

TECHNICAL MEMORANDUM

Date: September 15, 2003

To: Richard Tanaka, Mark Thomas & Company

From: Robert E. Rees, Fehr & Peers
Chris Gray, Fehr & Peers

Subject: **Holman Highway (Route 68) Existing Conditions Documentation**

1031-1975

PURPOSE

The purpose of this technical memorandum is to document the existing conditions regarding Holman Highway (State Route 68 [SR 68]) in Monterey, California. This memorandum addresses the following items:

- Study Area
- Data Collection (including traffic counts for intersections, ramp and roadway segments, and truck classification counts)
- Operations Analysis (intersections, ramp junctions, and freeway weaving)

The Monterey Peninsula has historically experienced traffic congestion on SR 68 west of State Route 1 (SR 1). In the 1980s, the Holman Highway Task Force was assembled to discuss possible roadway improvements and financing strategies for SR 68 between the Community Hospital of the Monterey Peninsula (CHOMP) and SR 1. The Task Force has been inactive in recent years. As such, the City of Monterey embarked on Project Approval/Environmental Document for SR 68 from 0.2 kilometers west of the CHOMP entrance to the SR 1/SR 68 Junction.

STUDY AREA

The project context area is shown on Figure 1, which details the major area roadways and surrounding municipalities and communities.

Holman Highway (i.e., SR 68) is located along the Monterey Peninsula in Monterey California. The municipalities in the area, the City of Monterey and the City of Pacific Grove, access SR 68. The Del Monte Forest also accesses the highway via gated access roads such as 17 Mile Drive. Land uses accessing SR 68 include commercial and residential in Pacific Grove, residential uses via Skyline Forest Drive and Aguajito Road, commercial uses via the Camel Hill Professional Center (CHPC), and CHOMP. The major roadways in the study area include SR 68, SR 1, and 17 Mile Drive.

SR 68 (Holman Highway), is a two-lane highway with a posted speed limit of 35 miles per hour (mph). This roadway extends through Pacific Grove and connects to SR 1 with a full-access interchange. Intersections within this study area include the CHOMP and CHPC driveways.

SR 1 is a four-lane conventional highway in Monterey County with a posted speed limit of 55 mph. In the study area, grade-separated access is provided via interchanges at Munras Avenue and SR 68. South of the SR 68 interchange, the highway becomes access-controlled with the first signalized intersection at Carpenter Street.

17 Mile Drive is a two-lane collector roadway that provides access to Pebble Beach through a gated access. The posted speed limit for this roadway is 25 mph.

Study Area Intersections

Four study area intersections were analyzed in this study. These intersections include:

1. SR 68 / Community Hospital Driveway
2. SR 68 / Carmel Professional Center
3. SR 68 / SR 1 Southbound Off-Ramp
4. SR 1 Southbound On-Ramp / 17 Mile Drive

These intersection locations (including lane configurations) are shown on Figure 2.

Study Area Ramps

Three ramps were analyzed in this study:

1. SR 1 Southbound Off-Ramp to SR 68
2. SR 1 Southbound On-Ramp from SR 68
3. SR 1 Southbound On-Ramp from Munras Avenue

The location of each of these ramps is shown on Figure 2. The SR 1 southbound on-ramp was evaluated as several of the road improvement alternatives included changes to the ramp configuration. The SR 1 southbound off-ramp to SR 68 and the on-ramp from Munras Avenue are inter-related by an auxiliary lane and must be evaluated as a single system. The system was evaluated since the off-ramp may be modified due to several improvement alternatives.

DATA COLLECTION

Fehr & Peers collected a variety of traffic data for this analysis including peak hour counts for intersection turning movements, freeway ramps, roadway segments, and truck classifications.

Turning Movement Counts

Turning movement counts were collected at the four study area intersections for the morning (7:00 to 9:00 AM) and evening (3:00 to 6:30 PM) peak periods. The calculated peak hour intersection turning movement volumes are shown on Figure 3. Detailed traffic count sheets are provided in Appendix A.

A review of the traffic count data indicated that the AM peak hour occurred between 8:00 and 9:00 AM with a slight variation at one intersection (i.e., the SR 68/CHOMP driveway peak hour was 7:45 to 8:45 AM). Since the 8:00 to 9:00 AM hour is predominant, this hour was selected as the peak hour for all intersections.

The peak hour for the PM period was not as uniform. Traffic to and from 17 Mile Drive has a peak hour from 3:30 to 4:30 PM. Traffic at the SR 68 intersections with CHOMP and CHPC has a peak hour from 5:00 to 6 PM. The SR 68/SR 1 southbound off-ramp intersection has a peak hour beginning at 3:30 PM; the secondary peak hour begins at 5:00 PM and traffic levels are 1 percent less than the primary peak hour. Since the improvement focuses on SR 68, and traffic peaking characteristics for SR 68 occurred at 5:00 PM, the PM peak hour for analysis was determined to be the 5:00 to 6:00 PM period.

Freeway Ramp Counts

Fehr & Peers collected traffic counts for the SR 1 southbound on-ramp at Munras Avenue. The SR 1 southbound off-ramp and on-ramp to SR 68 were derived from the intersection turning movement counts. These ramp counts are included in Appendix B.

Roadway Segment Counts

Roadway segment counts were taken on both SR 68 and SR 1. The roadway segment counts for SR 68 were conducted in July 2003; 24-hour counts were taken for a 7-day period to the west of Skyline Drive. This location was chosen to obtain unconstrained traffic flow (i.e., unimpeded by traffic congestion from the signalized intersection operations). The daily volumes on SR 68 varied from 22,500 on a Sunday to 28,500 on a Friday. The counts for SR 1 were peak period counts that were obtained south of the SR 68 interchange. The roadway segment count data for SR 68 are provided in Appendix C.

Figure 4 shows the hourly distribution of traffic on SR 68. As shown, weekday traffic generally peaks at 6:00 PM, while weekend traffic peaks at 2:00 PM.

Truck Classification Counts

Fehr & Peers conducted truck classification counts to determine the percentage of trucks on SR 68 in the study area. These classification counts were taken concurrently with the 7-day, 24-hour counts. The data was summarized for the AM peak period (7:00 to 9:00 AM) and the PM peak period (3:00 to 6:30 PM). Table 1 presents the results of these summaries and indicates that during the AM period, truck traffic represented about 2 percent of total traffic. Trucks represented less than 1 percent of the PM peak period traffic. The classification count data is included in Appendix D.

Day / Time Period		Total Trucks	Total Vehicles	Percent Trucks
Monday	7:00 to 9:00 AM	52	2,921	1.78%
	3:00 to 6:00 PM	45	6,034	0.72%
Tuesday	7:00 to 9:00 AM	84	2,959	2.84%
	3:00 to 6:00 PM	42	6,094	0.69%
Wednesday	7:00 to 9:00 AM	70	2,992	2.34%
	3:00 to 6:00 PM	55	6,223	0.88%
Thursday	7:00 to 9:00 AM	58	2,823	2.05%
	3:00 to 6:00 PM	35	6,126	0.57%
Friday	7:00 to 9:00 AM	74	2,823	2.57%
	3:00 to 6:00 PM	27	6,316	0.43%
AM Peak Period Totals		338	14,518	2.3%
PM Peak Period Totals		204	30,793	0.6%

Source: Fehr & Peers, September 2003

OPERATIONAL ANALYSIS

This section presents the results of the operational analysis and addresses intersection, ramp and roadway operations in the study area.

Intersection Operations

Level of Service Criteria

Transportation engineers and planners commonly use a grading system called level of service (LOS) to measure and describe the operational status of a local roadway network. LOS is a description of an intersection's operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity, resulting in long queues and delays).

Signalized Intersections

At signalized intersections, traffic conditions were evaluated using the Transportation Research Board's 2000 *Highway Capacity Manual* methodology. This operation analysis uses various intersection characteristics (i.e., traffic volumes, lane geometry, and signal phasing) to estimate the average control delay experienced by motorists traveling through an intersection. Table 2 summarizes the relationship between delay and LOS for signalized intersections.

TABLE 2 Signalized Intersection LOS Criteria		
Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Unsignalized Intersections

For unsignalized (all-way stop-controlled and side-street stop-controlled) intersections, the 2000 *Highway Capacity Manual* methodology for unsignalized intersections was utilized. With this methodology, operations are defined by the average control delay per vehicle (measured in seconds) for each stop-controlled movement. This incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. For side-street stop-controlled intersections, the delay is typically represented for each movement from the minor approaches only. Table 3 summarizes the relationship between delay and LOS for unsignalized intersections.

Level of Service	Description	Average Control Per Vehicle (Seconds) ¹
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Results

Table 4 lists the delay (in seconds) and LOS for each of the four study area intersections. The CHOMP intersection is shown to operate at acceptable levels during both the AM and PM peak hours. Traffic turning left out of the Carmel Hill Professional Center experiences LOS F conditions. Traffic turning left out of 17 Mile Drive experiences LOS E conditions in the PM peak hour and LOS B conditions during the AM peak hour. The Route 68 / Route 1 Southbound Off-Ramp intersection is shown to operate at LOS D during both the AM and PM peak hours. LOS calculations are provided in Appendix E.

Queue congestion was also observed within the Del Monte Forest on 17 Mile Drive. At times, the vehicle queue within the Forest extended back about 500 feet. The extent of this vehicle queue was dependent on two factors including the green time effectiveness at the SR 68/SR 1 southbound off-ramp intersection and the aggressiveness of drivers making the left-turn movement from 17 Mile Drive.

Vehicle queues at the SR 1 southbound off-ramp approaching SR 68 were typically about 10 vehicles, except for a short period of time at around 5:30 PM when the right-turning vehicle queue extended back approximately 25 vehicles. This congestion occurred for about 20 minutes before dissipating.

The vehicle queue on westbound SR 68 approaching the CHOMP intersection was generally manageable and extended back at times to the Scenic Drive over-crossing. Similar to the SR 1 southbound off-ramp, vehicle queue congestion increased on westbound SR 68 around 5:30 PM and the resulting vehicle queue extended back beyond the CHPC driveway. This condition occurred for about 20 minutes before dissipating.

Location	Control ¹	Peak Hour	Delay ²	LOS
Route 68 / Community Hospital Driveway	Signal	AM	18 seconds	B
		PM	34 seconds	C
Route 68 / Carmel Hill Professional Center	SSS	AM	>50 seconds	F
		PM	>50 seconds	F
Route 68 / Route 1 SB Off-Ramp	Signal	AM	36 seconds	D
		PM	43 seconds	D
Route 1 SB On-Ramp / 17 Mile Drive	SSS	AM	20 seconds	B
		PM	47 seconds	E

Notes:
 1. Signal = Signalized intersection
 SSS = Side-street stop-controlled intersection
 2. Volume-to-capacity ratio determined for all signalized intersections using the 2000 *Highway Capacity Manual*.
 For side-street stop-controlled intersections, delay for worst movement calculated using the 2000 *Highway Capacity Manual* methodology.
 Source: Fehr & Peers, 2003

Ramp Operations

The study area includes one ramp system: the SR 1 southbound on-ramp from SR 68. The methodologies used and results of the analysis for this ramp are discussed below. The SR 1 southbound off-ramp to SR 68 is represented by a weave section and is discussed later in this technical memorandum.

Methodology and Results

The ramp operation analysis was conducted using the 2000 *Highway Capacity Manual* methodology for ramp junctions. This methodology calculates the density of vehicles on the ramp and compares that density against defined standards. Factors that influence the density of vehicles on a ramp include number of lanes on a ramp, number of freeway lanes, ramp speed, number of lanes on the freeway, and the presence or absence of adjacent ramps. The LOS thresholds employed by this method are listed in Table 5. The ramp operation analysis is provided in Appendix F.

The SR 1 southbound on-ramp from SR 68 was determined to have a density of 21 passenger cars/per mile/per lane for both the AM and PM peak hours. This represents a LOS C condition.

Level of Service	Maximum Density (Passenger Cars/Mile/Lane)
A	10
B	20
C	28
D	35
E	>35
F	Demand Exceeds Flow Limits

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Weave Section Operations

Methodology

The Caltrans *Highway Design Manual (5th Edition)* defines a weaving segment as:

A weaving section is a length of one-way roadway where vehicles are crossing paths, changing lanes, or merging with through traffic as they enter or exit a freeway or a collector distributor road. (Section 504.7).

SR 1 southbound between Munras Avenue and SR 68 has an auxiliary lane that begins at Munras Avenue and ends at SR 68. This section, by definition, is considered a weave area and must be analyzed as a weave section using the methodologies specified in the *Highway Design Manual*.

The *Highway Design Manual* requires weave sections to be analyzed using either the Leisch Method or the Level of Service Method based on the 1965 *Highway Capacity Manual*. The Leisch Method employs a series of nomographs based on calculations developed by Jack Leisch and Associates. The Level of Service D Method estimates a volume-to-capacity ratio for the weave section based on the length of the segment, the conflicting volumes, number of lanes, and the percentage of trucks. According to the *Highway Design Manual*, the Leisch Method is the primary process of analysis and should be employed in all cases, except where weaving volumes exceed 2,500 vehicles per hour. Since weaving volumes measured in the field are less than this threshold, the Leisch Method is employed.

Results

The application of the Leisch Method indicated that the weaving section of SR 1 from Munras Avenue to SR 68 operates at LOS C during both the AM (7:00 to 9:00 AM) and PM (3:00 to 6:30 PM) peak periods. Weaving section results for this analysis is provided in Appendix G.

Accident History

Accident history for SR 68 and SR 1 for the past 36 months was provided by Caltrans from their Traffic Accident Surveillance and Analysis System (TASAS) and is shown in Table 6. The TASAS information includes the reported number of accidents in the study area and the number of fatalities and injuries. Caltrans also provided the rate of accidents, injuries, and fatalities for comparable facilities throughout the state. As shown in Table 6, there were no fatalities within the past 3 years in the study area. However, the rate of actual accidents was slightly higher than the statewide accidents.

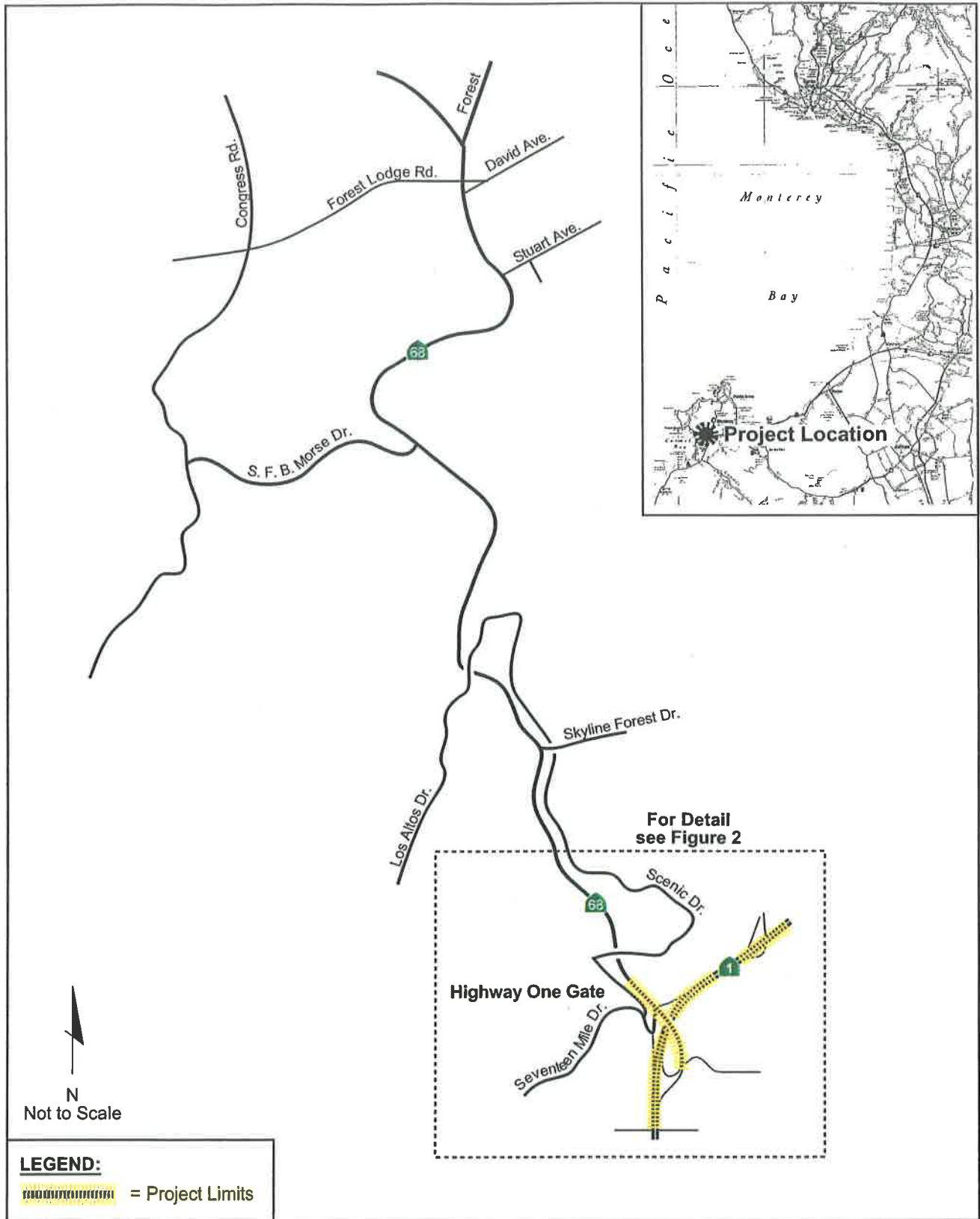
TABLE 6 Accident History for SR 68 and SR 1									
Facility	Total Accident s	Fatal	Fatal + Injury	Actual Accident Rate ¹			Average Accident Rate ¹		
				Total	Fatality	Fatal+ Injury	Total	Fatality	Fatal+ Injury
Route 68	104	0	31	1.82	0.00	0.54	1.55	0.03	0.67
Route 1	114	0	41	1.30	0.00	0.47	1.16	0.01	0.44

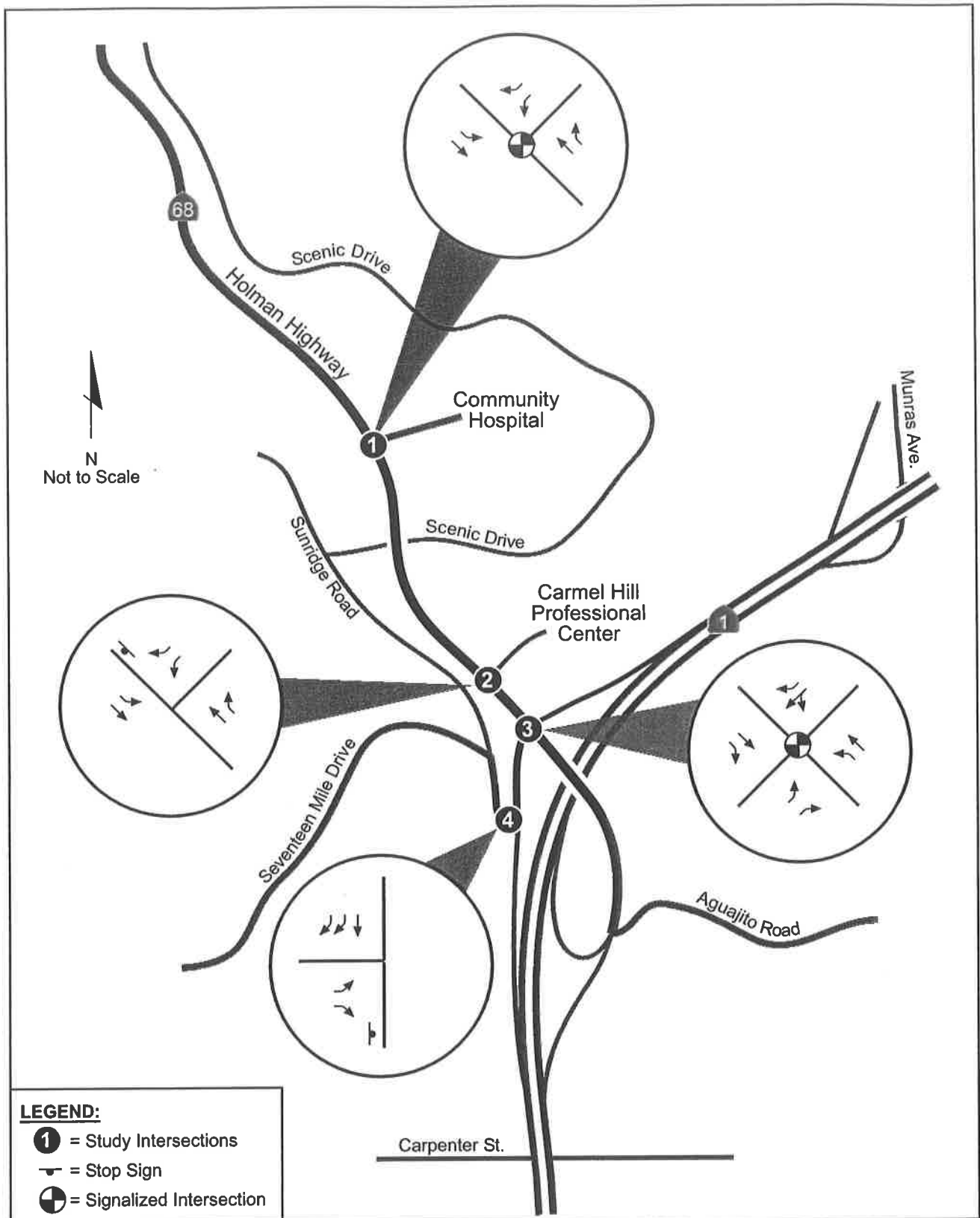
Notes:
¹ Accident rates presented as accidents per million vehicle miles
 Source: Caltrans District 5 TASAS Data

