOV Lane occupancy rate	3.6 persons/veh	3.7 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	20.4 %	15.3 %

#### NOTES:

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 PM.
- (5) Observations conducted 9/17/02 at the downstream touchdown of the flyover.

# HOV FLYOVER RAMP

Powell Street to SFOBB

## ALAMEDA-80

# Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>AM - PEAK</b>	Wed May 29, 2002	6:00 - 10:00 AM	4644	2.9%
	Wed Mar 28, 2001	5:00 - 10:00 AM	5108	18.6%
	Wed May 17, 2000	5:00 - 10:00 AM	5274	16.5%
	Wed Apr 21, 1999	7:00 - 10:00 AM	3900	5.6%
	Tue Oct 20, 1998	5:00 - 10:00 AM	4575	20.4%
<b>PM - PEAK</b>	Tue Sep 17, 2002	3:00 - 7:00 PM	1123	20.4%
	Wed Oct 3, 2001	3:00 - 7:00 PM	1045	26.1%
	Tue Dec 12, 2000	3:00 - 5:00 PM	490	16.1%
	Wed Feb 3, 1999	3:00 - 7:00 PM	946	30.7%
	Wed Oct 7, 1998	3:00 - 7:00 PM	1055	22.7%

### NOTES:

- (a) Morning period of operation from 5:00 to 10:00 AM
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Occupancy count is from 6:00 to 10:00 AM only due to poor visibility as a result of darkness.

# ALAMEDA-80

Contra Costa County Line to Powell Street

# Westbound A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	217	84	61	43
Buses	89	18	31	5
Carpools <sup>(1)</sup>	4541	643	1537	234
Vanpools	96	13	12	5
Single Occ. <sup>(2)</sup>	—	27771	—	7205
Violators	471	—	57	—
<b>TOTAL</b>	<b>5414</b>	<b>28529</b>	<b>1698</b>	<b>7492</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	217	84	61	43
Buses	3115	630	1085	175
Carpools <sup>(1)</sup>	12060	2331	3796	941
Vanpools	960	130	120	50
Single Occ. <sup>(2)</sup>	—	29945	—	7836
Violators	692	—	84	—
<b>TOTAL</b>	<b>17044</b>	<b>33120</b>	<b>5146</b>	<b>9045</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane occupancy rate	3.1 persons/veh		3.0 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.5 persons/veh		1.5 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	8.7 %		3.4 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 5/8/02 at Ashby Avenue Interchange.



# ALAMEDA-80

Contra Costa County Line to Powell Street

# Westbound P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	114	28	28	10
Buses	133	9	48	1
Carpools <sup>(1)</sup>	2226	665	519	172
Vanpools	44	13	23	4
Single Occ. <sup>(2)</sup>	—	22588	—	6057
Violators	585	—	71	—
<b>TOTAL</b>	<b>3102</b>	<b>23303</b>	<b>689</b>	<b>6244</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	114	28	28	10
Buses	2128	144	768	16
Carpools <sup>(1)</sup>	3554	2398	611	587
Vanpools	352	104	184	32
Single Occ. <sup>(2)</sup>	—	25082	—	6809
Violators	805	—	109	—
<b>TOTAL</b>	<b>6953</b>	<b>27756</b>	<b>1700</b>	<b>7454</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane occupancy rate	2.2 persons/veh		2.5 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	18.9 %		10.3 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 5/9/02 at Ashby Avenue Interchange.

# ALAMEDA-80

Powell Street to Contra Costa County Line

# Eastbound A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	70	64	30	18
Buses	41	54	12	24
Carpools <sup>(1)</sup>	425	838	119	174
Vanpools	22	33	5	11
Single Occ. <sup>(2)</sup>	—	21644	—	5978
Violators	119	—	33	—
<b>TOTAL</b>	<b>677</b>	<b>22633</b>	<b>199</b>	<b>6205</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	70	64	30	18
Buses	656	864	192	384
Carpools <sup>(1)</sup>	1094	2317	333	514
Vanpools	176	264	40	88
Single Occ. <sup>(2)</sup>	—	23770	—	6574
Violators	140	—	40	—
<b>TOTAL</b>	<b>2136</b>	<b>27279</b>	<b>635</b>	<b>7578</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane occupancy rate	3.2 persons/veh	3.2 persons/veh	3.2 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	17.6 %	17.6 %	16.6 %	16.6 %

### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 6/5/02 at Ashby Avenue Interchange.

# ALAMEDA-80

Powell Street to Contra Costa County Line

# Eastbound P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	226	64	55	23
Buses	99	23	31	4
Carpools <sup>(1)</sup>	3972	887	942	282
Vanpools	115	6	12	0
Single Occ. <sup>(2)</sup>	—	26084	—	6660
Violators	123	—	30	—
<b>TOTAL</b>	<b>4535</b>	<b>27064</b>	<b>1070</b>	<b>6969</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	226	64	55	23
Buses	3465	805	1085	140
Carpools <sup>(1)</sup>	11580	2194	2512	698
Vanpools	1150	60	120	0
Single Occ. <sup>(2)</sup>	—	29250	—	7590
Violators	195	—	44	—
<b>TOTAL</b>	<b>16616</b>	<b>32373</b>	<b>3816</b>	<b>8451</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 6:00 to 7:00 P.M.	
	HOV Lane occupancy rate	3.7 persons/veh		3.6 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.6 persons/veh		1.5 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.7 %		2.8 %	

### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 5/16/02 at Ashby Avenue Interchange.



# ALAMEDA-80

Powell Street to Contra Costa County Line

## Violation History Eastbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Jun 5, 2002	6:00 - 10:00 PM	677	17.6%
	Wed May 30, 2001	6:00 - 10:00 PM	606	21.5%
	Tue Dec 19, 2000	7:00 - 10:00 PM	221	7.7%
	Tue Apr 20, 1999	7:00 - 10:00 PM	531	20.9%
	Thu Dec 17, 1998	7:00 - 10:00 PM	311	16.7%
<b>P.M. PEAK</b>	Thu May 16, 2002	3:00 - 7:00 PM	4535	2.7%
	Thu Sep 27, 2001	3:00 - 7:00 PM	4655	6.5%
	Thu Sep 14, 2000	3:00 - 7:00 PM	4415	3.4%
	Wed Oct 20, 1999	3:00 - 7:00 PM	4287	1.3%
	Tue Dec 15, 1998	3:00 - 5:00 PM	1415	7.1%

- NOTES:** (a) Morning period of operation from 5:00 to 10:00 AM  
(b) Evening period of operation from 3:00 to 7:00 PM  
(c) Occupancy count is from 6:00 to 10:00 AM only due to poor visibility as a result of darkness.

# ALAMEDA-84

Newark Boulevard to west of Dumbarton Bridge Toll Plaza

# Westbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	105	0	33	0
Buses	19	0	6	0
Carpools <sup>(1)</sup>	2797	40	1150	8
Vanpools	17	0	4	0
Single Occ. <sup>(2)</sup>	—	11059	—	3820
Violators	106	—	36	—
<b>TOTAL</b>	<b>3044</b>	<b>11099</b>	<b>1229</b>	<b>3828</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	105	0	33	0
Buses	665	0	210	0
Carpools <sup>(1)</sup>	5740	83	2336	17
Vanpools	170	0	40	0
Single Occ. <sup>(2)</sup>	—	11059	—	3820
Violators	106	—	36	—
<b>TOTAL</b>	<b>6786</b>	<b>11142</b>	<b>2655</b>	<b>3837</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.5 %		2.9 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 05/14/02 at Dumbarton Bridge Toll Plaza

# ALAMEDA-84

Newark Boulevard to west of Dumbarton Bridge Toll Plaza

# Westbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	20	0	9	0
Buses	12	4	2	2
Carpools <sup>(1)</sup>	888	166	314	52
Vanpools	48	1	10	0
Single Occ. <sup>(2)</sup>	—	3616	—	1363
Violators	45	—	19	—
<b>TOTAL</b>	<b>1013</b>	<b>3787</b>	<b>354</b>	<b>1417</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	20	0	9	0
Buses	420	140	70	70
Carpools <sup>(1)</sup>	1885	352	663	115
Vanpools	480	10	100	0
Single Occ. <sup>(2)</sup>	—	3616	—	1363
Violators	45	—	19	—
<b>TOTAL</b>	<b>2850</b>	<b>4118</b>	<b>861</b>	<b>1548</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.8 persons/veh		2.4 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.5 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.4 %		5.4 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 6:00 P.M.
- (5) Observations conducted 02/28/02 at Dumbarton Bridge Toll Plaza

# ALAMEDA-84

Newark Boulevard to west of Dumbarton Bridge Toll Plaza

## Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue May 14, 2002	6:00 - 9:00 AM	3044	3.5%
	Tue Apr 10, 2001	6:00 - 10:00 AM	4480	3.1%
	Thu Oct 19, 2000	6:00 - 9:00 AM	4106	3.5%
	Tue Mar 16, 1999	6:00 - 9:00 AM	3906	5.7%
	Thu Apr 2, 1998	6:00 - 9:00 AM	3601	0.4%
	Tue Apr 29, 1997	6:00 - 9:00 AM	2900	16.9%
	Tue May 14, 1996	6:00 - 10:00 AM	3095	15.0%
	Thu Mar 30, 1995	6:00 - 9:00 AM	2248	13.0%
	Wed Sep 28, 1994	6:15 - 9:00 AM	2207	2.9%
	Thu Jun 3, 1993	6:00 - 9:00 AM	2422	2.4%
	Tue May 5, 1992	6:15 - 10:00 AM	2020	2.3%
	Wed Oct 16, 1991	7:15 - 10:00 AM	623	18.8%
	Thu May 31, 1990	6:00 - 9:00 AM	586	20.1%
<b>P.M. PEAK</b>	Thu Feb 28, 2002	3:00 - 6:00 PM	1013	4.4%
	Tue Mar 20, 2001	3:00 - 6:00 PM	919	2.2%
	Thu Oct 19, 2000	3:00 - 6:00 PM	849	3.1%
	Wed Sep 22, 1999	3:00 - 6:00 PM	949	2.0%
	Wed Apr 15, 1998	3:00 - 6:00 PM	981	1.6%
	Thu Oct 2, 1997	3:00 - 6:00 PM	819	6.6%
	Tue May 14, 1996	3:00 - 6:00 PM	605	2.8%
	Thu Mar 30, 1995	3:00 - 6:00 PM	709	3.8%
	Tue Sep 27, 1994	3:00 - 6:00 PM	701	7.8%
	Thu May 27, 1993	3:00 - 6:00 PM	604	6.8%
	Thu Oct 15, 1992	3:00 - 6:00 PM	746	9.4%
	Tue Apr 2, 1991	3:00 - 6:00 PM	174	22.4%
	Thu Nov 15, 1990	3:00 - 5:00 PM	161	49.1%

- NOTES:** (a) Minimum occupancy requirement was reduced to 2 persons per vehicle on January 1, 1992.  
(b) Morning period of operation from 5:00 to 10:00 AM.  
(c) Evening period of operation from 3:00 to 6:00 PM.



# ALAMEDA-92

Hesperian Boulevard to San Mateo-Hayward Bridge Toll Plaza

# Westbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	30	3	6	1
Buses	14	0	7	0
Carpools <sup>(1)</sup>	1855	93	774	18
Vanpools	48	0	22	0
Single Occ. <sup>(2)</sup>	—	8812	—	2841
Violators	62	—	30	—
<b>TOTAL</b>	<b>2009</b>	<b>8908</b>	<b>839</b>	<b>2860</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	30	3	6	1
Buses	490	0	245	0
Carpools <sup>(1)</sup>	3787	189	1584	37
Vanpools	480	0	220	0
Single Occ. <sup>(2)</sup>	—	8812	—	2841
Violators	62	—	30	—
<b>TOTAL</b>	<b>4849</b>	<b>9004</b>	<b>2085</b>	<b>2879</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.4 persons/veh		2.5 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.1 %		3.6 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 10/23/02 at the San Mateo Bridge Toll Plaza.

# ALAMEDA-92

# Westbound - P.M.

Hesperian Boulevard to West of San Mateo-Hayward Bridge Toll Plaza

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	36	6	14	1
Buses	10	0	3	0
Carpools <sup>(1)</sup>	1117	591	435	174
Vanpools	56	1	22	1
Single Occ. <sup>(2)</sup>	—	5379	—	2027
Violators	56	—	18	—
<b>TOTAL</b>	<b>1275</b>	<b>5977</b>	<b>492</b>	<b>2203</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	36	6	14	1
Buses	350	0	105	0
Carpools <sup>(1)</sup>	2414	1265	929	367
Vanpools	560	10	220	10
Single Occ. <sup>(2)</sup>	—	5379	—	2027
Violators	56	—	18	—
<b>TOTAL</b>	<b>3416</b>	<b>6660</b>	<b>1286</b>	<b>2405</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.7 persons/veh		2.6 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.4 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.4 %		3.7 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 6:00 P.M.
- (5) Observations conducted 06/11/02 at the San Mateo Bridge Toll Plaza.

# ALAMEDA-92

Hesperian Blvd. to West of San Mateo - Hayward Bridge Toll Plaza

## Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Oct 23, 2002	6:00 - 9:00 AM	2009	3.1%
	Thu Sep 20, 2001	6:00 - 9:00 AM	2075	8.1%
	Tue Oct 24, 2000	6:00 - 9:00 AM	2480	8.2%
	Wed Mar 17, 1999	6:00 - 9:00 AM	2534	9.4%
	Tue Mar 17, 1998	6:00 - 9:00 AM	2255	8.2%
	Tue Oct 7, 1997	6:00 - 9:00 AM	2111	14.9%
	Tue Apr 30, 1996	6:00 - 10:00 AM	1899	11.2%
	Tue Apr 4, 1995	6:00 - 9:00 AM	1344	21.1%
	Wed Oct 5, 1994	7:00 - 9:00 AM	982	9.1%
	Wed Jun 2, 1993	6:00 - 9:00 AM	1570	3.0%
	Wed Apr 29, 1992	6:00 - 9:00 AM	1452	8.1%
	Wed Jun 5, 1991	6:00 - 10:00 AM	1190	60.3%
	Tue Mar 27, 1990	6:00 - 10:00 AM	1016	71.5%
<b>P.M. PEAK</b>	Tue Jun 11, 2002	3:00 - 6:00 PM	1275	4.4%
	Wed Oct 3, 2001	3:00 - 6:00 PM	1177	5.4%
	Thu Apr 13, 2000	3:00 - 6:00 PM	1243	1.4%
	Thu Mar 4, 1999	3:00 - 6:00 PM	1128	3.2%
	Thu Mar 26, 1998	3:00 - 6:00 PM	1210	3.8%
	Wed Oct 8, 1997	3:00 - 6:00 PM	1138	6.8%
	Tue Apr 30, 1996	3:00 - 6:00 PM	973	7.9%
	Tue Apr 4, 1995	3:00 - 6:00 PM	944	10.3%
	Wed Oct 5, 1994	3:00 - 6:00 PM	1003	14.1%
	Thu Apr 28, 1994	3:00 - 6:00 PM	1020	8.0%
	Tue Oct 27, 1992	3:00 - 5:30 PM	790	10.7%
	Thu Oct 17, 1991	3:00 - 6:00 PM	603	47.9%
	Thu Nov 1, 1990	3:00 - 5:15 PM	431	66.8%

- NOTES:** (a) Minimum occupancy requirement was reduced to 2 persons per vehicle on January 1, 1992.  
(b) Morning period of operation from 5:00 to 10:00 AM.  
(c) Evening period of operation from 3:00 to 6:00 PM.

# ALAMEDA-680

Route 84 to Route 237 Calaveras Blvd.

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	57	19	23	2
Buses	0	21	0	8
Carpools <sup>(1)</sup>	989	856	371	495
Vanpools	4	0	1	0
Single Occ. <sup>(2)</sup>	—	15040	—	5323
Violators	48	—	25	—
<b>TOTAL</b>	<b>1098</b>	<b>15936</b>	<b>420</b>	<b>5828</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	57	19	23	2
Buses	0	735	0	280
Carpools <sup>(1)</sup>	2008	1764	764	1018
Vanpools	40	0	10	0
Single Occ. <sup>(2)</sup>	—	15040	—	5323
Violators	48	—	25	—
<b>TOTAL</b>	<b>2153</b>	<b>17558</b>	<b>822</b>	<b>6623</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.4 %		6.0 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 12/05/02 at Washington Blvd. I/C

# ALAMEDA - 680

Route 84 to Route 237/ Calaveras

## Violation History Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Dec 5, 2002	6:00 - 9:00 AM	1098	4.4%

*(a) Morning period of operation from 5:00 to 9:00 AM.*

**NOTES:**

# ALAMEDA-880

Marina Boulevard to Whipple Road

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	118	15	41	1
Buses	32	29	20	19
Carpools <sup>(1)</sup>	3195	390	1026	151
Vanpools	19	2	4	0
Single Occ. <sup>(2)</sup>	—	13411	—	4537
Violators	274	—	105	—
<b>TOTAL</b>	<b>3638</b>	<b>13847</b>	<b>1196</b>	<b>4708</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	118	15	41	1
Buses	1120	1015	700	665
Carpools <sup>(1)</sup>	6602	822	2127	314
Vanpools	190	20	40	0
Single Occ. <sup>(2)</sup>	—	13411	—	4537
Violators	274	—	105	—
<b>TOTAL</b>	<b>8304</b>	<b>15283</b>	<b>3013</b>	<b>5517</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane occupancy rate	2.3 persons/veh		2.5 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	7.5 %		8.8 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 06/11/02 at the Tennyson Road I/C.

# ALAMEDA-880

Marina Boulevard to Whipple Road

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	68	18	20	2
Buses	10	16	2	5
Carpools <sup>(1)</sup>	3127	883	1185	178
Vanpools	18	60	6	15
Single Occ. <sup>(2)</sup>	—	12325	—	4282
Violators	178	—	67	—
<b>TOTAL</b>	<b>3401</b>	<b>13302</b>	<b>1280</b>	<b>4482</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	68	18	20	2
Buses	350	560	70	175
Carpools <sup>(1)</sup>	6553	1905	2508	399
Vanpools	180	600	60	150
Single Occ. <sup>(2)</sup>	—	12325	—	4282
Violators	178	—	67	—
<b>TOTAL</b>	<b>7329</b>	<b>15408</b>	<b>2725</b>	<b>5008</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.4 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.2 %		5.2 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 06/05/02 at Tennyson Road I/C.

# ALAMEDA-880

Whipple Road to South of Route 238

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	58	12	21	1
Buses	30	22	14	13
Carpools <sup>(1)</sup>	2181	320	888	160
Vanpools	65	6	26	4
Single Occ. <sup>(2)</sup>	—	11837	—	4020
Violators	226	—	121	—
<b>TOTAL</b>	<b>2560</b>	<b>12197</b>	<b>1070</b>	<b>4198</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	58	12	21	1
Buses	1050	770	490	455
Carpools <sup>(1)</sup>	4514	679	1841	341
Vanpools	650	60	260	40
Single Occ. <sup>(2)</sup>	—	11837	—	4020
Violators	226	—	121	—
<b>TOTAL</b>	<b>6498</b>	<b>13358</b>	<b>2733</b>	<b>4857</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.5 persons/veh		2.6 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	8.8 %		11.3 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 09/12/02 at Tennyson Road I/C.



# ALAMEDA-880

Whipple Road to South of Route 238

# Northbound - P.M.

Typical data for 2002 (5)

VEHICLES	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	118	4	47	2
Buses	8	9	4	1
Carpools (1)	3391	470	1098	161
Vanpools	37	17	13	6
Single Occ. (2)	—	13657	—	4686
Violators	324	—	102	—
<b>TOTAL</b>	<b>3878</b>	<b>14157</b>	<b>1264</b>	<b>4856</b>

PERSONS	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	118	4	47	2
Buses	280	315	140	35
Carpools (1)	7057	998	2310	341
Vanpools	370	170	130	60
Single Occ. (2)	—	13657	—	4686
Violators	324	—	102	—
<b>TOTAL</b>	<b>8149</b>	<b>15144</b>	<b>2729</b>	<b>5124</b>

RATES	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate (3) (HOV Lane)	8.4 %		8.1 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/08/02 at Tennyson Road I/C.

