APPENDIX FOR
CHAPTER 2

TRANSPORT AND ENVIRONMENTAL SURVEYS

1 INTRODUCTION

A number of transport and environmental surveys were conducted in the Study. Those surveys were aimed to understand the present transport and environmental conditions in the Study area. For this purpose, eight kinds of transport surveys were conducted:

Transport Surveys

1. Roadside Traffic Count Survey (24 hours and 16 hours)
2. Intersection Traffic Count Survey
3. Travel Speed Survey
4. Public Transport Route / Service Frequency Survey
5. Bus Terminal Passenger Count Survey
6. Axle Load Survey
7. Resident Interview Survey
8. Business Establishment Interview Survey

Environmental Surveys

1. Air Quality Measurement
2. Noise Level Measurement
3. Water Sampling and Laboratory Analysis

2 OBJECTIVES OF THE SURVEYS

Eight (8) types of transport surveys and three (3) types of environment surveys were conducted to update the present transport data as well as to obtain the information required to plan the road network in CALA including the E-W roads. The outline of the transport and environmental surveys is summarized in Table 2.1 and Table 2.2.

3 SCOPE OF THE SURVEYS

3.1 Transport Surveys

(1) Roadside Traffic Count Survey

(1) Survey Methodology

The traffic count survey conducted the counting of traffic volume by vehicle type and by direction every 15 minutes. The vehicle types were classified into 10 categories, as follows:

1) Motorcycle	2) Tricycle	3) Jeepney
4) Mini-Bus	5) Standard Bus	6) Taxi/HOV Taxi

7) Car/Jeep 8) Utility Vehicle 9) Truck/Trailer
10) Others (Pedicab, Bicycle etc.)

Table 2.1 Outline of Transport Surveys

Survey	Objectives	Method	Coverage
1. Roadside Traffic Count Survey (24 hours and 16 hours)	• Determine current trend of main road traffic • Use for calibration of transport demand forecasting model	• Count all traffic by vehicle type (10 types) and by direction (every 15 minutes)	• 19 stations (6 stations for 24 hours and 13 stations for 16 hours) • 2 days
2. Intersection Traffic Count Survey	• Determine current traffic condition at major intersections, • Obtain basic data for study of traffic control measurement and facility improvement	• Count traffic volume by vehicle type (10 types) and direction (every 15 minutes) • Conduct field survey of intersection form	• 11 stations • 2 days
3. Travel Speed Survey	• Determine current road service level (speed, etc.) and • Grasp the traffic congestion bottleneck	• Record passing time and cause of delay at the checkpoints (intersection, stop, etc.) set by floating car method (Use GPS).	• 7 routes • 3 time periods (morning, noon, evening) • 3 times, with the same period and direction • Car, bus, jeepney, and truck (truck only along Aguinaldo Highway and Governor's Drive)
4. Public Transport Route / Service Frequency Survey	• Determine current service level of public transport (bus, jeepney) running around the major road around the study area	• Prepare route lists (including distance, origin/destination point, passing point, number of operators, number of registered vehicles) using official documents and field surveys • Count frequency of service by route at terminals	• Frequency Count : 18 hours (1 day)
5. Bus Terminal Passenger Count Survey	• Obtain data necessary in the formulation of road facility development plan by identifying the current number of passengers at the major bus or jeepney terminals	• Count the number of passengers by route at the bus/ jeepney terminal	• 14 hours (1 day)
6. Axle Load Survey	• Measure axle load of passing vehicles around the study area	• Measure distribution of axle load of passing vehicles by axle load measurement device (select among survey station of roadside traffic count survey)	• 2 stations • 24 hours • 10% of total number of heavy vehicles that passed
7. Resident Interview Survey	• Understand residents' socioeconomic conditions, preference for road development and resettlement destination within the study area	• Conduct home visit survey by surveyors	• 2,000 samples • 18 LGUs, 50-200 samples per LGU
8. Business Establishment Interview Survey	• Identify preference and option of business operators (factory, etc.) towards economic activities and road development	• Conduct business establishments visit survey by surveyors	• 500 samples • 18 LGUs, 10-50 samples per LGU

Table 2.2 Outline of Environment Surveys

Survey	Objectives	Method	Coverage
1. Air Quality Measurement	• Review present environmental conditions in the survey area • Conduct of field measurement of air quality/noise level in the survey area	• Conduct accurate recording of survey locations of field surveys, with corresponding photos of all the sites as well as basic site conditions such as weather, temperature, and wind vane/velocity.	• 1 location of traffic count survey • 24-hour sampling for one day (1 hour average data shall be estimated based on the measurement. • NOx, SO2, CO, and TSP
2. Noise Level Measurement			• 4 locations of traffic count survey • 24-hour sampling for one day (10 mins continuous measurement per hour) • Average noise level (dB) per 10 minutes with traffic volume for 10 minutes.
3. Water Sampling and Laboratory Analysis	• Conduct of field sampling and laboratory analysis of water quality in the survey area		• Six locations in the upper, middle, and lower reaches of Ylang-Ylang River and Imus River in the survey area. • 3 times sampling for one day (morning, afternoon, and evening) • BOD, TSS, DO, grease and oil, and coliform group number.

The vehicle occupancy survey is a sample survey which recorded the seating capacity and the number of passengers on board by vehicle type. The sample rate was determined based on the traffic volume by vehicle type, that is, vehicle occupancy survey was conducted for 50% of each vehicle type.

(2) Survey Stations

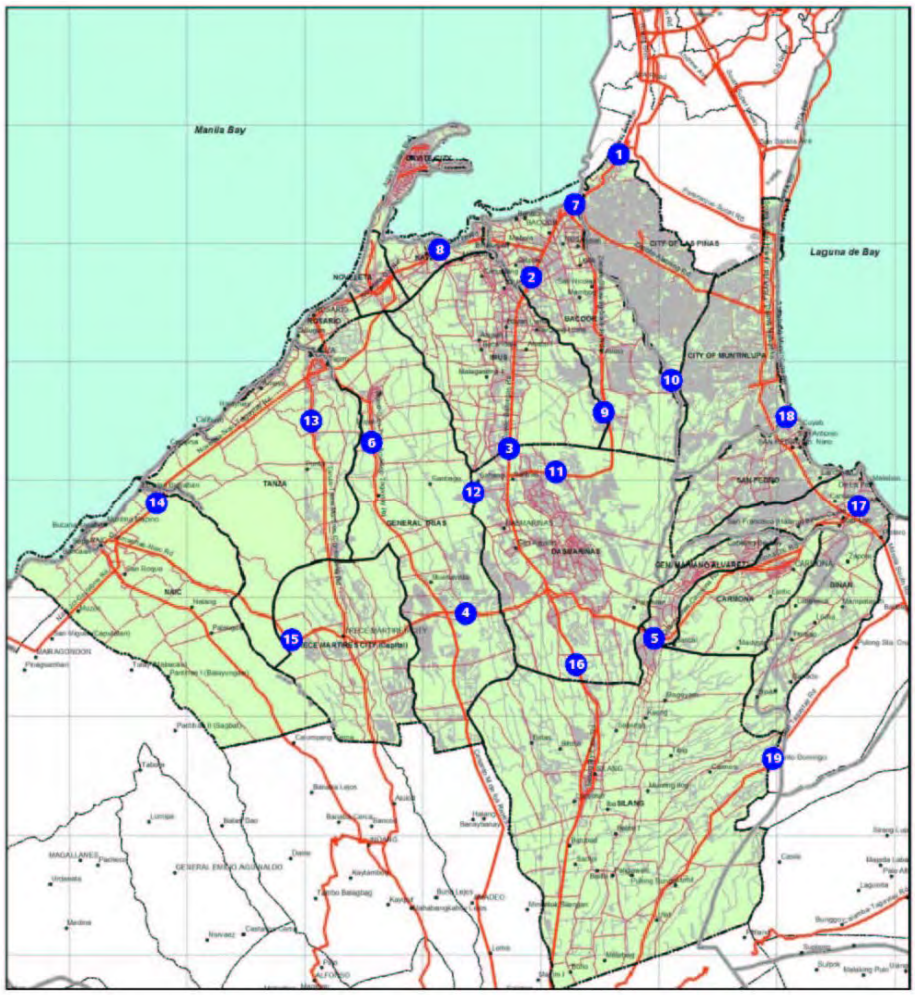
A combined total of 19 stations were covered in the survey. Six (6) stations were surveyed for 24-hour periods, while the remaining thirteen (13) stations were surveyed for 16-hour periods, as shown in Table 3.1 and Figure 3.1.