FIGURES



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LEGEND:
 ① = Study Intersections
 T = Stop Sign
 ⊕ = Signalized Intersection

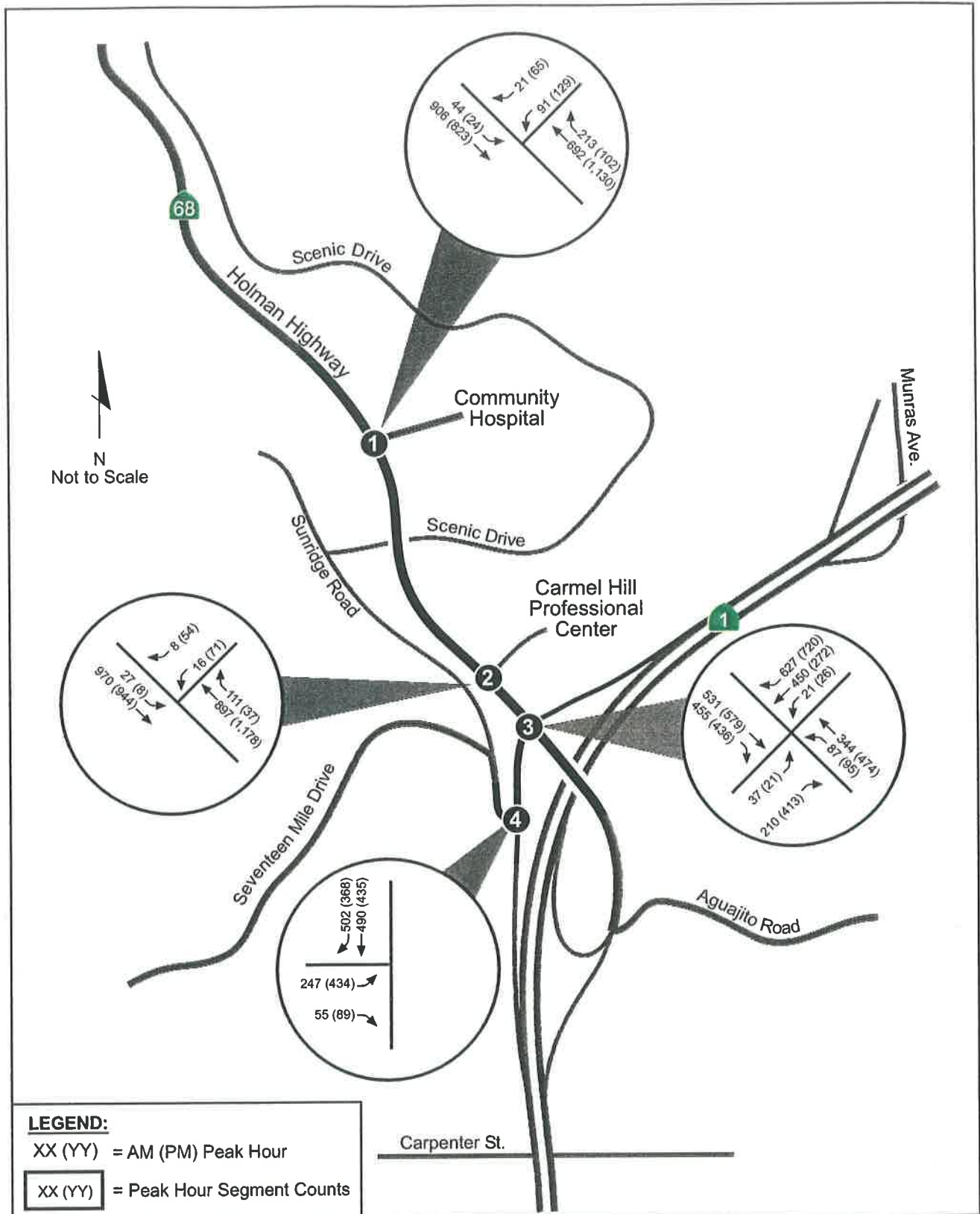
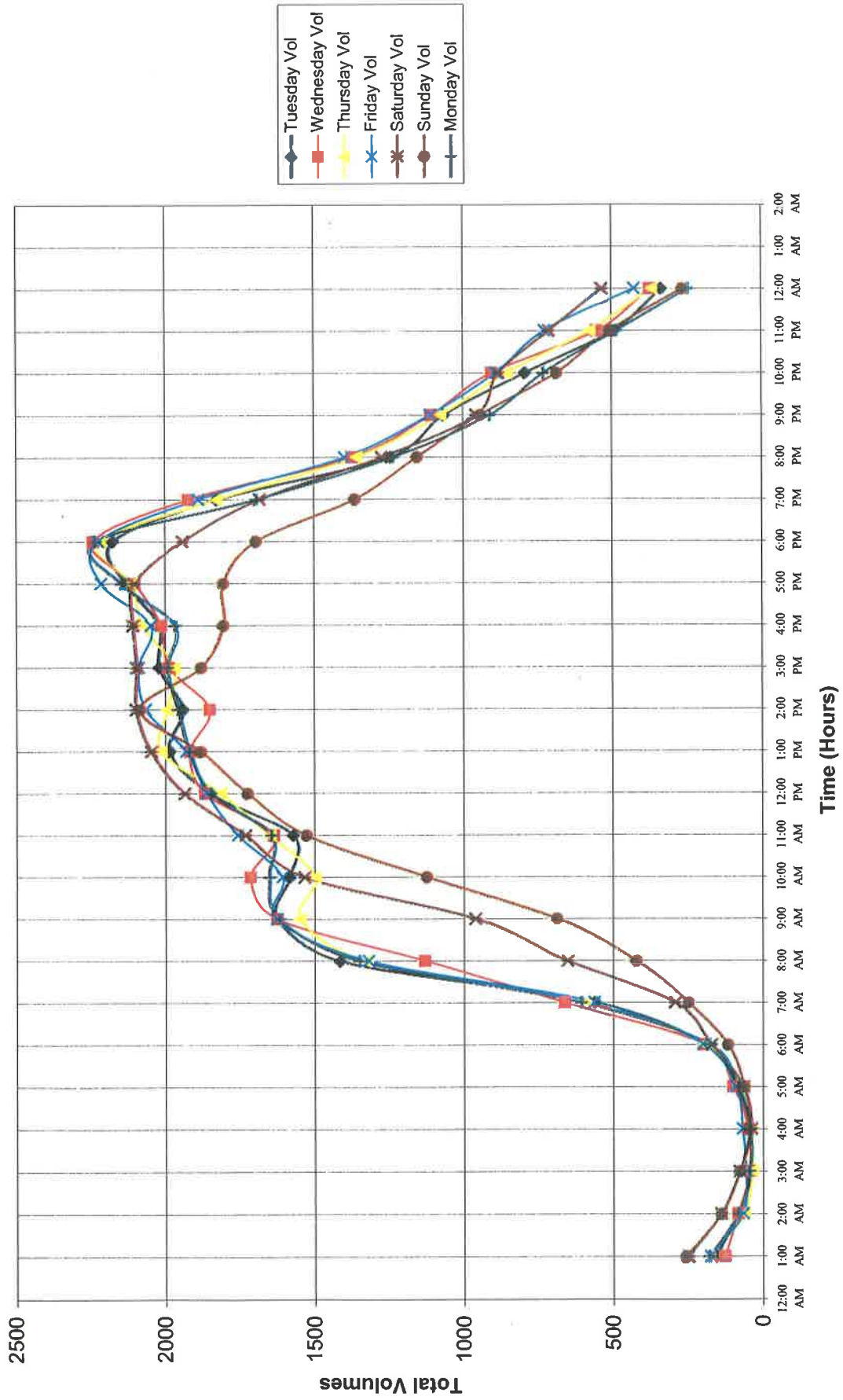


Figure 4
Hour Ending Distribution of Traffic on Route 68



APPENDIX A
TRAFFIC COUNT DATA



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HIPM

CITY OF MONTEREY

All Traffic/Data
 (916) 771-8700
 Fax 786-2879

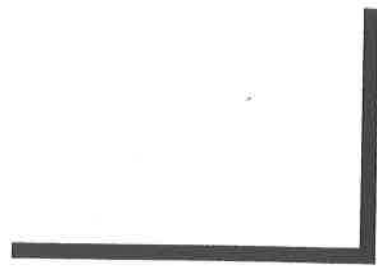
Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT1
 Page : 1

Start Time	SR 68 Southbound				SKYLINE FOREST DR. Westbound				Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
3:00pm	60	154	0	214	7	0	35	42	0	249	27	276	0	0	0	0	532
3:15	73	221	0	294	5	0	44	49	0	246	21	267	0	0	0	0	610
3:30	54	206	0	260	9	0	43	52	0	241	35	276	0	0	0	0	588
3:45	69	226	0	295	5	0	34	39	0	228	27	255	0	0	0	0	589
Hour Total	256	807	0	1063	26	0	156	182	0	964	110	1074	0	0	0	0	2319
4:00pm	46	196	0	242	3	0	45	48	0	229	26	255	0	0	0	0	545
4:15	63	262	0	325	5	0	47	52	0	223	23	246	0	0	0	0	623
4:30	42	237	0	279	6	0	32	38	0	228	21	249	0	0	0	0	566
4:45	66	198	0	264	5	0	34	39	0	230	24	254	0	0	0	0	557
Hour Total	217	893	0	1110	19	0	158	177	0	910	94	1004	0	0	0	0	2291
5:00pm	42	225	0	267	7	0	51	58	0	270	20	290	0	0	0	0	615
5:15	56	199	0	255	3	0	56	59	0	280	27	307	0	0	0	0	621
5:30	35	208	0	243	7	0	32	39	0	263	32	295	0	0	0	0	577
5:45	46	218	0	264	12	0	30	42	0	284	19	303	0	0	0	0	609
Hour Total	179	850	0	1029	29	0	169	198	0	1097	98	1195	0	0	0	0	2422
6:00pm	30	199	0	229	6	0	41	47	0	247	17	264	0	0	0	0	540
6:15	23	182	0	205	3	0	29	32	0	224	22	246	0	0	0	0	483
Total	53	381	0	434	9	0	70	79	0	471	39	510	0	0	0	0	1023
Grand Total	705	2931	0	3636	83	0	553	636	0	3442	341	3783	0	0	0	0	8055
% of Total	8.8%	36.4%	0.0%		1.0%	0.0%	6.9%		0.0%	42.7%	4.2%		0.0%	0.0%	0.0%		
Approch %				45.1%				7.9%				47.0%					
% of Apprch	19.4%	80.6%	0.0%		13.1%	0.0%	86.9%		0.0%	91.0%	9.0%		0.0%	0.0%	0.0%		

PHF=0.00

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	Total	Left	Thru	Rght	Total	
Southbound	SR 68	05:00pm	.963	179	850	0	0	1029	17.3	82.6	.0	.0
Westbound	SKYLINE FOREST DR.		.839	29	0	169	0	198	14.6	.0	85.3	.0
Northbound			.973	0	1097	98	0	1195	.0	91.7	8.2	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0



SR 68			
0	850	179	0
			1097
			169
			====
			1266
	Inbound	1029	
	Outbound	1266	
	Total	2295	



169

0
0
0

0

	Inbound	0
	Outbound	0
0	Total	0

	Inbound	198
	Outbound	277
	Total	475

179
0
98

SKYLINE FOREST DR.



	Inbound	1195
	Outbound	879
	Total	2074
29		0
850		1097
0		
====		
879		

98

2 PM

All Traffic Data
 (916) 771-8700
 Fax 786-2879

CITY OF MONTEREY

Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT2
 Page : 1

SR 68
 Southbound

COMMUNITY HOSPITAL ENTRANCE
 Westbound

Northbound

Eastbound

Time	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
3:00pm	4	170	0	174	47	0	18	65	0	250	35	285	0	0	0	0	524
3:15	6	212	0	218	54	0	21	75	0	245	30	275	0	0	0	0	568
3:30	7	211	0	218	51	0	28	79	0	243	34	277	0	0	0	0	574
3:45	11	217	0	228	47	0	29	76	0	228	27	255	0	0	0	0	559
Hour Total	28	810	0	838	199	0	96	295	0	966	126	1092	0	0	0	0	2225
4:00pm	11	197	0	208	53	0	15	68	0	238	31	269	0	0	0	0	545
4:15	8	245	0	253	39	0	18	57	0	228	15	243	0	0	0	0	553
4:30	6	228	0	234	37	0	20	57	0	229	25	254	0	0	0	0	545
4:45	7	211	0	218	27	0	10	37	0	248	28	276	0	0	0	0	531
Hour Total	32	881	0	913	156	0	63	219	0	943	99	1042	0	0	0	0	2174
5:00pm	6	209	0	215	41	0	27	68	0	263	27	290	0	0	0	0	573
5:15	7	198	0	205	42	0	21	63	0	286	29	315	0	0	0	0	583
5:30	4	205	0	209	25	0	8	33	0	280	16	296	0	0	0	0	538
5:45	7	218	0	225	21	0	9	30	0	297	29	326	0	0	0	0	581
Hour Total	24	830	0	854	129	0	65	194	0	1126	101	1227	0	0	0	0	2275
6:00pm	4	199	0	203	28	0	10	38	0	257	15	272	0	0	0	0	513
6:15	3	189	0	192	17	0	10	27	0	234	18	252	0	0	0	0	471
Hour Total	7	388	0	395	45	0	20	65	0	491	33	524	0	0	0	0	984
Grand Total	91	2909	0	3000	529	0	244	773	0	3526	359	3885	0	0	0	0	7658
% of Total	1.2%	38.0%	0.0%		6.9%	0.0%	3.2%		0.0%	46.0%	4.7%		0.0%	0.0%	0.0%		
Approch %				39.2%				10.1%				50.7%					
% of Apprch	3.0%	97.0%	0.0%		68.4%	0.0%	31.6%		0.0%	90.8%	9.2%		0.0%	0.0%	0.0%		

PAFF 970

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	RtRd	Total	Left	Thru	Rght	RtRd
Southbound	SR 68	05:00pm	.949	24	830	0	0	854	2.8	97.1	.0	.0
Westbound	COMMUNITY HOSPITAL ENTR		.693	129	0	65	50	244	52.8	.0	26.6	20.4
Northbound			.933	0	1126	101	20	1247	.0	90.2	8.0	1.6
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

CITY OF MONTERREY

All Traffic Data
(916) 771-8700
Fax 786-2879

Site Code : 00000000
Start Date: 07/23/03
File I.D. : MONT2
Page : 2

Category	Inbound	Outbound	Total
SR	68	0	68
830	830	0	830
24	24	0	24
1126	1126	0	1126
65	65	0	65
Total	2045	1191	2045
0	0	0	0
Inbound	0	0	0
Outbound	0	0	0
Total	0	0	0
Inbound	194	125	319
Outbound	125	129	254
Total	319	254	573
Inbound	1227	959	2186
Outbound	959	1227	2186
Total	2186	2186	4372
129	129	0	129
830	830	0	830
0	0	0	0
Total	959	1126	2085
COMMUNITY HOSPITAL ENTRANCE	101	0	101

TY OF MONTEREY

All Traffic Data
 (916) 771-8700
 Fax 786-2879

Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT3
 Page : 1

SR 68
 Southbound

CARMEL HILL PROFESSIONAL CENTER
 Westbound

Northbound

Eastbound

Time	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
3:00pm	5	220	0	225	18	0	8	26	0	281	18	299	0	0	0	0	550
3:15	8	248	0	256	16	0	12	28	0	263	20	283	0	0	0	0	567
3:30	7	260	0	267	37	0	22	59	0	258	16	274	0	0	0	0	600
3:45	4	254	0	258	28	0	15	43	0	236	18	254	0	0	0	0	555
Hour Total	24	982	0	1006	99	0	57	156	0	1038	72	1110	0	0	0	0	2272
4:00pm	5	210	0	215	32	0	13	45	0	256	19	275	0	0	0	0	535
4:15	3	297	0	300	18	0	13	31	0	232	15	247	0	0	0	0	578
4:30	3	238	0	241	25	0	11	36	0	241	11	252	0	0	0	0	529
4:45	3	229	0	232	26	0	17	43	0	259	13	272	0	0	0	0	547
Hour Total	14	974	0	988	101	0	54	155	0	988	58	1046	0	0	0	0	2189
5:00pm	4	242	0	246	25	0	18	43	0	275	13	288	0	0	0	0	577
5:15	2	216	0	218	18	0	15	33	0	298	11	309	0	0	0	0	560
5:30	1	275	0	276	10	0	11	21	0	286	7	293	0	0	0	0	590
5:45	1	236	0	237	18	0	9	27	0	317	5	322	0	0	0	0	586
Hour Total	8	969	0	977	71	0	53	124	0	1176	36	1212	0	0	0	0	2313
6:00pm	1	226	0	227	6	0	7	13	0	265	5	270	0	0	0	0	510
6:15	2	196	0	198	7	0	5	12	0	252	3	255	0	0	0	0	465
Total	3	422	0	425	13	0	12	25	0	517	8	525	0	0	0	0	975
Grand Total	49	3347	0	3396	284	0	176	460	0	3719	174	3893	0	0	0	0	7749
% of Total	.6%	43.2%	0.0%		3.7%	0.0%	2.3%		0.0%	48.0%	2.2%		0.0%	0.0%	0.0%		
Apprch %				43.8%				5.9%				50.2%					
% of Apprch	1.4%	98.6%	0.0%		61.7%	0.0%	38.3%		0.0%	95.5%	4.5%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes			Percentages					
				Left	Thru	Rght	Total	Left	Thru	Rght	Total	
Southbound	SR 68	05:00pm	.885	8	969	0	0	977	.8	99.1	.0	.0
Westbound	CARMEL HILL PROFESSIONAL CENTER		.721	71	0	53	0	124	57.2	.0	42.7	.0
Northbound			.941	0	1176	36	0	1212	.0	97.0	2.9	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

CITY OF MONTEREY

All Traffic Data
(916) 771-8700
Fax 786-2879

Site Code : 00000000
Start Date: 07/23/03
File I.D. : MONT3
Page : 2

SR 68			
0	969	8	0
			1176
			53
			1229
Inbound		977	
Outbound		1229	
Total		2206	

53

0
0
0

0

Inbound	0
Outbound	0
Total	0

Inbound	124
Outbound	44
Total	168

8
0
36
44

Inbound	1212	CARMEL HILL PROFESSIONAL CENTER
Outbound	1040	
Total	2252	
71		
969		
0		
1040		

36

4:4 PM

All Traffic Data
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Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT4
 Page : 1

CITY OF MONTEREY

Start Time	SR 68 Southbound				HWY 1 SB OFF RAMP Westbound				Northbound				HWY 1 SB ON/ PEBBLE BEACH ACCESS Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
3:00pm	0	138	95	233	3	72	163	238	24	117	0	141	7	0	107	114	726
3:15	0	172	131	303	6	68	159	233	25	118	0	143	6	0	118	124	803
3:30	0	157	127	284	9	69	157	235	28	112	0	140	5	0	122	127	786
3:45	0	175	120	295	3	58	140	201	22	110	0	132	8	0	125	133	761
Hour Total	0	642	473	1115	21	267	619	907	99	457	0	556	26	0	472	498	3076
4:00pm	0	152	100	252	6	58	147	211	27	116	0	143	7	0	145	152	758
4:15	0	159	145	304	7	62	141	210	24	103	0	127	5	0	136	141	782
4:30	0	166	107	273	6	67	132	205	22	113	0	135	6	0	133	139	752
4:45	0	162	113	275	5	66	155	226	23	102	0	125	9	0	123	132	758
Hour Total	0	639	465	1104	24	253	575	852	96	434	0	530	27	0	537	564	3050
5:00pm	0	127	115	242	5	72	162	239	28	119	0	147	7	0	118	125	753
5:15	0	146	106	252	4	67	190	261	23	114	0	137	6	0	117	123	773
5:30	0	157	120	277	5	63	178	246	19	107	0	126	5	0	96	101	750
5:45	0	154	120	274	12	70	190	272	25	130	0	155	3	0	83	86	787
Hour Total	0	584	461	1045	26	272	720	1018	95	470	0	565	21	0	414	435	3063
6:00pm	0	167	107	274	10	59	149	218	19	116	0	135	4	0	94	98	725
6:15	0	127	98	225	2	53	158	213	17	103	0	120	2	0	70	72	630
Total	0	294	205	499	12	112	307	431	36	219	0	255	6	0	164	170	1355
Grand	0	2159	1604	3763	83	904	2221	3208	326	1580	0	1906	80	0	1587	1667	10544
% of Total	0.0%	20.5%	15.2%	35.7%	.8%	8.6%	21.1%	30.4%	3.1%	15.0%	0.0%	18.1%	.8%	0.0%	15.1%	15.8%	
Approch %	0.0%	57.4%	42.6%		2.6%	28.2%	69.2%		17.1%	82.9%	0.0%		4.8%	0.0%	95.2%		

4:45 PM

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes					Percentages			
				Left	Thru	Rght	RtRd	Total	Left	Thru	Rght	RtRd
Southbound	SR 68	03:30pm	.930	0	643	492	234	1369	.0	46.9	35.9	17.0
Westbound	HWY 1 SB OFF RAMP		.939	25	247	585	187	1044	2.3	23.6	56.0	17.9
Northbound			.948	101	441	0	0	542	18.6	81.3	.0	.0
Eastbound	HWY 1 SB ON/ PEBBLE BBA		.911	25	0	528	467	1020	2.4	.0	51.7	45.7

SR 68			
492	643	0	25
			441
			585
			1051

Inbound	1135
Outbound	1051
Total	2186

HWY 1 SB ON/ PEBBLE BEACH ACC

585

840	101
	247
	492

25

247

Inbound	553
Outbound	840
Total	1393

Inbound	857
Outbound	0
Total	857

528

0	
0	
0	0

Inbound	542
Outbound	1196
Total	1738

HWY 1 SB OFF RAMP

25	101	441
643		
528		
1196		

0

5 AM

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Site Code : 00000000
 Start Date: 07/24/03
 File I.D. : MONT6
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CITY OF MONTERREY