# ALAMEDA-880

Marina Boulevard to Whipple Road

## Violation History Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Jun 11, 2002	6:00 - 9:00 AM	3638	7.5%
	Wed Mar 21, 2001	6:00 - 9:00 AM	3971	5.2%
	Tue May 9, 2000	6:00 - 9:00 AM	3661	4.6%
	Thu Mar 4, 1999	6:00 - 9:00 AM	3012	5.7%
	Tue Oct 27, 1998	6:00 - 9:00 AM	2958	10.1%
	Thu May 8, 1997	6:00 - 9:00 AM	2257	16.0%
	Tue May 21, 1996	6:00 - 9:00 AM	1926	13.7%
	Wed Mar 29, 1995	6:00 - 9:00 AM	1088	2.8%
	Wed May 25, 1994	6:00 - 10:00 AM	1354	7.9%
	Tue Apr 27, 1993	6:00 - 10:00 AM	1340	18.6%
<b>P.M. PEAK</b>	Wed Jun 5, 2002	3:00 - 6:00 PM	3401	5.2%
	Thu Apr 26, 2001	3:00 - 6:00 PM	3134	3.9%
	Tue May 9, 2000	3:00 - 6:00 PM	2484	5.6%
	Tue Mar 2, 1999	3:00 - 6:00 PM	2307	4.3%
	Tue Oct 27, 1998	3:00 - 6:00 PM	2218	6.0%
	Wed May 7, 1997	3:00 - 7:00 PM	2665	8.0%
	Tue May 7, 1996	3:00 - 7:00 PM	2609	4.2%
	Wed Apr 5, 1995	3:00 - 7:00 PM	3238	3.1%
	Wed May 25, 1994	3:00 - 6:00 PM	2507	5.4%
	Tue Apr 27, 1993	3:00 - 6:00 PM	1850	19.1%
	Wed May 20, 1992	3:00 - 6:00 PM	1308	14.2%
	Tue Dec 3, 1991	3:00 - 4:45 PM	468	22.0%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.

# ALAMEDA-880

Whipple Road to South of Route 238

## Violation History Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Sep 12, 2002	6:00 - 9:00 AM	2560	8.8%
	Thu Oct 11, 2001	6:00 - 9:00 AM	2212	5.2%
	Tue Nov 7, 2000	6:00 - 9:00 AM	1648	7.6%
	Tue Nov 2, 1999	6:00 - 9:00 AM	1845	8.1%
	Wed Oct 28, 1998	6:00 - 9:00 AM	1582	17.2%
	Wed Oct 8, 1997	6:00 - 9:00 AM	1147	12.7%
	Tue Nov 5, 1996	6:00 - 9:00 AM	2291	8.1%
	Wed Mar 29, 1995	6:00 - 9:00 AM	1158	17.8%
	Wed May 25, 1994	6:00 - 10:00 AM	2033	9.7%
	Thu Apr 29, 1993	6:00 - 10:00 AM	1945	6.5%
	Wed Mar 25, 1992	6:15 - 10:00 AM	1805	15.8%
Thu Dec 12, 1991	7:15 - 9:00 AM	1047	20.8%	
<b>P.M. PEAK</b>	Wed May 8, 2002	3:00 - 6:00 PM	3878	8.4%
	Wed May 2, 2001	3:00 - 6:00 PM	4069	4.8%
	Thu Oct 5, 2000	3:00 - 6:00 PM	4433	6.4%
	Tue Nov 2, 1999	3:00 - 6:00 PM	2238	26.5%
	Wed Oct 28, 1998	3:00 - 6:00 PM	2515	8.3%
	Tue May 6, 1997	3:00 - 7:00 PM	3788	11.1%
	Thu Oct 10, 1996	3:00 - 7:00 PM	4098	6.0%
	Wed Mar 29, 1995	3:00 - 7:00 PM	3869	11.0%
	Wed May 25, 1994	3:00 - 6:00 PM	2249	5.4%
Thu Apr 22, 1993	3:00 - 6:00 PM	1849	6.5%	

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.

# ALAMEDA-880

Whipple Road to Mission Boulevard

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	80	31	26	8
Buses	3	29	1	15
Carpools <sup>(1)</sup>	2318	364	820	92
Vanpools	43	3	20	0
Single Occ. <sup>(2)</sup>	—	12433	—	4633
Violators	81	—	45	—
<b>TOTAL</b>	<b>2525</b>	<b>12860</b>	<b>912</b>	<b>4748</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	80	31	26	8
Buses	105	1015	35	525
Carpools <sup>(1)</sup>	4775	740	1694	187
Vanpools	430	30	200	0
Single Occ. <sup>(2)</sup>	—	12433	—	4633
Violators	81	—	45	—
<b>TOTAL</b>	<b>5471</b>	<b>14249</b>	<b>2000</b>	<b>5353</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.2 %		4.9 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 09/24/02 at Mowry Avenue I/C.

# ALAMEDA-880

Whipple Road to Mission Boulevard

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	51	9	22	1
Buses	7	10	0	7
Carpools <sup>(1)</sup>	1921	789	643	273
Vanpools	12	13	5	7
Single Occ. <sup>(2)</sup>	—	11199	—	3801
Violators	123	—	20	—
<b>TOTAL</b>	<b>2114</b>	<b>12020</b>	<b>690</b>	<b>4089</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	51	9	22	1
Buses	245	350	0	245
Carpools <sup>(1)</sup>	4041	1685	1362	582
Vanpools	120	130	50	70
Single Occ. <sup>(2)</sup>	—	11199	—	3801
Violators	123	—	20	—
<b>TOTAL</b>	<b>4580</b>	<b>13373</b>	<b>1454</b>	<b>4699</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.8 %		2.9 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/07/02 at Mowry Avenue I/C.

# ALAMEDA-880

Mission Boulevard to Whipple Road

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	15	8	6	1
Buses	7	26	3	7
Carpools <sup>(1)</sup>	847	681	334	374
Vanpools	29	1	10	1
Single Occ. <sup>(2)</sup>	—	8421	—	3064
Violators	27	—	17	—
<b>TOTAL</b>	<b>925</b>	<b>9137</b>	<b>370</b>	<b>3447</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	15	8	6	1
Buses	245	910	105	245
Carpools <sup>(1)</sup>	1750	1404	691	770
Vanpools	290	10	100	10
Single Occ. <sup>(2)</sup>	—	8421	—	3064
Violators	27	—	17	—
<b>TOTAL</b>	<b>2327</b>	<b>10753</b>	<b>919</b>	<b>4090</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.5 persons/veh		2.5 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.9 %		4.6 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/16/02 at Mowry Avenue I/C.

# ALAMEDA-880

Mission Boulevard to Whipple Road

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	86	17	29	3
Buses	5	14	1	7
Carpools <sup>(1)</sup>	2398	1109	817	338
Vanpools	13	1	4	1
Single Occ. <sup>(2)</sup>	—	13899	—	4823
Violators	161	—	61	—
<b>TOTAL</b>	<b>2663</b>	<b>15040</b>	<b>912</b>	<b>5172</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	86	17	29	3
Buses	175	490	35	245
Carpools <sup>(1)</sup>	5025	2375	1704	731
Vanpools	130	10	40	10
Single Occ. <sup>(2)</sup>	—	13899	—	4823
Violators	161	—	61	—
<b>TOTAL</b>	<b>5577</b>	<b>16791</b>	<b>1869</b>	<b>5812</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.1 persons/veh		2.0 persons/veh	
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	6.0 %		6.7 %	

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/15/02 at Mowry Avenue I/C.

# ALAMEDA-880

Whipple Road to Mission Boulevard

## Violation History Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Sep 24, 2002	6:00 - 9:00 AM	2525	3.2%
	Tue Mar 27, 2001	6:00 - 9:00 AM	3423	4.8%
	Tue Mar 28, 2000	6:00 - 9:00 AM	2438	6.2%
	Wed May 19, 1999	6:00 - 9:00 AM	2118	3.7%
<b>P.M. PEAK</b>	Tue May 7, 2002	3:00 - 6:00 PM	2114	5.8%
	Wed Oct 17, 2001	3:00 - 6:00 PM	2157	3.8%
	Thu Nov 9, 2000	3:00 - 6:00 PM	2060	5.9%
	Tue Mar 9, 1999	3:00 - 6:00 PM	1966	20.7%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.



# ALAMEDA-880

Mission Boulevard to Whipple Road

## Violation History Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Apr 16, 2002	6:00 - 9:00 AM	925	2.9%
	Thu Nov 1, 2001	6:00 - 9:00 AM	856	9.7%
	Wed Mar 29, 2000	6:00 - 9:00 AM	956	5.6%
	Wed Mar 10, 1999	6:00 - 9:00 AM	833	13.2%
<b>P.M. PEAK</b>	Wed May 15, 2002	3:00 - 6:00 PM	2663	6.0%
	Thu Jun 7, 2001	3:00 - 6:00 PM	2755	3.9%
	Wed Nov 1, 2000	3:00 - 6:00 PM	3263	3.6%
	Thu Mar 18, 1999	3:00 - 6:00 PM	2657	4.6%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.

# ALAMEDA-880

16th Street to SFOBB Toll Plaza

# Northbound A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	59	4	17	3
Buses	23	53	16	13
Carpools <sup>(1)</sup>	1439	132	654	0
Vanpools	15	6	5	1
Single Occ. <sup>(2)</sup>	—	5057	—	1299
Violators	77	—	26	—
<b>TOTAL</b>	<b>1613</b>	<b>5252</b>	<b>718</b>	<b>1316</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	59	4	34	2
Buses	805	1855	1680	0
Carpools <sup>(1)</sup>	5112	1931	2102	784
Vanpools	150	60	230	30
Single Occ. <sup>(2)</sup>	—	5695	—	1413
Violators	87	—	27	—
<b>TOTAL</b>	<b>6213</b>	<b>9545</b>	<b>4073</b>	<b>2229</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane occupancy rate	3.9 persons/veh		5.7 persons/veh
Mixed Flow occupancy rate	1.8 persons/veh		1.7 persons/veh	
Overall occupancy (incl. buses)	2.3 persons/veh		3.1 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.8 %		3.6 %	

### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 4/17/02 north of 7th Street Interchange.

# ALAMEDA-880

16th Street to SFOBB Toll Plaza

# Northbound P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	25	16	2	7
Buses	13	8	1	12
Carpools <sup>(1)</sup>	406	0	101	18
Vanpools	9	7	2	4
Single Occ. <sup>(2)</sup>	—	5614	—	1625
Violators	33	—	2	—
<b>TOTAL</b>	<b>486</b>	<b>5645</b>	<b>108</b>	<b>1666</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	25	16	2	7
Buses	208	128	16	192
Carpools <sup>(1)</sup>	817	135	275	54
Vanpools	72	56	16	32
Single Occ. <sup>(2)</sup>	—	6335	—	1845
Violators	43	—	3	—
<b>TOTAL</b>	<b>1165</b>	<b>6670</b>	<b>312</b>	<b>2130</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane occupancy rate	2.4 persons/veh		2.9 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.3 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	6.8 %		1.9 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 4/17/02 north of 7th Street Interchange.

# ALAMEDA-880

16th Street to SFOBB Toll Plaza

## Violation History Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Apr 17, 2002	6:00 - 10:00 AM	1613	<b>4.8%</b>
	Thu Mar 22, 2001	6:00 - 10:00 AM	2402	<b>15.5%</b>
	Wed Sep 27, 2000	7:00 - 10:00 AM	2983	<b>16.4%</b>
	Tue May 18, 1999	6:00 - 10:00 AM	3471	<b>3.1%</b>
	Thu Sep 10, 1998	6:00 - 10:00 AM	1937	<b>11.7%</b>

<b>P.M. PEAK</b>	Wed Apr 17, 2002	3:00 - 7:00 PM	486	<b>6.8%</b>
	Thu Oct 11, 2001	3:00 - 7:00 PM	397	<b>14.6%</b>
	Wed Oct 18, 2000	3:00 - 7:00 PM	513	<b>43.3%</b>
	Thu Sep 30, 1999	3:00 - 7:00 PM	587	<b>16.5%</b>
	Thu Sep 10, 1998	3:00 - 7:00 PM	343	<b>14.9%</b>

- NOTES:** (a) Morning period of operation from 5:00 to 10:00 AM  
(b) Evening period of operation from 3:00 to 7:00 PM.  
(c) Occupancy count is from 6:00 to 10:00 AM only due to poor visibility as a result of darkness.

# CONTRA COSTA-4

West of Railroad Ave. to Port Chicago Highway

# Westbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	86	31	43	17
Buses	4	31	2	5
Carpools <sup>(1)</sup>	2022	1253	758	535
Vanpools	12	44	10	16
Single Occ. <sup>(2)</sup>	—	15019	—	5388
Violators	101	—	41	—
<b>TOTAL</b>	<b>2225</b>	<b>16378</b>	<b>854</b>	<b>5961</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	86	31	43	17
Buses	140	1085	70	175
Carpools <sup>(1)</sup>	4160	2723	1588	1170
Vanpools	120	440	100	160
Single Occ. <sup>(2)</sup>	—	15019	—	5388
Violators	101	—	41	—
<b>TOTAL</b>	<b>4607</b>	<b>19298</b>	<b>1842</b>	<b>6910</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 6:00 - 7:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.5 %		4.8 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 6:00 to 9:00 A.M.
- (5) Observations conducted 05/23/02 at the Bailey Road I/C.

# CONTRA COSTA-4

West of Railroad Ave. to Port Chicago Highway

## Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu May 23, 2002	6:00 - 9:00 AM	2225	4.5%
	Wed Sep 19, 2001	6:00 - 9:00 AM	1174	7.0%
	Wed May 10, 2000	6:00 - 9:00 AM	861	5.6%

**NOTES:** (a) Morning period of operation from 6:00 to 9:00 AM.

# CONTRA COSTA-4

Port Chicago Highway to West of Railroad Ave.

# Eastbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	53	13	13	9
Buses	1	8	0	3
Carpools <sup>(1)</sup>	2044	549	568	294
Vanpools	51	0	14	0
Single Occ. <sup>(2)</sup>	—	7971	—	2689
Violators	99	—	49	—
<b>TOTAL</b>	<b>2248</b>	<b>8541</b>	<b>644</b>	<b>2995</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	53	13	13	9
Buses	35	280	0	105
Carpools <sup>(1)</sup>	4245	1181	1191	618
Vanpools	510	0	140	0
Single Occ. <sup>(2)</sup>	—	7971	—	2689
Violators	99	—	49	—
<b>TOTAL</b>	<b>4942</b>	<b>9445</b>	<b>1393</b>	<b>3421</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh	2.2 persons/veh	2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	4.4 %	4.4 %	7.6 %	7.6 %

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 6:00 P.M.
- (5) Observations conducted 03/19/02 at the Bailey Road I/C.

# CONTRA COSTA-4

Port Chicago Highway to West of Railroad Ave.

## Violation History Eastbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>P.M. PEAK</b>	Tue Mar 19, 2002	3:00 - 6:00 PM	2248	4.4%
	Tue Oct 30, 2001	3:00 - 6:00 PM	2011	4.0%

**NOTES:** (a) Evening period of operation from 3:00 to 6:00 PM.



# CONTRA COSTA-80

Route 4 to Alameda County Line

# Westbound A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 7:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	90	8	40	3
Buses	71	15	37	5
Carpools <sup>(1)</sup>	2309	233	1163	86
Vanpools	15	4	7	3
Single Occ. <sup>(2)</sup>	—	12835	—	4694
Violators	171	—	38	—
<b>TOTAL</b>	<b>2656</b>	<b>13095</b>	<b>1285</b>	<b>4791</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 7:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	90	8	40	3
Buses	2485	525	1295	175
Carpools <sup>(1)</sup>	8815	1356	3100	264
Vanpools	150	40	70	30
Single Occ. <sup>(2)</sup>	—	14237	—	5123
Violators	217	—	48	—
<b>TOTAL</b>	<b>11757</b>	<b>16166</b>	<b>4553</b>	<b>5595</b>

RATES	PEAK PERIOD <sup>(4)</sup> 7:00 to 10:00 A.M.		PEAK HOUR 7:00 to 8:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	4.4 persons/veh		3.5 persons/veh	
Mixed Flow occupancy rate		1.2 persons/veh		1.2 persons/veh
Overall occupancy (incl. buses)	1.8 persons/veh		1.7 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	6.4 %		3.0 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 4/16/02 east of Hilltop Drive Interchange.

# CONTRA COSTA-80

Route 4 to Alameda County Line

# Westbound P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	25	31	10	3
Buses	82	33	26	8
Carpools <sup>(1)</sup>	920	1168	234	264
Vanpools	14	3	5	5
Single Occ. <sup>(2)</sup>	—	16649	—	4375
Violators	360	—	75	—
<b>TOTAL</b>	<b>1401</b>	<b>17884</b>	<b>350</b>	<b>4655</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	25	31	10	3
Buses	1312	528	416	128
Carpools <sup>(1)</sup>	2696	1991	657	506
Vanpools	112	24	40	40
Single Occ. <sup>(2)</sup>	—	19912	—	5235
Violators	493	—	105	—
<b>TOTAL</b>	<b>4638</b>	<b>22486</b>	<b>1228</b>	<b>5912</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane occupancy rate	3.3 persons/veh		3.5 persons/veh
Mixed Flow occupancy rate	1.3 persons/veh		1.3 persons/veh	
Overall occupancy (incl. buses)	1.4 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	25.7 %		21.4 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 5/7/02 east of Hilltop Drive Interchange.

# CONTRA COSTA-80

Alameda County Line to Route 4

# Eastbound A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	23	15	8	3
Buses	68	33	22	10
Carpools <sup>(1)</sup>	389	575	108	194
Vanpools	27	8	4	4
Single Occ. <sup>(2)</sup>	—	12110	—	3628
Violators	125	—	22	—
<b>TOTAL</b>	<b>632</b>	<b>12741</b>	<b>164</b>	<b>3839</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	23	15	8	3
Buses	1088	528	352	160
Carpools <sup>(1)</sup>	955	1929	108	308
Vanpools	216	64	32	32
Single Occ. <sup>(2)</sup>	—	13636	—	4013
Violators	144	—	28	—
<b>TOTAL</b>	<b>2426</b>	<b>16172</b>	<b>528</b>	<b>4516</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 to 10:00 A.M.		PEAK HOUR 8:00 to 9:00 A.M.	
	HOV Lane occupancy rate	3.8 persons/veh		3.2 persons/veh
Mixed Flow occupancy rate	1.3 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.4 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	19.8 %		13.4 %	

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 10:00 A.M.
- (5) Observations conducted 4/23/02 east of Hilltop Drive Interchange.

# CONTRA COSTA-80

Alameda County Line to Route 4

# Eastbound P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	104	40	25	9
Buses	106	28	27	5
Carpools <sup>(1)</sup>	3250	523	883	111
Vanpools	108	9	49	3
Single Occ. <sup>(2)</sup>	—	22118	—	5688
Violators	353	—	75	—
<b>TOTAL</b>	<b>3921</b>	<b>22718</b>	<b>1059</b>	<b>5816</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	104	40	25	9
Buses	3710	980	945	175
Carpools <sup>(1)</sup>	11236	1735	3395	440
Vanpools	1080	90	490	30
Single Occ. <sup>(2)</sup>	—	24669	—	6402
Violators	449	—	98	—
<b>TOTAL</b>	<b>16579</b>	<b>27514</b>	<b>4953</b>	<b>7056</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 4:00 to 5:00 P.M.	
	HOV Lane occupancy rate	4.2 persons/veh		4.7 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.7 persons/veh		1.7 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	9.0 %		7.1 %	

### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 4/16/02 east of Hilltop Drive Interchange.