Table 3.1 List of Stations for Roadside Traffic Count Survey

Station No.	Road Name (Section)	Survey Duration
1	Manila-Cavite Expressway @ Longos (boundary of Cavite and Metro Manila)	24 hours
2	Aguinaldo Highway @ Bgy Real, Bacoor (between Tirona Highway and Mambog Road)	24 hours
3	Aguinaldo Highway @ Bgy Anabu 2, Imus (North of Salawag-Salitran Road)	24 hours
4	Governor's Drive @ Bgy San Francisco, Gen Trias (between Manggahan and Palapala)	24 hours
5	Governor's Drive @ Bgy Paliparan, Dasmariñas (between Molino Rd and GMA)	24 hours
6	Amadeo – General Trias Rd @ Bgy Tapia, Gen Trias	16 hours

Station No.	Road Name (Section)	Survey Duration
7	Aguinaldo Highway @ Bgy Zapote III, Bacoor (boundary of Las Piñas and Bacoor)	24 hours
8	Tirona Highway (Highway 25) @ Bgy Marulas, Kawit	16 hours
9	Molino Road @ Bgy Molino IV, Bacoor	16 hours
10	Daang Hari Road @ Bgy Molino IV, Bacoor	16 hours
11	Salitran-Salawag Road.	16 hours
12	Don P Campos Ave @ Dasmariñas town proper	16 hours
13	Tanza – Trece Martires – Indang Road	16 hours
14	Noveleta – Tanza – Naic Road @ Bgy Capipisa, Tanza	16 hours
15	Governor's Drive @ Bgy Cabuco, Trece Martires City	16 hours
16	Aguinaldo Highway @ Bgy Biga II, Silang	16 hours
17	Carmona National Road @ Bgy Maduya, Carmona	16 hours
18	Manila South Road @ Bgy Tunasan, Muntinlupa	16 hours
19	Sta. Rosa-Tagaytay Road @ Bgy Sto Domingo, Sta Rosa	16 hours

Figure 3.1 Roadside Traffic Count Survey Stations



(3) Survey Durations and Schedules

Both surveys started from 6:00 a.m. and were conducted continuously for two (2) days. Table 3.2 shows the schedule of the surveys for the different stations.

Table 3.2 Roadside Traffic Count Survey Schedule

Station	Location	Duration	Survey Schedule	
			Day 1	Day 2
Stn 01	Manila-Cavite Expressway	06:00-06:00	2005 Feb17	2005 Feb22
Stn 02	Aguinaldo Highway	06:00-06:00	2005 Feb17	2005Feb22
Stn 03	Aguinaldo Highway	06:00-06:00	2005 Feb15	2005Feb16
Stn 04	Governor's Drive	06:00-06:00	2005 Feb15	2005Feb16
Stn 05	Governor's Drive	06:00-06:00	2005 Feb15	2005Feb16
Stn 06	Amadeo - General Trias Road	06:00-22:00	2005 Feb17	2005Feb22
Stn 07	Aguinaldo Highway	06:00-06:00	2005 Feb17	2005Feb22
Stn 08	Tirona Highway (Hwy 25)	06:00-22:00	2005 Feb17	2005Feb22
Stn 09	Molino Road	06:00-22:00	2005 Feb17	2005Feb22
Stn 10	Daang Hari	06:00-22:00	2005 Feb17	2005Feb22
Stn 11	Salitran - Salawag Road	06:00-22:00	2005 Feb17	2005Feb22
Stn 12	Don P Campos Avenue	06:00-22:00	2005 Feb17	2005Feb22
Stn 13	Tanza - Indang Road	06:00-22:00	2005 Feb15	2005Feb16
Stn 14	Noveleta - Tanza – Naic Road	06:00-22:00	2005 Feb15	2005Feb16
Stn 15	Governor's Drive	06:00-22:00	2005 Feb15	2005Feb16
Stn 16	Aguinaldo Highway	06:00-22:00	2005 Feb15	2005Feb16
Stn 17	Carmona National Road	06:00-22:00	2005 Feb15	2005Feb16
Stn 18	Manila South Road	06:00-22:00	2005 Feb15	2005Feb16
Stn 19	Sta Rosa - Tagaytay Road	06:00-22:00	2005 Feb15	2005Feb16

(2) Intersection Traffic Count Survey

(1) Survey Methodology

The intersection survey conducted the counting of traffic volume by vehicle type and by direction every 15 minutes. The vehicle types were classified into 10 categories, as follows: 1) Motorcycle; 2) Tricycle; 3) Jeepney; 4) Mini-Bus; 5) Standard Bus; 6) Taxi/HOV Taxi; 7) Car/Jeep; 8) Utility Vehicle; 9) Truck/Trailer; and 10) Others (Pedicab, Bicycle etc.)

(2) Survey Stations

There were 11 stations for this survey as listed in Table 3.3 and shown in Figure 3.2.

Table 3.3 List of Stations for Intersection Traffic Count Survey

Code No.	Intersection Name (Location)
1	Aguinaldo Highway / Molino Road (Bacoor)
2	Aguinaldo Highway / Mambog Road (Imus)
3	Highway 25 / General Alvarez (Noveleta)
4	General Trias National Road / Soriano Highway (General Trias)
5	Governor's Drive / Soriano Highway (Naic)
6	Governor's Drive (Trece Martires City)
7	General Trias National Road / Governor's Drive (General Trias)
8	Aguinaldo Highway / Governor's Drive (Palapala)
9	Governor's Drive / Molino Road (Dasmariñas)
10	South Luzon Expressway Southwoods Exit
11	South Luzon Expressway Carmona Exit

Figure 3.2 Intersection Traffic Count Survey Stations

(3) Survey Durations and Schedules

The survey was conducted for three (3) hours in each time period of morning (06:00-09:00) and evening (17:00-20:00) peak hours continuously for two (2) days. Table 3.4 shows the schedule and duration of the surveys for the different stations.

Table 3.4 Intersection Traffic Count Survey Schedule

Station	Location	Duration	Survey Schedule	
			Day 1	Day 2
Stn 01	Aguinaldo Highway / Molino Road (Bacoor)	6:00-10:00 + 17:00-20:00	2005 Mar01	2005 Mar02
Stn 02	Aguinaldo Highway / Mambog Road (Imus)	6:00-10:00 + 17:00-20:00	2005 Mar08	2005 Mar09
Stn 03	Highway 25 / General Alvarez (Noveleta)	6:00-10:00 + 17:00-20:00	2005 Mar01	2005 Mar02
Stn 04	General Trias National Road / Soriano Highway (General Trias)	6:00-10:00 + 17:00-20:00	2005 Mar01	2005 Mar02
Stn 05	Governor's Drive / Soriano Highway (Naic)	6:00-10:00 + 17:00-20:00	2005 Mar08	2005 Mar09
Stn 06	Governor's Drive (Trece Martires City)	6:00-10:00 + 17:00-20:00	2005 Feb23	2005 Feb24
Stn 07	General Trias National Road / Governor's Drive (General Trias)	6:00-10:00 + 17:00-20:00	2005 Feb23	2005 Feb24
Stn 08	Aguinaldo Highway / Governor's Drive (Palapala)	6:00-10:00 + 17:00-20:00	2005 Feb23	2005 Feb24
Stn 09	Governor's Drive / Molino Road (Dasmariñas)	6:00-10:00 + 17:00-20:00	2005 Feb23	2005 Feb24
Stn 10	South Luzon Expressway Southwoods Exit	6:00-10:00 + 17:00-20:00	2005 Mar01	2005 Mar02
Stn 11	South Luzon Expressway Carmona Exit	6:00-10:00 + 17:00-20:00	2005 Mar01	2005 Mar02

(3) Travel Speed Survey

(1) Survey Methodology

The survey was conducted by applying the "floating car method" which required the survey vehicle to keep the same position in the traffic flow, i.e. if the survey vehicle was overtaken by other vehicles, it should overtake the same number of vehicles. The modes of transport taken for this survey are (1) Car, (2) Bus, (3) Jeepney, and (4) Truck.

(2) Survey Routes

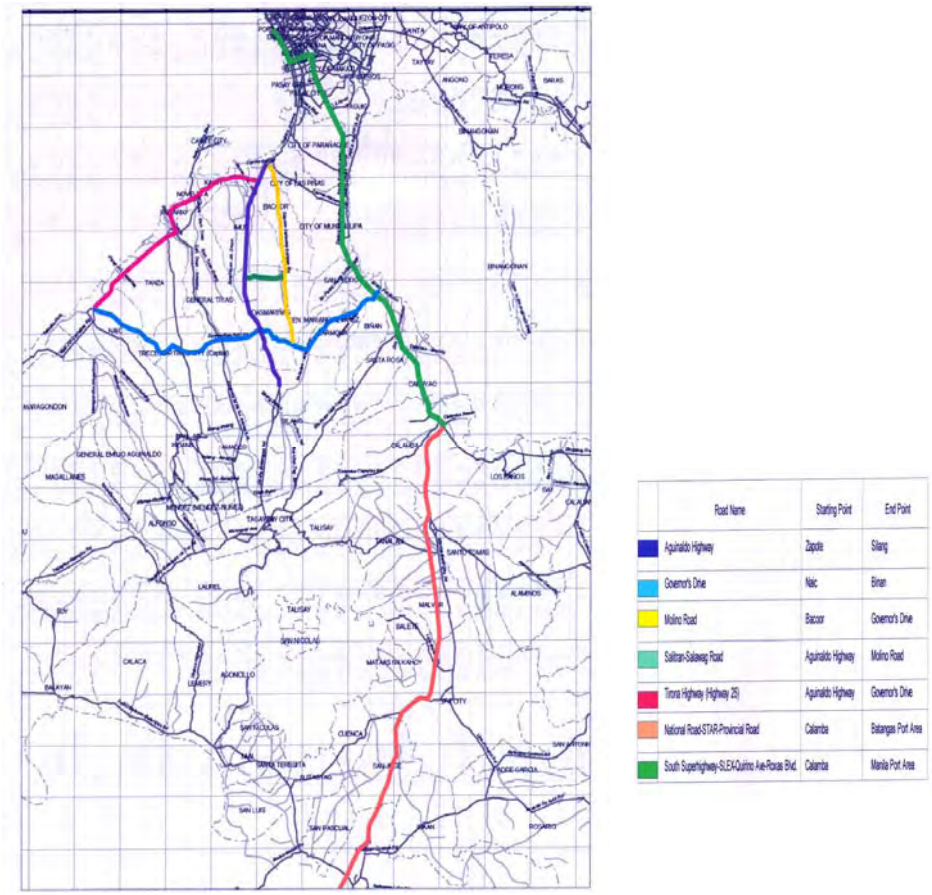
Seven (7) routes were selected for this survey, as shown in Table 3.5 and Figure 3.3.