PEBBLE BEACH/17 MILE DR. HWY 1 SB ON RAMP ACCESS

Start Time	Southbound				Westbound				Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
3:00pm	109	0	30	139	0	106	103	209	0	0	0	0	0	0	0	0	348
3:15	130	0	28	158	0	88	96	184	0	0	0	0	0	0	0	0	342
3:30	123	0	30	153	0	106	106	212	0	0	0	0	0	0	0	0	365
3:45	129	0	19	148	0	104	107	211	0	0	0	0	0	0	0	0	359
Hour Total	491	0	107	598	0	404	412	816	0	0	0	0	0	0	0	0	1414
4:00pm	127	0	15	142	0	109	86	195	0	0	0	0	0	0	0	0	337
4:15	125	0	28	153	0	107	108	215	0	0	0	0	0	0	0	0	368
4:30	123	0	15	138	0	113	90	203	0	0	0	0	0	0	0	0	341
4:45	139	0	17	156	0	79	109	188	0	0	0	0	0	0	0	0	344
Hour Total	514	0	75	589	0	408	393	801	0	0	0	0	0	0	0	0	1390
5:00pm	115	0	27	142	0	124	102	226	0	0	0	0	0	0	0	0	368
5:15	125	0	20	145	0	90	68	158	0	0	0	0	0	0	0	0	303
5:30	107	0	19	126	0	83	84	167	0	0	0	0	0	0	0	0	293
5:45	87	0	23	110	0	111	95	206	0	0	0	0	0	0	0	0	316
Hour Total	434	0	89	523	0	408	349	757	0	0	0	0	0	0	0	0	1280
6:00pm	89	0	17	106	0	127	84	211	0	0	0	0	0	0	0	0	317
6:15	100	0	18	118	0	96	90	186	0	0	0	0	0	0	0	0	304
Total	189	0	35	224	0	223	174	397	0	0	0	0	0	0	0	0	621
Grand Total	1628	0	306	1934	0	1443	1328	2771	0	0	0	0	0	0	0	0	4705
% of Total	34.6%	0.0%	6.5%		0.0%	30.7%	28.2%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		
Approch %				41.1%				58.9%									
of Apprch	84.2%	0.0%	15.8%		0.0%	52.1%	47.9%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/24/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	Total	Left	Thru	Rght	Total	
Southbound	PEBBLE BRACH/17 MILE DR	03:30pm	.974	504	0	92	0	596	84.5	.0	15.4	.0
Westbound	HWY 1 SB ON RAMP ACCESS		.969	0	426	407	0	833	.0	51.1	48.8	.0
Northbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

PEBBLE BEACH/17 MILE DR. ACCESS

92	0	504	0
			0
			407

			407
Inbound		596	
Outbound		407	
Total		1003	

518 0
 426
 92

0

Inbound 0
Outbound 518
Total 518

0

Inbound 833
Outbound 504 0
Total 1337

426

504
0 504
0

Inbound 0
Outbound 0
Total 0

0
0
0

0

HWY 1 SB ON RAMP ACCESS

0

#6 PM

All Traffic Data
 (916) 771-8700
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Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT5
 Page : 1

CITY OF MONTEREY

Start Time	SR 68 Southbound				AGUAJITO RD. Westbound				HWY 1 NB RAMPS Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
3:00pm	9	247	0	256	4	0	10	14	0	123	7	130	0	0	0	0	400
3:15	4	287	0	291	8	0	8	16	0	135	6	141	0	0	0	0	448
3:30	10	283	0	293	6	0	7	13	0	135	1	136	0	0	0	0	442
3:45	11	292	0	303	9	0	5	14	0	124	5	129	0	0	0	0	446
Hour Total	34	1109	0	1143	27	0	30	57	0	517	19	536	0	0	0	0	1736
4:00pm	6	293	0	299	6	0	6	12	0	137	8	145	0	0	0	0	456
4:15	7	300	0	307	5	0	3	8	0	130	3	133	0	0	0	0	448
4:30	11	294	0	305	4	0	8	12	0	121	1	122	0	0	0	0	439
4:45	11	280	0	291	7	0	7	14	0	118	9	127	0	0	0	0	432
Hour Total	35	1167	0	1202	22	0	24	46	0	506	21	527	0	0	0	0	1775
5:00pm	6	242	0	248	6	0	8	14	0	140	7	147	0	0	0	0	409
5:15	6	259	0	265	3	0	5	8	0	132	7	139	0	0	0	0	412
5:30	7	257	0	264	3	0	1	4	0	127	4	131	0	0	0	0	399
5:45	17	231	0	248	5	0	5	10	0	148	3	151	0	0	0	0	409
Hour Total	36	989	0	1025	17	0	19	36	0	547	21	568	0	0	0	0	1629
6:00pm	7	259	0	266	3	0	12	15	0	123	3	126	0	0	0	0	407
6:15	6	197	0	203	1	0	3	4	0	124	0	124	0	0	0	0	331
Total	13	456	0	469	4	0	15	19	0	247	3	250	0	0	0	0	738
Grand	118	3721	0	3839	70	0	88	158	0	1817	64	1881	0	0	0	0	5878
% of Total	2.0%	63.3%	0.0%	65.3%	1.2%	0.0%	1.5%	2.7%	0.0%	30.9%	1.1%	32.0%	0.0%	0.0%	0.0%	0.0%	
Apprch %	3.1%	96.9%	0.0%		44.3%	0.0%	55.7%		0.0%	96.6%	3.4%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	Total	Left	Thru	Rght	Total	
Southbound	SR 68	03:30pm	.979	34	1168	0	0	1202	2.8	97.1	.0	.0
Westbound	AGUAJITO RD.		.839	26	0	21	0	47	55.3	.0	44.6	.0
Northbound	HWY 1 NB RAMPS		.936	0	526	17	0	543	.0	96.8	3.1	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

SR 68	0	1168	34	0	
				526	
				21	
				<u>547</u>	
		Inbound	1202		
		Outbound	547		
		Total	1749		
					21

0	0
0	0
0	0
0	0

Inbound	0
Outbound	0
Total	0
0	0

Inbound	47
Outbound	51
Total	98

34	
0	51
17	
AGUAJITO RD.	

		Inbound	543		
		Outbound	1194		
		Total	1737		
		26	0	526	17
		1168			
		0			
		<u>1194</u>			
		HWY 1 NB RAMPS			

7:15 AM

All Traffic Data
 (916) 771-8700
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Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT1
 Page : 1

CITY OF MONTEREY

SR 68
 Southbound

SKYLINE FOREST DR.
 Westbound

Northbound

Eastbound

Start Time	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	8	132	0	140	4	0	15	19	0	102	9	111	0	0	0	0	270
7:15	10	170	0	180	10	0	8	18	0	132	7	139	0	0	0	0	337
7:30	18	200	0	218	15	0	26	41	0	131	8	139	0	0	0	0	398
7:45	28	237	0	265	12	0	23	35	0	172	7	179	0	0	0	0	479
Hour Total	64	739	0	803	41	0	72	113	0	537	31	568	0	0	0	0	1484
8:00am	18	208	0	226	6	0	15	21	0	145	8	153	0	0	0	0	400
8:15	18	212	0	230	14	0	25	39	0	164	10	174	0	0	0	0	443
8:30	22	220	0	242	13	0	30	43	0	153	11	164	0	0	0	0	449
8:45	17	241	0	258	10	0	36	46	0	188	13	201	0	0	0	0	505
Hour Total	75	881	0	956	43	0	106	149	0	650	42	692	0	0	0	0	1797
Grand Total	139	1620	0	1759	84	0	178	262	0	1187	73	1260	0	0	0	0	3281
% of Total	4.2%	49.4%	0.0%	53.6%	2.6%	0.0%	5.4%	8.0%	0.0%	36.2%	2.2%	38.4%	0.0%	0.0%	0.0%	0.0%	
% of Apprch	7.9%	92.1%	0.0%		32.1%	0.0%	67.9%		0.0%	94.2%	5.8%		0.0%	0.0%	0.0%		

PHF = .29

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages			
				Left	Thru	Rght	Total	Left	Thru	Rght	Total
Southbound	SR 68	08:00am	.926	75	881	0	956	7.8	92.1	.0	.0
Westbound	SKYLINE FOREST DR.		.810	43	0	106	149	28.8	.0	71.1	.0
Northbound			.861	0	650	42	692	.0	93.9	6.0	.0
Eastbound			.0	0	0	0	0	0.0	0.0	0.0	0.0

SR 68			
0	881	75	0
			650
			106
			<u>756</u>
	Inbound	956	
	Outbound	756	
	Total	1712	

106

0
0
0

0

Inbound	0
Outbound	0
Total	0

Inbound	149	
Outbound	117	43
Total	266	

75	
0	117
42	

SKYLINE FOREST DR.

Inbound	692
Outbound	924
Total	1616
43	0
881	650
0	
<u>924</u>	

42

A 01

All Traffic Data
 (916) 771-8700
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Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT2
 Page : 1

CITY OF MONTEREY

SR 68
 Southbound

COMMUNITY HOSPITAL ENTRANCE

Westbound

Northbound

Eastbound

Start Time	Southbound				Westbound				Northbound				Eastbound				Total
Time	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	7	139	0	146	17	0	5	22	0	93	35	128	0	0	0	0	296
7:15	19	160	0	179	13	0	6	19	0	133	63	196	0	0	0	0	394
7:30	15	190	0	205	50	0	13	63	0	132	51	183	0	0	0	0	451
7:45	24	230	0	254	39	0	7	46	0	167	50	217	0	0	0	0	517
Hour Total	65	719	0	784	119	0	31	150	0	525	199	724	0	0	0	0	1658
8:00am	9	199	0	208	32	0	7	39	0	146	63	209	0	0	0	0	456
8:15	15	218	0	233	16	0	6	22	0	171	59	230	0	0	0	0	485
8:30	11	222	0	233	21	0	3	24	0	158	44	202	0	0	0	0	459
8:45	9	234	0	243	21	0	5	26	0	201	43	244	0	0	0	0	513
Hour Total	44	873	0	917	90	0	21	111	0	676	209	885	0	0	0	0	1913
Grand Total	109	1592	0	1701	209	0	52	261	0	1201	408	1609	0	0	0	0	3571
of Total	3.1%	44.6%	0.0%		5.9%	0.0%	1.5%		0.0%	33.6%	11.4%		0.0%	0.0%	0.0%		
Approch %				47.6%				7.3%				45.1%					
of Apprch	6.4%	93.6%	0.0%		80.1%	0.0%	19.9%		0.0%	74.6%	25.4%		0.0%	0.0%	0.0%		

PHF = 1.132

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	RtRd	Total	Left	Thru	Rght	RtRd
Southbound	SR 68	07:45am	.913	59	869	0	0	928	6.3	93.6	.0	.0
Westbound	COMMUNITY HOSPITAL ENTR		.745	108	0	23	18	149	72.4	.0	15.4	12.0
Northbound			.916	0	642	216	51	909	.0	70.6	23.7	5.6
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

SR 68			
0	869	59	0
			642
			23
			=====
			665
	Inbound	928	
	Outbound	665	
	Total	1593	

			23

0	0
	0
	0
	0

	Inbound	0
	Outbound	0
	Total	0

	Inbound	131
	Outbound	275
	Total	406

	59
	0
	275

	Inbound	858
	Outbound	977
	Total	1835
	108	
	869	
	0	
	=====	
	977	

COMMUNITY HOSPITAL ENTRANCE

216

3AA

All Traffic Data
 (916) 771-8700
 Fax 786-2879

Site Code : 00000000
 Start Date: 07/23/03
 File I.D. : MONT3
 Page : 1

CITY OF MONTEREY

SR 68
 Southbound

CARMEL HILL PROFESSIONAL CENTER
 Westbound Northbound

Eastbound

Start Time	Southbound				Westbound				Northbound				Eastbound				Total
Time	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	4	158	0	162	5	0	3	8	0	122	28	150	0	0	0	0	320
7:15	3	170	0	173	2	0	1	3	0	193	15	208	0	0	0	0	384
7:30	3	238	0	241	4	0	0	4	0	183	20	203	0	0	0	0	448
7:45	6	263	0	269	0	0	1	1	0	219	25	244	0	0	0	0	514
Hour Total	16	829	0	845	11	0	5	16	0	717	88	805	0	0	0	0	1666
8:00am	6	219	0	225	4	0	1	5	0	208	26	234	0	0	0	0	464
8:15	6	235	0	241	1	0	3	4	0	229	24	253	0	0	0	0	498
8:30	7	235	0	242	8	0	0	8	0	200	32	232	0	0	0	0	482
8:45	7	248	0	255	3	0	4	7	0	246	26	272	0	0	0	0	534
Hour Total	26	937	0	963	16	0	8	24	0	883	108	991	0	0	0	0	1978
Grand Total	42	1766	0	1808	27	0	13	40	0	1600	196	1796	0	0	0	0	3644
of Total	1.2%	48.5%	0.0%		.7%	0.0%	.4%		0.0%	43.9%	5.4%		0.0%	0.0%	0.0%		
Apprch %				49.6%				1.1%				49.3%					
of Apprch	2.3%	97.7%	0.0%		67.5%	0.0%	32.5%		0.0%	89.1%	10.9%		0.0%	0.0%	0.0%		

PHF = .926

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	Total	Left	Thru	Rght	Total	
Southbound	SR 68	08:00am	.944	26	937	0	0	963	2.6	97.3	.0	.0
Westbound	CARMEL HILL PROFESSIONAL CENTER		.750	16	0	8	0	24	66.6	.0	33.3	.0
Northbound			.911	0	883	108	0	991	.0	89.1	10.8	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

SR 68			
0	937	26	0
			883
			8

			891
	Inbound	963	
	Outbound	891	
	Total	1854	

0	0
	0
	0

0

	Inbound	0
	Outbound	0
0	Total	0

0

	Inbound	24
	Outbound	134
	Total	158

26	
0	134
108	

	Inbound	991	CARMEL HILL PROFESSIONAL CENTER
	Outbound	953	
	Total	1944	
16			
937			
0			

953			

0	883	108
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4 AM

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Site Code : 00000000
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 File I.D. : MONT4
 Page : 1

CITY OF MONTERREY

Start Time	SR 68 Southbound				HWY 1 SB OFF RAMP Westbound				Northbound				HWY 1 SB ON/ PEBBLE BEACH ACCESS Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Total
7:00am	0	106	41	147	3	111	105	219	5	34	0	39	8	0	24	32	437
7:15	0	115	54	169	4	121	142	267	18	57	0	75	5	0	26	31	542
7:30	0	153	76	229	3	129	136	268	17	50	0	67	7	0	43	50	614
7:45	0	177	91	268	3	124	154	281	19	83	0	102	4	0	48	52	703
Hour Total	0	551	262	813	13	485	537	1035	59	224	0	283	24	0	141	165	2296
8:00am	0	138	116	254	7	114	165	286	20	61	0	81	7	0	42	49	670
8:15	0	113	99	212	7	111	178	296	21	68	0	89	9	0	63	72	669
8:30	0	133	114	247	4	105	132	241	23	82	0	105	15	0	48	63	656
8:45	0	128	119	247	3	114	149	266	23	124	0	147	6	0	69	75	735
Hour Total	0	512	448	960	21	444	624	1089	87	335	0	422	37	0	222	259	2730
Grand Total	0	1063	710	1773	34	929	1161	2124	146	559	0	705	61	0	363	424	5026
% of Total	0.0%	21.2%	14.1%		.7%	18.5%	23.1%		2.9%	11.1%	0.0%		1.2%	0.0%	7.2%		
Approach %				35.3%				42.3%				14.0%					8.4%
% of Approach	0.0%	60.0%	40.0%		1.6%	43.7%	54.7%		20.7%	79.3%	0.0%		14.4%	0.0%	85.6%		

PHF = .2929

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				Left	Thru	Rght	RtRd	Total	Left	Thru	Rght	RtRd
Southbound	SR 68	08:00am	.940	0	512	448	191	1151	.0	44.4	38.9	16.5
Westbound	HWY 1 SB OFF RAMP		.930	21	444	624	187	1276	1.6	34.7	48.9	14.6
Northbound			.718	87	335	0	0	422	20.6	79.3	.0	.0
Eastbound	HWY 1 SB ON/ PEBBLE BEA		.826	37	0	222	200	459	8.0	.0	48.3	43.5

PEBBLE BEACH/17 MILE DR. AHWY 1 SB ON RAMP ACCESS

Start Time	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	34	0	5	39	0	40	129	169	0	0	0	0	0	0	0	0	208
7:15	44	0	9	53	0	50	149	199	0	0	0	0	0	0	0	0	252
7:30	54	0	2	56	0	84	153	237	0	0	0	0	0	0	0	0	293
7:45	46	0	11	57	0	68	177	245	0	0	0	0	0	0	0	0	302
Hour Total	178	0	27	205	0	242	608	850	0	0	0	0	0	0	0	0	1055
8:00am	57	0	10	67	0	146	118	264	0	0	0	0	0	0	0	0	331
8:15	68	0	17	85	0	108	111	219	0	0	0	0	0	0	0	0	304
8:30	57	0	13	70	0	108	145	253	0	0	0	0	0	0	0	0	323
8:45	61	0	15	76	0	126	124	250	0	0	0	0	0	0	0	0	326
Hour Total	243	0	55	298	0	488	498	986	0	0	0	0	0	0	0	0	1284
Grand of Total	421	0	82	503	0	730	1106	1836	0	0	0	0	0	0	0	0	2339
Apprch % of Apprch	18.0%	0.0%	3.5%	21.5%	0.0%	31.2%	47.3%	78.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

PHF = .985

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/24/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages			
				Left	Thru	Rght	Total	Left	Thru	Rght	Total
Southbound	PEBBLE BEACH/17 MILE DR	08:00am	.876	243	0	55	298	81.5	0	18.4	.0
Westbound	HWY 1 SB ON RAMP ACCESS		.934	0	488	498	986	.0	49.4	50.5	.0
Northbound			.0	0	0	0	0	0.0	0.0	0.0	0.0
Eastbound			.0	0	0	0	0	0.0	0.0	0.0	0.0

PEBBLE BEACH/17 MILE DR. ACCESS

55	0	243	0
			0
			498
			====
			498
Inbound		298	
Outbound		498	
Total		796	

543 0
 488
 55

0

Inbound 0
Outbound 543
Total 543

0

Inbound 0
Outbound 0
Total 0

0 0 0
0 0 0
0 0 0

0 0 0

HWY 1 SB ON RAMP ACCESS

Inbound 986
Outbound 243 0
Total 1229

243
0 243
0

0

488

498

#6AM

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CITY OF MONTEREY

Start Time	SR 68 Southbound				AGUAJITO RD. Westbound				HWY 1 NB RAMPS Northbound				Eastbound				Total
	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	Left	Thru	Rght	Totl	
7:00am	3	132	0	135	1	0	1	2	0	37	1	38	0	0	0	0	175
7:15	6	139	0	145	2	0	2	4	0	75	5	80	0	0	0	0	229
7:30	4	194	0	198	1	0	3	4	0	62	1	63	0	0	0	0	265
7:45	6	224	0	230	2	0	8	10	0	94	7	101	0	0	0	0	341
Hour Total	19	689	0	708	6	0	14	20	0	268	14	282	0	0	0	0	1010
8:00am	9	175	0	184	3	0	8	11	0	64	0	64	0	0	0	0	259
8:15	7	181	0	188	4	0	5	9	0	81	3	84	0	0	0	0	281
8:30	5	182	0	187	3	0	6	9	0	99	6	105	0	0	0	0	301
8:45	4	188	0	192	3	0	4	7	0	146	2	148	0	0	0	0	347
Hour Total	25	726	0	751	13	0	23	36	0	390	11	401	0	0	0	0	1188
Grand Total	44	1415	0	1459	19	0	37	56	0	658	25	683	0	0	0	0	2198
% of Total	2.0%	64.4%	0.0%	66.4%	.9%	0.0%	1.7%	2.5%	0.0%	29.9%	1.1%	31.1%	0.0%	0.0%	0.0%	0.0%	
% of Apprch	3.0%	97.0%	0.0%		33.9%	0.0%	66.1%		0.0%	96.3%	3.7%		0.0%	0.0%	0.0%		

PHF = .554
 1
 A

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/23/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes			Total	Percentages		
				Left	Thru	Rght		Left	Thru	Rght
Southbound	SR 68	08:00am	.978	25	726	0	751	3.3	96.6	.0
Westbound	AGUAJITO RD.		.818	13	0	23	36	36.1	.0	63.8
Northbound	HWY 1 NB RAMPS		.677	0	390	11	401	.0	97.2	2.7
Eastbound			.0	0	0	0	0	0.0	0.0	0.0



SR 68
0

726

25

0
390
23

413

Inbound
Outbound
Total

751
413
1164



23

0
0
0

0

0

Inbound
Outbound
0 Total

0
0
0

Inbound
Outbound
Total

36
36
72

13

0

25

0

36

11

AGUAJITO RD.