# CONTRA COSTA-80

Route 4 to Alameda County Line

## Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Apr 16, 2002	7:00 - 10:00 AM	2656	6.4%
	Tue Mar 27, 2001	6:00 - 10:00 AM	3640	8.7%
	Tue Oct 3, 2000	7:00 - 10:00 AM	2643	9.5%
	Tue Nov 9, 1999	7:00 - 10:00 AM	2186	11.1%
	Tue Oct 6, 1998	7:00 - 10:00 AM	1743	10.0%
	Thu Oct 30, 1997	6:00 - 10:00 AM	1483	32.6%

<b>P.M. PEAK</b>	Tue May 7, 2002	3:00 - 7:00 PM	1401	25.7%
	Thu Oct 4, 2001	3:00 - 7:00 PM	1432	24.2%
	Thu Apr 13, 2000	3:00 - 7:00 PM	1167	37.3%
	Wed Apr 21, 1999	3:00 - 7:00 PM	1068	18.5%
	Tue Oct 6, 1998	3:00 - 7:00 PM	802	31.9%

### NOTES:

- (a) Morning period of operation from 5:00 to 10:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Occupancy count is from 7:00 to 10:00 AM only due to poor visibility as a result of darkness.

# CONTRA COSTA-80

Alameda County Line to Route 4

## Violation History Eastbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Apr 23, 2002	6:00 - 10:00 AM	632	<b>19.8%</b>
	Tue May 15, 2001	6:00 - 10:00 AM	553	<b>18.3%</b>
	Thu Dec 14, 2000	7:00 - 10:00 AM	483	<b>26.3%</b>
	Wed Apr 7, 1999	7:00 - 10:00 AM	498	<b>26.9%</b>
	Thu Oct 1, 1998	6:00 - 10:00 AM	386	<b>43.0%</b>
<b>P.M. PEAK</b>	Tue Apr 16, 2002	3:00 - 7:00 PM	3921	<b>9.0%</b>
	Thu Sep 20, 2001	3:00 - 7:00 PM	4649	<b>4.4%</b>
	Tue Sep 26, 2000	3:00 - 7:00 PM	3780	<b>18.0%</b>
	Tue Apr 13, 1999	3:00 - 7:00 PM	2956	<b>9.5%</b>
	Thu Oct 22, 1998	3:00 - 6:00 PM	2422	<b>17.8%</b>
	Tue Apr 8, 1997	3:00 - 7:00 PM	1680	<b>18.5%</b>

**NOTES:**

- (a) Morning period of operation from 5:00 to 10:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Occupancy count is from 6:00 to 10:00 AM only due to poor visibility as a result of darkness.

# CONTRA COSTA-680

Livorna Road to Alcosta Boulevard

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	48	10	22	2
Buses	30	18	13	2
Carpools <sup>(1)</sup>	2311	418	888	113
Vanpools	50	0	24	0
Single Occ. <sup>(2)</sup>	—	15472	—	5793
Violators	41	—	15	—
<b>TOTAL</b>	<b>2480</b>	<b>15918</b>	<b>962</b>	<b>5910</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	48	10	22	2
Buses	1050	630	455	70
Carpools <sup>(1)</sup>	4721	887	1810	246
Vanpools	500	0	240	0
Single Occ. <sup>(2)</sup>	—	15472	—	5793
Violators	41	—	15	—
<b>TOTAL</b>	<b>6360</b>	<b>16999</b>	<b>2542</b>	<b>6111</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.6 persons/veh	2.6 persons/veh	2.6 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.0 persons/veh	1.0 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	1.7 %	1.7 %	1.6 %	1.6 %

### NOTES:

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 6:00 to 9:00 A.M.
- (5) Observations conducted 06/13/02 at the Stone Valley Road I/C.

# CONTRA COSTA-680

Livorna Road to Alcosta Boulevard

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	1	5	0
Buses	5	13	2	1
Carpools <sup>(1)</sup>	1827	2177	757	480
Vanpools	4	40	2	12
Single Occ. <sup>(2)</sup>	—	11589	—	4634
Violators	156	—	53	—
<b>TOTAL</b>	<b>2009</b>	<b>13820</b>	<b>819</b>	<b>5127</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	1	5	0
Buses	175	455	70	35
Carpools <sup>(1)</sup>	3872	4531	1611	1011
Vanpools	40	400	20	120
Single Occ. <sup>(2)</sup>	—	11589	—	4634
Violators	156	—	53	—
<b>TOTAL</b>	<b>4260</b>	<b>16976</b>	<b>1759</b>	<b>5800</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	7.8 %		6.5 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 6:00 P.M.
- (5) Observations conducted 03/13/02 at the Stone Valley Road I/C.



# CONTRA COSTA-680

Alcosta Boulevard to Livorna Road

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	5	6	1
Buses	17	25	2	8
Carpools <sup>(1)</sup>	1582	888	678	256
Vanpools	5	3	3	2
Single Occ. <sup>(2)</sup>	—	10938	—	4626
Violators	120	—	40	—
<b>TOTAL</b>	<b>1746</b>	<b>11859</b>	<b>729</b>	<b>4893</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	5	6	1
Buses	595	875	70	280
Carpools <sup>(1)</sup>	3379	1837	1481	543
Vanpools	50	30	30	20
Single Occ. <sup>(2)</sup>	—	10938	—	4626
Violators	120	—	40	—
<b>TOTAL</b>	<b>4166</b>	<b>13685</b>	<b>1627</b>	<b>5470</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.4 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	6.9 %		5.5 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 6:00 to 9:00 A.M.
- (5) Observations conducted 04/25/02 at the Stone Valley I/C.

# CONTRA COSTA-680

Alcosta Boulevard to Livorna Road

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	73	2	19	1
Buses	21	8	4	4
Carpools <sup>(1)</sup>	3659	673	1221	309
Vanpools	56	6	15	0
Single Occ. <sup>(2)</sup>	—	10969	—	3983
Violators	180	—	75	—
<b>TOTAL</b>	<b>3989</b>	<b>11658</b>	<b>1334</b>	<b>4297</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	73	2	19	1
Buses	735	280	140	140
Carpools <sup>(1)</sup>	7502	1409	2534	657
Vanpools	560	60	150	0
Single Occ. <sup>(2)</sup>	—	10969	—	3983
Violators	180	—	75	—
<b>TOTAL</b>	<b>9050</b>	<b>12720</b>	<b>2918</b>	<b>4781</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane occupancy rate	2.3 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.4 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.5 %		5.6 %	

**NOTES:**

- (1) Two or more persons per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 6:00 P.M.
- (5) Observations conducted 11/20/02 at the Stone Valley I/C.

# CONTRA COSTA-680

# Violation History

Livorna Road to Alcosta Boulevard

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Jun 13, 2002	6:00 - 9:00 AM	2480	1.7%
	Thu Mar 15, 2001	6:00 - 9:00 AM	2609	5.3%
	Thu Apr 6, 2000	6:00 - 9:00 AM	2258	2.8%
	Wed Sep 29, 1999	6:00 - 9:00 AM	1974	3.1%
	Tues Mar 10, 1998	6:00 - 9:00 AM	1545	9.0%
	Wed Oct 29, 1997	6:00 - 9:00 AM	1791	3.9%
	Thu Oct 10, 1996	6:00 - 9:00 AM	1359	2.6%
	Tue Nov 7, 1995	6:00 - 9:00 AM	1179	1.2%
	Thu Oct 13, 1994	6:45 - 9:00 AM	416	16.3%
<b>P.M. PEAK</b>	Wed Mar 13, 2002	3:00 - 6:00 PM	2009	7.8%
	Wed May 9, 2001	3:00 - 6:00 PM	1831	8.5%
	Tue Dec 12, 2000	3:00 - 6:00 PM	1337	4.3%
	Wed Sep 29, 1999	3:00 - 6:00 PM	1604	7.2%
	Tue Sep 22, 1998	3:00 - 6:00 PM	2004	8.4%
	Thu Apr 17, 1997	3:00 - 6:00 PM	1344	2.0%
	Wed Oct 9, 1996	3:00 - 6:00 PM	1182	4.1%
	Tue Nov 7, 1995	3:00 - 6:00 PM	645	7.0%
	Thu Oct 13, 1994	3:00 - 6:00 PM	523	11.7%

- NOTES:** (a) Minimum occupancy requirement 2 persons per vehicle.  
(b) Morning period of operation from 6:00 to 9:00 AM.  
(c) Evening period of operation from 3:00 to 6:00 PM.

# CONTRA COSTA-680

# Violation History

Alcosta Boulevard to Livorna Road

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Apr 25, 2002	6:00 - 9:00 AM	1746	6.9%
	Tue Sep 25, 2001	6:00 - 9:00 AM	1681	3.0%
	Thu Nov 2, 2000	6:00 - 9:00 AM	1263	7.0%
	Tue Sep 28, 1999	6:00 - 9:00 AM	621	7.1%
	Thu Nov 5, 1998	6:00 - 9:00 AM	1213	4.6%
	Tue Oct 28, 1997	6:00 - 9:00 AM	1139	4.1%
	Wed Oct 9, 1996	6:00 - 9:00 AM	958	6.6%
	Thu Nov 2, 1995	6:00 - 9:00 AM	1064	4.4%
	Wed Oct 12, 1994	6:45 - 9:00 AM	261	15.7%
<b>P.M. PEAK</b>	Wed Nov 20, 2002	3:00 - 6:00 PM	3989	4.5%
	Tue May 8, 2001	3:00 - 6:00 PM	3742	5.0%
	Wed Oct 4, 2000	3:00 - 6:00 PM	4165	3.6%
	Tue Oct 26, 1999	3:00 - 6:00 PM	3224	4.9%
	Tue Oct 6, 1998	3:00 - 6:00 PM	2819	3.1%
	Wed Oct 15, 1997	3:00 - 6:00 PM	2755	4.9%
	Thu Oct 3, 1996	3:00 - 6:00 PM	2523	6.1%
	Thu Nov 2, 1995	3:00 - 6:00 PM	1902	1.2%
	Wed Oct 12, 1994	3:00 - 6:00 PM	466	17.0%

- NOTES:** (a) Minimum occupancy requirement 2 persons per vehicle.  
(b) Morning period of operation from 6:00 to 9:00 AM.  
(c) Evening period of operation from 3:00 to 6:00 PM.

# MARIN-101

Greenbrae I/C to Richardson Bridge

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	36	19	23	12
Buses	58	71	29	34
Carpools <sup>(1)</sup>	1458	705	701	403
Vanpools	8	0	5	0
Single Occ. <sup>(2)</sup>	—	8381	—	4309
Violators	31	—	2	—
<b>TOTAL</b>	<b>1591</b>	<b>9176</b>	<b>760</b>	<b>4758</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	36	19	23	12
Buses	2030	2485	1015	1190
Carpools <sup>(1)</sup>	3024	1521	1455	880
Vanpools	80	0	50	0
Single Occ. <sup>(2)</sup>	—	8381	—	4309
Violators	31	—	2	—
<b>TOTAL</b>	<b>5201</b>	<b>12406</b>	<b>2545</b>	<b>6391</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane occupancy rate	3.3 persons/veh		3.3 persons/veh
Mixed Flow occupancy rate	1.4 persons/veh		1.3 persons/veh	
Overall occupancy (incl. buses)	1.6 persons/veh		1.6 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.9 %		0.3 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 6:30 to 8:30 A.M.
- (5) Observations conducted 03/20/02 at Route 131 E. Blythdale Avenue I/C.

# MARIN-101

Richardson Bridge to Greenbrae I/C

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	58	41	26	15
Buses	92	46	41	17
Carpools <sup>(1)</sup>	1171	1264	525	513
Vanpools	24	2	13	0
Single Occ. <sup>(2)</sup>	—	9917	—	3901
Violators	20	—	2	—
<b>TOTAL</b>	<b>1365</b>	<b>11270</b>	<b>607</b>	<b>4446</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	58	41	26	15
Buses	3220	1610	1435	595
Carpools <sup>(1)</sup>	2619	2694	1227	1094
Vanpools	240	20	130	0
Single Occ. <sup>(2)</sup>	—	9917	—	3901
Violators	20	—	2	—
<b>TOTAL</b>	<b>6157</b>	<b>14282</b>	<b>2820</b>	<b>5605</b>

RATES	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane occupancy rate	4.5 persons/veh		4.6 persons/veh
Mixed Flow occupancy rate	1.3 persons/veh		1.3 persons/veh	
Overall occupancy (incl. buses)	1.6 persons/veh		1.7 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.5 %		0.3 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 4:30 to 7:00 P.M.
- (5) Observations conducted 09/17/02 at Route 131 Tiburon Boulevard I/C.

# MARIN-101

Greenbrae I/C to Richardson Bay Bridge

# Violation History

Southbound

<b>A.M. PEAK</b>	<b>DATE</b>	<b>PERIOD MONITORED</b>	<b>TOTAL HOVL VOLUME</b>	<b>VIOLATION RATE</b>
	Wed Mar 20, 2002	6:30 - 8:30 AM	1591	1.9%
	Wed Mar 28, 2001	6:30 - 8:30 AM	1495	2.3%
	Thu Mar 23, 2000	6:30 - 8:30 AM	1538	2.8%
	Wed Mar 17, 1999	6:30 - 8:30 AM	1394	2.3%
	Tue Mar 3, 1998	6:30 - 8:30 AM	1106	1.6%
	Tue Mar 11, 1997	6:30 - 8:30 AM	1367	2.4%
	Thu Oct 17, 1996	6:30 - 8:30 AM	1446	1.2%
	Tue Oct 31, 1995	6:30 - 8:30 AM	1389	3.7%
	Thu Oct 13, 1994	6:30 - 8:30 AM	1135	6.4%
	Wed Apr 21, 1993	6:30 - 8:30 AM	1325	7.2%
	Thu Mar 26, 1992	6:30 - 8:30 AM	1565	6.8%
	Wed May 22, 1991	6:30 - 8:30 AM	1337	6.1%
	Wed Apr 25, 1990	6:30 - 8:30 AM	1340	4.2%
	Wed Mar 15, 1989	6:30 - 8:30 AM	1517	10.7%
	Wed Sep 28, 1988	6:30 - 8:30 AM	466	16.5%
	Wed May 4, 1988	6:30 - 8:30 AM	768	25.6%
	Wed Aug 19, 1987	6:30 - 8:30 AM	562	26.0%
	Thu May 28, 1987	6:30 - 8:30 AM	504	11.3%
	Tue May 12, 1987	6:30 - 8:30 AM	618	25.9%
	Wed Apr 29, 1987	6:00 - 9:00 AM	755	18.8%

**NOTES:** (a) Minimum occupancy requirement was reduced to 2 persons per vehicle on October 1, 1988  
(b) Morning period of operation from 6:30 to 8:30 AM.

# MARIN-101

# Violation History

Richardson Bay Bridge to Greenbrae I/C

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>P.M. PEAK</b>	Tue Sep 17, 2002	4:30 - 7:00 PM	1365	1.5%
	Tue Apr 3, 2001	4:30 - 7:00 PM	1544	3.9%
	Tue Oct 3, 2000	4:30 - 7:00 PM	1771	1.6%
	Tue Mar 16, 1999	4:30 - 7:00 PM	1719	1.9%
	Wed Apr 22, 1998	4:30 - 7:00 PM	1838	4.8%
	Wed Oct 1, 1997	4:30 - 7:00 PM	2217	5.4%
	Thu Oct 24, 1996	4:30 - 7:00 PM	1820	3.4%
	Tue Oct 24, 1995	4:30 - 7:00 PM	1779	3.9%
	Tue Apr 5, 1994	4:30 - 7:00 PM	2031	0.2%
	Tue Apr 20, 1993	4:30 - 7:00 PM	1516	13.5%
	Tue Apr 28, 1992	4:30 - 7:00 PM	1296	9.0%
	Tue Oct 1, 1991	4:30 - 6:30 PM	1197	7.9%
	Wed Apr 25, 1990	4:30 - 7:00 PM	1180	7.5%
	Tue Mar 21, 1989	4:30 - 7:00 PM	1988	6.6%
	Thu Sep 29, 1988	4:30 - 7:00 PM	646	20.4%
	Tue May 3, 1988	4:30 - 7:00 PM	757	34.6%
	Wed Sep 16, 1987	4:30 - 7:00 PM	800	32.6%
	Tue Jul 21, 1987	4:30 - 7:00 PM	701	31.1%
	Wed May 27, 1987	4:30 - 7:00 PM	759	23.1%
	Thu May 7, 1987	4:30 - 7:00 PM	553	35.3%

**NOTES:** (a) Minimum occupancy requirement was reduced to 2 persons per vehicle on October 1, 1988  
(b) Evening period of operation from 4:30 to 7:00 PM.



# MARIN-101

Route 37 to N. San Pedro Road

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 6:30 - 7:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	53	6	19	6
Buses	37	35	20	13
Carpools <sup>(1)</sup>	2421	215	1308	103
Vanpools	21	0	9	0
Single Occ. <sup>(2)</sup>	—	8735	—	4451
Violators	32	—	5	—
<b>TOTAL</b>	<b>2564</b>	<b>8991</b>	<b>1361</b>	<b>4573</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 6:30 - 7:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	53	6	19	6
Buses	1295	1225	700	455
Carpools <sup>(1)</sup>	5156	480	2762	238
Vanpools	210	0	90	0
Single Occ. <sup>(2)</sup>	—	8735	—	4451
Violators	32	—	5	—
<b>TOTAL</b>	<b>6746</b>	<b>10446</b>	<b>3576</b>	<b>5150</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:30 - 8:30 AM		PEAK HOUR 6:30 - 7:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.6 persons/veh		2.6 persons/veh	
Mixed Flow occupancy rate		1.2 persons/veh		1.1 persons/veh
Overall occupancy (incl. buses)	1.5 persons/veh		1.5 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.2 %		0.4 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 6:30 to 8:30 A.M.
- (5) Observations conducted 03/19/02 at Alameda Del Prado Dr. I/C.

# MARIN-101

N. San Pedro Rd. to Route 37

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	64	26	34	6
Buses	52	39	25	16
Carpools <sup>(1)</sup>	1369	1561	651	566
Vanpools	26	7	15	2
Single Occ. <sup>(2)</sup>	—	11862	—	5116
Violators	41	—	6	—
<b>TOTAL</b>	<b>1552</b>	<b>13495</b>	<b>731</b>	<b>5706</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	64	26	34	6
Buses	1820	1365	875	560
Carpools <sup>(1)</sup>	3026	3317	1435	1200
Vanpools	260	70	150	20
Single Occ. <sup>(2)</sup>	—	11862	—	5116
Violators	41	—	6	—
<b>TOTAL</b>	<b>5211</b>	<b>16640</b>	<b>2500</b>	<b>6902</b>

RATES	PEAK PERIOD <sup>(4)</sup> 4:30 - 7:00 PM		PEAK HOUR 4:30 - 5:30 PM	
	HOV Lane occupancy rate	3.4 persons/veh		3.4 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.5 persons/veh		1.5 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.6 %		0.8 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 4:30 to 7:00 P.M.
- (5) Observations conducted 09/19/02 at the Manuel Freitas Truck Scale.