Only trucks along Aguinaldo Highway and Governor's Drive traveling to and from the industrial zones were included in the survey.

Table 3.5 List of Travel Speed Survey Routes

	Route Description		
	Road Name	Starting Point	End Point
1	Aguinaldo Hi-way	Zapote	Silang
2	Governor's Drive	Naic	Binan
3	Molino Road	Bacoor	Governor's Drive
4	Salitran-Salawag Road	Aguinaldo Highway	Molino Road
5	Tirona Highway-Highway 25	Aguinaldo Highway	Governor's Drive
6	National Road-STAR-Provincial Road	Calamba	Batangas Port Area
7	South Superhighway-SLEX-Quirino Ave-Roxas Blvd.	Calamba	Manila Port Area

Figure 3.3 Location of Travel Speed Survey Routes



(3) Survey Durations

The survey was continuously conducted on 8-9 March 2005. Three samples (round trips) were taken for each of the selected routes in each three-time periods of (i) morning peak hours (06:00-09:00), (ii) inter-peak hours (12:00-15:00) and (iii) evening peak hours (17:00-20:00).

(4) Public Transport Route / Service Frequency Survey

(1) Survey Methodology

The survey was divided into two types: (i) preparation of route lists of bus and jeepney with route description, route length, number of operating vehicles, etc. and (ii) service frequency survey for major routes of public transportation. The first task collected the information of registered routes from DOTC/LTFRB and then prepared a list of routes for survey. The second task counted the actual service frequency of the selected major routes at the terminal. In this survey, vehicle type and occupancy was also examined.

Terminal facilities were examined based on observation and collected secondary data/information.

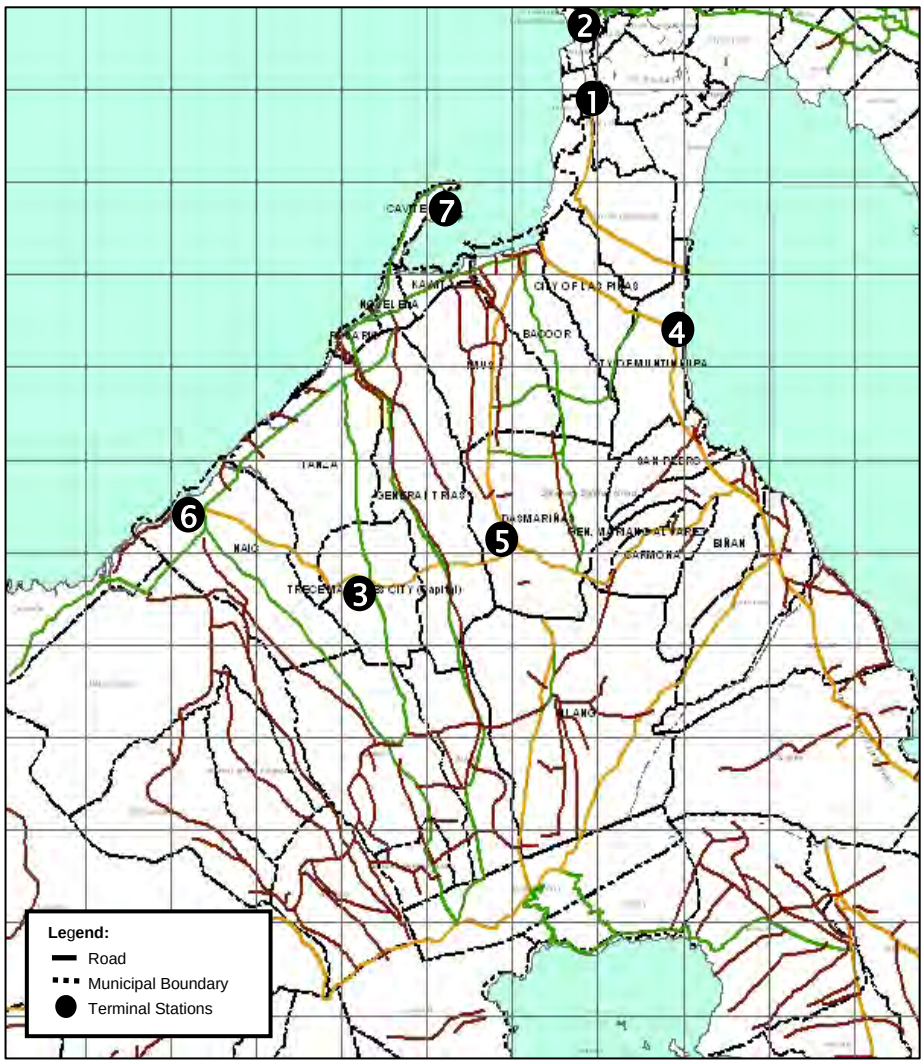
(2) Survey Stations

The major terminals of each mode of transport were surveyed to cover the selected routes of public transport mode, as shown in Table 3.6 and Figure 3.6.

Table 3.6 List of Terminals, Route and Mode of Public Transport

STA No.	TERMINAL NAME (LOCATION)	MODE	ROUTE	DATE OF SURVEY
STA-01A	(Baclaran: Infront of McDonald)	Bus and Jeepney	Baclaran-Indang	March 9, 2005
STA-01B	(Baclaran: Infront of Max Restaurant)	Mini Bus	Baclaran-Cavite	March 9, 2005
STA-01C	DMML Terminal (Baclaran: Along EDSA)	Bus	Baclaran-Alfonso	March 9, 2005
STA-01D	Saulog Terminal (Baclaran: Along Pasay Rotunda)	Bus	Baclaran-Cavite/Batangas	March 9, 2005
STA-02	Park N Ride (Lawton: Beside Mehan Garden)	Bus and FX/HOV	Lawton-Cavite/Batangas	March 9, 2005
STA-03	Trece Martires (Beside Jollibee)	Jeepney and FX/HOV	Trece-Indang/Tanza/Alabang	March 8, 2005
STA-04A	Metropolis Terminal (Alabang: Metropolis)	Bus	Alabang-Quezon	March 7, 2005
STA-04B	Dela Rosa Terminal (Alabang: Near City Terminal)	Bus	Alabang-Quezon/Batangas	March 7, 2005
STA-04C	Metropolis Terminal (Alabang: Metropolis)	Jeepney	Alabang-GMA (via Carmona)	March 7, 2005
STA-04D	City Terminal (Alabang: City Terminal)	Jeepney and FX/HOV	Alabang-GMA/Binan	March 7, 2005
STA-04E	City Terminal (Alabang: City Terminal)	FX/HOV	Alabang-Trece/Dasma/Imus (via Daang Hari and Governor's Drive)	March 7, 2005
STA-05A	Balibago Terminal (Palapala: Near Robinsons Mall)	Jeepney	Dasmariñas-Imus	March 8, 2005
STA-05B	Balibago Terminal (Palapala: Near Robinsons Mall)	FX/HOV	Dasmariñas-Laguna/Batangas	March 8, 2005
STA-05C	Balibago Terminal (Palapala: Near Robinsons Mall)	Jeepney	Dasmariñas-Trece	March 7, 2005
STA-06	Naic Bus Terminal (Naic: Near Naic Municipal Hall)	Mini Bus	Naic-Zapote	March 7, 2005
STA-07	Cavite City Mini Bus Terminal (Cavite City: Near Public Market)	Mini Bus	Cavite City- Zapote/Tanza/Baclaran	March 8, 2005
STA-08	Ayala Center Terminal (Makati City)	Bus and FX/HOV	Landmark-Balibago/Binan/Calamba-Sta Cruz/Dasmariñas/Carmona/ San Pedro-Pacita/Sucat-El Grande/ Pilar Village/Pag-asa-Molino/Sucat-Evacom/Pamplona/LasPinas-Southmall	March 8, 2005

Figure 3.4 Location of Public Transport Terminals



(3) Survey Durations

The survey was conducted at the terminals on one weekday for 18 hours starting from 5:00 a.m.

(5) Bus Terminal Passenger Count Survey

(1) Survey Methodology

This survey was conducted by counting the number of passengers by route in major bus terminals in the CALA area.

(2) Survey Stations

Passenger count was conducted simultaneously with the Public Transport Route Survey at the following selected major terminals in the CALA area.

Table 3.7 List of Bus Terminals for Passenger Count Survey

Station No.	Terminal Name
BACLARAN	
01-A	Baclaran Terminal (in front of McDonalds)
01-B	Baclaran (Mini-Bus) Cavite (Naic/Tanza)
01-C	DMML-Bus Terminal (in front of LRT)
01-D	Saulog Terminal (in front of LRT)
LAWTON	
02	Lawton Bus Terminal
TRECE MARTIRES	
03	Trece Martires (roadside terminal)
ALABANG	
04-A	Alabang Bus Terminal (Metropolis)
04-B	Alabang Bus Terminal (Dela Rosa)
NAIC	
06	Naic Bus Terminal
CAVITE CITY	
07	Cavite City Bus Terminal
MAKATI CITY	
08	Ayala Center Terminal

(3) Survey Duration

The survey was conducted at the bus terminals on one weekday for 14 hours starting from 6:00 a.m.