Inbound
Outbound
Total

401
739
1140

13
726
0

0 390

11

739
HWY 1 NB RAMPS

APPENDIX B
RAMP COUNTS

MUNRAS AVENUE NORTHBOUND OFF-RAMP FROM
HIGHWAY 1

NORTHBOUND

Begin Time	Cars & 2 Axle			Buses	2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>5 Axl	<6 Axl	6 Axle	>6 Axl	Total
	Bikes	Trlrs	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	
1:00 pm	0	33	3	0	1	0	0	0	0	0	0	0	0	37
1:15	0	21	3	0	0	0	0	0	0	0	0	0	0	24
11:30	0	11	1	0	0	0	0	0	0	0	0	0	0	12
11:45	0	20	3	0	3	0	0	0	0	0	0	0	0	26
Hour Total	0	85	10	0	4	0	0	0	0	0	0	0	0	99
Day Totals	3	8475	1011	8	66	1	1	10	1	1	3	*	*	9580
12:00 07/24	0	9	3	0	0	0	0	0	0	0	0	0	0	12
2:15	0	10	1	0	0	0	0	0	0	0	0	0	0	11
2:30	0	6	0	0	2	0	0	0	0	0	0	0	0	8
12:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
Hour Total	0	30	4	0	2	0	0	0	0	0	0	0	0	36
01:00 am	0	10	1	0	0	0	0	0	0	0	0	0	0	11
01:15	0	6	0	0	0	0	0	0	0	0	0	0	0	6
1:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
1:45	0	2	0	0	1	0	0	0	0	0	0	0	0	3
Hour Total	0	23	2	0	1	0	0	0	0	0	0	0	0	26
2:00 am	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	3	1	0	0	0	0	0	0	0	0	0	0	4
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Hour Total	0	7	1	0	0	0	0	0	0	0	0	0	0	8
03:00 am	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	2	1	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	4	1	0	0	0	0	0	0	0	0	0	0	5
04:00 am	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Hour Total	0	7	1	0	0	0	0	0	0	0	0	0	0	8
05:00 am	0	3	1	0	0	0	0	0	0	0	0	0	0	4
5:15	0	3	1	0	0	1	0	0	1	0	0	0	0	6
05:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
5:45	0	10	2	0	0	0	0	1	0	0	0	0	0	13
Hour Total	0	21	5	0	0	1	0	1	1	0	0	0	0	29
06:00 am	0	13	2	0	1	0	0	0	0	0	0	0	0	16
6:15	0	23	4	0	0	0	0	2	0	0	0	0	0	29
6:30	0	20	4	0	0	0	0	0	0	0	0	0	0	24
6:45	0	26	7	0	0	0	0	0	0	0	0	0	0	33
Hour Total	0	82	17	0	1	0	0	2	0	0	0	0	0	102

MUNRAS AVENUE NORTHBOUND OFF-RAMP FROM
HIGHWAY 1

NORTHBOUND

Begin Time	Cars & 2 Axle			2 Axle		3 Axle	4 Axle	<5 Axl	5 Axle	>5 Axl	<6 Axl	6 Axle	>6 Axl	Total
	Bikes	Tlrs	Long	Buses	Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	
07:00 am	0	55	7	0	0	0	0	0	0	0	0	0	0	62
07:15	0	53	8	0	1	0	0	0	0	0	0	0	0	62
07:30	0	73	6	0	1	0	0	0	0	0	0	0	0	80
07:45	0	104	13	0	2	0	0	1	0	0	0	0	0	120
Hour Total	0	285	34	0	4	0	0	1	0	0	0	0	0	324
08:00 am	0	110	10	0	4	0	0	0	0	0	0	0	0	124
08:15	0	136	13	0	3	0	0	0	0	0	0	0	0	152
08:30	0	128	11	0	2	0	0	0	0	0	0	0	0	141
08:45	0	145	20	0	1	0	0	0	0	0	0	0	0	166
Hour Total	0	519	54	0	10	0	0	0	0	0	0	0	0	583
09:00 am	0	143	16	0	1	0	0	0	0	0	0	0	0	160
09:15	0	145	10	0	2	0	0	0	0	0	0	0	0	157
Totals	3	9741	1156	8	87	2	1	14	2	1	3	0	0	11018
Percent	.0%	88.4%	10.4%	.0%	.7%	.0%	.0%	.1%	.0%	.0%	.0%	.0%	.0%	

MUNRAS AVENUE SOUTHBOUND ON-RAMP TO
HIGHWAY 1

SOUTHBOUND

Begin Time	Cars & 2 Axle			2 Axle 3 Axle 4 Axle			<5 Axl 5 Axle >5 Axl			<6 Axl 6 Axle >6 Axl			Total	
	Bikes	Trls	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi		Multi
07:00 am	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:15	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:30	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:45	0	86	18	0	2	0	2	0	0	1	0	0	0	109
Hour Total														109
08:00 am	0	74	11	0	1	0	0	0	0	0	1	0	0	87
08:15	0	89	15	1	1	0	0	0	0	0	0	0	0	106
08:30	0	109	14	0	1	0	0	0	0	0	0	0	0	124
08:45	0	124	26	0	2	0	0	0	0	0	0	0	0	152
Hour Total	0	396	66	1	5	0	0	0	0	0	1	0	0	469
09:00 am	0	98	15	0	2	1	0	0	0	0	0	0	0	116
09:15	0	117	18	0	2	0	0	1	0	0	0	0	0	138
09:30	0	120	21	0	3	1	0	1	0	0	0	0	0	146
09:45	0	132	20	0	3	0	0	0	0	0	0	0	0	155
Hour Total	0	467	74	0	10	2	0	2	0	0	0	0	0	555
10:00 am	0	154	14	1	0	1	0	0	0	0	0	0	0	170
10:15	2	140	25	0	2	0	0	0	0	0	0	0	0	169
10:30	0	142	12	0	1	0	0	0	0	0	0	0	0	155
10:45	1	153	20	0	1	0	0	0	0	0	0	0	0	175
Hour Total	3	589	71	1	4	1	0	0	0	0	0	0	0	669
11:00 am	0	144	16	0	1	0	0	0	0	0	0	0	0	161
11:15	1	155	27	0	1	0	0	1	0	0	0	0	0	185
11:30	0	159	15	0	2	1	0	2	0	0	0	0	0	179
11:45	0	165	20	0	3	0	0	0	0	0	0	0	0	188
Hour Total	1	623	78	0	7	1	0	3	0	0	0	0	0	713
12:00 pm	0	191	16	0	0	0	0	0	0	0	0	0	0	207
12:15	0	195	23	0	0	0	0	1	0	0	0	0	0	219
12:30	0	166	19	0	3	0	0	0	0	0	0	0	0	188
12:45	1	156	23	1	2	0	0	0	0	0	0	0	0	183
Hour Total	1	708	81	1	5	0	0	1	0	0	0	0	0	797
01:00 pm	0	166	17	0	1	0	0	0	0	0	0	0	0	184
01:15	0	139	15	0	0	0	0	0	1	0	0	0	0	155
01:30	0	165	20	0	2	0	0	0	0	0	0	0	0	187
01:45	0	176	18	0	2	0	0	0	0	0	0	0	0	196
Hour Total	0	646	70	0	5	0	0	0	1	0	0	0	0	722
02:00 pm	1	151	16	0	0	0	0	1	1	0	0	0	0	170
02:15	0	139	24	0	0	0	0	1	0	0	0	0	0	164
02:30	1	182	18	0	1	0	0	0	0	0	0	0	0	202
02:45	1	204	27	0	2	1	0	0	0	0	0	0	0	235
Hour Total	3	676	85	0	3	1	0	2	1	0	0	0	0	771

MUNRAS AVENUE SOUTHBOUND ON-RAMP TO
HIGHWAY 1

SOUTHBOUND

Begin Time	Cars & 2 Axle			2 Axle		3 Axle	4 Axle	<5 Axl	5 Axle	>5 Axl	<6 Axl	6 Axle	>6 Axl	Total
	Bikes	Trls	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	
03:00 pm	0	173	25	0	0	0	0	1	1	0	0	0	0	200
03:15	0	188	19	0	2	0	0	0	0	0	0	0	0	209
03:30	0	164	15	0	1	0	0	1	0	0	0	0	0	181
03:45	0	213	17	0	1	0	0	0	1	0	0	0	0	232
Hour Total	0	738	76	0	4	0	0	2	2	0	0	0	0	822
04:00 pm	0	189	18	0	1	0	0	0	0	0	1	0	0	209
04:15	0	185	24	0	1	0	0	0	0	0	0	0	0	210
04:30	0	200	18	0	1	0	0	0	0	0	0	0	0	219
04:45	0	186	21	0	0	0	0	0	0	0	0	0	0	207
Hour Total	0	760	81	0	3	0	0	0	0	0	1	0	0	845
05:00 pm	1	209	15	0	0	0	0	0	0	0	0	0	0	225
05:15	0	211	18	0	1	0	0	0	0	0	0	0	0	230
05:30	0	200	16	0	0	0	0	0	0	0	0	0	0	216
05:45	0	196	20	0	1	0	0	0	0	0	0	0	0	217
Hour Total	1	816	69	0	2	0	0	0	0	0	0	0	0	888
06:00 pm	0	156	20	0	2	0	0	0	0	0	0	0	0	178
06:15	2	153	16	0	0	0	0	0	0	0	0	0	0	171
06:30	0	149	12	0	1	0	0	0	0	0	0	0	0	162
06:45	0	145	12	0	2	0	0	0	0	0	0	0	0	159
Hour Total	2	603	60	0	5	0	0	0	0	0	0	0	0	670
07:00 pm	0	118	7	0	0	0	0	0	0	0	0	0	0	125
07:15	0	124	9	0	2	0	0	2	0	0	0	0	0	137
07:30	1	93	12	0	0	0	0	0	0	0	0	0	0	106
07:45	1	85	10	0	0	0	0	0	0	0	0	0	0	96
Hour Total	2	420	38	0	2	0	0	2	0	0	0	0	0	464
08:00 pm	0	86	7	0	0	0	0	0	0	0	0	0	0	93
08:15	0	79	7	0	1	0	0	0	0	0	0	0	0	87
08:30	0	82	7	0	0	0	0	0	0	0	0	0	0	89
08:45	0	79	11	0	0	0	0	0	0	0	0	0	0	90
Hour Total	0	326	32	0	1	0	0	0	0	0	0	0	0	359
09:00 pm	0	94	19	0	0	0	0	0	0	0	0	0	0	113
09:15	0	90	8	0	2	0	0	0	0	0	0	0	0	100
09:30	0	77	11	0	0	0	0	0	0	0	0	0	0	88
09:45	0	27	5	0	1	0	0	0	0	0	0	0	0	33
Hour Total	0	288	43	0	3	0	0	0	0	0	0	0	0	334
10:00 pm	0	51	3	0	0	0	0	0	0	0	0	0	0	54
10:15	1	39	7	0	1	0	0	0	0	0	0	0	0	48
10:30	0	37	6	0	0	0	0	1	0	0	0	0	0	44
10:45	0	19	4	0	0	0	0	0	0	0	0	0	0	23
Hour Total	1	146	20	0	1	0	0	1	0	0	0	0	0	169

MUNRAS AVENUE SOUTHBOUND ON-RAMP TO
HIGHWAY 1

SOUTHBOUND

Begin Time	Cars & 2 Axle			Buses	2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>5 Axl	<6 Axl	6 Axle	>6 Axl	Total
	Bikes	Trls	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	
11:00 pm	0	15	3	0	1	0	0	0	0	0	0	0	0	19
11:15	0	22	4	0	1	0	0	0	0	0	0	0	0	27
11:30	0	17	2	0	0	0	0	0	0	0	0	0	0	19
11:45	0	20	5	0	1	0	0	0	0	0	0	0	0	26
Hour Total	0	74	14	0	3	0	0	0	0	0	0	0	0	91
Day Totals	14	8362	976	3	65	5	2	13	4	1	2	*	*	9447
12:00 07/24	0	21	3	0	2	0	0	0	0	0	0	0	0	26
12:15	0	12	1	0	1	0	0	0	0	0	0	0	0	14
12:30	0	17	0	0	1	0	0	0	0	0	0	0	0	18
12:45	0	11	2	0	0	0	0	0	0	0	0	0	0	13
Hour Total	0	61	6	0	4	0	0	0	0	0	0	0	0	71
01:00 am	0	11	1	0	0	0	0	0	0	0	0	0	0	12
01:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	8	1	0	0	0	0	0	0	0	0	0	0	9
Hour Total	0	28	2	0	0	0	0	0	0	0	0	0	0	30
02:00 am	0	6	0	0	0	0	0	0	0	0	0	0	0	6
02:15	0	2	2	0	0	0	0	0	0	0	0	0	0	4
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Hour Total	0	13	2	0	0	0	0	0	0	0	0	0	0	15
03:00 am	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Hour Total	0	11	0	0	0	0	0	0	0	0	0	0	0	11
04:00 am	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04:15	0	3	2	0	1	0	0	0	0	0	0	0	0	6
04:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	3	0	0	1	0	0	0	0	0	0	0	0	4
Hour Total	0	10	3	0	2	0	0	0	0	0	0	0	0	15
05:00 am	0	4	1	0	0	0	0	0	0	0	0	0	0	5
05:15	0	7	2	0	0	0	0	0	0	0	0	0	0	9
05:30	0	7	1	0	0	1	0	0	0	0	0	0	0	9
05:45	0	15	6	0	1	0	0	0	0	0	0	0	0	22
Hour Total	0	33	10	0	1	1	0	0	0	0	0	0	0	45
06:00 am	0	17	5	0	1	0	0	0	0	0	0	0	0	23
06:15	0	23	9	0	1	0	0	1	0	0	0	0	0	34
06:30	0	19	8	0	1	0	0	0	0	0	0	0	0	28
06:45	0	33	12	0	2	0	0	0	0	0	0	0	0	47
Hour Total	0	92	34	0	5	0	0	1	0	0	0	0	0	132

MUNRAS AVENUE SOUTHBOUND ON-RAMP TO
HIGHWAY 1

SOUTHBOUND

Begin Time	Cars & 2 Axle			Buses	2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>5 Axl	<6 Axl	6 Axle	>6 Axl	Total
	Bikes	Trls	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	
07:00 am	0	36	15	0	3	0	0	1	0	0	0	0	0	55
07:15	0	42	9	0	1	1	0	0	0	0	0	0	0	53
07:30	0	69	10	0	1	0	0	0	0	0	0	0	0	80
07:45	0	93	14	0	4	1	0	0	0	0	0	0	0	112
Hour Total	0	240	48	0	9	2	0	1	0	0	0	0	0	300
08:00 am	0	76	30	0	2	0	0	0	0	0	0	0	0	108
08:15	2	86	17	0	0	0	0	1	0	0	0	0	0	106
08:30	0	89	13	0	6	0	0	0	0	0	0	0	0	108
08:45	0	122	22	0	3	0	0	0	0	0	0	0	0	147
Hour Total	2	373	82	0	11	0	0	1	0	0	0	0	0	469
09:00 am	0	112	23	0	2	0	0	0	0	0	0	0	0	137
Totals	16	9335	1186	3	99	8	2	16	4	1	2	0	0	10672
Percent	.1%	87.4%	11.1%	.0%	.9%	.0%	.0%	.1%	.0%	.0%	.0%	.0%	.0%	

7 PM

All Traffic Data
 (916) 771-8700
 Fax 786-2879

Site Code : 00000000
 Start Date: 07/24/03
 File I.D. : MONT7
 Page : 1

CITY OF MONTEREY

Start Time	HWY 1 NB MAINLINE Southbound				Westbound				HWY 1 SB MAINLINE Northbound				Eastbound				
	RV	Flbed	Cars	Totl	RV	Flbed	Cars	Totl	RV	Flbed	Cars	Totl	RV	Flbed	Cars	Totl	
3:00pm	2	6	607	615	0	6	607	613	5	5	637	647	0	0	0	0	1875
3:15	5	7	525	537	0	7	525	532	2	8	643	653	0	0	0	0	1722
3:30	2	7	548	557	0	7	548	555	0	7	654	661	0	0	0	0	1773
3:45	2	6	609	617	0	6	609	615	2	8	703	713	0	0	0	0	1945
Hour Total	11	26	2289	2326	0	26	2289	2315	9	28	2637	2674	0	0	0	0	7315
4:00pm	0	4	572	576	0	4	572	576	2	7	703	712	0	0	0	0	1864
4:15	5	5	592	602	0	5	592	597	1	9	710	720	0	0	0	0	1919
4:30	2	3	566	571	0	3	566	569	1	8	671	680	0	0	0	0	1820
4:45	1	3	550	554	0	3	550	553	3	5	675	683	0	0	0	0	1790
Hour Total	8	15	2280	2303	0	15	2280	2295	7	29	2759	2795	0	0	0	0	7393
5:00pm	1	4	618	623	0	4	618	622	1	7	676	684	0	0	0	0	1929
5:15	1	5	569	575	0	5	569	574	2	5	639	646	0	0	0	0	1795
5:30	1	2	535	538	0	2	535	537	1	2	642	645	0	0	0	0	1720
5:45	0	1	544	545	0	1	544	545	2	4	538	544	0	0	0	0	1634
Hour Total	3	12	2266	2281	0	12	2266	2278	6	18	2495	2519	0	0	0	0	7078
6:00pm	0	2	553	555	0	2	553	555	0	4	517	521	0	0	0	0	1631
6:15	1	1	453	455	0	1	453	454	1	2	525	528	0	0	0	0	1437
Total	1	3	1006	1010	0	3	1006	1009	1	6	1042	1049	0	0	0	0	3068
Grand Total	23	56	7841	7920	0	56	7841	7897	23	81	8933	9037	0	0	0	0	24854
of Total	.1%	.2%	31.5%		0.0%	.2%	31.5%		.1%	.3%	35.9%		0.0%	0.0%	0.0%		
Apprch %			31.9%				31.8%				36.4%						
of Apprch	.3%	.7%	99.0%		0.0%	.7%	99.3%		.3%	.9%	98.8%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 03:00pm to 06:15pm on 07/24/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				RV	Flbed	Cars	Total	RV	Flbed	Cars	Total	
Southbound	HWY 1 NB MAINLINE	03:45pm	.959	9	18	2339	0	2366	.3	.7	98.8	.0
Westbound			.958	0	18	2339	0	2357	.0	.7	99.2	.0
Northbound	HWY 1 SB MAINLINE		.981	6	32	2787	0	2825	.2	1.1	98.6	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

HWY 1 NB MAINLINE

2339	18	9	0
			32
			2339
			2371
Inbound		2366	
Outbound		2371	
Total		4737	

2339

2363 6
 18
 2339

0

18

Inbound 0
 Outbound 2363
 0 Total 2363

Inbound 2357
 Outbound 2796 0
 Total 5153

0

9
 0 2796
 2787

Inbound 2825
 Outbound 18
 Total 2843

32 2787

HWY 1 SB MAINLINE

0
 18
 0
 18

7 JAN

All Traffic Data
 (916) 771-8700
 Fax 786-2879

Site Code : 00000000
 Start Date: 07/24/03
 File I.D. : MONT7
 Page : 1

CITY OF MONTEREY

Start Time	HWY 1 NB MAINLINE Southbound				Westbound				HWY 1 SB MAINLINE Northbound				Eastbound				
	RV	Ftbed	Cars	Totl	RV	Ftbed	Cars	Totl	RV	Ftbed	Cars	Totl	RV	Ftbed	Cars	Totl	Total
7:00am	1	7	278	286	0	0	0	0	1	2	204	207	0	0	0	0	493
7:15	0	11	321	332	0	0	0	0	0	5	300	305	0	0	0	0	637
7:30	0	11	449	460	0	0	0	0	0	2	347	349	0	0	0	0	809
7:45	0	9	616	625	0	0	0	0	1	7	366	374	0	0	0	0	999
Hour Total	1	38	1664	1703	0	0	0	0	2	16	1217	1235	0	0	0	0	2938
8:00am	2	9	523	534	0	0	0	0	2	5	391	398	0	0	0	0	932
8:15	1	8	525	534	0	0	0	0	2	7	428	437	0	0	0	0	971
8:30	2	11	514	527	0	0	0	0	3	7	398	408	0	0	0	0	935
8:45	0	9	618	627	0	0	0	0	2	7	451	460	0	0	0	0	1087
Hour Total	5	37	2180	2222	0	0	0	0	9	26	1668	1703	0	0	0	0	3925
Grand	6	75	3844	3925	0	0	0	0	11	42	2885	2938	0	0	0	0	6863
% of Total	.1%	1.1%	56.0%		0.0%	0.0%	0.0%		.2%	.6%	42.0%		0.0%	0.0%	0.0%		
Apprch %				57.2%								42.8%					
% of Apprch	.2%	1.9%	97.9%		0.0%	0.0%	0.0%		.4%	1.4%	98.2%		0.0%	0.0%	0.0%		

Peak Hour Analysis By Entire Intersection for the Period: 07:00am to 08:45am on 07/24/03

Direction	Street Name	Start Peak Hour	Peak Hr Factor	Volumes				Percentages				
				RV	Ftbed	Cars	Total	RV	Ftbed	Cars	Total	
Southbound	HWY 1 NB MAINLINE	08:00am	.886	5	37	2180	0	2222	.2	1.6	98.1	.0
Westbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0
Northbound	HWY 1 SB MAINLINE		.926	9	26	1668	0	1703	.5	1.5	97.9	.0
Eastbound			.0	0	0	0	0	0	0.0	0.0	0.0	0.0

HWY 1 NB MAINLINE

2180	37	5	0
			26
			0
			26
Inbound		2222	
Outbound		26	
Total		2248	

2189	9
	0
2180	

0

Inbound	0
Outbound	2189
Total	2189

0

Inbound	0
Outbound	1673
Total	1673

5	
0	1673
1668	

Inbound	1703
Outbound	37
Total	1740

0	9	26	1668
37			
0			
37			

HWY 1 SB MAINLINE

APPENDIX C
ROADWAY SEGMENT COUNT DATA

All Traffic Data
 VOLUME SUMMARY
 TUE 07/15/2003

ence: 68-EB
 000000010182
 Jn: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	69	69
02:00	44	44
03:00	24	24
04:00	19	19
05:00	34	34
06:00	102	102
07:00	324	324
08:00	783	783
09:00	920	920
10:00	809	809
11:00	809	809
12:00	916	916
13:00	956	956
14:00	1023	1023
15:00	1004	1004
16:00	970	970
17:00	1023	1023
18:00	909	909
19:00	776	776
20:00	548	548
21:00	509	509
22:00	358	358
23:00	232	232
24:00	159	159
DAY TOTAL	13320	13320
PERCENTS	100.0%	100%
AM Times	08:30	
AM Peaks	934	
PM Times	13:00	
PM Peaks	1059	