# MARIN-101

Route 37 to N. San Pedro Road

## Violation History

Southbound

<b>A.M. PEAK</b>	<b>DATE</b>	<b>PERIOD MONITORED</b>	<b>TOTAL HOVL VOLUME</b>	<b>VIOLATION RATE</b>
	Tue Mar 19, 2002	6:30 - 8:30 AM	2564	1.2%
	Wed Oct 31, 2001	6:30 - 8:30 AM	2520	1.4%
	Wed Mar 22, 2000	6:30 - 8:30 AM	2610	1.1%
	Thu Mar 18, 1999	6:30 - 8:30 AM	2256	1.8%
	Wed Mar 4, 1998	6:30 - 8:30 AM	2047	3.3%
	Wed Nov 5, 1997	6:30 - 8:30 AM	2690	5.1%
	Tue Nov 19, 1996	6:30 - 8:30 AM	2507	2.6%
	Wed Oct 25, 1995	6:30 - 8:30 AM	2609	4.3%
	Wed Mar 30, 1994	6:30 - 8:30 AM	1702	1.8%
	Tue Apr 27, 1993	6:30 - 8:30 AM	2042	4.8%
	Tue Mar 31, 1992	6:30 - 8:30 AM	1594	7.8%
	Thu Mar 7, 1991	6:45 - 8:30 AM	1423	6.3%
	Thu Apr 26, 1990	6:30 - 8:30 AM	1903	10.7%
	Wed Mar 15, 1989	6:30 - 8:30 AM	1767	10.5%
	Thu Sep 15, 1988	6:30 - 8:30 AM	597	36.7%
	Wed Apr 13, 1988	6:30 - 8:30 AM	452	26.6%
	Wed Oct 28, 1987	6:30 - 8:30 AM	639	36.5%
	Thu Oct 8, 1987	6:30 - 8:30 AM	554	35.7%
	Wed Sep 30, 1987	6:30 - 8:30 AM	535	40.2%
	Tue Sep 22, 1987	6:30 - 8:30 AM	515	41.4%
	Wed Aug 26, 1987	6:30 - 8:30 AM	437	29.8%

**NOTES:** (a) *Minimum occupancy requirement was reduced to 2 persons per vehicle on October 1, 1988*  
(b) *Morning period of operation from 6:30 to 8:30 AM.*

# MARIN-101

N. San Pedro Road to Route 37

# Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>P.M. PEAK</b>	Thu Sep 19, 2002	4:30 - 7:00 PM	1552	2.6%
	Tue Sep 18, 2001	4:30 - 7:00 PM	1580	1.1%
	Tue Mar 21, 2000	4:30 - 7:00 PM	1921	2.7%
	Thu Sep 16, 1999	4:30 - 7:00 PM	1841	4.0%
	Tue Apr 7, 1998	4:30 - 7:00 PM	2147	2.4%
	Thu Oct 2, 1997	4:30 - 7:00 PM	1867	3.2%
	Thu Oct 17, 1996	4:30 - 7:00 PM	1983	3.9%
	Wed Apr 19, 1995	4:30 - 7:00 PM	1817	0.3%
	Thu Apr 7, 1994	4:30 - 7:00 PM	1233	0.9%
	Wed Apr 21, 1993	4:30 - 7:00 PM	1599	7.9%
	Wed Oct 7, 1992	4:30 - 6:45 PM	1718	7.6%
	Wed Mar 6, 1991	4:30 - 6:00 PM	1647	8.2%
	Thu Apr 26, 1990	4:30 - 7:00 PM	2576	9.3%
	Wed Mar 15, 1989	4:30 - 7:00 PM	2066	8.7%
	Wed Sep 28, 1988	4:30 - 7:00 PM	696	24.6%
	Tue Apr 12, 1988	4:30 - 7:00 PM	744	32.7%
	Tue Sep 29, 1987	4:30 - 7:00 PM	432	38.4%
	Wed Sep 16, 1987	4:30 - 7:00 PM	770	32.3%
	Tue Jul 21, 1987	4:30 - 7:00 PM	547	38.6%
	Wed May 27, 1987	4:30 - 7:00 PM	515	30.5%
Thu May 7, 1987	4:30 - 7:00 PM	527	25.4%	

**NOTES:** (a) Minimum occupancy requirement was reduced to 2 persons per vehicle on October 1, 1988  
(b) Evening period of operation from 4:30 to 7:00 PM.

# SONOMA-101

Route 12 to Wilfred Avenue

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	13	0	4	0
Buses	11	12	2	9
Carpools <sup>(1)</sup>	867	299	304	158
Vanpools	5	1	3	1
Single Occ. <sup>(2)</sup>	—	7770	—	2889
Violators	55	—	6	—
<b>TOTAL</b>	<b>951</b>	<b>8082</b>	<b>319</b>	<b>3058</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	13	0	4	1
Buses	385	420	70	315
Carpools <sup>(1)</sup>	1800	631	650	333
Vanpools	50	10	30	10
Single Occ. <sup>(2)</sup>	—	7770	—	2889
Violators	55	—	6	—
<b>TOTAL</b>	<b>2303</b>	<b>8831</b>	<b>760</b>	<b>3548</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.4 persons/veh		2.4 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.2 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.8 %		1.9 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 6:30 to 9:30 A.M.
- (5) Observations conducted 12/10/02 at South of Hearn Avenue I/C.

# SONOMA-101

Route 12 to Wilfred Avenue

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	8	5	0	7
Buses	16	17	4	13
Carpools <sup>(1)</sup>	1571	614	420	344
Vanpools	3	1	0	2
Single Occ. <sup>(2)</sup>	—	10701	—	3029
Violators	47	—	5	—
<b>TOTAL</b>	<b>1645</b>	<b>11338</b>	<b>429</b>	<b>3395</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	8	5	0	7
Buses	560	595	140	455
Carpools <sup>(1)</sup>	3321	1314	851	805
Vanpools	30	10	0	20
Single Occ. <sup>(2)</sup>	—	10701	—	3029
Violators	47	—	5	—
<b>TOTAL</b>	<b>3966</b>	<b>12625</b>	<b>996</b>	<b>4316</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.4 persons/veh		2.3 persons/veh	
Mixed Flow occupancy rate	1.1 persons/veh		1.3 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.9 %		1.2 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 12/10/02 South of Hearn Avenue I/C.
- (6) Volume count only from 5:00 to 7:00 pm due to poor visibility.

# SONOMA-101

Wilfred Avenue to Route 12

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	8	2	3	2
Buses	9	8	5	5
Carpools <sup>(1)</sup>	630	365	282	107
Vanpools	3	0	1	1
Single Occ. <sup>(2)</sup>	—	6368	—	2193
Violators	46	—	13	—
<b>TOTAL</b>	<b>696</b>	<b>6743</b>	<b>304</b>	<b>2308</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	8	2	3	2
Buses	315	280	175	175
Carpools <sup>(1)</sup>	1314	763	594	226
Vanpools	30	0	10	10
Single Occ. <sup>(2)</sup>	—	6368	—	2193
Violators	46	—	13	—
<b>TOTAL</b>	<b>1713</b>	<b>7413</b>	<b>795</b>	<b>2606</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:30 - 9:30 AM		PEAK HOUR 7:30 - 8:30 AM	
	HOV Lane occupancy rate	2.5 persons/veh	2.6 persons/veh	2.6 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	6.6 %	4.3 %	4.3 %	4.3 %

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 6:30 to 9:30 A.M.
- (5) Observations conducted 12/05/02 north of Todd Road.

# SONOMA-101

Wilfred Avenue to Route 12

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	42	12	9	13
Buses	22	2	2	11
Carpools <sup>(1)</sup>	2030	406	587	234
Vanpools	10	1	2	3
Single Occ. <sup>(2)</sup>	—	8349	—	2308
Violators	41	—	18	—
<b>TOTAL</b>	<b>2145</b>	<b>8770</b>	<b>618</b>	<b>2568</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	42	12	9	13
Buses	770	70	70	350
Carpools <sup>(1)</sup>	4202	857	1224	499
Vanpools	100	10	20	30
Single Occ. <sup>(2)</sup>	—	8349	—	2308
Violators	41	—	18	—
<b>TOTAL</b>	<b>5155</b>	<b>9298</b>	<b>1341</b>	<b>3200</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 7:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.4 persons/veh		2.2 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.2 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh		1.4 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.9 %		2.9 %	

## NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 12/05/02 North of Todd Road.
- (6) Volume count only from 5:00 to 7:00 pm due to poor visibility.



# SONOMA-101

Route 12 to Wilfred Avenue

## Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Dec 10, 2002	6:30 - 9:30 AM	951	<b>5.8%</b>
<b>P.M. PEAK</b>	Tue Dec 10, 2002	3:00 - 7:00 PM	1645	<b>2.9%</b>

**NOTES:**

- (a) Morning period of operation from 6:30 to 9:30 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Volume count only from 5:00 to 7:00 pm due to lack of visibility.

# SONOMA-101

Wilfred Avenue to Route 12

## Violation History Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Dec 5, 2002	6:30 - 9:30 AM	696	<b>6.6%</b>
<b>P.M. PEAK</b>	Thu Dec 5, 2002	3:00 - 7:00 PM	2145	<b>1.9%</b>

**NOTES:**

- (a) Morning period of operation from 6:30 to 9:30 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Volume count only from 5:00 to 7:00 pm due to lack of visibility.

# SANTA CLARA-85

Route 101 (Mountain View) to Route 280

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	7	2	4	1
Buses	2	4	2	0
Carpools <sup>(1)</sup>	474	213	306	126
Vanpools	3	2	2	1
Single Occ. <sup>(2)</sup>	—	4021	—	2043
Violators	54	—	28	—
<b>TOTAL</b>	<b>540</b>	<b>4242</b>	<b>342</b>	<b>2171</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	7	2	4	1
Buses	70	140	70	0
Carpools <sup>(1)</sup>	1001	443	646	263
Vanpools	30	20	20	10
Single Occ. <sup>(2)</sup>	—	4021	—	2043
Violators	54	—	28	—
<b>TOTAL</b>	<b>1162</b>	<b>4626</b>	<b>768</b>	<b>2317</b>

RATES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh	2.2 persons/veh	2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	10.0 %	10.0 %	8.2 %	8.2 %

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 10/23/02 at Winchester Boulevard I/C

# SANTA CLARA-85

Route 101 (Mountain View) to Route 280

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	127	1	44	1
Buses	3	3	2	1
Carpools <sup>(1)</sup>	2400	5218	835	1887
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	4384	—	1593
Violators	117	—	26	—
<b>TOTAL</b>	<b>2647</b>	<b>9606</b>	<b>907</b>	<b>3482</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	127	1	44	1
Buses	105	105	70	35
Carpools <sup>(1)</sup>	5026	10523	1735	3784
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	4384	—	1593
Violators	117	—	26	—
<b>TOTAL</b>	<b>5375</b>	<b>15013</b>	<b>1875</b>	<b>5413</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.0 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.6 persons/veh		1.6 persons/veh	
Overall occupancy (incl. buses)	1.7 persons/veh		1.7 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.4 %		2.9 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/29/02 at Winchester Boulevard I/C

# SANTA CLARA-85

Route 280 to Route 101(Mountain View)

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	89	1	54	1
Buses	0	3	0	0
Carpools <sup>(1)</sup>	1325	107	691	32
Vanpools	1	0	1	0
Single Occ. <sup>(2)</sup>	—	6988	—	3544
Violators	21	—	4	—
<b>TOTAL</b>	<b>1436</b>	<b>7099</b>	<b>750</b>	<b>3577</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	89	1	54	1
Buses	0	105	0	0
Carpools <sup>(1)</sup>	2773	227	1434	72
Vanpools	10	0	10	0
Single Occ. <sup>(2)</sup>	—	6988	—	3544
Violators	21	—	4	—
<b>TOTAL</b>	<b>2893</b>	<b>7321</b>	<b>1502</b>	<b>3617</b>

RATES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.5 %		0.5 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 10/08/02 at Fremont Avenue I/C

# SANTA CLARA-85

Route 280 to Route 101(Mountain View)

# Northbound - P.M.

Typical data for 2002 (5)

VEHICLES	PEAK PERIOD (4) 3:00 - 5:30 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	6	13	3	2
Buses	0	8	0	4
Carpools (1)	738	861	280	398
Vanpools	0	4	0	0
Single Occ. (2)	—	6815	—	2617
Violators	17	—	1	—
<b>TOTAL</b>	<b>761</b>	<b>7701</b>	<b>284</b>	<b>3021</b>

PERSONS	PEAK PERIOD (4) 3:00 - 5:30 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	6	13	3	2
Buses	0	280	0	140
Carpools (1)	1483	1796	562	830
Vanpools	0	40	0	0
Single Occ. (2)	—	6815	—	2617
Violators	17	—	1	—
<b>TOTAL</b>	<b>1506</b>	<b>8944</b>	<b>566</b>	<b>3589</b>

RATES	PEAK PERIOD (4) 3:00 - 5:30 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh	
Mixed Flow occupancy rate		1.2 persons/veh		1.2 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.3 persons/veh	
Violation rate (3) (HOV Lane)	2.2 %		0.4 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 10/31/02 at Fremont Avenue I/C

# SANTA CLARA-85

Route 101 (Mountain View) to Route 280

## Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Oct 23, 2002	7:00 - 9:00 AM	540	10.0%
	Thu Jun 7, 2001	6:00 - 9:00 AM	560	4.1%
	Wed Sep 27, 2000	6:00 - 9:00 AM	604	13.2%
	Tue Jun 8, 1999	6:00 - 9:00 AM	597	9.4%
	Wed Mar 04, 1998	6:00 - 9:00 AM	551	0.5%
	Tue Feb 25, 1997	6:45 - 9:00 AM	397	5.3%
	Wed Apr 3, 1996	6:00 - 9:00 AM	359	5.0%
	Wed Sept 20, 1995	7:00 - 9:00 AM	345	6.4%
	Thu Dec 1, 1994	7:00 - 9:00 AM	618	2.1%
	Wed Jun 9, 1993	6:00 - 9:00 AM	286	26.6%
<b>P.M. PEAK</b>	Wed May 29, 2002	3:00 - 6:00 PM	2647	4.4%
	Tue Sep 25, 2001	3:00 - 6:00 PM	2656	6.4%
	Thu Jun 1, 2000	3:00 - 6:00 PM	2792	0.9%
	Thu May 13, 1999	3:00 - 6:00 PM	3121	1.4%
	Thu Apr 9, 1998	4:00 - 6:00 PM	2058	0.2%
	Tue Sept 30, 1997	3:00 - 6:00 PM	2277	1.2%
	Thu May 16, 1996	3:00 - 6:00 PM	2165	3.0%
	Thu Sept 21, 1995	3:00 - 6:00 PM	3671	2.4%
	Tue Nov 29, 1994	3:00 - 5:00 PM	970	2.1%
	Tue May 18, 1993	3:00 - 6:00 PM	1279	7.8%
	Wed Oct 21, 1992	3:00 - 6:00 PM	1280	15.9%
	Thu Apr 25, 1991	3:00 - 7:00 PM	1545	17.6%
	Tue Oct 23, 1990	3:00 - 6:00 PM	1018	21.0%

### NOTES:

(a) Morning period of operation from 5:00 to 9:00 AM.

(b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-85

Route 280 to Route 101 (Mountain View)

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Oct 8, 2002	7:00 - 9:00 AM	1435	1.5%
	Tue Apr 10, 2001	6:00 - 9:00 AM	2471	1.8%
	Tue Oct 17, 2000	7:00 - 9:00 AM	2188	10.1%
	Wed Oct 6, 1999	6:00 - 9:00 AM	2402	4.9%
	Tue Dec 1, 1998	6:00 - 9:00 AM	2473	4.7%
	Thu Dec 4, 1997	7:00 - 9:00 AM	1584	0.1%
	Wed Nov 20, 1996	6:45 - 9:00 AM	1840	0.2%
	Tue Sept 12, 1995	7:00 - 9:00 AM	1896	1.4%
	Tue Nov 29, 1994	7:00 - 9:00 AM	1073	1.8%
	Tue Nov 16, 1993	6:30 - 9:00 AM	1031	11.1%
	Thu Jun 4, 1992	6:00 - 9:00 AM	1181	7.3%
	Tue May 7, 1991	6:00 - 9:00 AM	1416	15.6%
	Wed May 23, 1990	6:00 - 9:00 AM	937	20.8%
<b>P.M. PEAK</b>	Thu Oct 31, 2002	3:00 - 5:30 PM	761	2.2%
	Wed Oct 10, 2001	3:00 - 6:00 PM	1124	0.4%
	Thu May 4, 2000	3:00 - 6:00 PM	940	2.1%
	Thu Oct 28, 1999	3:00 - 6:00 PM	845	1.2%
	Wed Mar 4, 1998	3:00 - 6:00 PM	852	3.5%
	Tue Feb 25, 1997	3:00 - 6:00 PM	1051	2.7%
	Tue Jun 4, 1996	3:00 - 6:00 PM	1008	8.2%
	Tue Sept 12, 1995	3:00 - 6:00 PM	652	9.8%
	Thu Dec 1, 1994	3:00 - 5:00 PM	569	4.4%
	Thu Apr 29, 1993	3:00 - 6:00 PM	382	31.4%

NOTES:



# SANTA CLARA-85

Route 280 to Almaden Expressway

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	4	2	4	1
Buses	1	25	1	12
Carpools <sup>(1)</sup>	227	458	123	193
Vanpools	1	1	1	0
Single Occ. <sup>(2)</sup>	—	6532	—	3430
Violators	23	—	12	—
<b>TOTAL</b>	<b>256</b>	<b>7018</b>	<b>141</b>	<b>3636</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	4	2	4	1
Buses	35	875	35	420
Carpools <sup>(1)</sup>	467	951	254	400
Vanpools	10	10	10	0
Single Occ. <sup>(2)</sup>	—	6532	—	3430
Violators	23	—	12	—
<b>TOTAL</b>	<b>539</b>	<b>8370</b>	<b>315</b>	<b>4251</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	9.0 %		8.5 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/01/02 at Winchester Boulevard I/C

# SANTA CLARA-85

Route 280 to Almaden expressway

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	51	3	13	0
Buses	10	7	2	2
Carpools <sup>(1)</sup>	2708	498	1011	138
Vanpools	0	2	0	0
Single Occ. <sup>(2)</sup>	—	10965	—	3655
Violators	97	—	26	—
<b>TOTAL</b>	<b>2866</b>	<b>11475</b>	<b>1052</b>	<b>3795</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	51	3	13	0
Buses	350	245	70	70
Carpools <sup>(1)</sup>	5559	1036	2069	287
Vanpools	0	20	0	0
Single Occ. <sup>(2)</sup>	—	10965	—	3655
Violators	97	—	26	—
<b>TOTAL</b>	<b>6057</b>	<b>12269</b>	<b>2178</b>	<b>4012</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	3.4 %	3.4 %	2.5 %	2.5 %

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 03/13/02 at Winchester Boulevard I/C

# SANTA CLARA-85

Almaden Expressway to Route 280

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	93	12	42	5
Buses	1	1	0	0
Carpools <sup>(1)</sup>	2358	325	1079	108
Vanpools	2	1	0	1
Single Occ. <sup>(2)</sup>	—	9196	—	2914
Violators	118	—	52	—
<b>TOTAL</b>	<b>2572</b>	<b>9535</b>	<b>1173</b>	<b>3028</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	93	12	42	5
Buses	35	35	0	0
Carpools <sup>(1)</sup>	4881	693	2225	230
Vanpools	20	10	0	10
Single Occ. <sup>(2)</sup>	—	9196	—	2914
Violators	118	—	52	—
<b>TOTAL</b>	<b>5147</b>	<b>9946</b>	<b>2319</b>	<b>3159</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.6 %		4.4 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 03/27/02 at Union Avenue I/C

# SANTA CLARA-85

Almaden Expressway to Route 280

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	18	18	9	11
Buses	2	2	0	0
Carpools <sup>(1)</sup>	966	1608	364	452
Vanpools	2	5	0	2
Single Occ. <sup>(2)</sup>	—	8222	—	3109
Violators	80	—	23	—
<b>TOTAL</b>	<b>1068</b>	<b>9855</b>	<b>396</b>	<b>3574</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	18	18	9	11
Buses	70	70	0	0
Carpools <sup>(1)</sup>	2059	3400	772	958
Vanpools	20	50	0	20
Single Occ. <sup>(2)</sup>	—	8222	—	3109
Violators	80	—	23	—
<b>TOTAL</b>	<b>2247</b>	<b>11760</b>	<b>804</b>	<b>4098</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	7.5 %		5.8 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 04/04/02 at Union Avenue I/C

# SANTA CLARA-85

Route 280 to Almaden Expressway

# Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed May 1, 2002	6:00 - 9:00 AM	256	9.0%
	Tue Apr 17, 2001	6:00 - 9:00 AM	341	5.9%
	Tue May 2, 2000	6:00 - 9:00 AM	363	1.7%
	Thu Mar 11, 1999	6:30 - 9:00 AM	371	0.3%
	Tue Mar 3, 1998	6:00 - 9:00 AM	416	2.4%
	Thu Nov 6, 1997	6:00 - 9:00 AM	456	8.6%
	Wed May 01, 1996	6:30 - 9:00 AM	328	9.1%
	Thu Sept 14, 1995	7:00 - 9:00 AM	514	5.6%
	Wed Dec 7, 1994	7:00 - 9:00 AM	179	20.1%
<b>P.M. PEAK</b>	Wed Mar 13, 2002	3:00 - 6:00 PM	2866	3.4%
	Thu Apr 5, 2001	3:00 - 6:00 PM	2798	0.5%
	Tue Apr 18, 2000	3:00 - 6:00 PM	3056	0.5%
	Thu Mar 11, 1999	3:00 - 6:00 PM	2963	0.1%
	Thu Jun 4, 1998	3:00 - 6:00 PM	3004	0.1%
	Thu Feb 27, 1997	3:00 - 6:00 PM	2460	1.3%
	Tue Apr 30, 1996	3:00 - 6:00 PM	3167	7.0%
	Wed Sept 13, 1995	3:00 - 6:00 PM	2774	1.9%
	Thu Dec 15, 1994	3:00 - 5:00 PM	1856	1.3%

**NOTES:**

(a) Morning period of operation from 5:00 to 9:00 AM.