(6) Axle Load Survey

(1) Survey Methodology

This survey was carried out by stopping vehicles at stations. Weights of each axle (one-side wheel only) were measured with the use of a Loadometer. Other information such as vehicle type, number of axles, loading capacity, load factors, and type of loaded cargoes was also recorded.

(2) Survey Stations

There were two (2) stations for this survey as shown in Figure 3.5. Exact locations and landmarks of survey are listed in Table 3.8.

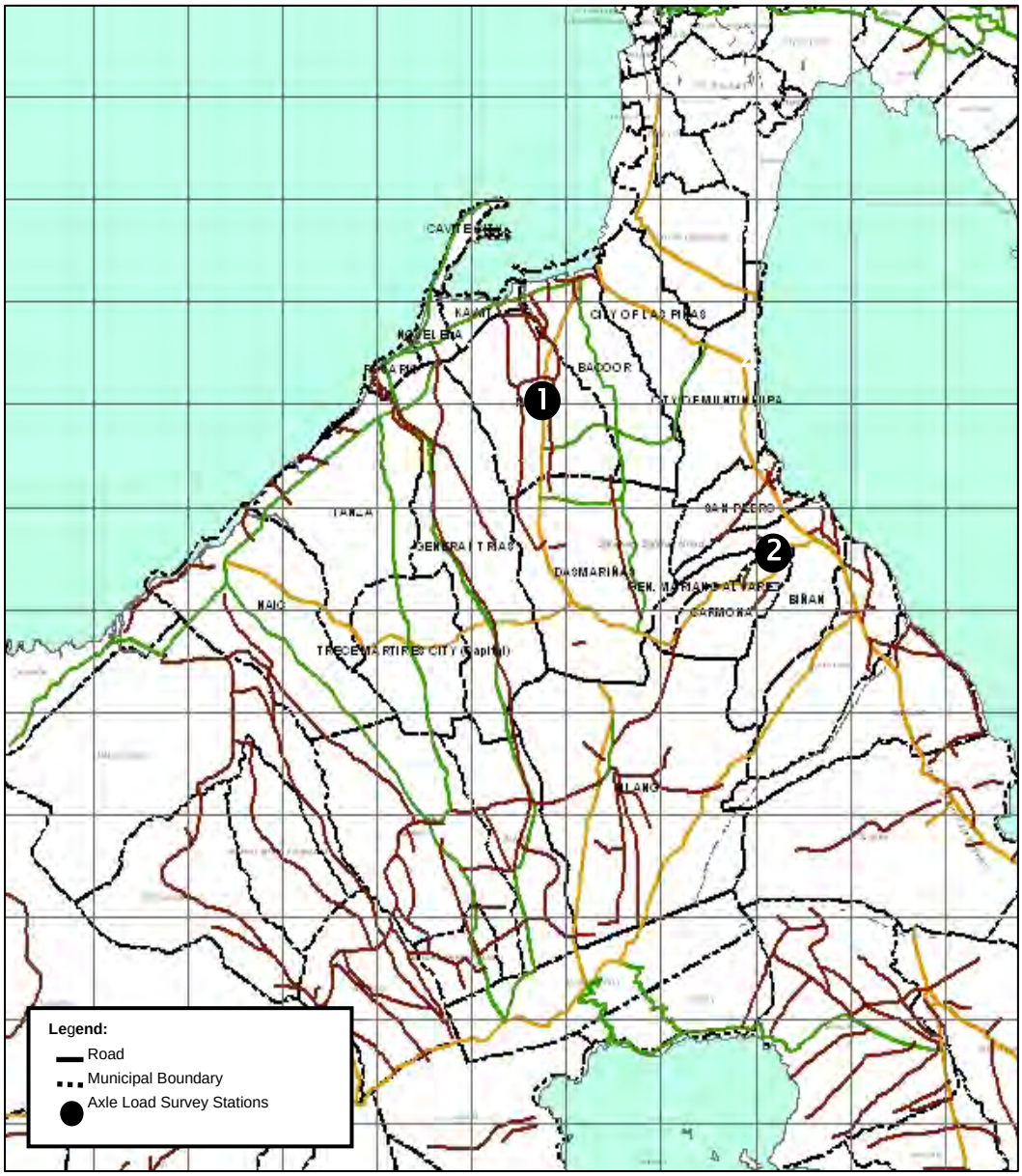
(3) Survey Durations

The survey was conducted for 24 hours starting from 6:00 a.m. continuously for two (2) days.

Table 3.8 Location of Axle Load Survey Stations

Station	Barangay Location	Road Name	Direction	Landmark
1				
1a	Barangay Anabu 1D, Imus, Cavite	Aguinaldo Highway	Southbound	Casa Real Montessori School
1b	Barangay Anabu 2C, Imus, Cavite	Aguinaldo Highway	Northbound	Joshua Construction Supply fronting Imus Metro Enterprises
2				
2a	Barangay Bancal, Carmona, Cavite	Governor's Drive	Westbound	Mango trees fronting residential area after coming from Shell Station
2b	Barangay Bancal, Carmona, Cavite	Governor's Drive	Eastbound	Residential area fronting the residence of the Barangay Captain

Figure 3.5 Axle Load Survey Stations



(7) Resident Interview Survey

(1) Survey Methodology

Interviewers visited and conducted interviews to the targeted residents and families/households based on the questionnaire form prepared by the JICA Study Team. Socioeconomic conditions, preference for road development and resettlement destination within the study area were identified in the survey.

(2) Coverage of the Survey

A total of 2,014 respondents were interviewed during home visits in the 18 cities/municipalities (50-200 samples per LGU) as shown in Table 3.9.

(8) Business Establishment Survey

(1) Survey Methodology

Interviewers visited the selected business operators in the area and conducted an interview with the appropriate person, such as the operating and/or financial managers, based on the questionnaire form prepared by JICA Study Team. Preferences and options towards economic activities and road development were identified in the survey.

(2) Coverage of the Survey

As shown in Table 3.10, a total of 505 respondents were interviewed during visits to the various business enterprises in the 18 cities/municipalities, with the total number of respondents distributed along the following major roads:

- Governor's Drive (Carmona-GMA-Silang-Dasmariñas-Gen. Trias-Trece Martires-Tanza)
- Aguinaldo Highway (Bacoor-Imus-Dasmariñas-Silang)
- Manila-Cavite Road (Bacoor-Kawit-Noveleta-Rosario)
- Zapote-Salawag-Salitran Road (Bacoor-Dasmariñas)
- Noveleta-Naic-Tagaytay Road (Naic)

Classification of business establishments are shown in Table 3.11.

Table 3.9 Distribution of Respondents for the Resident Interview Survey

	No. of Samples
1. MUNTINLUPA	**201**
Alabang	44
Poblacion	44
Putatan	75
Tunasan	38
2. CAVITE	**101**
Barangay 3 (Hen. E. Aguinaldo)	9
Barangay 4 (Hen. M. Trias)	3
Barangay 5 (Hen. E. Evangelista)	18
Barangay 6 (Diego Silang)	21
Barangay 8 (Manuel S. Rojas)	50
3. BACOOR	**202**
Queens Row Central	13
Queens Row East	20
Queens Row West	12
Molino II	34
Molino III	123
4. CARMONA	**100**
Lantic	17
Milagrosa	43
Barangay 1 (Pob.)	9
Barangay 2 (Pob.)	3
Barangay 3 (Pob.)	4
Barangay 4 (Pob.)	3
Barangay 5 (Pob.)	3
Barangay 6 (Pob.)	3
Barangay 7 (Pob.)	3
Barangay 8 (Pob.)	12
5. SILANG	**101**
Biga 2	30
Ipil 1	13
Ipil 2	21
Anahaw 2	23
Narra 3	14
6. DASMARIÑAS	**151**
Sabang	38
Salitran I	23
San Isidro Labrador I	30
Langkaan II	60
7. GENERAL TRIAS	**200**
Dulong Bayan Pob. (Bgy. 3)	20
San Gabriel Pob. (Bgy. 4)	29
Bagumbayan Pob. (Bgy. 5)	22
Vibora Pob. (Bgy. 6)	25
Navarro	43
Pasong Camachile I	61
8. IMUS	**200**
Anabu II-A	19
Malagasang I-A	17
Malagasang II-A	40
Pasong Buaya I	16
Anabu II-B	70
9. KAWIT	**50**
San Sebastian	4
Batong Dalig	21
Tabon II	10
Tabon III	15
10. NAIC	**50**
Sabang	12
Bayo Silangan	38
11. NOVELETA	**100**
Poblacion	26
Salcedo I	20
Santa Rosa I	23
San Jose II	19
Santa Rosa II	12
12. ROSARIO	**53**
Bagbag I	26
Wawa I	27
13. TANZA	**101**
Bagtas	29
Biga	17
Paradahan I	25
Sahud Ulan	20
Tres Cruses	10
14. TRECE MARTIRES CITY	**154**
San Agustin (Pob.)	106
Gregorio (Aliang)	48
15. GEN. MARIANO ALVAREZ	**50**
Barangay 1 Poblacion (Area I)	9
Barangay 2 Poblacion	8
Barangay 3 Poblacion	4
Barangay 4 Poblacion	8
Barangay 5 Poblacion	21
16. BIÑAN	**100**
Biñan (Poblacion)	1
Santo Tomas (Calabuso)	81
Langkiwa	5
Poblacion	8
Timbao	5
17. SAN PEDRO	**100**
Bagong Silang	25
Magsaysay	47
United Better Living	8
Sampaguita Village	20
Total	**2,014**