All Traffic Data
 VOLUME SUMMARY
 WED 07/16/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	O EAST	Total
01:00	62	62
02:00	55	55
03:00	25	25
04:00	24	24
05:00	34	34
06:00	99	99
07:00	348	348
08:00	816	816
09:00	897	897
10:00	921	921
11:00	850	850
12:00	926	926
13:00	920	920
14:00	969	969
15:00	983	983
16:00	967	967
17:00	985	985
18:00	976	976
19:00	859	859
20:00	626	626
21:00	504	504
22:00	398	398
23:00	252	252
24:00	162	162
DAY TOTAL	13658	13658
PERCENTS	100.0%	100%
AM Times	08:45	
AM Peaks	935	
PM Times	16:00	
PM Peaks	1042	

All Traffic Data
 VOLUME SUMMARY
 THU 07/17/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	83	83
02:00	37	37
03:00	23	23
04:00	18	18
05:00	33	33
06:00	113	113
07:00	323	323
08:00	699	699
09:00	806	806
10:00	778	778
11:00	865	865
12:00	904	904
13:00	989	989
14:00	987	987
15:00	927	927
16:00	1032	1032
17:00	1022	1022
18:00	956	956
19:00	836	836
20:00	607	607
21:00	497	497
22:00	391	391
23:00	263	263
24:00	177	177
DAY TOTAL	13366	13366
PERCENTS	100.0%	100%
Times	11:00	
Peaks	921	
PM Times	16:30	
Peaks	1050	

All Traffic Data
 VOLUME SUMMARY
 FRI 07/18/2003

Site Reference: 68-EB
 te ID: 000000010182
 ation: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	97	97
02:00	30	30
03:00	37	37
04:00	17	17
05:00	44	44
06:00	98	98
07:00	311	311
08:00	733	733
09:00	904	904
10:00	885	885
11:00	883	883
12:00	938	938
13:00	932	932
14:00	1074	1074
15:00	1061	1061
16:00	922	922
17:00	1027	1027
18:00	960	960
19:00	905	905
20:00	644	644
21:00	519	519
22:00	411	411
23:00	327	327
24:00	173	173
DAY TOTAL	13932	13932
PERCENTS	100.0%	100%
Times	11:00	
Peaks	957	
PM Times	13:45	
Peaks	1123	

All Traffic Data
 VOLUME SUMMARY
 SAT 07/19/2003

Site Reference: 68-EB
 te ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	125	125
02:00	70	70
03:00	33	33
04:00	20	20
05:00	25	25
06:00	85	85
07:00	160	160
08:00	325	325
09:00	526	526
10:00	865	865
11:00	939	939
12:00	992	992
13:00	996	996
14:00	1047	1047
15:00	1017	1017
16:00	1008	1008
17:00	978	978
18:00	964	964
19:00	778	778
20:00	620	620
21:00	515	515
22:00	436	436
23:00	339	339
24:00	269	269
DAY TOTAL	13132	13132
PERCENTS	100.0%	100%
Times	11:00	
Peaks	1004	
PM Times	13:30	
Peaks	1073	

All Traffic Data
 VOLUME SUMMARY
 SUN 07/20/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	130	130
02:00	62	62
03:00	40	40
04:00	17	17
05:00	26	26
06:00	51	51
07:00	127	127
08:00	230	230
09:00	419	419
10:00	682	682
11:00	890	890
12:00	931	931
13:00	1011	1011
14:00	1061	1061
15:00	946	946
16:00	881	881
17:00	893	893
18:00	760	760
19:00	613	613
20:00	565	565
21:00	461	461
22:00	324	324
23:00	230	230
24:00	122	122
DAY TOTAL	11472	11472
PERCENTS	100.0%	100%
AM Times	11:00	
AM Peaks	932	
PM Times	13:15	
PM Peaks	1061	

All Traffic Data
 VOLUME SUMMARY
 MON 07/21/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	0 EAST	Total
01:00	72	72
02:00	42	42
03:00	22	22
04:00	23	23
05:00	37	37
06:00	100	100
07:00	311	311
08:00	753	753
09:00	925	925
10:00	895	895
11:00	856	856
12:00	921	921
13:00	937	937
14:00	996	996
15:00	969	969
16:00	918	918
17:00	961	961
18:00	938	938
19:00	771	771
20:00	582	582
21:00	428	428
22:00	343	343
23:00	232	232
24:00	117	117
Y TOTAL	13149	13149
RCENTS	100.0%	100%
Times	08:30	
Peaks	939	
Times	13:30	
Peaks	1018	

All Traffic Data
 VOLUME SUMMARY
 TUE 07/15/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	89	89
02:00	41	41
03:00	15	15
04:00	25	25
05:00	55	55
06:00	94	94
07:00	238	238
08:00	633	633
09:00	707	707
10:00	776	776
11:00	764	764
12:00	935	935
13:00	1031	1031
14:00	919	919
15:00	1017	1017
16:00	1051	1051
17:00	1109	1109
18:00	1268	1268
19:00	1051	1051
20:00	696	696
21:00	557	557
22:00	434	434
23:00	263	263
24:00	177	177
DAY TOTAL	13945	13945
PERCENTS	100.0%	100%
AM Times	11:15	
AM Peaks	935	
PM Times	17:30	
PM Peaks	1309	

All Traffic Data
 VOLUME SUMMARY
 WED 07/16/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	67	67
02:00	30	30
03:00	22	22
04:00	28	28
05:00	68	68
06:00	99	99
07:00	317	317
08:00	618	618
09:00	731	731
10:00	797	797
11:00	789	789
12:00	944	944
13:00	1000	1000
14:00	885	885
15:00	1007	1007
16:00	1050	1050
17:00	1122	1122
18:00	1270	1270
19:00	1066	1066
20:00	748	748
21:00	606	606
22:00	508	508
23:00	300	300
24:00	213	213
D / TOTAL	14285	14285
PERCENTS	100.0%	100%
AM Times	11:15	
AM Peaks	944	
PM Times	17:30	
PM Peaks	1274	

All Traffic Data
 VOLUME SUMMARY
 THU 07/17/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	98	98
02:00	27	27
03:00	15	15
04:00	22	22
05:00	40	40
06:00	85	85
07:00	269	269
08:00	632	632
09:00	744	744
10:00	721	721
11:00	787	787
12:00	908	908
13:00	1025	1025
14:00	1007	1007
15:00	1043	1043
16:00	1045	1045
17:00	1093	1093
18:00	1263	1263
19:00	991	991
20:00	753	753
21:00	579	579
22:00	462	462
23:00	313	313
24:00	191	191
TOTAL	14113	14113
PERCENTS	100.0%	100%
Times	11:15	
Peaks	908	
PM Times	17:15	
PM Peaks	1263	

All Traffic Data
 VOLUME SUMMARY
 FRI 07/18/2003

Site Reference: 68-WB
 File ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	83	83
02:00	40	40
03:00	25	25
04:00	25	25
05:00	51	51
06:00	108	108
07:00	256	256
08:00	592	592
09:00	728	728
10:00	728	728
11:00	880	880
12:00	929	929
13:00	1003	1003
14:00	997	997
15:00	1033	1033
16:00	1131	1131
17:00	1193	1193
18:00	1270	1270
19:00	988	988
20:00	757	757
21:00	595	595
22:00	482	482
23:00	402	402
24:00	256	256
TOTAL	14552	14552
PERCENTS	100.0%	100%
M Times	11:00	
M Peaks	952	
M Times	17:15	
M Peaks	1270	

All Traffic Data
 VOLUME SUMMARY
 SAT 07/19/2003

Site Reference: 68-WB
 File ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	125	125
02:00	70	70
03:00	45	45
04:00	19	19
05:00	40	40
06:00	87	87
07:00	135	135
08:00	301	301
09:00	436	436
10:00	669	669
11:00	793	793
12:00	944	944
13:00	1052	1052
14:00	1052	1052
15:00	1080	1080
16:00	1100	1100
17:00	1127	1127
18:00	977	977
19:00	905	905
20:00	653	653
21:00	441	441
22:00	445	445
23:00	372	372
24:00	264	264
TOTAL	13132	13132
F CENTS	100.0%	100%
M Times	11:15	
M Peaks	944	
M Times	16:00	
M Peaks	1137	

All Traffic Data
 VOLUME SUMMARY
 SUN 07/20/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	138	138
02:00	77	77
03:00	37	37
04:00	29	29
05:00	37	37
06:00	66	66
07:00	124	124
08:00	194	194
09:00	269	269
10:00	443	443
11:00	637	637
12:00	794	794
13:00	872	872
14:00	1026	1026
15:00	935	935
16:00	924	924
17:00	913	913
18:00	936	936
19:00	751	751
20:00	590	590
21:00	482	482
22:00	362	362
23:00	278	278
24:00	144	144
TOTAL	11058	11058
CENTS	100.0%	100%
Times	11:15	
Peaks	794	
PM Times	13:15	
Peaks	1026	

All Traffic Data
 VOLUME SUMMARY
 MON 07/21/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	0 WEST	Total
01:00	108	108
02:00	41	41
03:00	24	24
04:00	21	21
05:00	47	47
06:00	81	81
07:00	297	297
08:00	600	600
09:00	695	695
10:00	758	758
11:00	791	791
12:00	927	927
13:00	983	983
14:00	962	962
15:00	1024	1024
16:00	1050	1050
17:00	1187	1187
18:00	1297	1297
19:00	925	925
20:00	653	653
21:00	483	483
22:00	388	388
23:00	254	254
24:00	130	130
TOTAL	13726	13726
PERCENTS	100.0%	100%
AM Times	11:15	
AM Peaks	927	
PM Times	17:15	
PM Peaks	1297	

APPENDIX D
TRUCK CLASSIFICATION COUNT DATA



FEHR & PEERS
TRANSPORTATION CONSULTANTS

All Traffic Data
 CLASSIFICATION SUMMARY
 TUE 07/15/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: WEST

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	79	10	0	0	0	0	0	0	0	0	0	0	0	0	89
02:00	0	38	2	1	0	0	0	0	0	0	0	0	0	0	0	41
03:00	0	13	1	0	0	0	0	0	1	0	0	0	0	0	0	15
04:00	0	21	4	0	0	0	0	0	0	0	0	0	0	0	0	25
05:00	0	39	15	0	0	0	0	0	1	0	0	0	0	0	0	55
06:00	1	73	14	0	1	3	0	0	1	0	1	0	0	0	0	94
07:00	1	182	48	0	4	0	0	0	3	0	0	0	0	0	0	236
08:00	0	484	120	0	8	4	0	2	8	0	7	0	0	0	0	632
09:00	1	521	158	0	6	0	0	0	13	0	8	0	0	0	0	707
10:00	0	604	156	0	5	3	0	1	3	0	4	0	0	0	0	776
11:00	0	608	146	0	6	3	0	1	0	0	0	0	0	0	0	764
12:00	0	780	139	0	8	1	0	3	4	0	0	0	0	0	0	935
13:00	1	869	147	0	5	2	1	1	5	0	0	0	0	0	0	1031
14:00	0	772	123	0	12	3	0	4	4	0	1	0	0	0	0	919
15:00	4	845	156	0	8	1	0	1	1	0	1	0	0	0	0	1017
16:00	1	886	150	0	3	0	0	2	8	0	1	0	0	0	0	1051
17:00	4	961	136	1	4	0	0	1	2	0	0	0	0	0	0	1109
18:00	1	1128	136	0	2	1	0	0	0	0	0	0	0	0	0	1266
19:00	3	939	100	0	3	4	0	1	1	0	0	0	0	0	0	1051
20:00	0	635	58	0	1	0	0	0	2	0	0	0	0	0	0	696
21:00	3	494	56	0	2	0	0	1	1	0	0	0	0	0	0	557
22:00	2	391	41	0	0	0	0	0	0	0	0	0	0	0	0	434
23:00	3	243	17	0	0	0	0	0	0	0	0	0	0	0	0	263
24:00	1	163	13	0	0	0	0	0	0	0	0	0	0	0	0	177

DAY TOT	26	11768	1946	2	78	25	1	18	58	0	23	0	0	0	0	13945
ROAD TOT	26	11768	1946	2	78	25	1	18	58	0	23	0	0	0	0	13945
PERCENTS	0.2%	84.4%	14.0%	0.1%	0.6%	0.1%	0.0%	0.1%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.5%															
Trucks & Buses	1.4%															

All Traffic Data
 CLASSIFICATION SUMMARY
 WED 07/16/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: WEST

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	59	6	1	1	0	0	0	0	0	0	0	0	0	0	67
02:00	0	29	1	0	0	0	0	0	0	0	0	0	0	0	0	30
03:00	0	18	3	0	1	0	0	0	0	0	0	0	0	0	0	22
04:00	1	21	6	0	0	0	0	0	0	0	0	0	0	0	0	28
05:00	1	48	16	0	1	0	0	1	1	0	0	0	0	0	0	66
06:00	0	76	16	0	1	2	0	0	4	0	0	0	0	0	0	95
07:00	0	221	71	0	3	15	0	0	5	0	2	0	0	0	0	317
08:00	0	483	121	1	5	3	0	2	2	0	1	0	0	0	0	616
09:00	0	541	169	0	6	3	0	0	12	0	0	0	0	0	0	731
10:00	2	629	146	0	9	4	0	2	5	0	0	0	0	0	0	797
11:00	0	657	119	0	7	2	0	1	2	0	1	0	0	0	0	785
12:00	2	795	122	0	11	2	0	3	9	0	0	0	0	0	0	944
13:00	1	856	127	0	9	3	0	1	2	0	1	0	0	0	0	1000
14:00	0	752	118	1	8	0	0	2	3	0	1	0	0	0	0	885
15:00	5	843	144	0	4	1	0	2	7	0	1	0	0	0	0	1007
16:00	3	899	134	0	8	0	0	2	3	0	1	0	0	0	0	1050
17:00	6	968	135	0	8	2	0	1	2	0	0	0	0	0	0	1122
18:00	4	1113	145	0	3	2	0	1	2	0	0	0	0	0	0	1270
19:00	6	971	88	0	0	1	0	0	0	0	0	0	0	0	0	1066
20:00	1	673	72	0	1	0	0	0	1	0	0	0	0	0	0	746
21:00	0	547	56	0	0	0	0	0	3	0	0	0	0	0	0	606
22:00	0	456	52	0	0	0	0	0	0	0	0	0	0	0	0	508
23:00	0	273	27	0	0	0	0	0	0	0	0	0	0	0	0	300
24:00	2	194	17	0	0	0	0	0	0	0	0	0	0	0	0	213

DAY TOT	34	12122	1911	3	86	40	0	18	63	0	8	0	0	0	0	14285
ROAD TOT	34	12122	1911	3	86	40	0	18	63	0	8	0	0	0	0	14285
PERCENTS	0.3%	84.9%	13.4%	0.1%	0.6%	0.2%	0.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.4%															
Trucks & Buses	1.5%															

All Traffic Data
 CLASSIFICATION SUMMARY
 FRI 07/18/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: WEST

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	1	75	7	0	0	0	0	0	0	0	0	0	0	0	0	83
02:00	0	37	2	0	0	0	0	0	1	0	0	0	0	0	0	40
03:00	0	23	2	0	0	0	0	0	0	0	0	0	0	0	0	25
04:00	0	22	3	0	0	0	0	0	0	0	0	0	0	0	0	25
05:00	0	40	8	0	1	0	0	0	2	0	0	0	0	0	0	51
06:00	0	82	19	0	3	1	0	2	1	0	0	0	0	0	0	106
07:00	0	206	42	0	2	1	0	1	4	0	0	0	0	0	0	256
08:00	0	458	120	0	8	3	0	0	3	0	0	0	0	0	0	592
09:00	1	542	157	0	14	2	0	3	7	0	2	0	0	0	0	726
10:00	3	585	126	1	9	0	0	0	4	0	0	0	0	0	0	726
11:00	0	717	145	0	10	4	0	1	3	0	0	0	0	0	0	880
12:00	0	773	134	0	9	5	0	2	5	0	1	0	0	0	0	925
13:00	3	879	107	0	6	2	0	2	3	0	1	0	0	0	0	1003
14:00	1	864	114	0	12	1	0	1	3	0	1	0	0	0	0	997
15:00	1	886	138	0	3	0	0	1	4	0	0	0	0	0	0	1033
16:00	1	977	141	0	4	0	0	2	5	0	1	0	0	0	0	1131
17:00	2	1025	157	0	3	2	1	2	1	0	0	0	0	0	0	1193
18:00	3	1155	109	0	3	0	0	0	0	0	0	0	0	0	0	1270
19:00	2	896	89	0	0	0	0	1	0	0	0	0	0	0	0	986
20:00	2	679	70	0	1	0	0	2	3	0	0	0	0	0	0	757
21:00	3	541	47	0	1	0	0	0	3	0	0	0	0	0	0	595
22:00	0	445	36	0	1	0	0	0	0	0	0	0	0	0	0	482
23:00	0	369	31	0	1	0	0	1	0	0	0	0	0	0	0	402
24:00	0	238	18	0	0	0	0	0	0	0	0	0	0	0	0	256

DAY TOT	23	12514	1822	1	91	21	1	21	52	0	6	0	0	0	0	14552
ROAD TOT	23	12514	1822	1	91	21	1	21	52	0	6	0	0	0	0	14552
P PERCENTS	0.2%	86.0%	12.6%	0.1%	0.6%	0.1%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		98.6%														
Trucks & Buses									1.3%							

All Traffic Data
 CLASSIFICATION SUMMARY
 SAT 07/19/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: WEST

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	110	14	1	0	0	0	0	0	0	0	0	0	0	0	125
02:00	0	66	4	0	0	0	0	0	0	0	0	0	0	0	0	70
03:00	1	38	5	0	0	0	0	1	0	0	0	0	0	0	0	45
04:00	0	17	1	0	1	0	0	0	0	0	0	0	0	0	0	19
05:00	0	33	4	0	0	0	0	0	3	0	0	0	0	0	0	40
06:00	0	74	11	0	1	0	0	0	1	0	0	0	0	0	0	87
07:00	0	115	18	0	1	0	0	0	1	0	0	0	0	0	0	135
08:00	0	249	45	0	3	0	0	1	3	0	0	0	0	0	0	301
09:00	1	364	64	0	4	1	0	1	1	0	0	0	0	0	0	436
10:00	1	569	95	0	1	0	0	2	1	0	0	0	0	0	0	669
11:00	1	680	106	0	5	0	0	0	0	0	1	0	0	0	0	793
12:00	1	826	113	0	2	0	0	2	0	0	0	0	0	0	0	944
13:00	1	923	121	0	4	1	1	0	1	0	0	0	0	0	0	1052
14:00	1	935	112	1	3	0	0	0	0	0	0	0	0	0	0	1052
15:00	6	955	113	0	4	0	1	0	1	0	0	0	0	0	0	1080
16:00	5	962	125	2	3	0	0	1	2	0	0	0	0	0	0	1100
17:00	5	1012	107	1	1	0	0	0	1	0	0	0	0	0	0	1127
18:00	3	894	77	0	3	0	0	0	0	0	0	0	0	0	0	977
19:00	4	818	81	0	2	0	0	0	0	0	0	0	0	0	0	905
20:00	0	602	50	1	0	0	0	0	0	0	0	0	0	0	0	653
21:00	0	407	32	0	0	0	0	0	2	0	0	0	0	0	0	441
22:00	0	406	39	0	0	0	0	0	0	0	0	0	0	0	0	445
23:00	2	347	23	0	0	0	0	0	0	0	0	0	0	0	0	372
24:00	1	247	16	0	0	0	0	0	0	0	0	0	0	0	0	264

1 DAY TOT	33	11649	1376	6	38	2	2	8	17	0	1	0	0	0	0	13132
ROAD TOT	33	11649	1376	6	38	2	2	8	17	0	1	0	0	0	0	13132
PERCENTS	0.3%	88.8%	10.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.4%															
Trucks & Buses			0.5%													

All Traffic Data
CLASSIFICATION SUMMARY
SUN 07/20/2003

Site Reference: 68-WB
Site ID: 000000000000
Location: HWY 68 W/O SKYLINE FORREST DRIVE
Lane 1: WEST

File: 68-WB.prn
City: CITY OF MONTEREY
County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	127	11	0	0	0	0	0	0	0	0	0	0	0	0	138
02:00	0	70	7	0	0	0	0	0	0	0	0	0	0	0	0	77
03:00	0	33	4	0	0	0	0	0	0	0	0	0	0	0	0	37
04:00	1	26	2	0	0	0	0	0	0	0	0	0	0	0	0	29
05:00	0	29	8	0	0	0	0	0	0	0	0	0	0	0	0	37
06:00	0	59	5	0	0	0	0	0	2	0	0	0	0	0	0	66
07:00	0	108	15	0	1	0	0	0	0	0	0	0	0	0	0	124
08:00	0	163	30	0	1	0	0	0	0	0	0	0	0	0	0	194
09:00	0	240	28	0	0	0	0	0	1	0	0	0	0	0	0	269
10:00	0	400	42	0	1	0	0	0	0	0	0	0	0	0	0	443
11:00	3	569	59	0	4	0	0	2	0	0	0	0	0	0	0	637
12:00	10	710	73	0	0	1	0	0	0	0	0	0	0	0	0	794
13:00	6	789	69	0	5	0	0	2	1	0	0	0	0	0	0	872
14:00	6	903	112	0	4	0	0	0	0	0	1	0	0	0	0	1026
15:00	2	823	105	0	3	0	0	1	1	0	0	0	0	0	0	935
16:00	2	838	77	1	3	1	0	1	1	0	0	0	0	0	0	924
17:00	5	832	73	0	1	0	0	1	1	0	0	0	0	0	0	913
18:00	4	850	80	0	0	0	0	2	0	0	0	0	0	0	0	936
19:00	7	679	64	0	0	0	0	1	0	0	0	0	0	0	0	751
20:00	1	533	54	0	0	0	0	0	2	0	0	0	0	0	0	590
21:00	1	447	32	0	0	0	0	0	2	0	0	0	0	0	0	482
22:00	1	328	32	0	0	0	0	1	0	0	0	0	0	0	0	362
23:00	0	251	27	0	0	0	0	0	0	0	0	0	0	0	0	278
24:00	0	124	19	0	0	0	0	0	1	0	0	0	0	0	0	144