(b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-85

Almaden Expressway to Route 280

# Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Mar 27, 2002	6:00 - 9:00 AM	2572	4.6%
	Tues Oct 16, 2001	6:00 - 9:00 AM	3298	6.4%
	Wed Jun 7, 2000	6:00 - 9:00 AM	3555	9.9%
	Tue Oct 26, 1999	7:00 - 9:00 AM	2350	3.0%
	Wed May 13, 1998	6:00 - 9:00 AM	2801	12.2%
	Wed Nov 5, 1997	6:00 - 9:00 AM	3036	0.4%
	Wed Nov 20, 1996	6:45 - 9:00 AM	1840	0.2%
	Tue Apr 18, 1995	6:30 - 9:00 AM	2145	2.0%
	Tue Dec 6, 1994	7:00 - 9:00 AM	1927	1.9%
<b>P.M. PEAK</b>	Thu Apr 4, 2002	3:00 - 6:00 PM	1068	7.5%
	Tue Jun 12, 2001	3:00 - 6:00 PM	985	8.9%
	Tue Oct 17, 2000	3:00 - 6:00 PM	642	3.6%
	Tue Feb 23, 1999	3:00 - 6:00 PM	866	8.7%
	Wed Apr 8, 1998	3:00 - 6:00 PM	1097	4.4%
	Wed Oct 8, 1997	3:00 - 6:00 PM	895	0.3%
	Wed Sep 25, 1996	3:00 - 6:00 PM	1417	0.6%
	Tue Oct 3, 1995	3:00 - 6:00 PM	748	6.1%
	Thu Dec 8, 1994	3:00 - 5:00 PM	339	7.4%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-85

Almaden Expressway to Route 101 (So. San Jose)

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	5	21	2	8
Buses	7	5	0	3
Carpools <sup>(1)</sup>	661	396	308	176
Vanpools	0	1	0	0
Single Occ. <sup>(2)</sup>	—	6831	—	2991
Violators	2	—	0	—
<b>TOTAL</b>	<b>675</b>	<b>7254</b>	<b>310</b>	<b>3178</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	5	21	2	8
Buses	245	175	0	105
Carpools <sup>(1)</sup>	1389	838	644	378
Vanpools	0	10	0	0
Single Occ. <sup>(2)</sup>	—	6831	—	2991
Violators	2	—	0	—
<b>TOTAL</b>	<b>1641</b>	<b>7875</b>	<b>646</b>	<b>3482</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.4 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	0.3 %		0.0 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/24/02 at Blossom Hill On-Ramp

# SANTA CLARA-85

Almaden Expressway to Route 101 (So. San Jose)

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	43	10	14	2
Buses	10	4	5	1
Carpools <sup>(1)</sup>	1848	892	641	320
Vanpools	5	2	2	0
Single Occ. <sup>(2)</sup>	—	9589	—	3261
Violators	75	—	22	—
<b>TOTAL</b>	<b>1981</b>	<b>10497</b>	<b>684</b>	<b>3584</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	43	10	14	2
Buses	350	140	175	35
Carpools <sup>(1)</sup>	3839	1901	1327	674
Vanpools	50	20	20	0
Single Occ. <sup>(2)</sup>	—	9589	—	3261
Violators	75	—	22	—
<b>TOTAL</b>	<b>4357</b>	<b>11660</b>	<b>1558</b>	<b>3972</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.3 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.8 %		3.2 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/02/02 at Blossom Hill On-Ramp



# SANTA CLARA-85

Route 101 (So. San Jose) to Almaden Expressway

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	28	16	11	9
Buses	0	7	0	5
Carpools <sup>(1)</sup>	884	737	488	344
Vanpools	3	17	2	7
Single Occ. <sup>(2)</sup>	—	8113	—	2752
Violators	24	—	13	—
<b>TOTAL</b>	<b>939</b>	<b>8890</b>	<b>514</b>	<b>3117</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	28	16	11	9
Buses	0	245	0	175
Carpools <sup>(1)</sup>	1848	1579	1028	749
Vanpools	30	170	20	70
Single Occ. <sup>(2)</sup>	—	8113	—	2752
Violators	24	—	13	—
<b>TOTAL</b>	<b>1930</b>	<b>10123</b>	<b>1072</b>	<b>3755</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.2 persons/veh	1.2 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh	1.2 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	2.6 %	2.6 %	2.5 %	2.5 %

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 03/12/02 at Blossom Hill Road Station

# SANTA CLARA-85

Route 101 (So. San Jose) to Almaden Expressway

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	28	11	8
Buses	2	5	1	5
Carpools <sup>(1)</sup>	907	1330	359	463
Vanpools	1	3	1	1
Single Occ. <sup>(2)</sup>	—	8533	—	3406
Violators	49	—	17	—
<b>TOTAL</b>	<b>976</b>	<b>9899</b>	<b>389</b>	<b>3883</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	28	11	8
Buses	70	175	35	175
Carpools <sup>(1)</sup>	1910	2889	762	1003
Vanpools	10	30	10	10
Single Occ. <sup>(2)</sup>	—	8533	—	3406
Violators	49	—	17	—
<b>TOTAL</b>	<b>2056</b>	<b>11655</b>	<b>835</b>	<b>4602</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.0 %		4.4 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 04/24/02 at Blossom Hill Road Station

# SANTA CLARA-85

Almaden Expressway to Route 101 (So. San Jose)

# Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Apr 24, 2002	6:00 - 9:00 AM	675	0.3%
	Wed May 2, 2001	6:00 - 9:00 AM	595	1.7%
	Wed May 3, 2000	6:00 - 9:00 AM	635	7.1%
	Wed Feb 3, 1999	6:00 - 9:00 AM	739	0.0%
	Tue May 19, 1998	6:00 - 9:00 AM	602	0.0%
	Thu Dec 4, 1997	6:00 - 9:00 AM	282	12.8%
	Tue May 21, 1996	6:00 - 9:00 AM	324	13.0%
	Tue Sept 26, 1995	7:00 - 9:00 AM	240	8.8%
	Tue Dec 13, 1994	7:00 - 9:00 AM	240	17.5%
<b>P.M. PEAK</b>	Thu May 2, 2002	3:00 - 6:00 PM	1981	3.8%
	Wed Oct 3, 2001	3:00 - 6:00 PM	2418	0.2%
	Wed Oct 18, 2000	3:00 - 6:00 PM	2354	0.6%
	Tue May 18, 1999	3:00 - 6:00 PM	2112	2.5%
	Thu Dec 3, 1998	3:00 - 6:00 PM	4447	0.0%
	Thu Oct 16, 1997	3:00 - 6:00 PM	1754	3.6%
	Thu Sep 19, 1996	3:00 - 6:00 PM	960	5.4%
	Thu Oct 5, 1995	3:00 - 6:00 PM	960	5.4%
	Tue Dec 13, 1994	3:00 - 5:00 PM	531	7.7%

**NOTES:**

(a) Morning period of operation from 5:00 to 9:00 AM.

(b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-85

Route 101 (S. San Jose) to Almaden Expressway

# Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Mar 12, 2002	6:00 - 9:00 AM	939	2.6%
	Thu Apr 12, 2001	6:00 - 9:00 AM	1678	7.3%
	Thu Oct 5, 2000	7:00 - 9:00 AM	1222	5.2%
	Tue Oct 5, 1999	6:00 - 9:00 AM	1669	1.1%
	Wed Mar 25, 1998	6:00 - 9:00 AM	1482	0.4%
	Thu Mar 6, 1997	6:30 - 9:00 AM	1019	7.7%
	Thu Jun 13, 1996	6:00 - 9:00 AM	1151	8.4%
	Thu Sept 21, 1995	7:00 - 9:00 AM	981	2.5%
	Thu Dec 8, 1994	7:00 - 9:00 AM	618	3.7%
<b>P.M. PEAK</b>	Wed Apr 24, 2002	3:00 - 6:00 PM	976	5.0%
	Tue Oct 9, 2001	3:00 - 6:00 PM	814	8.6%
	Wed May 3, 2000	3:00 - 6:00 PM	784	5.6%
	Thu Nov 17, 1999	3:00 - 5:30 PM	826	6.5%
	Thu May 7, 1998	3:00 - 6:00 PM	1062	10.1%
	Tue Oct 30, 1997	3:00 - 6:00 PM	1245	0.2%
	Wed Mar 20, 1996	3:00 - 6:00 PM	907	9.0%
	Tue Sept 19, 1995	3:00 - 6:00 PM	717	8.9%
	Tue Dec 20, 1994	3:00 - 5:00 PM	557	16.5%

**NOTES:**

(a) Morning period of operation from 5:00 to 9:00 AM.

(b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-101

SCL/SM County Line to Ellis Street

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	127	9	41	2
Buses	5	18	1	8
Carpools <sup>(1)</sup>	1688	611	562	199
Vanpools	1	4	1	1
Single Occ. <sup>(2)</sup>	—	13468	—	4937
Violators	128	—	15	—
<b>TOTAL</b>	<b>1949</b>	<b>14110</b>	<b>620</b>	<b>5147</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	127	9	41	2
Buses	175	630	35	280
Carpools <sup>(1)</sup>	3520	1309	1169	432
Vanpools	10	40	10	10
Single Occ. <sup>(2)</sup>	—	13468	—	4937
Violators	128	—	15	—
<b>TOTAL</b>	<b>3960</b>	<b>15456</b>	<b>1270</b>	<b>5661</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	6.6 %		2.4 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/15/02 at the San Antonio Road I/C

# SANTA CLARA-101

SCL/SM County Line to Ellis Street

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	67	5	16	1
Buses	9	4	3	3
Carpools <sup>(1)</sup>	2028	1125	732	483
Vanpools	0	1	0	0
Single Occ. <sup>(2)</sup>	—	14264	—	4856
Violators	15	—	9	—
<b>TOTAL</b>	<b>2119</b>	<b>15399</b>	<b>760</b>	<b>5343</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	67	5	16	1
Buses	315	140	105	105
Carpools <sup>(1)</sup>	4124	2411	1487	1031
Vanpools	0	10	0	0
Single Occ. <sup>(2)</sup>	—	14264	—	4856
Violators	15	—	9	—
<b>TOTAL</b>	<b>4521</b>	<b>16830</b>	<b>1617</b>	<b>5993</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.1 persons/veh		2.1 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	0.7 %		1.2 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/14/02 at the San Antonio Road I/C

# SANTA CLARA-101

Ellis Street to SCL/SM County Line

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	63	28	31	14
Buses	0	7	0	2
Carpools <sup>(1)</sup>	1770	1190	665	497
Vanpools	0	31	0	12
Single Occ. <sup>(2)</sup>	—	9816	—	3593
Violators	40	—	19	—
<b>TOTAL</b>	<b>1873</b>	<b>11072</b>	<b>715</b>	<b>4118</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	63	28	31	14
Buses	0	245	0	70
Carpools <sup>(1)</sup>	3591	2581	1350	1110
Vanpools	0	310	0	120
Single Occ. <sup>(2)</sup>	—	9816	—	3593
Violators	40	—	19	—
<b>TOTAL</b>	<b>3694</b>	<b>12980</b>	<b>1400</b>	<b>4907</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.1 %		2.7 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 09/25/02 at the San Antonio Road I/C

# SANTA CLARA-101

Ellis Street to SCL/SM County Line

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	125	22	56	7
Buses	4	26	0	0
Carpools <sup>(1)</sup>	2871	728	1180	233
Vanpools	0	10	0	4
Single Occ. <sup>(2)</sup>	—	13212	—	4977
Violators	64	—	13	—
<b>TOTAL</b>	<b>3064</b>	<b>13998</b>	<b>1249</b>	<b>5221</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	125	22	56	7
Buses	140	910	0	0
Carpools <sup>(1)</sup>	6067	1539	2512	501
Vanpools	0	100	0	40
Single Occ. <sup>(2)</sup>	—	13212	—	4977
Violators	64	—	13	—
<b>TOTAL</b>	<b>6396</b>	<b>15783</b>	<b>2581</b>	<b>5525</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	2.1 %	2.1 %	1.0 %	1.0 %

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 06/06/02 at the San Antonio Road I/C



# SANTA CLARA-101

SCI/SM County Line to Ellis Street

## Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed May 15, 2002	6:00 - 9:00 AM	1949	6.6%
	Wed Mar 21, 2001	6:00 - 9:00 AM	2710	0.8%
	Wed Sep 13, 2000	6:00 - 9:00 AM	2823	10.5%
	Wed Apr 28, 1999	6:00 - 9:00 AM	2817	3.3%
	Thu Mar 12, 1998	6:00 - 9:00 AM	2885	0.6%
	Tue Dec 2, 1997	6:00 - 9:00 AM	2773	2.1%
	Thu Apr 25, 1996	6:30 - 9:00 AM	3742	1.5%
	Thu Jun 8, 1995	6:00 - 9:00 AM	2973	1.6%
	Thu May 5, 1994	6:00 - 9:00 AM	2684	4.8%
	Thu Jun 24, 1993	6:00 - 9:00 AM	1629	8.0%
<b>P.M. PEAK</b>	Tue May 14, 2002	3:00 - 6:00 PM	2119	0.7%
	Wed Oct 24, 2001	3:00 - 6:00 PM	2935	4.4%
	Thu Mar 25, 1999	3:00 - 6:00 PM	3037	1.2%
	Thu Mar 25, 1999	3:00 - 6:00 PM	3037	1.2%
	Tue Mar 17, 1998	3:00 - 6:00 PM	2406	0.7%
	Wed Oct 29, 1997	3:00 - 6:00 PM	2666	0.0%
	Wed Oct 2 1996	3:00 - 6:00 PM	2836	0.6%
	Wed Oct 4 1995	3:00 - 6:00 PM	2591	3.9%
	Thu Apr 21, 1994	3:00 - 7:00 PM	4979	14.7%
	Wed May 12, 1993	3:00 - 6:00 PM	1995	13.4%
	Wed Nov 18, 1992	3:00 - 5:00 PM	1457	14.5%
	Thu May 16, 1991	3:00 - 7:00 PM	2684	9.3%
	Wed Apr 4, 1990	3:00 - 7:00 PM	1721	7.6%

### NOTES:

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Data collected on and prior to April 19, 1990 cover section between Guadalupe Parkway and the SCI/SM County Line.

# SANTA CLARA-101

Ellis Street to SCI/SM County Line

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Wed Sept 25, 2002	6:45 - 9:00 AM	1479	2.4%
	Thu Oct 4, 2001	6:00 - 9:00 AM	1942	6.0%
	Thu May 18, 2000	6:00 - 9:00 AM	2047	5.1%
	Thu Nov 18, 1999	6:30 - 9:00 AM	1745	2.5%
	Thu Mar 26, 1998	6:00 - 9:00 AM	1986	0.1%
	Tue Dec 2, 1997	7:00 - 9:00 AM	1720	3.8%
	Wed Jun 12, 1996	6:00 - 9:00 AM	3249	0.7%
	Thu May 4, 1995	6:00 - 9:00 AM	2070	5.9%
	Thu Apr 21, 1994	6:00 - 9:00 AM	3114	3.5%
	Wed May 12, 1993	6:00 - 9:00 AM	1509	7.7%
	Wed May 20, 1992	6:15 - 9:00 AM	1172	4.3%
	Thu May 23, 1991	6:45 - 9:00 AM	879	6.5%
	Thu Apr 19, 1990	6:30 - 9:00 AM	1084	6.3%
<b>P.M. PEAK</b>	Thu Jun 6, 2002	3:00 - 6:00 PM	3064	2.1%
	Wed Oct 17, 2001	3:00 - 6:00 PM	2523	3.2%
	Tue Nov 7, 2000	3:00 - 6:00 PM	3032	4.6%
	Tue Apr 27, 1999	3:00 - 6:00 PM	3034	1.5%
	Wed Mar 11, 1998	3:00 - 6:00 PM	2464	1.3%
	Thu Apr 24, 1997	3:00 - 6:00 PM	3693	0.2%
	Tue Nov 12, 1996	3:00 - 6:00 PM	3151	0.1%
	Wed Mar 15, 1995	3:00 - 6:00 PM	4260	3.4%
	Wed Sep 28, 1994	3:00 - 6:00 PM	4122	2.4%
	Thu Jun 3, 1993	3:00 - 6:00 PM	2831	7.5%

### NOTES:

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Data collected on and prior to April 19, 1990 cover the section between Guadalupe Parkway and the SCI/SM County Line.