Table 3.10 Distribution of Respondents for the Business Establishment Survey

Study Area (excl. Muntinlupa and Las Pinas)	Number of Establishments by Number of Employees											
	Total		1 - 9		10 - 99		100 - 199		200 or more		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cavite Province												
Bacoor	85	17	81	95	4	5	1	0.3	1	0.1	87	100
Carmona	10	2	8	78	1	14	1	3.4	1	4.6	11	100
Cavite City	25	5	23	93	2	6	1	0.2	1	0.1	27	99
Dasmarinas	35	7	30	87	3	9	1	1.5	1	2.6	35	100
General Trias	20	4	19	95	1	3	1	0.6	1	1.6	22	100
Imus	50	10	47	94	3	5	1	0.2	1	0.3	52	100
Kawit	25	5	24	97	1	3	1	0.2	0	0	26	100
Naic	15	3	14	96	1	4	0	0	0	0	15	100
Noveleta	10	2	10	96	1	4	0	0	1	0.2	12	100
Rosario	30	6	23	76	3	9	1	2.9	4	12.2	31	100
Silang	30	6	29	95	1	4	1	0.3	1	0.7	32	100
Tanza	15	3	14	95	1	5	1	0.1	1	0.4	17	101
Trece Martires City	10	2	9	90	1	10	1	0.2	1	0.2	12	100
GMA	10	2	9	94	1	6	1	0.2	0	0	11	100
Laguna Province												
Binan	70	14	64	91	5	7	1	0.7	1	1.2	71	100
San Pedro	65	13	60	93	4	6	1	0.6	1	0.3	66	100
Total	505		464	92	33	6.5	14	3	16	3	527	104

Source of Basic Data: NATIONAL STATISTICS OFFICE, Industry & Trade Statistics Department, 2003 List of Establishments

Note: The computed number of samples most especially in the 10 - 99; 100 - 199, and 200 or more business sizes have been rounded off to the nearest whole number.
The corrected sample numbers are higher than intended and percentages will not therefore necessarily represent the whole numbers presented in the table. It is also due to automatic spreadsheet rounding from the previous source tables.

Table 3.11 Classification of Business Establishments by Employment & Asset Size

Type	Employment Size	Asset Size (excluding land)
Micro	1-9	Less than P1,500,000
Small	10-99	₱1,500,000 to ₱ 15,000,000
Medium	100-199	₱ 15,000,001 to ₱ 100,000,000
Large	200 and over	Over ₱ 100,000,000.00

3.2 Environment Surveys

(1) Ambient Air Quality Measurement

(1) Survey Methodology

The 24-hour ambient air quality sampling was conducted on the same day of the traffic count survey. The methods of sampling and analysis used are Pararosaniline Method for SO_2, Griess-Saltzman Reaction for NO_2 and Gravimetric method for TSP. After sampling was conducted, the gas samples were carefully recovered from the samplers and placed in the sampling bottles. These were then preserved at low temperature and instantaneously submitted to the laboratory for analysis.

(2) Survey Stations

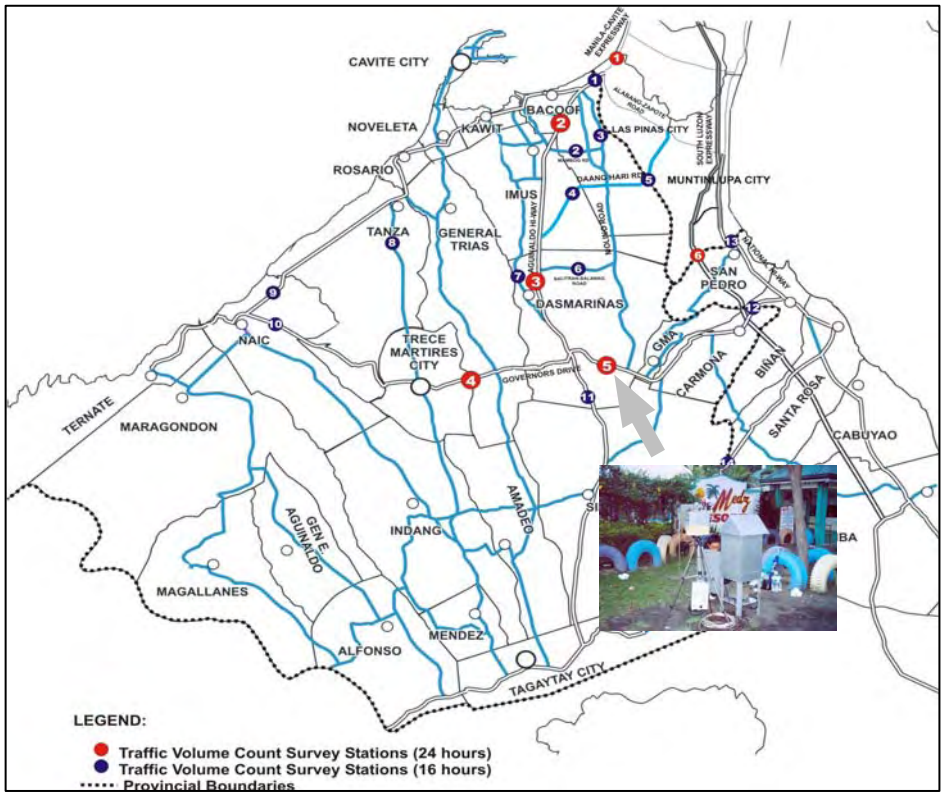
The survey location was pre-determined by the JICA Study Team in consultation with the DPWH-PMO FS. The sampling station as prescribed in the TOR was located near the survey point of the traffic count survey with a distance of 20

meters away from the existing main road (Governor's Drive), designated as Survey Point No. 5 as shown in Figure 3.6.

(3) Survey Durations

A 24-hour sampling was conducted for one day, and one (1) hour average data was then estimated based on the measurement.

Figure 3.6 Ambient Air Quality Measurement Survey Point



(2) Noise Level Measurement

(1) Survey Methodology

The 24-hour noise level measurements were conducted on the same day of the traffic count surveys and consisted of 10-minute continuous measurements per hour.
Noise monitoring was conducted at different locations continuously for twenty four hours monitoring. Recording the lowest and highest noise levels at each four compass directions for a period of ten (10) minutes every hour was conducted. The logarithmic average of these noise levels gives the equivalent noise level (Leq).

(2) Survey Stations

The survey locations were pre-determined by the JICA Study Team in consultation with the DPWH-PMO FS. The sampling stations were located along Governor's

Drive and Aguinaldo Highway as shown in Figure 3.7. The exact locations and landmarks are as described in Table 3.12.

(3) Survey Durations

Twenty four (24) hour sampling was conducted for one day at 10 minutes continuous measurement per hour.

Figure 3.7 Noise Level Measurement Survey Locations

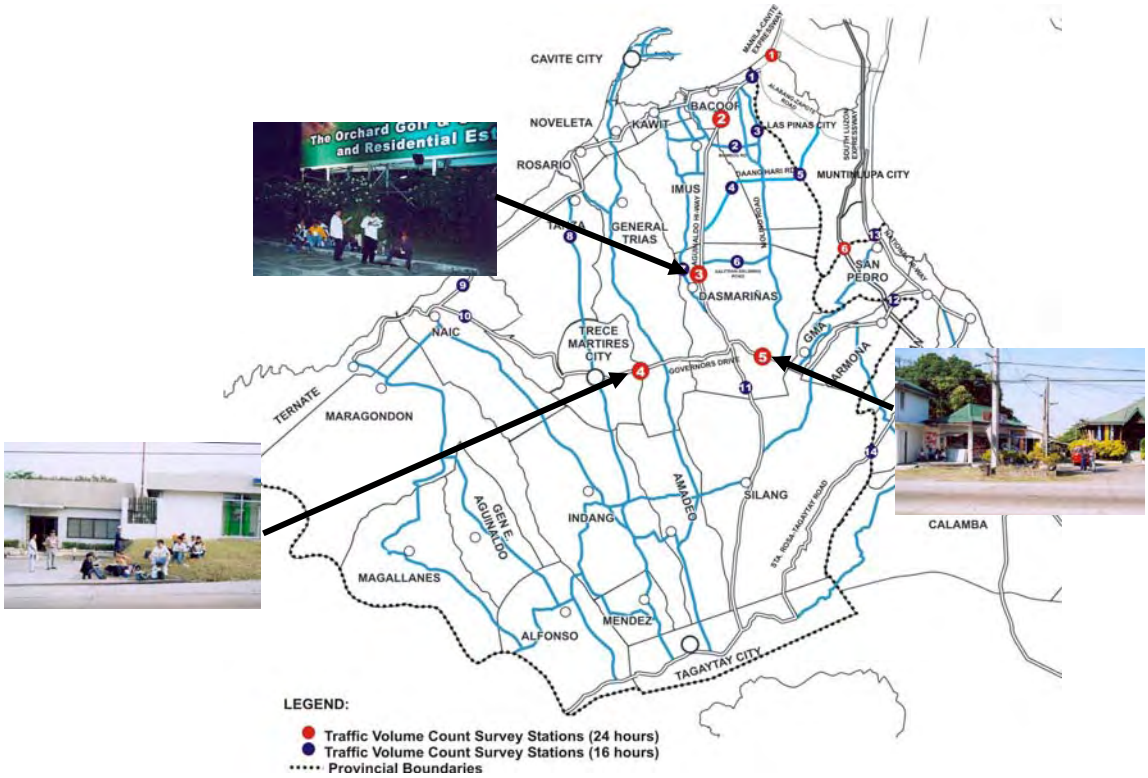


Table 3.12 Scope of Noise Level Measurement Survey

(1) Survey Location: Four locations at the same survey points selected for the traffic count survey (Survey Point Nos. 2 and 3 along Aguinaldo Highway, and Nos. 4 and 5 along Governor's Drive as shown in Figure 3.7.) The noise level measurement was conducted on the same day of the traffic count survey.	
Station Number 2	Imus-Bacoor Boundary (fronting Maynilad Water Offices) along Aguinaldo Highway
Station Number 3	Entrance to the Orchard Golf and Country Club along Aguinaldo Highway
Station Number 4	Yamamura Pulo Molds along Governor's Drive
Station Number 5	Medz Resort and Restaurant Compound along Governor's Drive
(2) Survey items	Average noise level (dB) per 10 minutes with traffic volume for 10 minutes.