DAY TOT	49	9931	1028	1	23	2	0	11	12	0	1	0	0	0	0	11058
ROAD TOT	49	9931	1028	1	23	2	0	11	12	0	1	0	0	0	0	11058
PERCENTS	0.5%	89.9%	9.3%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.5%															
Trucks & Buses	0.4%															

All Traffic Data
 CLASSIFICATION SUMMARY
 MON 07/21/2003

Site Reference: 68-WB
 Site ID: 000000000000
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: WEST

File: 68-WB.prn
 City: CITY OF MONTEREY
 County: WESTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	1	97	10	0	0	0	0	0	0	0	0	0	0	0	0	108
02:00	0	35	5	0	0	0	0	0	1	0	0	0	0	0	0	41
03:00	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
04:00	0	18	3	0	0	0	0	0	0	0	0	0	0	0	0	21
05:00	0	35	10	0	0	0	0	1	1	0	0	0	0	0	0	47
06:00	0	63	12	0	1	1	0	0	4	0	0	0	0	0	0	81
07:00	0	233	60	0	1	1	0	1	1	0	0	0	0	0	0	297
08:00	1	466	115	0	8	3	0	0	6	0	1	0	0	0	0	600
09:00	0	521	155	0	7	0	0	0	10	0	2	0	0	0	0	695
10:00	0	598	142	0	6	2	0	3	6	0	1	0	0	0	0	756
11:00	1	628	147	0	6	1	0	1	7	0	0	0	0	0	0	791
12:00	1	773	134	0	7	4	0	0	7	0	1	0	0	0	0	927
13:00	2	838	126	0	4	4	0	2	5	0	2	0	0	0	0	983
14:00	2	808	138	1	5	4	0	3	0	0	1	0	0	0	0	962
15:00	1	865	142	0	6	3	0	2	5	0	0	0	0	0	0	1024
16:00	5	893	133	0	6	1	0	2	10	0	0	0	0	0	0	1050
17:00	3	1028	149	1	5	1	0	0	0	0	0	0	0	0	0	1187
18:00	2	1144	143	0	3	1	0	1	2	0	1	0	0	0	0	1297
19:00	1	814	108	0	1	0	0	0	1	0	0	0	0	0	0	925
20:00	1	589	60	0	2	0	0	0	1	0	0	0	0	0	0	653
21:00	0	445	35	0	1	0	0	0	2	0	0	0	0	0	0	483
22:00	0	353	32	0	1	0	0	1	1	0	0	0	0	0	0	386
23:00	0	232	21	1	0	0	0	0	0	0	0	0	0	0	0	254
24:00	0	124	6	0	0	0	0	0	0	0	0	0	0	0	0	130

DAY TOT	21	11620	1890	3	70	26	0	17	70	0	9	0	0	0	0	13726
ROAD TOT	21	11620	1890	3	70	26	0	17	70	0	9	0	0	0	0	13726
PERCENTS	0.2%	84.7%	13.8%	0.1%	0.5%	0.1%	0.0%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.5%															
Trucks & Buses	1.4%															

All Traffic Data
 CLASSIFICATION SUMMARY
 TUE 07/15/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: EAST

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	61	8	0	0	0	0	0	0	0	0	0	0	0	0	69
02:00	0	38	5	1	0	0	0	0	0	0	0	0	0	0	0	44
03:00	0	20	4	0	0	0	0	0	0	0	0	0	0	0	0	24
04:00	0	13	4	0	1	0	0	0	1	0	0	0	0	0	0	19
05:00	0	32	2	0	0	0	0	0	0	0	0	0	0	0	0	34
06:00	1	83	14	0	0	2	0	0	2	0	0	0	0	0	0	102
07:00	1	269	52	0	0	0	0	0	2	0	0	0	0	0	0	324
08:00	1	663	110	0	5	0	0	0	1	0	3	0	0	0	0	783
09:00	1	784	116	1	4	2	0	2	5	0	5	0	0	0	0	920
10:00	4	676	99	1	5	2	0	1	14	1	6	0	0	0	0	809
11:00	1	682	110	0	9	1	1	2	0	0	3	0	0	0	0	809
12:00	0	757	146	2	7	1	0	2	0	0	1	0	0	0	0	916
13:00	0	799	140	0	6	0	0	3	8	0	0	0	0	0	0	956
14:00	2	877	124	0	11	1	0	3	5	0	0	0	0	0	0	1023
15:00	1	856	129	0	7	3	0	2	4	0	2	0	0	0	0	1004
16:00	3	811	134	0	9	1	0	3	8	0	1	0	0	0	0	970
17:00	1	850	160	0	6	0	0	1	5	0	0	0	0	0	0	1022
18:00	5	797	104	0	0	0	0	1	2	0	0	0	0	0	0	909
19:00	3	677	89	0	5	0	0	2	0	0	0	0	0	0	0	776
20:00	3	488	55	0	0	0	0	1	1	0	0	0	0	0	0	546
21:00	1	468	36	0	0	0	0	1	3	0	0	0	0	0	0	509
22:00	3	330	25	0	0	0	0	0	0	0	0	0	0	0	0	358
23:00	1	212	16	0	1	2	0	0	0	0	0	0	0	0	0	232
24:00	0	138	16	0	2	3	0	0	0	0	0	0	0	0	0	159
1 DAY TOT	32	11381	1698	5	78	18	1	24	61	1	21	0	0	0	0	13320
ROAD TOT	32	11381	1698	5	78	18	1	24	61	1	21	0	0	0	0	13320
PERCENTS	0.3%	85.5%	12.8%	0.1%	0.6%	0.1%	0.0%	0.1%	0.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		98.4%														
Trucks & Buses											1.5%					

All Traffic Data
CLASSIFICATION SUMMARY
WED 07/16/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: EAST

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	56	4	1	0	0	0	1	0	0	0	0	0	0	0	62
02:00	0	47	7	0	1	0	0	0	0	0	0	0	0	0	0	55
03:00	0	23	2	0	0	0	0	0	0	0	0	0	0	0	0	25
04:00	0	20	3	0	1	0	0	0	0	0	0	0	0	0	0	24
05:00	0	30	3	0	0	0	0	0	1	0	0	0	0	0	0	34
06:00	1	87	10	0	0	0	0	0	1	0	0	0	0	0	0	99
07:00	0	282	57	0	0	3	0	2	4	0	0	0	0	0	0	348
08:00	0	676	120	0	5	9	0	0	6	0	0	0	0	0	0	816
09:00	1	767	114	0	7	2	0	0	3	0	3	0	0	0	0	897
10:00	9	766	127	0	3	1	2	3	9	0	0	1	0	0	0	921
11:00	1	699	130	1	6	3	0	3	6	0	1	0	0	0	0	850
12:00	2	774	134	0	9	3	0	3	1	0	0	0	0	0	0	926
13:00	3	785	107	0	6	3	0	4	10	0	2	0	0	0	0	920
14:00	7	815	138	0	5	0	0	2	1	1	0	0	0	0	0	969
15:00	0	840	129	0	8	0	0	2	4	0	0	0	0	0	0	983
16:00	2	801	146	0	7	3	0	1	6	0	1	0	0	0	0	967
17:00	3	827	144	0	7	3	0	0	0	0	1	0	0	0	0	985
18:00	4	847	119	0	2	1	0	1	2	0	0	0	0	0	0	976
19:00	0	758	95	0	3	0	0	2	1	0	0	0	0	0	0	859
20:00	2	545	79	0	0	0	0	0	0	0	0	0	0	0	0	626
21:00	3	443	55	0	0	0	0	0	3	0	0	0	0	0	0	504
22:00	1	356	40	0	0	0	0	0	1	0	0	0	0	0	0	396
23:00	0	237	12	0	1	2	0	0	0	0	0	0	0	0	0	252
24:00	0	153	8	0	1	0	0	0	0	0	0	0	0	0	0	162
1 DAY TOT	39	11634	1783	2	72	33	2	24	59	1	8	1	0	0	0	13658
ROAD TOT	39	11634	1783	2	72	33	2	24	59	1	8	1	0	0	0	13658
PERCENTS	0.3%	85.2%	13.1%	0.1%	0.6%	0.2%	0.0%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		98.5%														
Trucks & Buses									1.4%							

All Traffic Data
CLASSIFICATION SUMMARY
THU 07/17/2003

Site Reference: 68-EB
Site ID: 000000010182
Location: HWY 68 W/O SKYLINE FORREST DRIVE
Lane 1: EAST

File: 68-EB.prn
City: CITY OF MONTEREY
County: EASTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	74	7	1	1	0	0	0	0	0	0	0	0	0	0	82
02:00	0	32	4	0	0	0	0	0	1	0	0	0	0	0	0	37
03:00	0	19	3	0	1	0	0	0	0	0	0	0	0	0	0	23
04:00	0	15	3	0	0	0	0	0	0	0	0	0	0	0	0	18
05:00	0	29	4	0	0	0	0	0	0	0	0	0	0	0	0	33
06:00	0	97	15	0	0	0	0	0	1	0	0	0	0	0	0	113
07:00	2	267	50	0	0	1	0	2	1	0	0	0	0	0	0	323
08:00	1	579	111	0	2	0	0	3	3	0	0	0	0	0	0	695
09:00	1	677	115	0	4	4	0	1	4	0	0	0	0	0	0	806
10:00	1	647	108	1	4	5	0	2	10	0	0	0	0	0	0	776
11:00	4	714	136	0	2	1	0	3	4	0	1	0	0	0	0	865
12:00	2	763	119	2	8	2	0	3	5	0	0	0	0	0	0	904
13:00	2	846	124	0	8	1	0	1	7	0	0	0	0	0	0	985
14:00	5	847	120	0	6	0	0	4	2	0	3	0	0	0	0	987
15:00	1	786	121	0	12	1	0	2	4	0	0	0	0	0	0	927
16:00	2	876	140	0	5	2	0	3	4	0	0	0	0	0	0	1032
17:00	2	857	147	0	10	1	0	2	3	0	0	0	0	0	0	1022
18:00	5	831	113	0	1	1	0	2	3	0	0	0	0	0	0	956
19:00	4	759	72	0	0	0	0	1	0	0	0	0	0	0	0	836
20:00	0	538	66	0	1	0	0	2	0	0	0	0	0	0	0	607
21:00	0	451	42	1	0	0	0	1	2	0	0	0	0	0	0	497
22:00	1	358	29	0	0	0	0	0	3	0	0	0	0	0	0	391
23:00	0	238	24	0	0	0	0	0	1	0	0	0	0	0	0	262
24:00	0	163	13	1	0	0	0	0	0	0	0	0	0	0	0	177

LANE TOT	33	11463	1686	6	65	19	0	32	58	0	4	0	0	0	0	13366
ROAD TOT	33	11463	1686	6	65	19	0	32	58	0	4	0	0	0	0	13366
PERCENTS	0.3%	85.8%	12.7%	0.1%	0.4%	0.1%	0.0%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		98.6%														
Trucks & Buses									1.3%							

All Traffic Data
CLASSIFICATION SUMMARY
FRI 07/18/2003

Site Reference: 68-EB
Site ID: 000000010182
Location: HWY 68 W/O SKYLINE FORREST DRIVE
Line 1: EAST

File: 68-EB.prn
City: CITY OF MONTEREY
County: EASTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	90	6	1	0	0	0	0	0	0	0	0	0	0	0	97
02:00	0	25	3	0	1	0	0	0	1	0	0	0	0	0	0	30
03:00	0	31	6	0	0	0	0	0	0	0	0	0	0	0	0	37
04:00	0	12	3	0	1	1	0	0	0	0	0	0	0	0	0	17
05:00	0	38	5	0	0	0	0	1	0	0	0	0	0	0	0	44
06:00	0	86	10	0	1	0	0	0	1	0	0	0	0	0	0	98
07:00	1	255	53	0	1	0	0	0	0	0	1	0	0	0	0	311
08:00	0	602	120	0	6	1	0	3	1	0	0	0	0	0	0	733
09:00	0	774	109	1	11	0	0	2	7	0	0	0	0	0	0	904
10:00	3	742	121	0	5	1	0	4	8	0	1	0	0	0	0	885
11:00	3	739	125	0	9	4	0	2	1	0	0	0	0	0	0	883
12:00	1	803	117	0	3	2	0	5	7	0	0	0	0	0	0	935
13:00	0	781	125	0	15	4	0	0	7	0	0	0	0	0	0	932
14:00	4	922	134	0	4	1	0	4	4	0	1	0	0	0	0	1074
15:00	1	898	140	0	9	2	0	6	3	0	2	0	0	0	0	1061
16:00	3	772	129	0	6	2	0	2	8	0	0	0	0	0	0	922
17:00	2	894	123	1	2	0	0	4	1	0	0	0	0	0	0	1027
18:00	4	848	106	0	0	0	0	2	0	0	0	0	0	0	0	960
19:00	0	813	88	0	1	0	0	3	0	0	0	0	0	0	0	905
20:00	0	591	52	0	1	0	0	0	0	0	0	0	0	0	0	644
21:00	0	476	39	0	0	0	0	1	3	0	0	0	0	0	0	515
22:00	0	374	34	0	1	0	0	0	2	0	0	0	0	0	0	411
23:00	1	299	25	0	1	0	0	0	1	0	0	0	0	0	0	327
24:00	0	164	8	0	1	0	0	0	0	0	0	0	0	0	0	173

DAY TOT	23	12029	1681	3	79	18	0	39	55	0	5	0	0	0	0	13932
ROAD TOT	23	12029	1681	3	79	18	0	39	55	0	5	0	0	0	0	13932
PERCENTS	0.2%	86.4%	12.1%	0.1%	0.6%	0.1%	0.0%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles		98.5%														
Trucks & Buses									1.4%							

All Traffic Data
CLASSIFICATION SUMMARY
SAT 07/19/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: EAST

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND

TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
1 01:00	0	115	10	0	0	0	0	0	0	0	0	0	0	0	0	125
02:00	0	64	5	1	0	0	0	0	0	0	0	0	0	0	0	70
1 03:00	0	30	3	0	0	0	0	0	0	0	0	0	0	0	0	33
04:00	0	18	0	0	1	0	0	1	0	0	0	0	0	0	0	20
1 05:00	0	23	2	0	0	0	0	0	0	0	0	0	0	0	0	25
06:00	0	73	11	0	1	0	0	0	0	0	0	0	0	0	0	85
07:00	0	133	22	0	0	1	0	0	4	0	0	0	0	0	0	160
08:00	0	277	44	0	2	0	0	0	2	0	0	0	0	0	0	325
09:00	4	459	60	0	3	0	0	0	0	0	0	0	0	0	0	526
10:00	0	785	74	0	3	1	0	1	1	0	0	0	0	0	0	865
11:00	3	823	110	0	2	0	0	0	1	0	0	0	0	0	0	935
12:00	6	879	100	0	3	0	0	3	0	0	1	0	0	0	0	992
13:00	5	869	115	0	3	1	0	1	1	0	0	1	0	0	0	996
1 14:00	1	926	114	0	3	1	0	2	0	0	0	0	0	0	0	1047
15:00	3	894	115	0	3	1	0	1	0	0	0	0	0	0	0	1017
1 16:00	2	901	97	0	4	0	0	0	4	0	0	0	0	0	0	1008
17:00	3	874	97	0	1	1	0	2	0	0	0	0	0	0	0	978
1 18:00	5	856	97	0	3	0	0	1	1	0	1	0	0	0	0	964
19:00	6	702	68	0	1	0	0	0	1	0	0	0	0	0	0	778
1 20:00	1	568	49	0	1	0	0	1	0	0	0	0	0	0	0	620
21:00	1	470	42	0	2	0	0	0	0	0	0	0	0	0	0	515
1 22:00	0	408	26	0	0	0	0	1	1	0	0	0	0	0	0	436
23:00	0	312	25	0	1	0	0	0	1	0	0	0	0	0	0	338
1 24:00	0	257	11	1	0	0	0	0	0	0	0	0	0	0	0	269
1 DAY TOT	40	11716	1297	2	37	6	0	14	17	0	2	1	0	0	0	13132
ROAD TOT	40	11716	1297	2	37	6	0	14	17	0	2	1	0	0	0	13132
PERCENTS	0.4%	89.3%	9.9%	0.0%	0.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	99.3%															
Trucks & Buses	0.6%															

All Traffic Data
 CLASSIFICATION SUMMARY
 MON 07/21/2003

Site Reference: 68-EB
 Site ID: 000000010182
 Location: HWY 68 W/O SKYLINE FORREST DRIVE
 Lane 1: EAST

File: 68-EB.prn
 City: CITY OF MONTEREY
 County: EASTBOUND












TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Tot
01:00	0	62	9	0	0	0	0	0	1	0	0	0	0	0	0	72
02:00	0	39	3	0	0	0	0	0	0	0	0	0	0	0	0	42
03:00	0	18	3	0	0	0	0	0	1	0	0	0	0	0	0	22
04:00	0	20	2	0	1	0	0	0	0	0	0	0	0	0	0	23
05:00	0	35	1	0	0	0	0	1	0	0	0	0	0	0	0	37
06:00	0	86	12	0	0	0	0	0	2	0	0	0	0	0	0	100
07:00	2	247	60	0	0	0	0	0	2	0	0	0	0	0	0	311
08:00	1	638	109	0	4	1	0	0	0	0	0	0	0	0	0	753
09:00	1	779	135	0	2	0	0	1	6	0	1	0	0	0	0	925
10:00	0	752	121	0	8	2	0	3	9	0	0	0	0	0	0	895
11:00	3	721	118	0	4	3	0	1	5	0	1	0	0	0	0	856
12:00	2	783	124	0	6	1	0	0	4	0	1	0	0	0	0	921
13:00	1	808	112	1	8	0	0	2	5	0	0	0	0	0	0	937
14:00	2	834	140	2	9	1	0	3	4	0	1	0	0	0	0	996
15:00	2	828	123	1	4	4	0	2	4	0	1	0	0	0	0	965
16:00	3	763	140	0	3	2	0	1	5	0	1	0	0	0	0	916
17:00	6	811	126	0	3	0	1	2	11	0	1	0	0	0	0	961
18:00	4	828	100	0	4	0	0	0	2	0	0	0	0	0	0	936
19:00	1	676	90	0	2	0	0	1	1	0	0	0	0	0	0	771
20:00	0	518	55	2	5	0	0	0	2	0	0	0	0	0	0	582
21:00	0	389	36	0	0	0	0	1	2	0	0	0	0	0	0	426
22:00	0	309	33	0	0	0	0	0	1	0	0	0	0	0	0	343
23:00	0	212	19	0	0	0	0	0	1	0	0	0	0	0	0	232
24:00	0	106	7	1	1	2	0	0	0	0	0	0	0	0	0	117

1 DAY TOT	28	11262	1678	7	64	16	1	18	68	0	7	0	0	0	0	13149
ROAD TOT	28	11262	1678	7	64	16	1	18	68	0	7	0	0	0	0	13149
PERCENTS	0.3%	85.7%	12.8%	0.1%	0.4%	0.1%	0.0%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
Passenger Vehicles	98.6%															
Trucks & Buses	1.3%															

APPENDIX E
LOS CALCULATIONS



FEHR & PEERS
TRANSPORTATION CONSULTANTS

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	44	106	668	45	75	906
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	45	108	682	46	77	924
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1782	705			728	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1782	705			728	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	45	75			91	
cM capacity (veh/h)	82	437			876	
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	153	728	77	924		
Volume Left	45	0	77	0		
Volume Right	108	46	0	0		
cSH	280	1700	876	1700		
Volume to Capacity	0.55	0.43	0.09	0.54		
Queue Length (ft)	76	0	7	0		
Control Delay (s)	32.3	0.0	9.5	0.0		
Lane LOS	D		A			
Approach Delay (s)	32.3	0.0	0.7			
Approach LOS	D					
Intersection Summary						
Average Delay			3.0			
Intersection Capacity Utilization		58.7%		ICU Level of Service		A

Movement	↙	↘	↑	↗	↖	↓
	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↘	↑	↗	↖	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	1863	1583	1770	1863
Volume (vph)	91	21	692	213	44	906
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	21	706	217	45	924
Lane Group Flow (vph)	93	21	706	217	45	924
Turn Type		Perm		Perm	custom	
Protected Phases	4		6		5	2
Permitted Phases		4		6	5	
Actuated Green, G (s)	9.0	9.0	52.0	52.0	3.7	59.4
Effective Green, g (s)	9.2	9.2	52.9	52.9	3.4	60.3
Actuated g/C Ratio	0.12	0.12	0.68	0.68	0.04	0.78
Clearance Time (s)	4.2	4.2	4.9	4.9	3.7	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	210	188	1272	1081	78	1450
v/s Ratio Prot	c0.05		0.38		0.03	c0.50
v/s Ratio Perm		0.01		0.14		
v/c Ratio	0.44	0.11	0.56	0.20	0.58	0.64
Uniform Delay, d1	31.8	30.5	6.3	4.5	36.3	3.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.3	0.5	0.1	9.9	0.9
Delay (s)	33.3	30.8	6.8	4.6	46.3	4.7
Level of Service	C	C	A	A	D	A
Approach Delay (s)	32.8		6.3			6.6
Approach LOS	C		A			A
Intersection Summary						
HCM Average Control Delay			8.0	HCM Level of Service		A
HCM Volume to Capacity ratio			0.61			
Actuated Cycle Length (s)			77.5	Sum of lost time (s)	8.0	
Intersection Capacity Utilization			60.5%	ICU Level of Service	B	
c Critical Lane Group						