# SANTA CLARA-101

Ellis Street to Guadalupe Parkway

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	11	16	3
Buses	0	29	0	5
Carpools <sup>(1)</sup>	629	629	205	247
Vanpools	2	45	1	19
Single Occ. <sup>(2)</sup>	—	8919	—	3340
Violators	15	—	12	—
<b>TOTAL</b>	<b>668</b>	<b>9633</b>	<b>234</b>	<b>3614</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	11	16	3
Buses	0	1015	0	175
Carpools <sup>(1)</sup>	1279	1379	419	562
Vanpools	20	450	10	190
Single Occ. <sup>(2)</sup>	—	8919	—	3340
Violators	15	—	12	—
<b>TOTAL</b>	<b>1336</b>	<b>11774</b>	<b>457</b>	<b>4270</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.2 %		5.1 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 8:00 to 9:00 A.M.
- (5) Observations conducted 12/03/02 at the San Tomas Expressway I/C

# SANTA CLARA-101

Ellis Street to Guadalupe Parkway

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	87	10	31	5
Buses	5	25	3	0
Carpools <sup>(1)</sup>	2784	1097	1016	332
Vanpools	0	3	0	0
Single Occ. <sup>(2)</sup>	—	12475	—	4214
Violators	36	—	8	—
<b>TOTAL</b>	<b>2912</b>	<b>13610</b>	<b>1058</b>	<b>4551</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	87	10	31	5
Buses	175	875	105	0
Carpools <sup>(1)</sup>	5794	2323	2099	699
Vanpools	0	30	0	0
Single Occ. <sup>(2)</sup>	—	12475	—	4214
Violators	36	—	8	—
<b>TOTAL</b>	<b>6092</b>	<b>15713</b>	<b>2243</b>	<b>4918</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh	1.2 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh	1.3 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	1.2 %	1.2 %	0.8 %	0.8 %

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 04/11/02 at the San Tomas Expressway I/C

# SANTA CLARA-101

Guadalupe Parkway to Ellis Street

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	33	37	13	10
Buses	5	4	3	3
Carpools <sup>(1)</sup>	1478	741	519	269
Vanpools	6	0	1	0
Single Occ. <sup>(2)</sup>	—	12173	—	4573
Violators	124	—	46	—
<b>TOTAL</b>	<b>1646</b>	<b>12955</b>	<b>582</b>	<b>4855</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	33	37	13	10
Buses	175	140	105	105
Carpools <sup>(1)</sup>	3157	1521	1102	549
Vanpools	60	0	10	0
Single Occ. <sup>(2)</sup>	—	12173	—	4573
Violators	124	—	46	—
<b>TOTAL</b>	<b>3549</b>	<b>13871</b>	<b>1276</b>	<b>5237</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	7.5 %		7.9 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/04/02 at the Fair Oaks Avenue I/C

# SANTA CLARA-101

Guadalupe Parkway to Ellis Street

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	54	45	23	11
Buses	4	10	1	4
Carpools <sup>(1)</sup>	1373	1301	560	327
Vanpools	0	3	0	0
Single Occ. <sup>(2)</sup>	—	11543	—	4367
Violators	56	—	13	—
<b>TOTAL</b>	<b>1487</b>	<b>12902</b>	<b>597</b>	<b>4709</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	54	45	23	11
Buses	140	350	35	140
Carpools <sup>(1)</sup>	2879	2765	1162	694
Vanpools	0	30	0	0
Single Occ. <sup>(2)</sup>	—	11543	—	4367
Violators	56	—	13	—
<b>TOTAL</b>	<b>3129</b>	<b>14733</b>	<b>1233</b>	<b>5212</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.1 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.8 %		2.2 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/22/02 at the North Fair Oaks Avenue I/C

# SANTA CLARA-101

Ellis Street to Guadalupe Parkway

## Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Dec 3, 2002	6:45 - 9:00 AM	534	2.8%
	Tue Jun 5, 2001	6:00 - 9:00 AM	765	2.1%
	Thu Apr 20, 2000	6:00 - 9:00 AM	916	3.8%
	Thur Oct 21, 1999	7:00 - 9:00 AM	739	1.8%
	Thu Apr 9, 1998	6:00 - 9:00 AM	1163	4.3%
	Wed Dec 3, 1997	6:00 - 9:00 AM	1272	8.6%
	Thu Nov 7, 1996	6:45 - 9:00 AM	2212	1.1%
	Wed Oct 4, 1995	7:00 - 9:00 AM	1057	4.5%
	Wed Nov 2, 1994	6:30 - 9:00 AM	1124	20.7%
	Tue Jun 15, 1993	6:00 - 9:00 AM	664	2.9%
<b>P.M. PEAK</b>	Thu Apr 11, 2002	3:00 - 6:00 PM	2912	1.2%
	Thu Mar 29, 2001	3:00 - 6:00 PM	3903	3.1%
	Wed Nov 15, 2000	3:00 - 5:30 PM	3077	2.7%
	Wed Oct 20, 1999	3:00 - 6:00 PM	3954	2.3%
	Thu May 14, 1998	4:00 - 6:30 PM	3124	0.2%
	Tue Apr 22, 1997	3:00 - 6:00 PM	3268	1.0%
	Wed May 22, 1996	3:00 - 6:00 PM	3832	1.3%
	Thu Apr 20, 1995	3:00 - 7:00 PM	5831	1.5%
	Wed Nov 2, 1994	3:00 - 5:15 PM	2698	9.5%
	Wed Oct 6, 1993	3:00 - 6:00 PM	3056	7.0%
	Thu May 28, 1992	3:00 - 7:00 PM	2045	7.8%
	Tue May 14, 1991	3:00 - 7:00 PM	2998	6.1%
	Wed Apr 4, 1990	3:00 - 7:00 PM	3992	12.4%

- NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.  
(c) Data collected on and prior to April 19, 1990 cover section between Guadalupe Parkway and the SCI/SM County Line.

# SANTA CLARA-101

Guadalupe Parkway to Ellis Street

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Apr 4, 2002	6:00 - 9:00 AM	1646	7.5%
	Wed Sep 26, 2001	6:00 - 9:00 AM	1607	0.8%
	Tue Apr 4, 2000	6:00 - 9:00 AM	1527	2.8%
	Wed Oct 20, 1999	7:00 - 9:00 AM	1299	0.5%
	Thu Oct 1, 1998	7:00 - 9:00 AM	1268	1.6%
	Thu Nov 20, 1997	6:00 - 9:00 AM	1700	0.0%
	Thu Sep 26, 1996	7:00 - 9:00 AM	1765	0.7%
	Thu Oct 5, 1995	7:00 - 9:00 AM	1594	3.8%
	Tue Nov 1, 1994	6:30 - 9:00 AM	1861	4.8%
	Wed Oct 6, 1993	7:00 - 9:00 AM	977	14.4%
	Tue Dec 15, 1992	6:15 - 9:00 AM	833	16.6%
	Thu Jun 6, 1991	6:00 - 9:00 AM	118	18.6%
	Thu Nov 8, 1990	6:45 - 9:00 AM	131	59.0%
<b>P.M. PEAK</b>	Wed May 22, 2002	3:00-6:00 PM	1487	3.8%
	Wed May 10, 2000	3:00-6:00 PM	1684	0.3%
	Tue Jun 8, 1999	3:00 - 6:00 PM	1765	2.2%
	Thu May 21, 1998	3:00-6:00 PM	2066	4.5%
	Thu Apr 10, 1997	3:00 - 6:00 PM	1563	1.5%
	Tue May 21, 1996	3:00 - 6:00 PM	2126	4.2%
	Tue Oct 17, 1995	3:00 - 6:00 PM	1910	6.0%
	Tue Dec 6, 1994	3:00-5:00 PM	708	9.3%
	Tue Jun 8, 1993	3:00 - 6:00 PM	1765	2.2%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
 (b) Evening period of operation from 3:00 to 7:00 PM.  
 (c) Data collected on and prior to April 19, 1990 cover section between Guadalupe Parkway and the SCL/SM County Line.



# SANTA CLARA-101

Guadalupe Parkway to Route 280/680 I/C

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	13	8	3	5
Buses	0	9	0	0
Carpools <sup>(1)</sup>	313	555	109	204
Vanpools	1	5	0	3
Single Occ. <sup>(2)</sup>	—	5197	—	1784
Violators	12	—	1	—
<b>TOTAL</b>	<b>339</b>	<b>5774</b>	<b>113</b>	<b>1996</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	13	8	3	5
Buses	0	315	0	0
Carpools <sup>(1)</sup>	679	1190	241	437
Vanpools	10	50	0	30
Single Occ. <sup>(2)</sup>	—	5197	—	1784
Violators	12	—	1	—
<b>TOTAL</b>	<b>714</b>	<b>6760</b>	<b>245</b>	<b>2256</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.5 %		0.9 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/30/02 at McKee Road I/C

# SANTA CLARA-101

Guadalupe Parkway to Route 280/680 I/C

# Southbound - P.M.

Typical data for 2002 (5)

VEHICLES	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	115	25	41	4
Buses	21	1	13	1
Carpools (1)	2176	1039	816	269
Vanpools	0	3	0	1
Single Occ. (2)	—	12172	—	4160
Violators	30	—	9	—
<b>TOTAL</b>	<b>2342</b>	<b>13240</b>	<b>879</b>	<b>4435</b>

PERSONS	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	115	25	41	4
Buses	735	35	455	35
Carpools (1)	4545	2187	1693	571
Vanpools	0	30	0	10
Single Occ. (2)	—	12172	—	4160
Violators	30	—	9	—
<b>TOTAL</b>	<b>5425</b>	<b>14449</b>	<b>2198</b>	<b>4780</b>

RATES	PEAK PERIOD (4) 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.3 persons/veh		2.5 persons/veh	
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate (3) (HOV Lane)	1.3 %		1.0 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 06/13/02 at McKee Road I/C

# SANTA CLARA-101

Route 280/680 I/C to Guadalupe Parkway

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	124	10	39	6
Buses	5	2	3	1
Carpools <sup>(1)</sup>	3523	605	1423	293
Vanpools	0	1	0	0
Single Occ. <sup>(2)</sup>	—	17081	—	5774
Violators	98	—	25	—
<b>TOTAL</b>	<b>3750</b>	<b>17699</b>	<b>1490</b>	<b>6074</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	124	10	39	6
Buses	175	70	105	35
Carpools <sup>(1)</sup>	7237	1330	2914	638
Vanpools	0	10	0	0
Single Occ. <sup>(2)</sup>	—	17081	—	5774
Violators	98	—	25	—
<b>TOTAL</b>	<b>7634</b>	<b>18501</b>	<b>3083</b>	<b>6453</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.6 %		1.7 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/11/02 at McKee Road I/C

# SANTA CLARA-101

Route 280/680 I/C to Guadalupe Parkway

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	18	7	4
Buses	3	8	3	1
Carpools <sup>(1)</sup>	1221	1222	393	350
Vanpools	3	1	2	0
Single Occ. <sup>(2)</sup>	—	10820	—	3902
Violators	20	—	12	—
<b>TOTAL</b>	<b>1264</b>	<b>12069</b>	<b>417</b>	<b>4257</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	17	18	7	4
Buses	105	280	105	35
Carpools <sup>(1)</sup>	2518	2606	808	731
Vanpools	30	10	20	0
Single Occ. <sup>(2)</sup>	—	10820	—	3902
Violators	20	—	12	—
<b>TOTAL</b>	<b>2690</b>	<b>13734</b>	<b>952</b>	<b>4672</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 3:00 - 4:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.1 persons/veh		2.3 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.6 %		2.9 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/23/02 at McKee Road I/C

# SANTA CLARA-101

Guadalupe Parkway to Route 280/680 I/C

# Violation History

Southbound

		PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu May 30, 2002	6:00 - 9:00 AM	339	3.5%
	Thu Oct 18, 2001	6:00 - 9:00 AM	495	3.0%
	Thu Jun 8, 2000	6:00 - 9:00 AM	485	11.8%
	Wed Mar 24, 1999	6:00 - 9:00 AM	378	9.5%
	Thu Apr 2, 1998	6:00 - 9:00 AM	436	6.7%
	Wed Mar 5, 1997	6:30 - 9:00 AM	438	2.1%
	Thu Oct 24, 1996	7:00 - 9:00 AM	550	0.4%
	Wed Oct 18, 1995	7:00 - 9:00 AM	172	3.5%
	Tue Nov 8, 1994	6:30 - 9:00 AM	422	18.5%

<b>P.M. PEAK</b>	Thu Jun 13, 2002	3:00 - 6:00 PM	2342	1.3%
	Tue Mar 27, 2001	3:00 - 6:00 PM	2840	2.6%
	Thu May 11, 2000	3:00 - 6:00 PM	3049	1.7%
	Tue Dec 14, 1999	3:00 - 5:30 PM	2418	0.4%
	Thu Sep 17, 1998	3:00 - 6:00 PM	3499	2.5%
	Tue Sept 23, 1997	3:00 - 6:00 PM	2965	0.5%
	Wed Oct 23, 1996	3:00 - 6:00 PM	3230	0.3%
	Wed Apr 19, 1995	3:00 - 7:00 PM	3957	2.9%
	Thu Nov 3, 1994	3:00 - 5:15 PM	1856	1.5%
	Thu Oct 7, 1993	3:00 - 6:00 PM	2163	5.4%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Data collected on and prior to April 19, 1990 cover section between Guadalupe Parkway and the SCL/SM County Line.

# SANTA CLARA-101

Route 280/680 I/C to Guadalupe Parkway

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Apr 11, 2002	6:30 - 9:00 AM	3438	2.7%
	Thu May 11, 2000	6:00 - 9:00 AM	4839	2.4%
	Wed Apr 14, 1999	6:00 - 9:00 AM	4717	2.9%
	Thu Dec 10, 1998	6:00 - 9:00 AM	4589	1.8%
	Wed Sep 24, 1997	7:00 - 9:00 AM	2994	2.4%
	Wed May 22, 1996	6:00 - 9:00 AM	5386	0.8%
	Thu Nov 2, 1995	6:00 - 9:00 AM	5061	0.5%
	Thu Nov 3, 1994	6:30 - 9:00 AM	3777	2.1%
	Thu Oct 28, 1993	7:00 - 9:00 AM	3048	5.2%
<b>P.M. PEAK</b>	Thu May 23, 2002	3:00 - 6:00 PM	1264	1.6%
	Thu Apr 27, 2000	3:00 - 6:00 PM	1318	3.7%
	Tue Dec 7, 1999	3:00 - 5:00 PM	1314	4.3%
	Wed Nov 4, 1998	3:00 - 5:30 PM	1393	0.7%
	Wed Apr 30, 1997	3:00 - 6:00 PM	2171	0.2%
	Thu Nov 14, 1996	3:00 - 6:00 PM	1743	0.0%
	Wed Oct 11, 1995	3:00 - 6:00 PM	1370	6.0%
	Tue Nov 8, 1994	3:00 - 5:00 PM	1272	3.6%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.  
(c) Data collected on and prior to April 19, 1990 cover the section between Guadalupe Parkway and the SC/SM County Line.

# SANTA CLARA-101

Route 280/680 I/C to Bernal Road

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	21	5	5	2
Buses	2	28	1	5
Carpools <sup>(1)</sup>	663	1009	271	424
Vanpools	3	14	1	4
Single Occ. <sup>(2)</sup>	—	8653	—	3108
Violators	41	—	18	—
<b>TOTAL</b>	<b>730</b>	<b>9709</b>	<b>296</b>	<b>3543</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	21	5	5	2
Buses	70	980	35	175
Carpools <sup>(1)</sup>	1476	2198	605	916
Vanpools	30	140	10	40
Single Occ. <sup>(2)</sup>	—	8653	—	3108
Violators	41	—	18	—
<b>TOTAL</b>	<b>1638</b>	<b>11976</b>	<b>673</b>	<b>4241</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh		2.3 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.6 %		6.1 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 06/06/02 at the Hellyer Avenue I/C

# SANTA CLARA-101

Route 280/680 I/C to Bernal Road

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	32	26	7	11
Buses	8	95	4	48
Carpools <sup>(1)</sup>	1425	1528	521	524
Vanpools	1	26	1	9
Single Occ. <sup>(2)</sup>	—	9046	—	3078
Violators	30	—	6	—
<b>TOTAL</b>	<b>1496</b>	<b>10721</b>	<b>539</b>	<b>3670</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	32	26	7	11
Buses	280	3325	140	1680
Carpools <sup>(1)</sup>	3070	3247	1120	1115
Vanpools	10	260	10	90
Single Occ. <sup>(2)</sup>	—	9046	—	3078
Violators	30	—	6	—
<b>TOTAL</b>	<b>3422</b>	<b>15904</b>	<b>1283</b>	<b>5974</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.3 persons/veh		2.4 persons/veh
Mixed Flow occupancy rate	1.5 persons/veh		1.6 persons/veh	
Overall occupancy (incl. buses)	1.6 persons/veh		1.7 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.0 %		1.1 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 03/19/02 at the Hellyer Avenue I/C



# SANTA CLARA-101

Bernal Road to Route 280/680 I/C

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	92	12	35	1
Buses	4	0	1	0
Carpools <sup>(1)</sup>	1712	826	713	306
Vanpools	0	1	0	1
Single Occ. <sup>(2)</sup>	—	12571	—	4527
Violators	51	—	15	—
<b>TOTAL</b>	<b>1859</b>	<b>13410</b>	<b>764</b>	<b>4835</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	92	12	35	1
Buses	140	0	35	0
Carpools <sup>(1)</sup>	3568	1792	1495	667
Vanpools	0	10	0	10
Single Occ. <sup>(2)</sup>	—	12571	—	4527
Violators	51	—	15	—
<b>TOTAL</b>	<b>3851</b>	<b>14385</b>	<b>1580</b>	<b>5205</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 7:00 - 8:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.7 %		2.0 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/16/02 at the Hellyer Avenue I/C

# SANTA CLARA-101

Bernal Road to Route 280/680 I/C

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	14	22	5	5
Buses	5	9	0	5
Carpools <sup>(1)</sup>	597	1379	245	433
Vanpools	0	4	0	1
Single Occ. <sup>(2)</sup>	—	7567	—	2598
Violators	5	—	1	—
<b>TOTAL</b>	<b>621</b>	<b>8981</b>	<b>251</b>	<b>3042</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	14	22	5	5
Buses	175	315	0	175
Carpools <sup>(1)</sup>	1268	2935	526	913
Vanpools	0	40	0	10
Single Occ. <sup>(2)</sup>	—	7567	—	2598
Violators	5	—	1	—
<b>TOTAL</b>	<b>1462</b>	<b>10879</b>	<b>532</b>	<b>3701</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.4 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	0.8 %		0.4 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 10/08/02 at the Hellyer Avenue

# SANTA CLARA-101

Route 280/680 I/C to Bernal Road

## Violation History Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Jun 6, 2002	6:00 - 9:00 AM	730	5.6%
	Thu Apr 19, 2001	6:00 - 9:00 AM	746	5.4%
	Wed Oct 4, 2000	7:00 - 9:00 AM	413	5.6%
	Wed Nov 3, 1999	6:00 - 9:00 AM	660	0.9%
	Thur May 6, 1998	6:00 - 9:00 AM	576	0.7%
	Thu May 22, 1997	6:30 - 9:00 AM	473	6.1%
	Thu Oct 17, 1996	7:00 - 9:00 AM	538	0.7%
	Tue Oct 24, 1995	7:00 - 9:00 AM	538	6.5%
	Tue Nov 15, 1994	6:45 - 9:00 AM	490	11.4%
	Thu Jun 17, 1993	6:00 - 9:00 AM	737	3.4%
<b>P.M. PEAK</b>	Tue Mar 19, 2002	3:00 - 6:00 PM	1496	2.0%
	Wed May 16, 2001	3:00 - 6:00 PM	1732	0.8%
	Tue Sep 19, 2000	3:00 - 6:00 PM	1898	0.7%
	Tue Mar 16, 1999	3:00 - 6:30 PM	702	4.6%
	Wed Apr 22, 1998	3:00 - 6:00 PM	1498	0.1%
	Tue Oct 7, 1997	3:00 - 6:00 PM	1843	0.1%
	Wed Dec 11, 1996	3:00 - 5:30 PM	1426	3.6%
	Wed May 3, 1995	3:00 - 7:00 PM	2181	11.0%
	Wed Nov 30, 1994	3:00 - 5:00 PM	1116	9.2%
	Thu May 20, 1993	3:00 - 6:00 PM	2154	5.7%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.
- (c) Data collected on and prior to April 19, 1990 cover section between Guadalupe Parkway and the SCL/SM County Line.

# SANTA CLARA-101

Bernal Road to Route 280/680 I/C

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu May 16, 2002	6:00 - 9:00 AM	1859	2.7%
	Tue Apr 3, 2001	6:00 - 9:00 AM	2258	3.5%
	Thu Nov 30, 2000	7:00 - 9:00 AM	1503	2.3%
	Tue Dec 7, 1999	6:30 - 9:00 AM	2550	4.9%
	Tue Dec 8, 1998	6:00 - 9:00 AM	2663	4.8%
	Wed May 21, 1997	6:30 - 9:00 AM	1932	0.9%
	Thu Jun 6, 1996	6:00 - 9:00 AM	2225	0.2%
	Tue Apr 18, 1995	6:00 - 9:00 AM	1614	0.9%
	Wed Nov 9, 1994	6:45 - 9:00 AM	1668	1.6%
	Tue May 25, 1993	6:00 - 9:00 AM	1857	2.7%
<b>P.M. PEAK</b>	Wed Mar 27, 2002	3:00 - 6:00 PM	1156	3.1%
	Tue May 15, 2001	3:00 - 6:00 PM	1155	5.4%
	Wed Apr 5, 2000	3:00 - 6:00 PM	1169	5.9%
	Wed May 26, 1999	3:00 - 6:00 PM	1255	5.1%
	Thu Apr 23, 1998	3:00 - 6:00 PM	995	4.6%
	Wed Mar 12, 1997	3:00 - 6:00 PM	803	0.4%
	Wed Dec 4, 1996	3:00 - 5:30 PM	777	3.3%
	Thu Oct 19, 1995	3:00 - 6:00 PM	794	2.3%
	Wed Dec 7, 1994	3:00 - 5:00 PM	1156	3.4%
	Wed Jun 9, 1993	3:00 - 6:00 PM	1160	8.4%

**NOTES:** (a) Morning period of operation from 5:00 to 9:00 AM.  
(b) Evening period of operation from 3:00 to 7:00 PM.  
(c) Data collected on and prior to April 19, 1990 cover the section between Guadalupe Parkway and the SCL/SM County Line.