Note: Station number assignments corresponds to Traffic Count Survey station numbering

(3) Water Quality Sampling

(1) Survey Methodology

Water sampling was conducted at the upper, middle and lower reaches/streams of the Imus River and Ylang-Ylang River for three sampling periods for one day (morning, afternoon, and evening). Collected samples were placed in DENR-

approved containers and immediately brought to the DENR Regional Office IV laboratory in Kawit, Cavite, the nearest laboratory that can handle the volume of collected samples at each run of the sampling activity, for laboratory processing.

(2) Sampling Stations

Using a topographic map with 1:50,000 scale, sampling stations were selected after considering the following factors: consistency with the DENR-4 Sampling Stations standards (as much as possible); proximity of the stations to the conceptual alignment; accessibility (preferably in bridge locations); and security. The sampling locations are listed in Table 3.13 and shown in Figure 3.8.

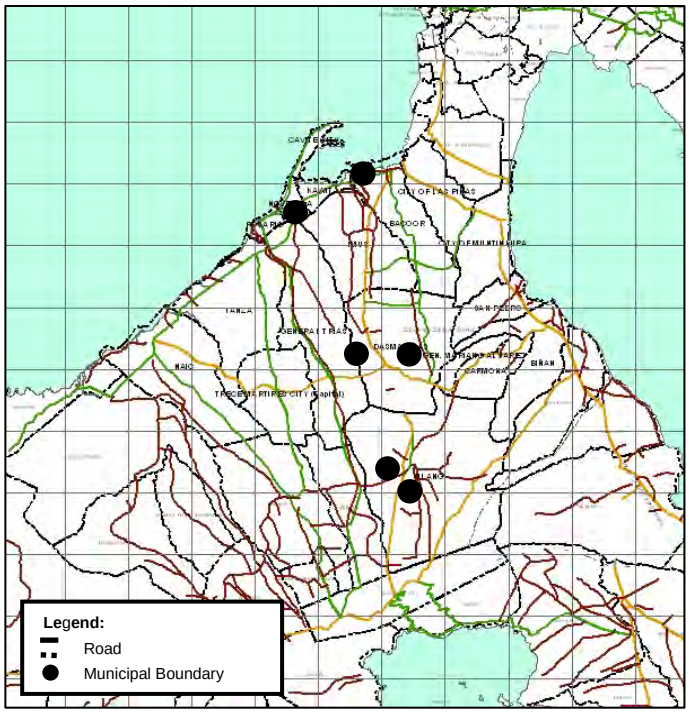
Table 3.13 Water Quality Sampling Locations

Sampling Location	Imus River	Ylang-Ylang River
Downstream	Island Cove Bridge @ Elev. 11.0 m with coordinates 0276108/1599596	Noveleta Diversion Bridge @ Elev. 2.0 m with coordinates 0271862/1596404
Midstream	Salitran Bridge @ Elev. 82.0 m with coordinates 0279580/1584959	Ibayo Resort @ Elev. 83 m with coordinates 0277188/1584769
Upstream	Balite I Bridge @ Elev. 354.0 m with coordinates 0282206/1570433	Luksuhin Bridge @ Elev. 325 m with coordinates 0279454/1571963

(3) Sampling Schedule

The sampling activities for the two rivers were done separately on different dates. For the Imus River, the sampling activity was conducted on March 3, 2005 while for the Ylang-Ylang River, the sampling activity was conducted on March 8, 2005. The separate scheduling was done in consideration of the limitations of the laboratory facilities and the number of personnel doing the tests.

Figure 3.8 Water Quality Sampling Stations



4 SURVEY RESULTS

In this section, a summary of outputs and results of the transport and environmental surveys are presented, with more specific survey results and outputs presented in the respective component survey reports.

4.1 Roadside Vehicle Counts

The summarized Roadside Vehicle Counts survey results for each travel direction, survey station and survey date are shown in Table 4.1. Individual survey results are presented in Traffic Survey Report Volume 1: Roadside Traffic Counts and Passenger Occupancy Checks (TSR-V1).

Table 4.1 Summary of Total Daily Traffic Volumes (combined directions)

Station	Road	24-hour Traffic Volume		16-hour Traffic Volume	
		Day 1	Day 2	Day 1	Day 2
Station 01	Manila-Cavite Expressway	61,700	60,264	49,578	50,479
Station 02	Aguinaldo Highway	41,898	43,692	33,327	35,069
Station 03	Aguinaldo Highway	33,103	31,710	27,566	26,735
Station 04	Governor's Drive	23,339	24,427	20,719	21,881
Station 05	Governor's Drive	28,925	28,775	26,040	26,158
Station 06	Amadeo - General Trias Road	-	-	6,390	6,571
Station 07	Aguinaldo Highway	32,008	30,714	25,165	23,929
Station 08	Tirona Highway (Highway 25)	-	-	13,125	13,005
Station 09	Molino Road	-	-	22,827	23,501
Station 10	Daang Hari Road	-	-	12,921	14,637
Station 11	Salitran - Salawag Road	-	-	13,142	13,836
Station 12	Don P Campos Avenue	-	-	13,761	15,228
Station 13	Tanza - Indang Road	-	-	14,763	13,695
Station 14	Noveleta - Tanza - Naic Road	-	-	7,288	6,885
Station 15	Governor's Drive	-	-	3,097	2,932
Station 16	Aguinaldo Highway	-	-	14,253	14,808
Station 17	Carmona National Road	-	-	18,914	17,168
Station 18	Manila South Road	-	-	26,833	25,928
Station 19	Sta Rosa – Tagaytay Road	-	-	9,588	9,536

The summarized Average Passenger Occupancy values for all vehicle types passing through the stations are shown in Table 4.2. Individual survey results for the average passenger occupancy surveys are also presented in TSR-V1.

Table 4.2 Summary of Average Daily (16-hour) Passenger Occupancy

Station	Road	First Survey Day		Second Survey Day	
		Direction 1	Direction 2	Direction 1	Direction 2
Station 01	Manila-Cavite Expressway	8.69	7.54	8.99	6.07
Station 02	Aguinaldo Highway	5.84	5.40	5.61	5.54
Station 03	Aguinaldo Highway	7.02	5.64	6.63	5.46
Station 04	Governor's Drive	4.82	4.17	5.94	4.16
Station 05	Governor's Drive	3.83	4.23	4.12	3.28
Station 06	Amadeo - General Trias Road	2.83	2.38	2.85	2.62
Station 07	Aguinaldo Highway	4.50	4.71	4.32	4.15
Station 08	Tirona Highway (Highway 25)	6.50	5.99	6.57	6.40
Station 09	Molino Road	2.73	3.93	3.72	2.47
Station 10	Daang Hari Road	1.60	1.51	1.89	1.69
Station 11	Salitran - Salawag Road	2.25	3.05	2.21	2.61
Station 12	Don P Campos Avenue	3.12	3.88	3.12	4.48
Station 13	Tanza - Indang Road	3.13	3.48	3.00	3.24
Station 14	Noveleta - Tanza - Naic Road	5.05	4.79	5.09	4.93
Station 15	Governor's Drive	3.21	3.54	3.49	3.39
Station 16	Aguinaldo Highway	4.51	6.75	3.93	6.31
Station 17	Carmona National Road	5.67	4.53	6.47	4.61
Station 18	Manila South Road	5.12	6.80	7.05	7.91
Station 19	Sta Rosa – Tagaytay Road	4.27	3.83	3.83	3.45

The following figures show the hourly variation of traffic volume during Day 1 of survey in each 24-hour survey station.