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑	↗	↘	↓
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	16	8	897	111	27	970
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	16	8	915	113	28	990
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type	None					
Median storage (veh)						
Upstream signal (ft)			420			886
pX, platoon unblocked	0.74	0.89			0.89	
vC, conflicting volume	1960	915			1029	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2084	905			1032	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	60	97			95	
cM capacity (veh/h)	41	299			602	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	24	915	113	28	990	
Volume Left	16	0	0	28	0	
Volume Right	8	0	113	0	0	
cSH	62	1700	1700	602	1700	
Volume to Capacity	0.40	0.54	0.07	0.05	0.58	
Queue Length (ft)	37	0	0	4	0	
Control Delay (s)	97.7	0.0	0.0	11.3	0.0	
Lane LOS	F			B		
Approach Delay (s)	97.7	0.0		0.3		
Approach LOS	F					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			62.1%	ICU Level of Service		B











HCM Signalized Intersection Capacity Analysis
4: SR 68 & Hwy 1 NB Off Ramp

Holman Highway Entire Network
AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑		↘		↗		↑	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00
Flt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863		1770		1583		1859	1583
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863		1770		1583		1859	1583
Volume (vph)	0	531	455	87	344	0	37	0	210	21	450	627
Peak-hour factor, PHF	0.92	0.97	0.97	0.97	0.97	0.92	0.97	0.92	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	547	469	90	355	0	38	0	216	23	489	682
Lane Group Flow (vph)	0	547	469	90	355	0	38	0	216	0	512	682
Turn Type			Perm	Prot			custom		custom	custom		Perm
Protected Phases		2		1	6		3				4	4
Permitted Phases		2	2		6		3		3	4		4
Actuated Green, G (s)		46.1	46.1	9.6	59.4		8.8		8.8		39.3	39.3
Effective Green, g (s)		47.4	47.4	9.3	60.7		8.5		8.5		39.0	39.0
Actuated g/C Ratio		0.39	0.39	0.08	0.50		0.07		0.07		0.32	0.32
Clearance Time (s)		5.3	5.3	3.7	5.3		3.7		3.7		3.7	3.7
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0		3.0	3.0
Lane Grp Cap (vph)		735	624	137	941		125		112		603	514
v/s Ratio Prot		0.29		c0.05	0.19		0.02				0.28	
v/s Ratio Perm			c0.30						c0.14			c0.43
v/c Ratio		0.74	0.75	0.66	0.38		0.30		1.93		0.85	1.33
Uniform Delay, d1		31.2	31.3	53.9	18.2		53.0		55.9		37.9	40.6
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00
Incremental Delay, d2		4.1	5.1	10.8	0.3		1.4		448.9		10.8	160.1
Delay (s)		35.3	36.4	64.7	18.4		54.4		504.8		48.6	200.7
Level of Service		D	D	E	B		D		F		D	F
Approach Delay (s)		35.8			27.8			437.4			135.5	
Approach LOS		D			C			F			F	
Intersection Summary												
HCM Average Control Delay			110.6			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			120.2			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			79.2%			ICU Level of Service			C			
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 5: Pebble Beach Access & Hwy 1 SB

Holman Highway Entire Network
 AM

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	247	55	0	0	490	502
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (veh/h)	268	60	0	0	533	546
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					272	
pX, platoon unblocked						
vC, conflicting volume	533	533	1078			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	533	533	1078			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	47	89	100			
cM capacity (veh/h)	508	547	647			
Direction, Lane #	EB 1	EB 2	SB 1	SB 2	SB 3	
Volume Total	268	60	533	273	273	
Volume Left	268	0	0	0	0	
Volume Right	0	60	0	273	273	
cSH	508	547	1700	1700	1700	
Volume to Capacity	0.53	0.11	0.31	0.16	0.16	
Queue Length (ft)	76	9	0	0	0	
Control Delay (s)	19.8	12.4	0.0	0.0	0.0	
Lane LOS	C	B				
Approach Delay (s)	18.4		0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization			49.6%		ICU Level of Service	A

HCM Unsignalized Intersection Capacity Analysis
 6: Hwy 1 NB ON Ramp & SR 68 at Aguajito

Holman Highway Entire Network
 AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑		↑		↑		↑
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	13	23	0	408	11	26	0	736
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.92	0.99	0.99	0.92	0.99	0.99
Hourly flow rate (veh/h)	0	0	0	0	13	23	0	412	11	28	0	743
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)						2						
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)											987	
pX, platoon unblocked												
vC, conflicting volume	492	480	0	474	1218	418	743			423		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	492	480	0	474	1218	418	743			423		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	93	96	100			98		
cM capacity (veh/h)	434	473	1085	491	176	635	864			1136		
Direction, Lane #	WB 1	NB 1	SB 1	SB 2								
Volume Total	36	423	28	743								
Volume Left	0	0	28	0								
Volume Right	23	11	0	743								
cSH	488	1700	1136	1700								
Volume to Capacity	0.07	0.25	0.02	0.44								
Queue Length (ft)	6	0	2	0								
Control Delay (s)	16.7	0.0	8.2	0.0								
Lane LOS	C		A									
Approach Delay (s)	16.7	0.0	0.3									
Approach LOS	C											
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization			56.0%		ICU Level of Service					A		












HCM Signalized Intersection Capacity Analysis
7: Carpenter Road & Hwy 1

Holman Highway Entire Network
AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	→		↖	↕		↖	↕↗		↖	↕↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		0.95	0.95		1.00	0.95		1.00	0.95	1.00
Fr _t	1.00	0.87		1.00	0.89		1.00	1.00		1.00	1.00	0.85
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1619		1681	1578		1770	3527		1770	3539	1583
Fl _t Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1619		1681	1578		1770	3527		1770	3539	1583
Volume (vph)	398	4	25	31	22	58	28	1348	32	28	1620	574
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	428	4	27	33	24	62	30	1449	34	30	1742	617
Lane Group Flow (vph)	428	31	0	33	86	0	30	1483	0	30	1742	617
Turn Type	Split			Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	16.6	16.6		5.3	5.3		3.8	54.5		3.8	54.5	54.5
Effective Green, g (s)	16.6	16.6		5.3	5.3		3.8	56.5		3.8	56.5	56.5
Actuated g/C Ratio	0.17	0.17		0.05	0.05		0.04	0.58		0.04	0.58	0.58
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	580	274		91	85		68	2029		68	2036	911
v/s Ratio Prot	c0.12	0.02		0.02	c0.05		c0.02	0.42		0.02	c0.49	
v/s Ratio Perm												0.39
v/c Ratio	0.74	0.11		0.36	1.01		0.44	0.73		0.44	0.86	0.68
Uniform Delay, d ₁	38.7	34.6		44.8	46.5		46.2	15.3		46.2	17.4	14.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d ₂	4.9	0.2		2.5	100.9		4.5	1.4		4.5	3.8	2.0
Delay (s)	43.6	34.7		47.3	147.3		50.7	16.7		50.7	21.2	16.5
Level of Service	D	C		D	F		D	B		D	C	B
Approach Delay (s)		43.0			119.6			17.3			20.4	
Approach LOS		D			F			B			C	
Intersection Summary												
HCM Average Control Delay			24.3			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			98.2			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			73.7%			ICU Level of Service			C			
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 1: Skyline Forest & SR 68

Holman Highway Entire Network
 PM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	29	169	1097	98	178	818
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	30	172	1119	100	182	835
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2367	1169			1219	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2367	1169			1219	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	27			68	
cM capacity (veh/h)	26	235			572	
<hr/>						
Direction, Lane #	WB 1	NB 1	SB 1	SB 2		
Volume Total	202	1219	182	835		
Volume Left	30	0	182	0		
Volume Right	172	100	0	0		
cSH	137	1700	572	1700		
Volume to Capacity	1.47	0.72	0.32	0.49		
Queue Length (ft)	342	0	34	0		
Control Delay (s)	307.7	0.0	14.2	0.0		
Lane LOS	F		B			
Approach Delay (s)	307.7	0.0	2.5			
Approach LOS	F					
<hr/>						
Intersection Summary						
Average Delay			26.6			
Intersection Capacity Utilization		88.4%		ICU Level of Service		D

HCM Signalized Intersection Capacity Analysis
 2: Community Hospital & SR 68

Holman Highway Entire Network
 PM

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑	↗	↘	↓
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	1863	1583	1770	1863
Volume (vph)	129	65	1130	102	24	823
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	132	66	1153	104	24	840
Lane Group Flow (vph)	132	66	1153	104	24	840
Turn Type		Perm		Perm	custom	
Protected Phases	4		6		5	2
Permitted Phases		4		6	5	
Actuated Green, G (s)	14.6	14.6	96.9	96.9	4.7	105.3
Effective Green, g (s)	14.8	14.8	97.8	97.8	4.4	106.2
Actuated g/C Ratio	0.11	0.11	0.76	0.76	0.03	0.82
Clearance Time (s)	4.2	4.2	4.9	4.9	3.7	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	182	1412	1200	60	1534
v/s Ratio Prot	c0.07		c0.62		0.01	c0.45
v/s Ratio Perm		0.04		0.07		
v/c Ratio	0.65	0.36	0.82	0.09	0.40	0.55
Uniform Delay, d1	54.6	52.7	9.9	4.0	61.0	3.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	1.2	3.8	0.0	4.3	0.4
Delay (s)	61.9	54.0	13.7	4.1	65.3	4.1
Level of Service	E	D	B	A	E	A
Approach Delay (s)	59.2		12.9			5.8
Approach LOS	E		B			A
Intersection Summary						
HCM Average Control Delay			14.2		HCM Level of Service	B
HCM Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			129.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			74.6%		ICU Level of Service	C
c Critical Lane Group						

Movement	↙ WBL	↖ WBR	↑ NBT	↗ NBR	↘ SBL	↓ SBT
Lane Configurations	↙	↖	↑	↗	↘	↓
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	71	54	1178	37	8	944
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (veh/h)	72	55	1202	38	8	963
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type	None					
Median storage (veh)						
Upstream signal (ft)			420			886
pX, platoon unblocked	0.90	0.82			0.82	
vC, conflicting volume	2182	1202			1240	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2006	1247			1293	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	68			98	
cM capacity (veh/h)	58	173			438	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	128	1202	38	8	963	
Volume Left	72	0	0	8	0	
Volume Right	55	0	38	0	0	
cSH	87	1700	1700	438	1700	
Volume to Capacity	1.46	0.71	0.02	0.02	0.57	
Queue Length (ft)	247	0	0	1	0	
Control Delay (s)	345.8	0.0	0.0	13.4	0.0	
Lane LOS	F			B		
Approach Delay (s)	345.8	0.0		0.1		
Approach LOS	F					
Intersection Summary						
Average Delay			18.9			
Intersection Capacity Utilization			73.9%	ICU Level of Service		C

HCM Signalized Intersection Capacity Analysis
4: SR 68 & Hwy 1 NB Off Ramp

Holman Highway Entire Network
PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00
Flt		1.00	0.85	1.00	1.00		1.00		0.85		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863		1770		1583		1855	1583
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863		1770		1583		1855	1583
Volume (vph)	0	579	436	95	474	0	21	0	413	26	272	720
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	597	449	98	489	0	22	0	426	27	280	742
Lane Group Flow (vph)	0	597	449	98	489	0	22	0	426	0	307	742
Turn Type			Perm	Prot			custom		custom	custom		Perm
Protected Phases		2		1	6		3			4	4	
Permitted Phases		2	2		6		3		3	4		4
Actuated Green, G (s)		47.3	47.3	10.3	61.3		9.5		9.5		43.2	43.2
Effective Green, g (s)		48.6	48.6	10.0	62.6		9.2		9.2		42.9	42.9
Actuated g/C Ratio		0.38	0.38	0.08	0.49		0.07		0.07		0.34	0.34
Clearance Time (s)		5.3	5.3	3.7	5.3		3.7		3.7		3.7	3.7
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0		3.0		3.0	3.0
Lane Grp Cap (vph)		715	607	140	920		129		115		628	536
v/s Ratio Prot		c0.32		c0.06	0.26		0.01				0.17	
v/s Ratio Perm			0.28						c0.27			c0.47
v/c Ratio		0.83	0.74	0.70	0.53		0.17		3.70		0.49	1.38
Uniform Delay, d1		35.4	33.6	56.9	22.0		55.2		58.8		33.2	41.9
Progression Factor		1.00	1.00	1.00	1.00		1.00		1.00		1.00	1.00
Incremental Delay, d2		8.3	4.7	14.2	0.6		0.6		1238.0		0.6	184.3
Delay (s)		43.7	38.3	71.1	22.6		55.8		1296.8		33.8	226.2
Level of Service		D	D	E	C		E		F		C	F
Approach Delay (s)		41.4			30.7			1235.8			169.9	
Approach LOS		D			C			F			F	
Intersection Summary												
HCM Average Control Delay			253.4			HCM Level of Service			F			
HCM Volume to Capacity ratio			1.27									
Actuated Cycle Length (s)			126.7			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			85.0%			ICU Level of Service			D			
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 5: Pebble Beach Access & Hwy 1 SB

Holman Highway Entire Network
 PM

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↑	↓	↖↗
Sign Control	Stop			Free	Free	FF
Grade	0%			0%	0%	
Volume (veh/h)	434	89	0	0	435	368
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (veh/h)	482	99	0	0	483	409
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					272	
pX, platoon unblocked						
vC, conflicting volume	483	483	892			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	483	483	892			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	11	83	100			
cM capacity (veh/h)	542	583	760			
Direction, Lane #	EB 1	EB 2	SB 1	SB 2	SB 3	
Volume Total	482	99	483	204	204	
Volume Left	482	0	0	0	0	
Volume Right	0	99	0	204	204	
cSH	542	583	1700	1700	1700	
Volume to Capacity	0.89	0.17	0.28	0.12	0.12	
Queue Length (ft)	255	15	0	0	0	
Control Delay (s)	44.0	12.4	0.0	0.0	0.0	
Lane LOS	E	B				
Approach Delay (s)	38.6		0.0			
Approach LOS	E					
Intersection Summary						
Average Delay			15.2			
Intersection Capacity Utilization			58.8%	ICU Level of Service		A

HCM Unsignalized Intersection Capacity Analysis
 6: Hwy 1 NB ON Ramp & SR 68 at Aguajito

Holman Highway Entire Network
 PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↗		↑		↖		↖
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	17	19	0	550	21	37	0	981
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.92	0.99	0.99	0.92	0.99	0.99
Hourly flow rate (veh/h)	0	0	0	0	17	19	0	556	21	40	0	991
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)											987	
pX, platoon unblocked												
vC, conflicting volume	674	657	0	647	1638	566	991			577		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	674	657	0	647	1638	566	991			577		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	82	96	100			96		
cM capacity (veh/h)	297	369	1085	372	96	524	698			997		
Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2							
Volume Total	17	19	577	40	991							
Volume Left	0	0	0	40	0							
Volume Right	0	19	21	0	991							
cSH	96	524	1700	997	1700							
Volume to Capacity	0.18	0.04	0.34	0.04	0.58							
Queue Length (ft)	15	3	0	3	0							
Control Delay (s)	50.2	12.1	0.0	8.8	0.0							
Lane LOS	F	B		A								
Approach Delay (s)	30.1		0.0	0.3								
Approach LOS	D											
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			71.4%		ICU Level of Service					C		

HCM Signalized Intersection Capacity Analysis
7: Carpenter Road & Hwy 1

Holman Highway Entire Network
PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖		↖	↔		↖	↕		↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	1.00		0.95	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.87		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	1793		1681	1548		1770	3527		1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	1793		1681	1548		1770	3527		1770	3539	1583
Volume (vph)	663	17	6	12	10	52	41	1804	43	58	1514	710
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	713	18	6	13	11	56	44	1940	46	62	1628	763
Lane Group Flow (vph)	713	24	0	13	67	0	44	1986	0	62	1628	763
Turn Type	Split			Split			Prot			Prot		Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	25.2	25.2		4.5	4.5		5.9	62.6		6.1	62.8	62.8
Effective Green, g (s)	25.2	25.2		4.5	4.5		5.9	64.6		6.1	64.8	64.8
Actuated g/C Ratio	0.22	0.22		0.04	0.04		0.05	0.55		0.05	0.56	0.56
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	743	388		65	60		90	1957		93	1970	881
v/s Ratio Prot	c0.21	0.01		0.01	c0.04		0.02	c0.56		c0.04	0.46	
v/s Ratio Perm												0.48
v/c Ratio	0.96	0.06		0.20	1.12		0.49	1.01		0.67	0.83	0.87
Uniform Delay, d1	45.1	36.2		54.2	56.0		53.8	25.9		54.2	21.2	22.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.2	0.1		1.5	151.8		4.1	24.1		16.6	3.0	8.9
Delay (s)	68.3	36.3		55.7	207.8		57.9	50.0		70.7	24.2	31.0
Level of Service	E	D		E	F		E	D		E	C	C
Approach Delay (s)		67.3			183.0			50.2			27.5	
Approach LOS		E			F			D			C	
Intersection Summary												
HCM Average Control Delay			44.1			HCM Level of Service					D	
HCM Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			116.4			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			95.6%			ICU Level of Service			E			
c Critical Lane Group												

APPENDIX F
RAMP OPERATION ANALYSIS



FEHR & PEERS
TRANSPORTATION CONSULTANTS

Phone:
E-mail:

Fax:
Merge Analysis

Analyst: AL
 Agency/Co.:
 Date performed: 8/29/2003
 Analysis time period:
 Freeway/dir or travel: HWY 1 NB ON RAMP AT AGUAJITO
 Junction:
 Jurisdiction:
 Analysis Year:
 Description: EXISTING AM PEAK HOUR

Freeway Data

Type of analysis Merge
 Number of lanes in freeway 2
 Free-flow speed on freeway 55.0 mph
 Volume on freeway 1385 vph

On Ramp Data

Side of freeway Right
 Number of lanes in ramp 1
 Free-flow speed on ramp 45.0 mph
 Volume on ramp 749 vph
 Length of first accel/decel lane 600 ft
 Length of second accel/decel lane ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No
 Volume on adjacent Ramp
 Position of adjacent Ramp
 Type of adjacent Ramp
 Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	1385	749	vph
Peak-hour factor, PHF	0.90	0.90	
Peak 15-min volume, v15	385	208	v
Trucks and buses	2	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	%	%	%
Length	mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fhv	0.990	0.990	
Driver population factor, fp	1.00	1.00	
Flow rate, vp	1554	841	pcph

Estimation of V12 Merge Areas

L = 0.00 (Equation 25-2 or 25-3)

EQ = 1.000 Using Equation 0
 FM
 $V = V_{12} (P_{12}) = 1554$ pc/h

Capacity Checks

V FO Actual Maximum LOS F?
 V RI2 2395 4500 No
 2395 4600 No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 V_R + 0.0078 V_A - 0.00627 L_A = 20.0+$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $M = 0.310$
 Space mean speed in ramp influence area, $S_R = 51.0$ mph
 Space mean speed in outer lanes, $S = N/A$ mph
 Space mean speed for all vehicles, $S = 51.0$ mph

HCS2000: Ramps and Ramp Junctions Release 4.1c

Phone: _____
 E-mail: _____
 Fax: _____

Analyst: AL
 Agency/Co.: _____
 Date performed: 8/29/2003

Analysis time period: _____
 Freeway/air or travel: HWY 1 NB ON RAMP AT AGUAJITO
 Junction: _____
 Jurisdiction: _____
 Analysis Year: _____
 Description: EXISTING PM PEAK HOUR

Type of analysis: Merge
 Number of lanes in freeway: 2
 Free-flow speed on freeway: 55.0 mph
 Volume on freeway: 1948 vph

Side of freeway: Right
 Number of lanes in ramp: 1
 Free-flow speed on ramp: 45.0 mph
 Volume on ramp: 998 vph
 Length of first accel/decel lane: 600 ft
 Length of second accel/decel lane: _____ ft

Does adjacent ramp exist? No
 Volume on adjacent Ramp: _____ vph
 Position of adjacent Ramp: _____ ft
 Type of adjacent Ramp: _____ ft
 Distance to adjacent Ramp: _____ ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	1948	998	
Peak-hour factor, PHF	0.93	0.93	
Peak 15-min volume, V15	524	268	
Trucks and buses	2	2	
Recreational vehicles	0	0	
Terrain type:	Level	Level	Level
Grade	%	%	%
Length	mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.990	0.990	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2116	1084	

Estimation of V12 Merge Areas
 L = 0.00 (Equation 25-2 or 25-3)

PO = 1.000 Using Equation 0
 FM
 $V_{12} = V_{FM} (P) = 2116$ pc/h

Capacity Checks

V	Actual	Maximum	LOS F?
FO	3200	4500	No
R12	3200	4600	No

Level of Service Determination (if not F)
 Density, $D = 5.475 + 0.00734 V_R + 0.0078 V_{12} - 0.00627 L_A = 26.2$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $M = 0.363$
 Space mean speed in ramp influence area, $S_R = 50.3$ mph
 Space mean speed in outer lanes, $S_0 = N/A$ mph
 Space mean speed for all vehicles, $S = 50.3$ mph

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Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: AL
 Agency/Co.: 8/29/2003
 Date performed:
 Analysis time period:
 Freeway/dir or travel: HWY 1 NB OFF RAMP AT AGUAJITO
 Junction:
 Jurisdiction:
 Analysis Year:
 Description: EXISTING AM PEAK HOUR

Freeway Data

Type of analysis Diverge
 Number of lanes in freeway 2
 Free-flow speed on freeway 55.0 mph
 Volume on freeway 1804 vph

Off Ramp Data

Side of freeway Right
 Number of lanes in ramp 1
 Free-flow speed on ramp 45.0 mph
 Volume on ramp 419 vph
 Length of first accel/decel lane 500 ft
 Length of second accel/decel lane ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No
 Volume on adjacent ramp vph
 Position of adjacent ramp ft
 Type of adjacent ramp ft
 Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	1804	419	vph
Peak-hour factor, PHF	0.93	0.93	
Peak 15-min volume, V15	485	113	v
Trucks and buses	2	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	0.00 %	0.00 %	%
Length	0.00 mi	0.00 mi	mi
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, FHV	0.990	0.990	
Driver population factor, FP	1.00	1.00	
Flow rate, vp	1959	455	pcph

Estimation of V12 Diverge Areas

L = 0.00 (Equation 25-8 or 25-9)