# SANTA CLARA-237

Route 880/237 I/C to Mathilda Avenue

# Westbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	106	8	38	3
Buses	8	3	2	0
Carpools <sup>(1)</sup>	1404	322	482	98
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	10964	—	4031
Violators	59	—	32	—
<b>TOTAL</b>	<b>1577</b>	<b>11297</b>	<b>554</b>	<b>4132</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	106	8	38	3
Buses	280	105	70	0
Carpools <sup>(1)</sup>	2958	666	1017	203
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	10964	—	4031
Violators	59	—	32	—
<b>TOTAL</b>	<b>3403</b>	<b>11743</b>	<b>1157</b>	<b>4237</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.2 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.7 %		5.8 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/02/02 at the Zanker Road I/C.

# SANTA CLARA-237

Route 880/237 I/C to Mathilda Avenue

# Westbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	34	7	20	2
Buses	6	2	3	0
Carpools <sup>(1)</sup>	716	563	372	113
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	8996	—	3533
Violators	17	—	8	—
<b>TOTAL</b>	<b>773</b>	<b>9568</b>	<b>403</b>	<b>3648</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	34	7	20	2
Buses	210	70	105	0
Carpools <sup>(1)</sup>	1458	1199	762	234
Vanpools	0	0	0	0
Single Occ. <sup>(2)</sup>	—	8996	—	3533
Violators	17	—	8	—
<b>TOTAL</b>	<b>1719</b>	<b>10272</b>	<b>895</b>	<b>3769</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.2 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	2.2 %		2.0 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/15/02 at the Zanker Road I/C.

# SANTA CLARA-237

Mathilda Avenue to Route 880/237/ IC

# Eastbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	14	0	8	0
Buses	1	1	1	1
Carpools <sup>(1)</sup>	477	99	282	26
Vanpools	1	0	1	0
Single Occ. <sup>(2)</sup>	—	4530	—	2730
Violators	68	—	38	—
<b>TOTAL</b>	<b>561</b>	<b>4630</b>	<b>330</b>	<b>2757</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	14	0	8	0
Buses	35	35	35	35
Carpools <sup>(1)</sup>	990	201	588	52
Vanpools	10	0	10	0
Single Occ. <sup>(2)</sup>	—	4530	—	2730
Violators	68	—	38	—
<b>TOTAL</b>	<b>1117</b>	<b>4766</b>	<b>679</b>	<b>2817</b>

RATES	PEAK PERIOD <sup>(4)</sup> 7:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.0 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.1 persons/veh		1.1 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	12.1 %		11.5 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 10/31/02 at the Zanker Road I/C

# SANTA CLARA-237

Mathilda Avenue to Route 880/237/IC

# Eastbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	47	4	25	2
Buses	13	3	4	0
Carpools <sup>(1)</sup>	1309	338	514	105
Vanpools	1	0	0	0
Single Occ. <sup>(2)</sup>	—	8397	—	3170
Violators	26	—	9	—
<b>TOTAL</b>	<b>1396</b>	<b>8742</b>	<b>552</b>	<b>3277</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	47	4	25	2
Buses	455	105	140	0
Carpools <sup>(1)</sup>	2736	709	1075	220
Vanpools	10	0	0	0
Single Occ. <sup>(2)</sup>	—	8397	—	3170
Violators	26	—	9	—
<b>TOTAL</b>	<b>3274</b>	<b>9215</b>	<b>1249</b>	<b>3392</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.3 persons/veh		2.3 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.0 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.9 %		1.6 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/01/02 at the Zanker Road I/C



# SANTA CLARA-237

Route 880/237 I/C to Mathilda Avenue

## Violation History

Westbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu May 2, 2002	6:00 - 9:00 AM	1577	3.7%
	Thu May 3, 2001	6:00 - 9:00 AM	1916	5.3%
	Wed Nov 15, 2000	6:00 - 9:00 AM	2055	2.7%
	Tue Nov 9, 1999	6:30 - 9:00 AM	1917	1.9%
	Tue Sep 29, 1998	7:00 - 9:00 AM	1770	3.3%
	Tue May 13, 1997	6:30 - 9:00 AM	2015	2.8%
	Thu May 30, 1996	6:00 - 9:00 AM	3274	0.5%
	Wed Oct 25, 1995	7:00 - 9:00 AM	1308	2.6%
	Thu Oct 27, 1994	7:30 - 9:00 AM	1011	20.2%
	Wed May 19, 1993	6:00 - 9:00 AM	1838	5.9%
	Wed Apr 8, 1992	6:30 - 9:00 AM	1751	7.1%
	Tue Apr 30, 1991	6:00 - 9:00 AM	2514	6.7%
	Thu Mar 22, 1990	6:45 - 9:00 AM	2380	9.2%
	Thu Apr 20, 1989	5:00 - 9:00 AM	2204	11.3%
	Wed Apr 27, 1988	5:00 - 9:00 AM	2697	5.8%
	Thu Apr 9, 1987	5:00 - 9:00 AM	2535	11.8%
	Thu Jul 10, 1986	5:00 - 9:00 AM	2397	8.8%
	Wed Jan 16, 1985	5:00 - 9:00 AM	2115	9.0%
<b>P.M. PEAK</b>	Wed May 15, 2002	3:00 - 6:00 PM	773	2.2%
	Wed May 30, 2001	3:00 - 6:00 PM	1102	3.1%
	Wed Sep 13, 2000	3:00 - 6:00 PM	1155	2.5%
	Wed Mar 3, 1999	3:00 - 7:00 PM	1260	0.6%
	Tue Sep 29, 1998	3:00 - 6:00 PM	1658	2.8%
	Tue Oct 14, 1997	3:00 - 6:00 PM	1866	0.8%
	Wed Jun 12, 1996	3:00 - 6:00 PM	1593	0.9%
	Tue Oct 24, 1995	3:00 - 6:00 PM	1072	7.3%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-237

Mathilda Avenue to Route 880/237 I/C

## Violation History

Eastbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Oct 31, 2002	7:00 - 9:00 AM	561	12.1%
	Thu Mar 29, 2001	6:00 - 9:00 AM	759	15.0%
	Thu May 25, 2000	6:00 - 9:00 AM	536	5.8%
	Thu Oct 14, 1999	6:00 - 9:00 AM	769	11.4%
	Thu Oct 8, 1998	7:00 - 9:00 AM	750	3.2%
	Wed Oct 29, 1997	6:30 - 9:00 AM	723	0.1%
	Thu Nov 14, 1996	6:30 - 9:00 AM	845	7.5%
	Thu Oct 26, 1995	7:00 - 9:00 AM	495	2.2%

<b>P.M. PEAK</b>	Wed May 1, 2002	3:00 - 6:00 PM	1396	1.9%
	Thu May 3, 2001	3:00 - 6:00 PM	1255	2.1%
	Tue Mar 21, 2000	4:00 - 7:00 PM	2181	0.4%
	Thu Nov 18, 1999	3:00 - 6:00 PM	2535	3.0%
	Thu Oct 15, 1998	3:00 - 6:00 PM	2418	5.0%
	Tue Oct 28, 1997	3:00 - 6:00 PM	2835	2.7%
	Thu Oct 17, 1996	3:00 - 6:00 PM	3682	0.3%
	Wed Oct 25, 1995	3:00 - 6:00 PM	1827	5.8%
	Wed Oct 26, 1994	3:00 - 6:00 PM	2774	36.2%
	Wed May 19, 1993	3:00 - 6:00 PM	2497	2.0%
	Tue Apr 7, 1992	3:00 - 7:00 PM	2724	9.0%
	Wed Apr 24, 1991	3:00 - 7:00 PM	3066	9.6%
	Wed Oct 3, 1990	3:00 - 6:00 PM	2757	5.5%
	Tue Apr 18, 1989	3:00 - 7:00 PM	3233	8.3%
	Wed Mar 23, 1988	3:00 - 6:00 PM	2560	9.6%
	Wed Nov 4, 1987	3:00 - 7:00 PM	3244	8.0%
	Wed Sep 24, 1986	3:00 - 7:00 PM	3181	8.0%

**NOTES:**

- (a) *Morning period of operation from 5:00 to 9:00 AM.*
- (b) *Evening period of operation from 3:00 to 7:00 PM.*

# SANTA CLARA-280

Magdalena Avenue to Leland Avenue

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	11	2	7	1
Buses	3	5	3	2
Carpools <sup>(1)</sup>	362	457	197	191
Vanpools	0	3	0	1
Single Occ. <sup>(2)</sup>	—	8268	—	3770
Violators	21	—	9	—
<b>TOTAL</b>	<b>397</b>	<b>8735</b>	<b>216</b>	<b>3965</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	11	2	7	1
Buses	105	175	105	70
Carpools <sup>(1)</sup>	786	969	423	406
Vanpools	0	30	0	10
Single Occ. <sup>(2)</sup>	—	8268	—	3770
Violators	21	—	9	—
<b>TOTAL</b>	<b>923</b>	<b>9444</b>	<b>544</b>	<b>4257</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.3 persons/veh		2.5 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.1 persons/veh		1.1 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	5.3 %		4.2 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/18/02 at the Wolfe Road I/C

# SANTA CLARA-280

Magdalena Avenue to Leland Avenue

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	62	13	23	5
Buses	5	27	3	12
Carpools <sup>(1)</sup>	1847	862	711	304
Vanpools	8	45	4	15
Single Occ. <sup>(2)</sup>	—	13291	—	4430
Violators	11	—	3	—
<b>TOTAL</b>	<b>1933</b>	<b>14238</b>	<b>744</b>	<b>4766</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	62	13	23	5
Buses	175	945	105	420
Carpools <sup>(1)</sup>	3807	1822	1480	639
Vanpools	80	450	40	150
Single Occ. <sup>(2)</sup>	—	13291	—	4430
Violators	11	—	3	—
<b>TOTAL</b>	<b>4135</b>	<b>16521</b>	<b>1651</b>	<b>5644</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.1 persons/veh		2.2 persons/veh	
Mixed Flow occupancy rate	1.2 persons/veh		1.2 persons/veh	
Overall occupancy (incl. buses)	1.3 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	0.6 %		0.4 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 09/19/02 at the Wolfe Road I/C

# SANTA CLARA-280

Leland Avenue to Magdalena Avenue

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	10	2	6	1
Buses	5	3	2	0
Carpools <sup>(1)</sup>	1299	393	575	106
Vanpools	0	2	0	0
Single Occ. <sup>(2)</sup>	—	13038	—	5158
Violators	73	—	60	—
<b>TOTAL</b>	<b>1387</b>	<b>13438</b>	<b>643</b>	<b>5265</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	10	2	6	1
Buses	175	105	70	0
Carpools <sup>(1)</sup>	2689	843	1192	229
Vanpools	0	20	0	0
Single Occ. <sup>(2)</sup>	—	13038	—	5158
Violators	73	—	60	—
<b>TOTAL</b>	<b>2947</b>	<b>14008</b>	<b>1328</b>	<b>5388</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.0 persons/veh	1.0 persons/veh	1.0 persons/veh	1.0 persons/veh
Overall occupancy (incl. buses)	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	5.3 %	5.3 %	9.3 %	9.3 %

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 05/21/02 at Wolfe Road I/C

# SANTA CLARA-280

Leland Avenue to Magdalena Avenue

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	31	16	12	5
Buses	0	2	0	0
Carpools <sup>(1)</sup>	1031	1279	467	437
Vanpools	3	13	0	3
Single Occ. <sup>(2)</sup>	—	11147	—	4465
Violators	16	—	4	—
<b>TOTAL</b>	<b>1081</b>	<b>12457</b>	<b>483</b>	<b>4910</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	31	16	12	5
Buses	0	70	0	0
Carpools <sup>(1)</sup>	2130	2754	973	932
Vanpools	30	130	0	30
Single Occ. <sup>(2)</sup>	—	11147	—	4465
Violators	16	—	4	—
<b>TOTAL</b>	<b>2207</b>	<b>14117</b>	<b>989</b>	<b>5432</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.0 persons/veh		2.0 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	1.5 %		0.8 %	

### NOTES:

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 05/28/02 at the Wolfe Road I/C

# SANTA CLARA-280

Magdalena Avenue to Leland Avenue

## Violation History Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Apr 18, 2002	6:30 - 9:00 AM	372	4.6%
	Thu Apr 5, 2001	6:00 - 9:00 AM	524	2.7%
	Thu Apr 13, 2000	6:00 - 9:00 AM	474	9.3%
	Tue Apr 20, 1999	6:00 - 9:00 AM	608	0.3%
	Thu Jun 4, 1998	6:00 - 9:00 AM	781	0.1%
	Wed Oct 22, 1997	7:00 - 9:00 AM	592	0.0%
	Wed Oct 9, 1996	7:00 - 9:00 AM	1087	1.4%
	Wed Nov 1, 1995	6:30 - 9:00 AM	566	4.9%
	Wed Nov 30, 1994	7:00 - 9:00 AM	989	1.6%
	Thu Dec 9, 1993	7:00 - 9:00 AM	469	4.5%
<b>P.M. PEAK</b>	Thu Sep 19, 2002	3:00 - 6:00 PM	1933	0.6%
	Thu Oct 11, 2001	3:00 - 6:00 PM	2221	1.0%
	Wed Oct 11, 2000	3:00 - 6:00 PM	2325	5.0%
	Wed Apr 21, 1999	3:00 - 6:00 PM	2058	4.9%
	Tue Dec 8, 1998	3:00 - 6:00 PM	2236	1.0%
	Tue Oct 21, 1997	3:00 - 6:00 PM	2050	2.8%
	Tue Jun 11, 1996	3:00 - 6:00 PM	1716	4.3%
	Tue May 16, 1995	3:00 - 6:00 PM	1996	9.3%
	Wed Nov 16, 1994	3:00 - 5:00 PM	858	2.3%
	Wed May 26, 1993	3:00 - 6:00 PM	2348	1.7%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.

# SANTA CLARA-280

Leland Avenue to Magdalena Avenue

## Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue May 21, 2002	6:00 - 9:00 AM	1355	5.4%
	Tue Nov 6, 2001	6:00 - 9:00 AM	1253	1.6%
	Wed Mar 29, 2000	6:00 - 9:00 AM	2086	1.7%
	Thu Nov 4, 1999	6:30 - 9:00 AM	1884	0.3%
	Wed Dec 9, 1998	6:00 - 9:00 AM	2235	3.7%
	Wed Apr 23, 1997	6:00 - 9:00 AM	1851	0.10%
	Tue Jun 11, 1996	6:00 - 9:00 AM	1762	1.40%
	Thu May 18, 1995	6:00 - 9:00 AM	2510	1.50%
	Wed Nov 16, 1994	6:45 - 9:00 AM	1124	2.9%
	Wed Nov 17, 1993	6:30 - 9:00 AM	2639	1.3%

<b>P.M. PEAK</b>	Tue May 28, 2002	3:00 - 6:00 PM	1081	1.5%
	Wed Apr 4, 2001	3:00 - 6:00 PM	1160	0.9%
	Thu Apr 13, 2000	3:00 - 6:00 PM	1106	5.4%
	Tue Apr 20, 1999	3:00 - 6:00 PM	938	0.2%
	Tue Sep 15, 1998	3:00 - 6:00 PM	955	5.3%
	Wed, Apr 23, 1997	3:00 - 6:00 PM	1975	0.5%
	Thu Dec 12, 1996	3:00 - 5:30 PM	1205	4.2%
	Wed May 17, 1995	3:00 - 6:00 PM	1095	13.2%
	Thu Nov 17, 1994	3:00 - 5:00 PM	584	9.1%
	Thu Jun 10, 1993	3:00 - 6:00 PM	1238	4.2%

**NOTES:**

- (a) Morning period of operation from 5:00 to 9:00 AM.
- (b) Evening period of operation from 3:00 to 7:00 PM.



# RAMP HOV BYPASS LANES

Sterling Street on-ramp to SF/OBB  
SAN FRANCISCO-80

# Eastbound P.M.

Typical data for 2002 (5)

## PEAK PERIOD (4)

3:30 - 7:00 PM

## PEAK HOUR

4:00 - 5:00 PM

### VEHICLES

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	119	—	26	—
Buses	8	—	5	—
Carpool (1)	1382	—	434	—
2 - seaters (2)	576	—	183	—
Vanpools	81	—	41	—
Trucks	137	—	49	—
Violators	410	—	96	—
<b>TOTAL</b>	<b>2713</b>	<b>N/A</b>	<b>834</b>	<b>N/A</b>

### PERSONS

	HOV Lane	SOV Lane	HOV Lane	SOV Lane
Motorcycles	119	—	26	—
Buses	280	—	175	—
Carpool (1)	4284	—	1345	—
2 - seaters (2)	1152	—	366	—
Vanpools	810	—	410	—
Trucks	137	—	49	—
Violators	527	—	124	—
<b>TOTAL</b>	<b>7309</b>	<b>N/A</b>	<b>2495</b>	<b>N/A</b>

### RATES

HOV Lane occupancy rate	2.7 persons/veh	3.0 persons/veh
Violation rate (3) (HOV Lane)	15.1 %	11.5 %

#### NOTES:

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:30 to 7:00 PM.
- (5) Observations conducted 9/17/02 at the Sterling Street on-ramp

# RAMP HOV BYPASS LANES

Sterling Street On-Ramp to SFOBB

**SAN FRANCISCO-80**

# Violation History

**Eastbound**

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>PM - PEAK</b>	Tue Sep 17, 2002	3:30 - 7:00 PM	2713	15.1%
	Wed Oct 10, 2001	3:30 - 7:00 PM	3133	10.4%
	Thu Oct 19, 2000	3:30 - 7:00 PM	3327	6.5%
	Thu Oct 14, 1999	3:30 - 7:00 PM	3566	27.5%
	Thu Dec 3, 1998	3:30 - 7:00 PM	3276	29.0%
	Wed Jun 11, 1997	3:30 - 7:00 PM	2810	12.4%
	Tue Apr 23, 1996	3:30 - 7:00 PM	1891	22.2%
	Wed Mar 29, 1995	3:30 - 7:00 PM	2692	52.6%
	Tue May 17, 1994	4:00 - 6:00 PM	787	28.3%
	Wed Oct 13, 1993	4:00 - 6:00 PM	1023	34.6%
	Thu Jun 4, 1992	4:00 - 6:00 PM	1051	35.0%
	Tue Dec 3, 1991	4:00 - 6:00 PM	1427	28.0%
	Thu Nov 15, 1990	4:00 - 6:00 PM	701	58.3%
	Tue Apr 18, 1989	4:30 - 6:00 PM	821	17.4%
	Tue Apr 26, 1988	4:00 - 6:00 PM	1599	69.2%
	Tue Oct 20, 1987	4:00 - 6:00 PM	1103	53.3%
	Tue Apr 21, 1987	4:00 - 6:00 PM	960	40.1%
	Tue Oct 21, 1986	4:00 - 6:00 PM	1576	50.7%
	Tue Oct 22, 1985	4:00 - 6:00 PM	1252	38.4%

**NOTES:**

*Evening period of operation from 3:30 to 7:00 P.M.*

# SAN MATEO-101

Whipple Avenue to SM/SCL County Line

# Southbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	50	5	26	2
Buses	5	27	2	1
Carpools <sup>(1)</sup>	1439	511	637	209
Vanpools	1	13	0	5
Single Occ. <sup>(2)</sup>	—	14164	—	4734
Violators	54	—	39	—
<b>TOTAL</b>	<b>1549</b>	<b>14720</b>	<b>704</b>	<b>4951</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	50	5	26	2
Buses	175	945	70	35
Carpools <sup>(1)</sup>	2968	1080	1315	450
Vanpools	10	130	0	50
Single Occ. <sup>(2)</sup>	—	14164	—	4734
Violators	54	—	39	—
<b>TOTAL</b>	<b>3257</b>	<b>16324</b>	<b>1450</b>	<b>5271</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane occupancy rate	2.1 persons/veh	2.1 persons/veh	2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh	1.2 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	3.5 %	3.5 %	5.5 %	5.5 %

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 03/26/02 at the Woodside Road I/C