Figure 4.1 Hourly Variation of Traffic Volume (Station No.1)

(Manila-Cavite Expressway: Boundary of Metro Manila and Cavite)

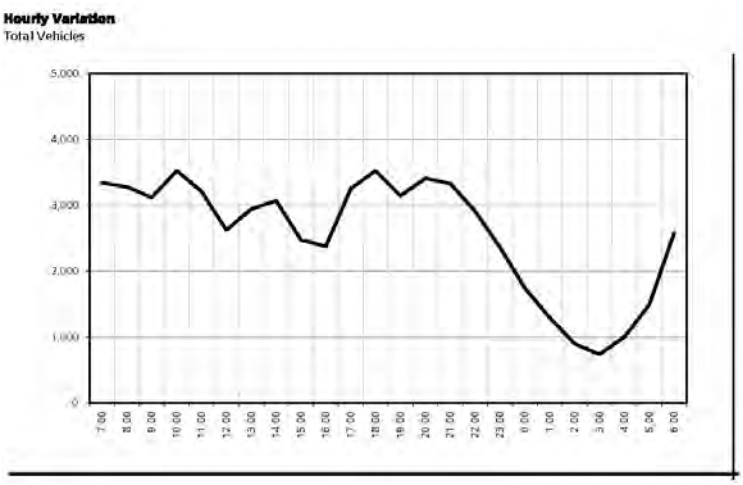


Figure 4.2 Hourly Variation of Traffic Volume (Station No.2)

(Aguinaldo Hi-way @ Bgy Real, Bacoor: Between Tirona Highway and Mambog Road)

Figure 4.3 Hourly Variation of Traffic Volume (Station No.3)

(Aguinaldo Highway @ Bgy Anabu 2, Imus: North of Salawag-Salitran Road)

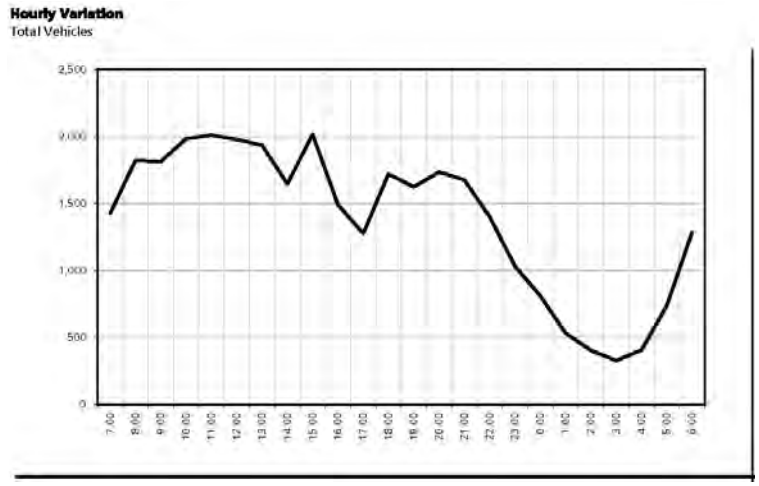


Figure 4.4 Hourly Variation of Traffic Volume (Station No.4)

(Governor's Drive @ Bgy San Francisco, Gen Trias: Between Manggahan and Palapala)

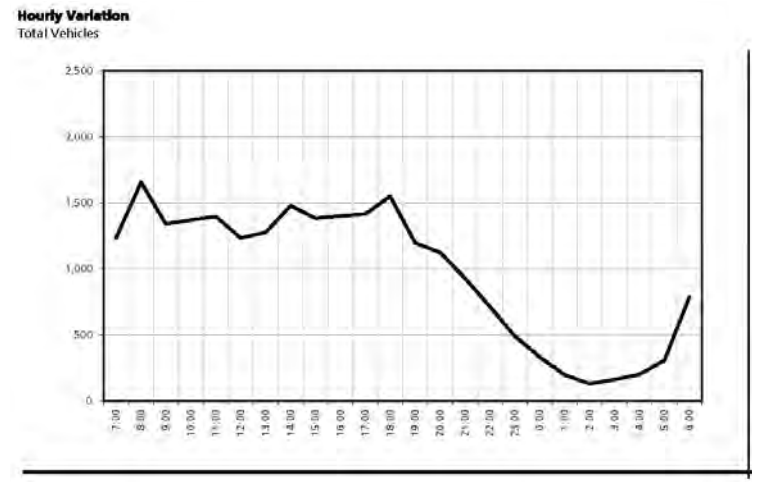


Figure 4.5 Hourly Variation of Traffic Volume (Station No.5)

(Governor's Drive @ Bgy Paliparan, Dasmarinas: Between Molino Rd and GMA)

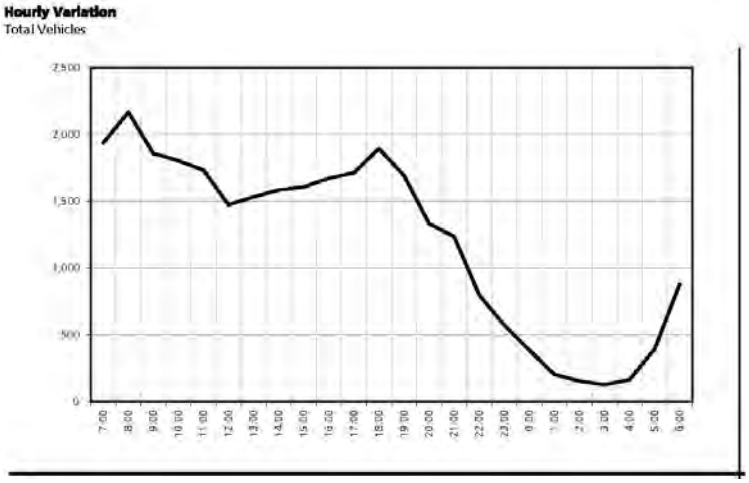
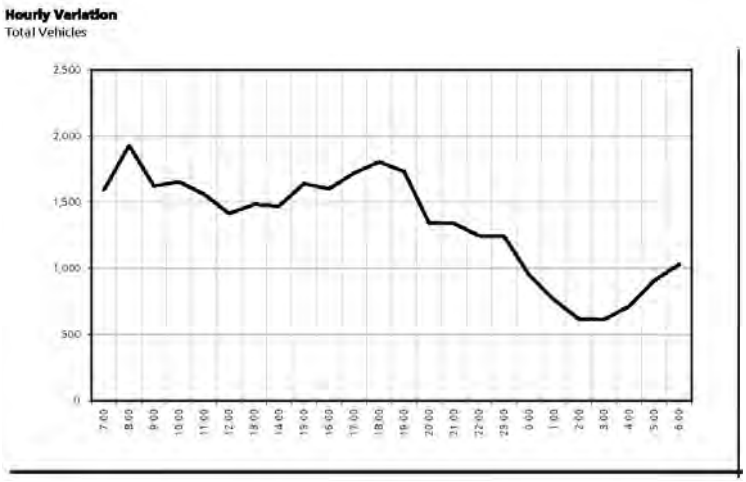


Figure 4.6 Hourly Variation of Traffic Volume (Station No.7)

(Aguinaldo Hi-way @ Bgy Zapote III, Bacoor: Boundary of Las Pinas and Bacoor)



A summary of the Average Daily Traffic Volume and Average Occupancy are shown in Table 4.3 and Table 4.4, respectively. Appendix 1 of this report presents the detailed average daily traffic volume per survey hour as well as average daily passenger car unit and person trips.

Table 4.3 Summary of Average Daily Traffic Volume (Both directions)

Station	Road Section	Survey Duration (No. of hours)	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi/HOV Taxi	Car/Jeep	Utility Vehicle	Truck/Trailer	Others	Total
1	Manila-Cavite Expressway	24	242	52	5,770	570	3,866	5,267	18,586	23,068	3,451	113	60,982
2	Aguinaldo Highway	24	3,309	538	8,243	85	2,168	1,939	10,194	12,160	3,618	543	42,795
3	Aguinaldo Highway	24	1,973	128	8,360	58	2,185	709	7,444	8,818	2,579	155	32,407
4	Governor's Drive	24	1,951	771	5,067	115	702	148	5,803	6,842	2,294	244	23,937
5	Governor's Drive	24	2,070	3,854	3,454	38	301	289	5,641	9,696	2,986	524	28,850
6	Amadeo - General Trias Road	16	839	2,014	210	34	41	20	1,423	2,405	780	148	7,913
7	Aguinaldo Highway	24	4,531	1,514	10,950	1,768	67	985	3,380	4,122	1,198	2,849	31,361
8	Tirona Highway (Highway 25)	16	1,698	1,701	1,150	2,993	406	311	3,041	3,190	461	625	15,577
9	Molino Road	16	2,847	1,235	5,501	19	35	1,325	5,443	9,025	1,871	626	27,928
10	Daang Hari Road	16	1,390	116	85	20	12	411	5,552	7,325	986	458	16,356
11	Salitran - Salawag Road	16	1,118	4,936	269	12	18	177	3,619	5,027	938	245	16,357
12	Don P Campos Avenue	16	1,229	6,999	2,258	8	941	107	2,514	2,751	367	426	17,598
13	Tanza - Indang Road	16	3,279	5,962	1,992	48	19	80	1,914	2,578	848	544	17,264
14	Noveleta - Tanza - Naic Road	16	1,446	828	496	1,989	203	165	1,011	1,716	663	45	8,563
15	Governor's Drive	16	419	616	244	2	11	20	732	1,096	531	42	3,713
16	Aguinaldo Highway	16	934	241	3,383	27	866	106	4,195	6,039	1,587	183	17,562
17	Carmona National Road	16	2,165	1,463	5,637	40	956	182	3,573	4,934	2,268	764	21,983
18	Manila South Road	16	4,502	1,927	8,727	45	1,557	742	4,323	6,360	2,233	1,429	31,845
19	Sta Rosa – Tagaytay Road	16	958	437	716	39	166	83	2,922	4,887	1,290	72	11,571

* Traffic counts at 16-hr survey stations (6, 8-19) were expanded to 24 hours.