EQ P = 1.000 Using Equation 0
 FD V = v + (v - v) P = 1959 pc/h
 12 R F R FD

Capacity Checks

v = v	Actual	Maximum	LOS F?
F _i F	1959	4500	No
V	1959	4400	No
V = v - v	1504	4500	No
F _O F R	455	2100	No
R			

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v - 0.009 L = 16.6$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, $D = 0.339$
 Space mean speed in ramp influence area, $S = 51$ mph
 Space mean speed in outer lanes, $S = N/A$ mph
 Space mean speed for all vehicles, $S = 50.6$ mph

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Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: AL
 Agency/Co.: 8/29/2003
 Date performed:
 Analysis time period:
 Freeway/dir or travel: HWY 1 NB OFF RAMP AT AGUAJITO
 Junction:
 Jurisdiction:
 Analysis Year:
 Description: EXISTING PM PEAK HOUR

Freeway Data

Type of analysis Diverge
 Number of lanes in freeway 2
 Free-flow speed on freeway 55.0 mph
 Volume on freeway 2519 vph

Off Ramp Data

Side of freeway Right
 Number of lanes in ramp 1
 Free-flow speed on ramp 45.0 mph
 Volume on ramp 571 vph
 Length of first accel/decel lane 500 ft
 Length of second accel/decel lane ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No
 Volume on adjacent ramp vph
 Position of adjacent ramp ft
 Type of adjacent ramp
 Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	2519	571	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, v15	685	155	v
Trucks and buses	2	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	0.00 %	0.00 %	%
Length	0.00 mi	0.00 mi	mi
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.990	0.990	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2765	627	pcph

Estimation of V12 Diverge Areas

L = 0.00 (Equation 25-8 or 25-9)

EQ P = 1.000 Using Equation 0

FD V = V + (V - V) F = 2765 pc/h
 12 R F R FD

Capacity Checks

V	Fi F	Actual	Maximum	LOS F?
V	12	2765	4500	No
V	FO F R	2138	4500	No
V	R	627	2100	No

Level of Service Determination (if not F)

Density, D = 4.252 + 0.0086 v - 0.009 L = 23.5 pc/mi/ln
 R 12 D
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D = 0.354
 S
 Space mean speed in ramp influence area, S = 50 mph
 Space mean speed in outer lanes, S = N/A mph
 Space mean speed for all vehicles, S = 50.4 mph

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Phone:
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Fax:

Merge Analysis

Analyst: AL

Agency/Co.: 8/29/2003

Date performed:

Analysis time period:

Freeway/dir or travel: HWY 1 SB ON RAMP AT 17 MILE DR

Junction:

Jurisdiction:

Analysis Year:

Description: EXISTING AM PEAK HOUR

Freeway Data

Type of analysis Merge
Number of lanes in freeway 2
Free-flow speed on freeway 55.0 mph
Volume on freeway 1677 vph

On Ramp Data

Side of freeway Right
Number of lanes in ramp 1
Free-flow speed on ramp 45.0 mph
Volume on ramp 545 vph
Length of first accel/decel lane 600 ft
Length of second accel/decel lane ft

Does adjacent ramp exist? No

Volume on adjacent Ramp vph

Position of adjacent Ramp ft

Type of adjacent Ramp

Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components

Volume, V (vph)	Freeway	Ramp	Adjacent Ramp
1677	1677	545	vph
Peak-hour factor, PHF	0.90	0.90	
Peak 15-min volume, v15	466	151	v
Trucks and buses	2	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	%	%	%
Length	mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fhv	0.990	0.990	
Driver population factor, fp	1.00	1.00	
Flow rate, vp	1882	612	pcph

Estimation of V12 Merge Areas

L = 0.00 (Equation 25-2 or 25-3)

EQ = 1.000 Using Equation 0

FM
V = V (P) = 1882 pc/h
12 F FM

Capacity Checks

V	FO	Actual	Maximum	LOS F?
V	R12	2494	4500	NO
		2494	4600	NO

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v + 0.0078 v - 0.00627 L = 20.9$ pc/mi/ln
Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $M = 0.314$

Space mean speed in ramp influence area, $S = 50.9$ mph

Space mean speed in outer lanes, $S = N/A$ mph

Space mean speed for all vehicles, $S = 50.9$ mph

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Phone:
E-mail:

Fax:

Merge Analysis

Analyst: AL
 Agency/Co.: 8/29/2003
 Date performed:
 Analysis time period:
 Freeway/dir or travel: HWY 1 SB ON RAMP AT 17 MILE DR
 Junction:
 Jurisdiction:
 Analysis year:
 Description: EXISTING PM PEAK HOUR

Freeway Data

Type of analysis Merge
 Number of lanes in freeway 2
 Free-flow speed on freeway 55.0 mph
 Volume on freeway 1761 vph

On Ramp Data

Side of freeway Right
 Number of lanes in ramp 1
 Free-flow speed on ramp 45.0 mph
 Volume on ramp 524 vph
 Length of first accel/decel lane 600 ft
 Length of second accel/decel lane ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? NO
 Volume on adjacent Ramp vph
 Position of adjacent Ramp
 Type of adjacent Ramp
 Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	1761	524	vph
Peak-hour factor, PHF	0.93	0.93	
Peak 15-min volume, V15	473	141	V
Trucks and buses	2	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	Level
Grade	%	%	%
Length	mi	mi	mi
Trucks and buses, PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.990	0.990	
Driver population factor, fp	1.00	1.00	
Flow rate, vp	1912	569	pcph

Estimation of V12 Merge Areas

L = 0.00 (Equation 25-2 or 25-3)

PO = 1.000 Using Equation 0
 FM
 $V = v (P) = 1912$ pc/h
 12 F FM

Capacity Checks

V	Actual	Maximum	LOS F?
FO	2481	4500	No
V	2481	4600	No
R12			

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 V + 0.0078 V_{R12} - 0.00627 L_A = 20.8$ pc/mi/ln
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $M = 0.314$
 Space mean speed in ramp influence area, $S = 50.9$ mph
 Space mean speed in outer lanes, $S = N/A$ mph
 Space mean speed for all vehicles, $S = 50.9$ mph

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Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: AL
 Agency/Co.: 8/29/2003
 Date performed:
 Freeway/dir or travel: HWY 1 NB OFF RAMP AT MUNRAS
 Junction:
 Jurisdiction:
 Analysis Year:
 Description: EXISTING AM PEAK HOUR

Freeway Data

Type of analysis Diverge
 Number of lanes in freeway 2
 Free-flow speed on freeway 55.0 mph
 Volume on freeway 2134 vph

Off Ramp Data

Side of freeway Right
 Number of lanes in ramp 1
 Free-flow speed on ramp 45.0 mph
 Volume on ramp 645 vph
 Length of first accel/decel lane 500 ft
 Length of second accel/decel lane ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No
 Volume on adjacent ramp vph
 Position of adjacent ramp
 Type of adjacent ramp
 Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	2134	645	vph
Peak-hour factor, PHF	0.91	177	V
Peak 15-min volume, V15	2	2	%
Trucks and buses	0	0	%
Recreational vehicles	Level	Level	Level
Terrain type:	%	%	%
Grade	0.00	0.00	mi
Length	0.00	0.00	mi
Trucks and buses PCE, ET	1.5	1.5	mi
Recreational vehicle PCE, ER	1.2	1.2	mi
Heavy vehicle adjustment, fHV	0.990	0.990	mi
Driver population factor, fp	1.00	1.00	mi
Flow rate, vp	2369	716	pcph

Estimation of V12 Diverge Areas

L = 0.00 (Equation 25-8 or 25-9)

EQ
 $P = 1.000$ Using Equation 0
 $P_{FD} = v + (v - v_r) P = 2369$ pc/h
 $v_r = 12$ R F R FD

Capacity Checks

V	Fi	F	Actual	Maximum	LOS F?
12	2369	4400	2369	4500	No
FO	1653	4500	1653	4500	No
R	716	2100	716	2100	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v - 0.009 L = 20.1$ pc/mi/ln
 $R = 12$ D
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $D = 0.362$
 Space mean speed in ramp influence area, $S = 50$ mph
 Space mean speed in outer lanes, $S = N/A$ mph
 Space mean speed for all vehicles, $S = 50.3$ mph

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Phone: _____ Fax: _____
 E-mail: _____

Diverge Analysis

Analyst: AL
 Agency/Co.: _____
 Date performed: 8/29/2003
 Analysis time period: _____
 Freeway/dir or travel: HWY 1 NB OFF RAMP AT MUNRAS
 Junction: _____
 Jurisdiction: _____
 Analysis Year: _____
 Description: EXISTING PM PEAK HOUR

Freeway Data

Type of analysis	Diverge
Number of lanes in freeway	2
Free-flow speed on freeway	55.0 mph
Volume on freeway	2946 vph

Off Ramp Data

Side of freeway	Right
Number of lanes in ramp	1
Free-flow speed on ramp	45.0 mph
Volume on ramp	682 vph
Length of first accel/decel lane	500 ft
Length of second accel/decel lane	_____ ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No
Volume on adjacent ramp	_____ vph
Position of adjacent ramp	_____
Type of adjacent ramp	_____
Distance to adjacent ramp	_____ ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	pcph
Volume, V (vph)	2946	682		
Peak-hour factor, PHF	0.91	0.91		
Peak 15-min volume, v15	809	187		
Trucks and buses	2	2		
Recreational vehicles	0	0		
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fhv	0.990	0.990		
Driver population factor, fp	1.00	1.00		
Flow rate, vp	3270	757		

Estimation of V12 Diverge Areas

L = 0.00 (Equation 25-8 or 25-9)

EQ
 $P = 1.000$ Using Equation 0
 $FD = 3270 + (V - V) P = 3270$ pc/h
 12 R F R FD

Capacity Checks

V = V	Actual	Maximum	LOS F?
Fi F	3270	4500	No
V 12	3270	4400	No
V = V - V	2513	4500	No
FO F R	757	2100	No
V R			

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v - 0.009 L = 27.9$ pc/mi/in
 R 12 D
 Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, $D = 0.366$
 Space mean speed in ramp influence area, $S = 50$ mph
 Space mean speed in outer lanes, $S = N/A$ mph
 Space mean speed for all vehicles, $S = 50.2$ mph

APPENDIX G
WEAVING SECTION ANALYSIS RESULTS

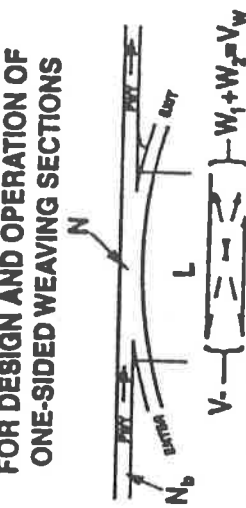


FEHR & PEERS
TRANSPORTATION CONSULTANTS

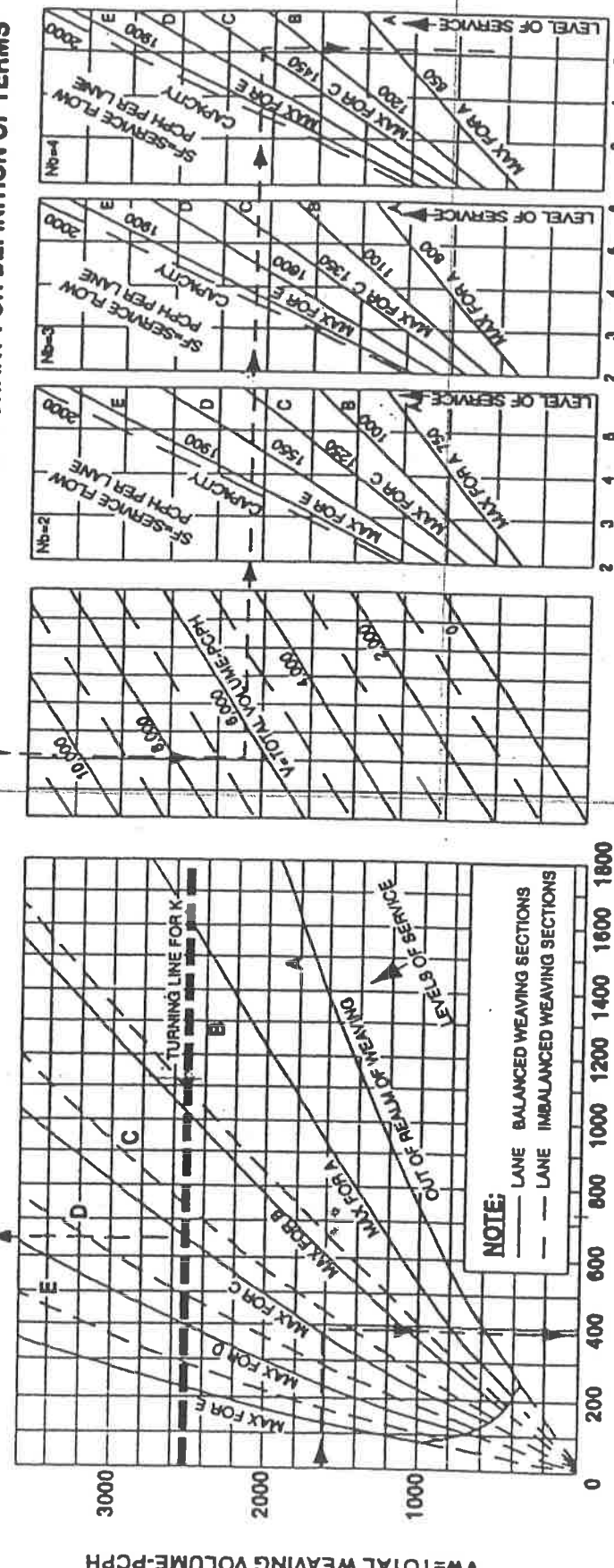
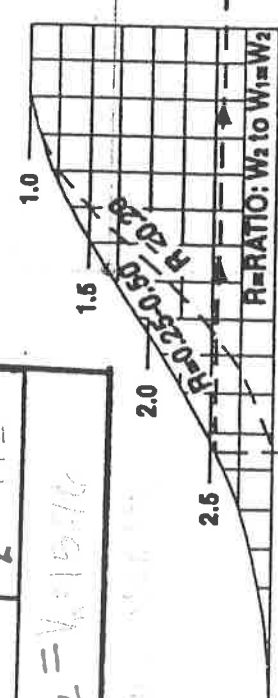
Figure 504.7A
Design Curve for Freeway and Collector Weaving

SCENARIO: 1995-1997 Exh. Proj. B1	LOCATION: MUMUKH
$L = 700\text{ m}$	% Trucks Mainline = 1.7
$PHF = 0.97$	% Trucks Ramps = 1.0
$W_1 = 1104$	$V_{\text{TOTAL}} = 1072$
$W_2 = 472$	
$W_1 + W_2 = 1576$	

ANALYSIS NOMOGRAPH FOR DESIGN AND OPERATION OF ONE-SIDED WEAVING SECTIONS



$V = W_1 + W_2 = V_w$
 $N_b = \text{NUMBER OF BASIC LANES ON APPROACH}$
 SEE CHART FOR DEFINITION OF TERMS



$N = \text{NUMBER OF LANE IN WEAVING SECTION}$
 $L = \text{LENGTH OF WEAVING SECTION-METERS (See Figure 504.7A)}$
 $\text{LANE-BALANCED-OPTIONAL LANE AT EXIT, I.E., ONE MORE LANE GOING AWAY}$

LOS = C

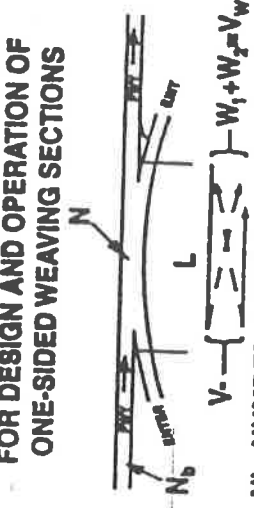
NOTE: EXTRAPOLATION OF CHART BEYOND THE BOUNDARIES GIVEN IS NOT ADVISED.

Example: The nomograph is entered on the left (see dashed line and arrow) with weaving volume, $W_1 + W_2$ (or V_w) followed by projection to the right, intersecting the desired weaving LOS; a vertical drop from this point provides weaving distance $L = 400\text{ m}$. Returning to the vertical axis, a horizontal extension meets the desired W_2 volume. Then a downward turn to the right, intersection (in this case) the desired LOS = C curve having an SF of 1450 (representing the overall or composite operation of the weaving section) projected to the right, intersection (in this case) the desired LOS = C curve having an SF of 1450 (representing the overall or composite operation of the weaving section).

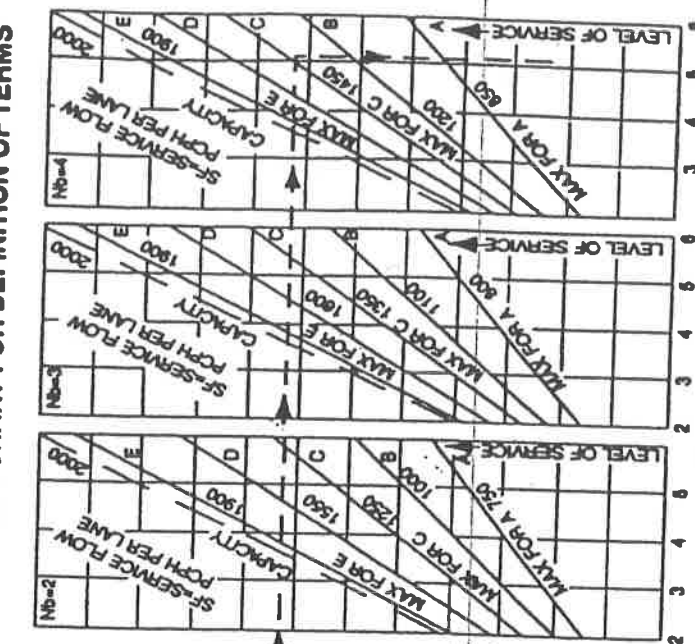
Figure 504.7A
Design Curve for Freeway and Collector Weaving

SCENARIO: 1021 HWY EXCH. Peak PM	LOCATION: Mun. Hwy 156
L = 720m	% Trucks Mainline = 1.07
PHF = 0.95	% Trucks Ramps = 1.02
$W_1 = 1.25$	$V_{TOTAL} = 2,495$
$W_2 = 1.0$	
$W_1 + W_2 = 1.25 + 1.0 = 2.25$	

ANALYSIS NOMOGRAPH FOR DESIGN AND OPERATION OF ONE-SIDED WEAVING SECTIONS

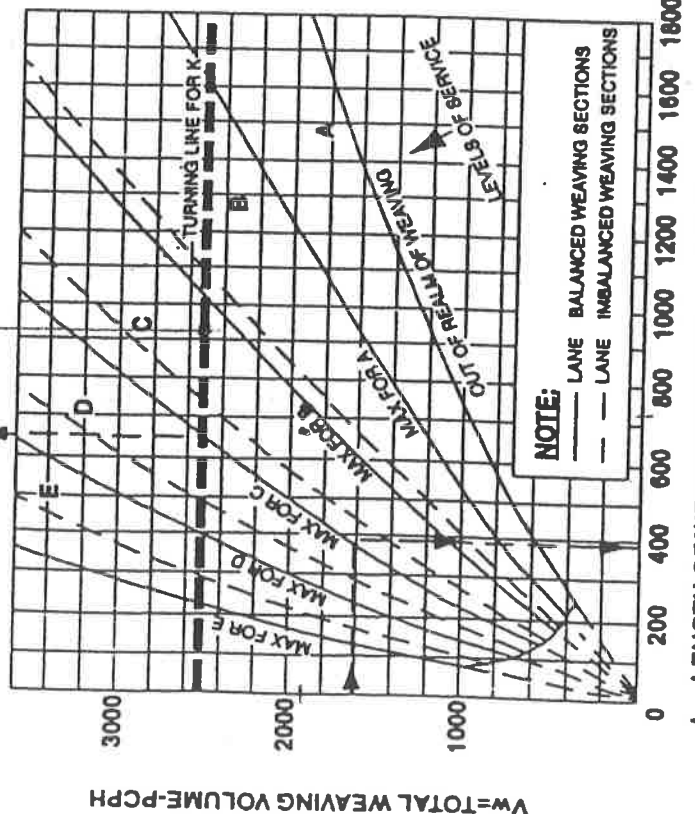
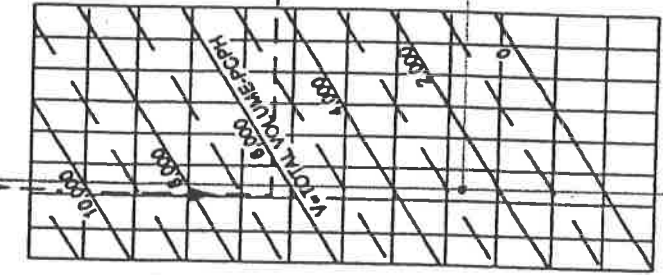


N_b = NUMBER OF BASIC LANES ON APPROACH
SEE CHART FOR DEFINITION OF TERMS



N = NUMBER OF LANE IN WEAVING SECTION

LOS = C



L = LENGTH OF WEAVING SECTION - METERS (See Figure 504.7A)
LANE-BALANCED-OPTIONAL LANE AT EXIT, I.E. ONE MORE LANE GOING AWAY

NOTE: EXTRAPOLATION OF CHART BEYOND THE BOUNDARIES GIVEN IS NOT ADVISED.

Example: The nomograph is entered on the left (see dashed line and arrows) with weaving volume, $W_1 + W_2$ (or V_w) followed by projection to the right, intersecting the LOS curve. A vertical drop from this point provides weaving distance $L = 400$ m. Return projection along the LOS to the horizontal, heavy dashed, "turning line for K' ". A plus curve, from which a horizontal extension meets the desired W_2 volume. Then a downward turn to local volume, V , from which the line is horizontally projected to the right. Intersection (in this case) the desired LOS = C curve having an SF of 1450 (representing the overall or composite operation of the weaving section).