# SAN MATEO-101

Whipple Avenue to SM/SCL County Line

# Southbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	59	19	22	9
Buses	4	2	0	0
Carpools <sup>(1)</sup>	1760	1338	674	469
Vanpools	12	0	3	0
Single Occ. <sup>(2)</sup>	—	13734	—	4569
Violators	60	—	1	—
<b>TOTAL</b>	<b>1895</b>	<b>15093</b>	<b>700</b>	<b>5047</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	59	19	22	9
Buses	140	70	0	0
Carpools <sup>(1)</sup>	3759	2827	1440	995
Vanpools	120	0	30	0
Single Occ. <sup>(2)</sup>	—	13734	—	4569
Violators	60	—	1	—
<b>TOTAL</b>	<b>4138</b>	<b>16650</b>	<b>1493</b>	<b>5573</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 4:00 - 5:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.2 %		0.1 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3)  $Violation\ rate = \frac{no.\ of\ violators\ in\ HOV\ lane}{Total\ no.\ of\ vehicles\ in\ HOV\ lane} \times 100\%$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 10/02/02 at the Woodside Road I/C

# SAN MATEO-101

SM/SCL County Line to Whipple Avenue

# Northbound - A.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	5	11	1
Buses	6	20	1	6
Carpools <sup>(1)</sup>	976	657	396	272
Vanpools	1	2	0	1
Single Occ. <sup>(2)</sup>	—	13240	—	5282
Violators	49	—	38	—
<b>TOTAL</b>	<b>1054</b>	<b>13924</b>	<b>446</b>	<b>5562</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	22	5	11	1
Buses	210	700	35	210
Carpools <sup>(1)</sup>	2014	1408	817	575
Vanpools	10	20	0	10
Single Occ. <sup>(2)</sup>	—	13240	—	5282
Violators	49	—	38	—
<b>TOTAL</b>	<b>2305</b>	<b>15373</b>	<b>901</b>	<b>6078</b>

RATES	PEAK PERIOD <sup>(4)</sup> 6:00 - 9:00 AM		PEAK HOUR 8:00 - 9:00 AM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
HOV Lane occupancy rate	2.2 persons/veh		2.0 persons/veh	
Mixed Flow occupancy rate		1.1 persons/veh		1.1 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh		1.2 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	4.6 %		8.5 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 5:00 to 9:00 A.M.
- (5) Observations conducted 04/09/02 at the Woodside Road I/C

# SAN MATEO-101

SM/SCL County Line to Whipple Avenue

# Northbound - P.M.

Typical data for 2002 <sup>(5)</sup>

VEHICLES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	74	27	29	9
Buses	3	11	1	1
Carpools <sup>(1)</sup>	1798	766	643	262
Vanpools	27	1	19	0
Single Occ. <sup>(2)</sup>	—	11598	—	3860
Violators	67	—	11	—
<b>TOTAL</b>	<b>1969</b>	<b>12403</b>	<b>703</b>	<b>4132</b>

PERSONS	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	74	27	29	9
Buses	105	385	35	35
Carpools <sup>(1)</sup>	3762	1602	1340	554
Vanpools	270	10	190	0
Single Occ. <sup>(2)</sup>	—	11598	—	3860
Violators	67	—	11	—
<b>TOTAL</b>	<b>4278</b>	<b>13622</b>	<b>1605</b>	<b>4458</b>

RATES	PEAK PERIOD <sup>(4)</sup> 3:00 - 6:00 PM		PEAK HOUR 5:00 - 6:00 PM	
	HOV Lane occupancy rate	2.2 persons/veh		2.3 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh		1.1 persons/veh	
Overall occupancy (incl. buses)	1.2 persons/veh		1.3 persons/veh	
Violation rate <sup>(3)</sup> (HOV Lane)	3.4 %		1.6 %	

**NOTES:**

- (1) Two or more occupants per vehicle.
- (2) Mixed flow lanes only.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) HOV lane in operation from 3:00 to 7:00 P.M.
- (5) Observations conducted 06/05/02 at the Woodside Road I/C

# SAN MATEO-101

Whipple Avenue to the Santa Clara/San Mateo County Line

# Violation History

Southbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Mar 26, 2002	6:00 - 9:00 AM	1549	3.5%
	Thu Mar 22, 2001	6:00 - 9:00 AM	1746	2.2%
	Tue Apr 25, 2000	6:00 - 9:00 AM	1849	7.0%
	Thu Dec 2, 1999	6:45 - 9:00 AM	1915	5.2%
	Tue Mar 10, 1998	6:00 - 9:00 AM	2711	0.8%
	Tue Sept 23, 1997	7:00 - 9:00 AM	1761	0.7%
	Wed Mar 27, 1996	6:00 - 9:00 AM	1681	4.6%
	Wed Jun 7, 1995	6:00 - 9:00 AM	1922	3.0%
	Tue Sep 27, 1994	6:45 - 9:00 AM	2078	4.2%
	Wed Jun 16, 1993	6:00 - 9:00 AM	1236	17.3%
<b>P.M. PEAK</b>	Wed Oct 2, 2002	3:00 - 6:00 PM	1895	3.2%
	Thu Nov 8, 2001	3:00 - 5:30 PM	1685	7.0%
	Thu Oct 12, 2000	3:00 - 6:00 PM	2245	3.3%
	Wed Dec 8, 1999	3:00 - 5:15 PM	1683	0.5%
	Thu Dec 10, 1998	3:00 - 6:00 PM	2537	1.6%
	Wed Nov 5, 1997	3:00 - 6:00 PM	2514	0.6%
	Wed Mar 27, 1996	3:00 - 6:00 PM	2836	1.9%
	Tue Sept 26, 1995	3:00 - 6:00 PM	2505	2.0%
	Tue Oct 18, 1994	3:00 - 6:00 PM	2613	7.0%
	Tue May 11, 1993	3:00 - 6:00 PM	1535	19.6%

**NOTES:**

- (a) Southbound was completed for operation on July 16, 1991
- (b) Morning period of operation from 5:00 to 9:00 AM.
- (c) Evening period of operation from 3:00 to 7:00 PM.

# SAN MATEO-101

Santa Clara/San Mateo County Line to Whipple Avenue

# Violation History

Northbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Tue Apr 9, 2002	6:45 - 9:00 AM	865	5.7%
	Wed Oct 31, 2001	6:00 - 9:00 AM	1662	2.1%
	Thu Oct 12, 2000	6:00 - 9:00 AM	2964	4.7%
	Thu Apr 29, 1999	6:00 - 9:00 AM	2088	0.5%
	Tue Oct 27, 1998	6:00 - 9:00 AM	1873	2.1%
	Thu Sept 25, 1997	7:00 - 9:00 AM	1348	0.1%
	Wed Jun 5, 1996	6:00 - 9:00 AM	1799	3.3%
	Thu Jun 15, 1995	6:00 - 9:00 AM	2272	2.9%
	Tue Apr 19, 1994	6:00 - 9:00 AM	2549	5.8%
	Tue Jun 8, 1993	6:00 - 9:00 AM	1695	4.2%
<b>P.M. PEAK</b>	Wed Jun 5, 2002	3:00 - 6:00 PM	1969	3.4%
	Wed Nov 14, 2001	3:00 - 5:30 PM	1675	0.2%
	Tue Sep 12, 2000	3:00 - 6:00 PM	2329	14.3%
	Tue Oct 26, 1999	3:00 - 6:00 PM	2987	8.5%
	Wed Dec 9, 1998	3:00 - 6:00 PM	2670	6.6%
	Tue Apr 29, 1997	3:00 - 6:00 PM	2616	0.9%
	Thu Sep 26, 1996	3:00 - 6:00 PM	2619	5.8%
	Tue Jun 6, 1995	3:00 - 6:30 PM	2617	4.4%
	Wed Apr 20, 1994	3:00 - 6:00 PM	3530	3.1%
	Wed Jun 2, 1993	3:00 - 6:00 PM	1763	8.2%

**NOTES:**

- (a) Northbound was completed for operation on July 18, 1991
- (b) Morning period of operation from 5:00 to 9:00 AM.
- (c) Evening period of operation from 3:00 to 7:00 PM.



# SOLANO-80

Carquinez Bridge Toll Plaza

# Eastbound A.M.

Typical data for 2002 <sup>(6)</sup>

## PEAK PERIOD <sup>(5)</sup>

5:00 to 10:00 A.M.

## PEAK HOUR

7:00 to 8:00 A.M.

### VEHICLES

	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	29	—	10	—
Buses <sup>(4)</sup>	60	—	13	—
Carpools <sup>(1)</sup>	376	—	110	—
2 - seaters <sup>(2)</sup>	143	—	35	—
Vanpools	27	—	14	—
Violators (HOV only)	71	—	13	—
<b>TOTAL</b>	<b>706</b>	<b>10004</b>	<b>195</b>	<b>2663</b>

### PERSONS

	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	29	—	10	—
Buses <sup>(4)</sup>	960	—	208	—
Carpools <sup>(1)</sup>	1166	—	341	—
2 - seaters <sup>(2)</sup>	286	—	70	—
Vanpools	216	—	112	—
Violators (HOV only)	105	—	23	—
<b>TOTAL</b>	<b>2762</b>	<b>12005</b>	<b>764</b>	<b>3196</b>

### RATES

HOV Lane occupancy rate	3.9 persons/veh	3.9 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	10.1 %	6.7 %

#### NOTES:

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) Assumed AM bus occupancy = 10 persons/vehicle.
- (5) HOV lane in operation from 5:00 to 10:00 AM.
- (6) Observations conducted 11/14/02 at the Carquinez Bridge Toll Plaza.

# SOLANO-80

Carquinez Bridge Toll Plaza

# Eastbound P.M.

Typical data for 2002<sup>(6)</sup>

VEHICLES	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	240	—	61	—
Buses <sup>(4)</sup>	67	—	21	—
Carpools <sup>(1)</sup>	2006	—	621	—
2 - seaters <sup>(2)</sup>	647	—	190	—
Vanpools	144	—	43	—
Violators (HOV only)	325	—	50	—
<b>TOTAL</b>	<b>3429</b>	<b>17956</b>	<b>986</b>	<b>4594</b>

PERSONS	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane	Mixed Flow Lanes	HOV Lane	Mixed Flow Lanes
Motorcycles	240	—	61	—
Buses <sup>(4)</sup>	2345	—	735	—
Carpools <sup>(1)</sup>	6219	—	1925	—
2 - seaters <sup>(2)</sup>	1294	—	380	—
Vanpools	1440	—	430	—
Violators (HOV only)	515	—	78	—
<b>TOTAL</b>	<b>12053</b>	<b>19752</b>	<b>3609</b>	<b>5053</b>

RATES	PEAK PERIOD <sup>(5)</sup> 3:00 to 7:00 P.M.		PEAK HOUR 5:00 to 6:00 P.M.	
	HOV Lane occupancy rate	3.5 persons/veh		3.7 persons/veh
Violation rate <sup>(3)</sup> (HOV Lane)	9.5 %		5.1 %	

**NOTES:**

- (1) 3 or more persons per vehicle.
- (2) 2 - seater vehicles with 2 persons.
- (3) 
$$\text{Violation rate} = \frac{\text{no. of violators in HOV lane} \times 100\%}{\text{Total no. of vehicles in HOV lane}}$$
- (4) Assumed PM bus occupancy = 35 persons/vehicle.
- (5) HOV lane in operation from 3:00 to 7:00 P.M.
- (6) Observations conducted 9/26/02 at the Carquinez Bridge Toll Plaza.

# SOLANO-80

Carquinez Bridge Toll Plaza

## Violation History Eastbound

	DATE	PERIOD MONITORED	TOTAL HOVL VOLUME	VIOLATION RATE
<b>A.M. PEAK</b>	Thu Nov 14, 2002	5:00 - 10:00 AM	706	10.1%
	Thu May 31, 2001	5:00 - 10:00 AM	804	24.5%
	Thu Nov 16, 2000	5:00 - 10:00 AM	773	34.4%
	Wed Mar 10, 1999	6:00 - 10:00 AM	664	26.2%
	Wed Sep 16, 1998	6:00 - 10:00 AM	559	27.2%
	Tue Dec 2, 1997	6:00 - 10:00 AM	406	7.9%
<b>P.M. PEAK</b>	Thu Sep 26, 2002	3:00 - 7:00 PM	3429	9.5%
	Thu Mar 29, 2001	3:00 - 7:00 PM	3493	1.2%
	Tue Oct 17, 2000	3:00 - 7:00 PM	3373	9.5%
	Wed Sep 29, 1999	3:00 - 7:00 PM	2945	12.9%
	Wed Sep 16, 1998	3:00 - 7:00 PM	2203	12.4%
	Thu Nov 6, 1997	3:00 - 6:00 PM	1260	6.0%

**NOTES:** (a) Morning period of operation from 5:00 to 10:00 AM  
 (b) Evening period of operation from 3:00 to 7:00 PM.

---

# HOV TOLL GATES

---

# HOV TOLL GATE

Richmond-San Rafael Bridge Toll Plaza  
CONTRA COSTA - 580

Westbound A.M.

Typical data for 2002 (3)

**PEAK PERIOD** (2)  
6:00 to 10:00 A.M.

**PEAK HOUR**  
7:00 to 8:00 A.M.

**VEHICLES**

Motorcycles	34	8
Buses	23	5
Vanpools	11	5
Carpools (1)	697	272
Total HOV	765	290
1 Occupancy	706	170
2 Occupancy	96	22
<b>TOTAL</b>	1567	482

**PERSONS**

Motorcycles	34	8
Buses	805	175
Vanpools	110	50
Carpools (1)	1952	762
Total HOV	2901	995
1 Occupancy	706	170
2 Occupancy	192	44
<b>TOTAL</b>	3799	1209

**RATES**

HOV Occupancy Rate	3.8 persons/veh	3.4 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	2.4 persons/veh	2.5 persons/veh

**NOTES:**

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) HOV operation hours from 5:00 to 10:00 AM and 3:00 to 6:00 PM.
- (3) Observations conducted 11/19/02.

# HOV TOLL GATE

Richmond-San Rafael Bridge Toll Plaza  
CONTRA COSTA - 580

Westbound P.M.

Typical data for 2002<sup>(3)</sup>

## PEAK PERIOD <sup>(2)</sup> 3:00 to 6:00 P.M.

## PEAK HOUR 4:00 to 5:00 P.M.

### VEHICLES

Motorcycles	40	10
Buses	5	2
Vanpools	15	4
Carpools <sup>(1)</sup>	215	77
Total HOV	275	93
1 Occupancy	375	155
2 Occupancy	51	9
<b>TOTAL</b>	<b>701</b>	<b>257</b>

### PERSONS

Motorcycles	40	10
Buses	175	70
Vanpools	150	40
Carpools <sup>(1)</sup>	631	261
Total HOV	996	381
1 Occupancy	375	155
2 Occupancy	102	18
<b>TOTAL</b>	<b>1473</b>	<b>554</b>

### RATES

HOV Occupancy Rate	3.6 persons/veh	4.1 persons/veh
Mixed Flow occupancy rate	1.1 persons/veh	1.1 persons/veh
Overall occupancy (incl. buses)	2.1 persons/veh	2.2 persons/veh

#### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.  
 (2) HOV operation hours from 5:00 to 10:00 AM and 3:00 to 6:00 PM.  
 (3) Observations conducted 9/24/02.

# HOV TOLL GATE

Antioch Bridge Toll Plaza  
CONTRA COSTA -160

## Northbound A.M.

Typical data for 2002 <sup>(3)</sup>

### PEAK PERIOD <sup>(2)</sup>

6:00 to 9:00 A.M.

### PEAK HOUR

6:00 to 7:00 A.M.

#### VEHICLES

Motorcycles	5		2	
Buses	1		0	
Vanpools	9		4	
Carpools <sup>(1)</sup>	36		12	
Total HOV		51		18
1 Occupancy	930		326	
2 Occupancy	166		65	
<b>TOTAL</b>	<b>1147</b>		<b>409</b>	

#### PERSONS

Motorcycles	5		2	
Buses	35		0	
Vanpools	90		40	
Carpools <sup>(1)</sup>	112		37	
Total HOV		242		79
1 Occupancy	930		326	
2 Occupancy	332		130	
<b>TOTAL</b>	<b>1504</b>		<b>535</b>	

#### RATES

HOV Occupancy Rate	4.7 persons/veh	4.4 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh

#### NOTES:

- (1) 3 or more occupants per vehicle & 2-seater vehicles w/2 occupants.
- (2) HOV operation hours 5:00 to 10:00 AM.
- (3) Observations conducted 11/5/02 at Toll Plaza

# HOV TOLL GATE

Antioch Bridge Toll Plaza

CONTRA COSTA -160

Northbound P.M.

Typical data for 2002<sup>3)</sup>

## PEAK PERIOD <sup>(2)</sup>

3:00 to 6:00 P.M.

## PEAK HOUR

4:00 to 5:00 P.M.

### VEHICLES

Motorcycles	5		2	
Buses	0		0	
Vanpools	15		5	
Carpools <sup>(1)</sup>	45		18	
Total HOV		65		25
1 Occupancy	1608		565	
2 Occupancy	283		110	
<b>TOTAL</b>	1956		700	

### PERSONS

Motorcycles	5		2	
Buses	0		0	
Vanpools	150		50	
Carpools <sup>(1)</sup>	140		56	
Total HOV		295		108
1 Occupancy	1608		565	
2 Occupancy	566		220	
<b>TOTAL</b>	2469		893	

### RATES

HOV Occupancy Rate	4.5 persons/veh	4.3 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh

#### NOTES:

- (1) 3 or more occupants per vehicle & 2-seater vehicles w/2 occupants.
- (2) HOV operation hours 3:00 to 7:00 PM.
- (3) Observations conducted 11/5/02 at Toll Plaza



# HOV TOLL GATE

Benica-Martinez Bridge

SOLANO - 680

## Northbound A.M.

Typical data for 2002 <sup>(3)</sup>

### PEAK PERIOD <sup>(2)</sup>

6:00 to 9:00 A.M.

### PEAK HOUR

7:00 to 8:00 A.M.

#### VEHICLES

Motorcycles	18	3
Buses	32	15
Vanpools	10	6
Carpools <sup>(1)</sup>	160	79
Total HOV	<b>220</b>	<b>103</b>
1 Occupancy	6727	2598
2 Occupancy	944	327
<b>TOTAL</b>	<b>7891</b>	<b>3028</b>

#### PERSONS

Motorcycles	18	3
Buses	1120	525
Vanpools	100	60
Carpools <sup>(1)</sup>	496	245
Total HOV	<b>1734</b>	<b>833</b>
1 Occupancy	6727	2598
2 Occupancy	1888	654
<b>TOTAL</b>	<b>10349</b>	<b>4085</b>

#### RATES

HOV Occupancy Rate	7.9 persons/veh	8.1 persons/veh
Overall occupancy (incl. buses)	1.3 persons/veh	1.3 persons/veh

#### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) HOV operation hours from 5:00 to 10:00 AM.
- (3) Observations conducted 3/21/02 at Benicia Bridge Toll Plaza.

# HOV TOLL GATE

Benica-Martinez Bridge

SOLANO - 680

Northbound P.M.

Typical data for 2002 <sup>(3)</sup>

## PEAK PERIOD <sup>(2)</sup>

3:00 to 7:00 P.M.

## PEAK HOUR

4:00 to 5:00 P.M.

### VEHICLES

Motorcycles	57	18
Buses	11	4
Vanpools	54	19
Carpools <sup>(1)</sup>	285	94
Total HOV	<b>407</b>	<b>135</b>
1 Occupancy	10909	3737
2 Occupancy	1739	626
<b>TOTAL</b>	<b>13055</b>	<b>4498</b>

### PERSONS

Motorcycles	57	18
Buses	385	140
Vanpools	540	190
Carpools <sup>(1)</sup>	884	291
Total HOV	<b>1866</b>	<b>639</b>
1 Occupancy	10909	3737
2 Occupancy	3478	1252
<b>TOTAL</b>	<b>16253</b>	<b>5628</b>

### RATES

HOV Occupancy Rate	4.6 persons/veh	4.7 persons/veh
Overall occupancy (incl. buses)	1.2 persons/veh	1.3 persons/veh

#### NOTES:

- (1) 3 or more persons per vehicle & 2 - seater vehicles with 2 persons.
- (2) HOV operation hours from 3:00 to 7:00 PM.
- (3) Observations conducted 3/20/02 at Benicia Bridge Toll Plaza.