Table 4.4 Average Occupancy

Station	Road Section	Survey Duration (No. of hours)	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi/HOV Taxi	Car/Jeep	Utility Vehicle	Truck/Trailer	Others
1	Manila-Cavite Expressway	24	1.24	2.32	12.39	22.84	40.73	3.96	1.93	3.86	2.22	1.12
2	Aguinaldo Highway	24	1.28	1.98	9.50	15.90	30.36	3.55	1.64	2.93	2.22	1.02
3	Aguinaldo Highway	24	1.25	2.40	7.88	18.60	30.37	2.27	1.62	3.07	2.27	1.03
4	Governor's Drive	24	1.29	2.22	10.99	16.51	30.88	2.06	1.81	2.31	2.22	1.09
5	Governor's Drive	24	1.33	2.50	11.83	14.03	17.65	2.65	1.86	3.38	2.09	1.04
6	Amadeo - General Trias Road	16	1.34	2.27	8.85	10.22	11.67	1.58	1.52	3.61	1.86	1.03
7	Aguinaldo Highway	24	1.38	2.18	7.32	7.11	23.39	2.47	1.92	3.25	2.27	1.03
8	Tirona Highway (Highway 25)	16	1.37	1.84	7.14	16.08	44.91	3.04	1.60	2.54	2.19	1.08
9	Molino Road	16	1.28	2.00	8.86	9.70	21.06	3.02	1.68	2.36	2.32	1.02
10	Daang Hari Road	16	1.26	1.91	4.58	6.45	12.55	3.32	1.40	1.81	2.22	1.00
11	Salitran - Salawag Road	16	1.33	2.88	3.37	17.00	14.92	2.02	1.71	2.98	2.60	1.01
12	Don P Campos Avenue	16	1.41	1.82	8.96	7.40	17.07	1.84	2.24	2.62	3.16	1.02
13	Tanza - Indang Road	16	1.50	2.30	11.40	4.94	6.53	2.17	1.94	3.63	2.47	1.03
14	Noveleta - Tanza - Naic Road	16	1.46	2.56	9.09	9.70	19.96	4.99	2.12	3.88	2.34	1.00
15	Governor's Drive	16	1.39	2.43	13.88	1.67	11.76	3.32	1.95	3.81	2.45	1.07
16	Aguinaldo Highway	16	1.36	2.08	10.36	17.97	34.15	2.84	1.88	2.37	2.47	1.11
17	Carmona National Road	16	1.46	2.24	11.27	12.36	16.97	3.72	1.50	2.75	2.11	1.03
18	Manila South Road	16	1.26	2.03	9.73	18.59	37.12	4.46	1.86	3.20	2.38	1.02
19	Sta Rosa – Tagaytay Road	16	1.29	2.73	16.91	21.81	40.72	2.77	1.56	2.95	2.48	1.03

4.2 Traffic Volume at Major Intersections

The summary of Average Daily Intersection Counts is shown in Figure 4.7 to 4.20. Individual survey results are presented in Traffic Survey Report Volume 2: Intersection Traffic Counts (TSR-V2).

Figure 4.7 Intersection Traffic Volume (Station No.1)

Aguinaldo Highway - Molino Road Intersection (Bacoor

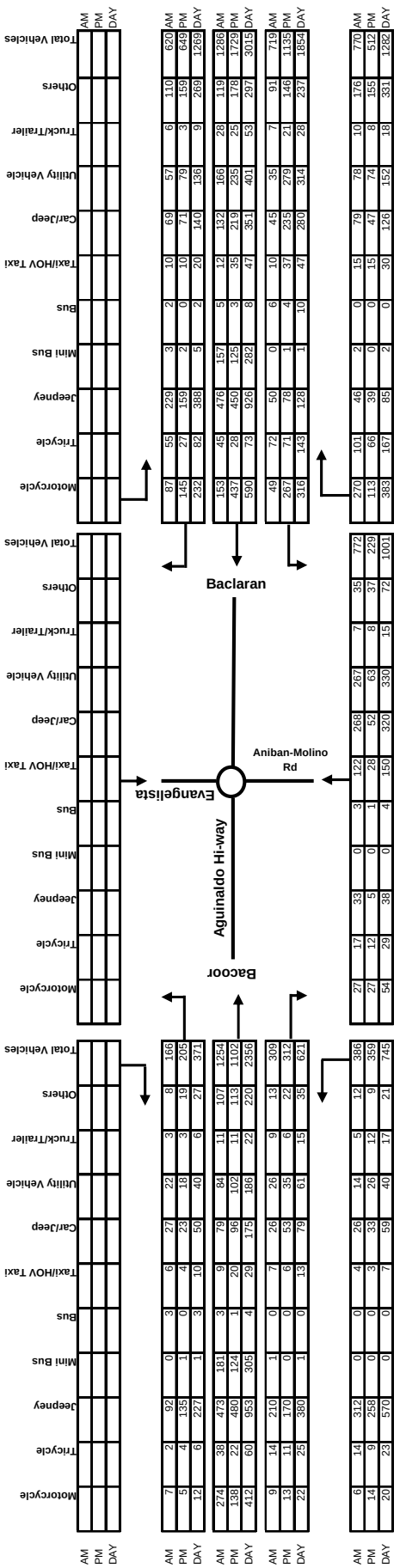
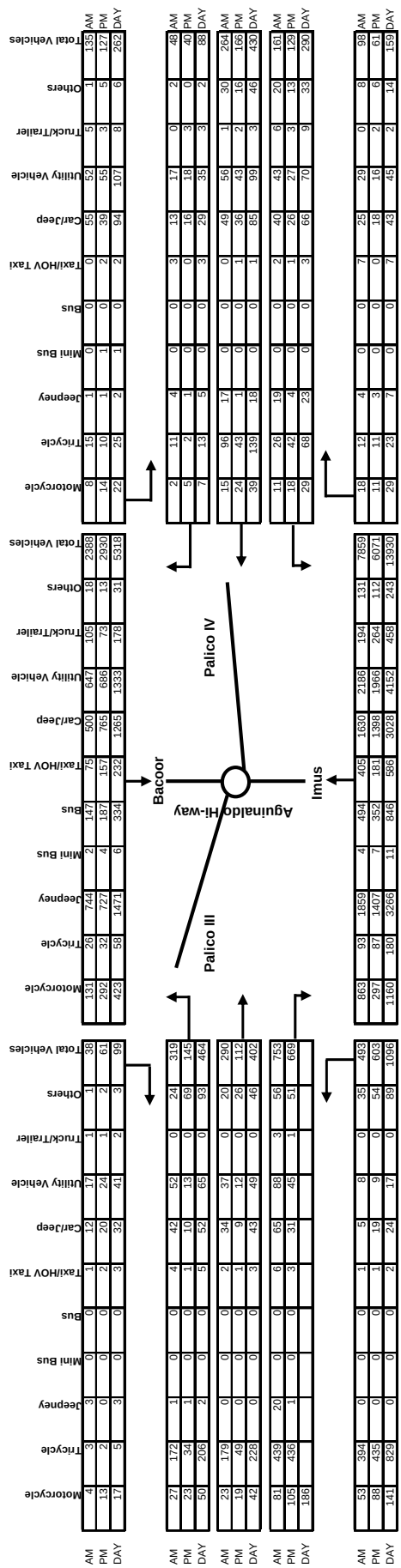


Figure 4.8 Intersection Traffic Volume (Station No.2A)

Aguinaldo Highway - Mambog Road Intersection (Imus)



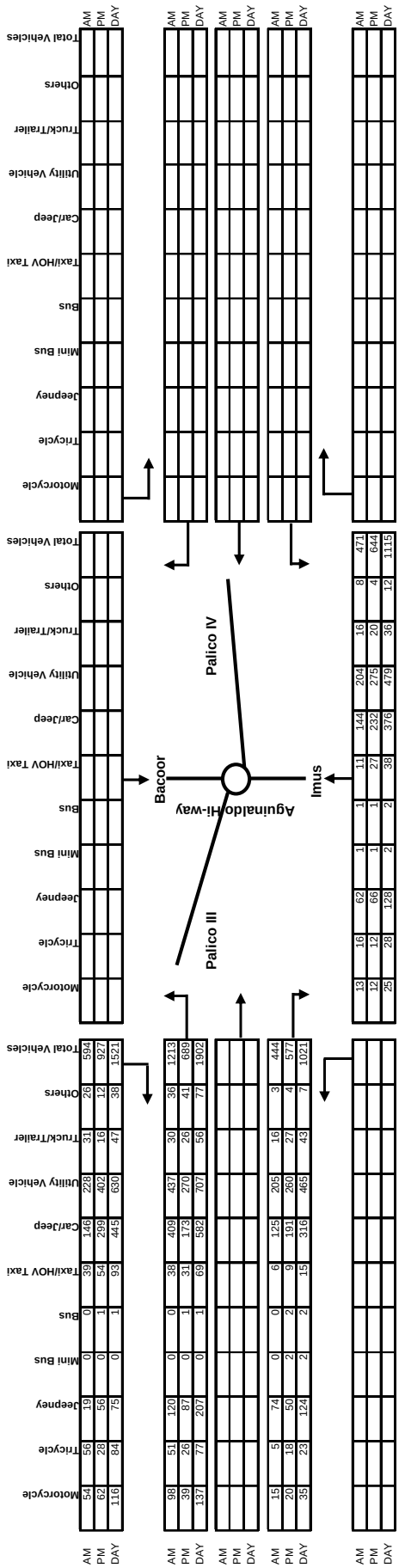


Figure 4.9 Intersection Traffic Volume (Station No.2B)
Aguinaldo Highway - Mambog Road Intersection Bypass (Imus)

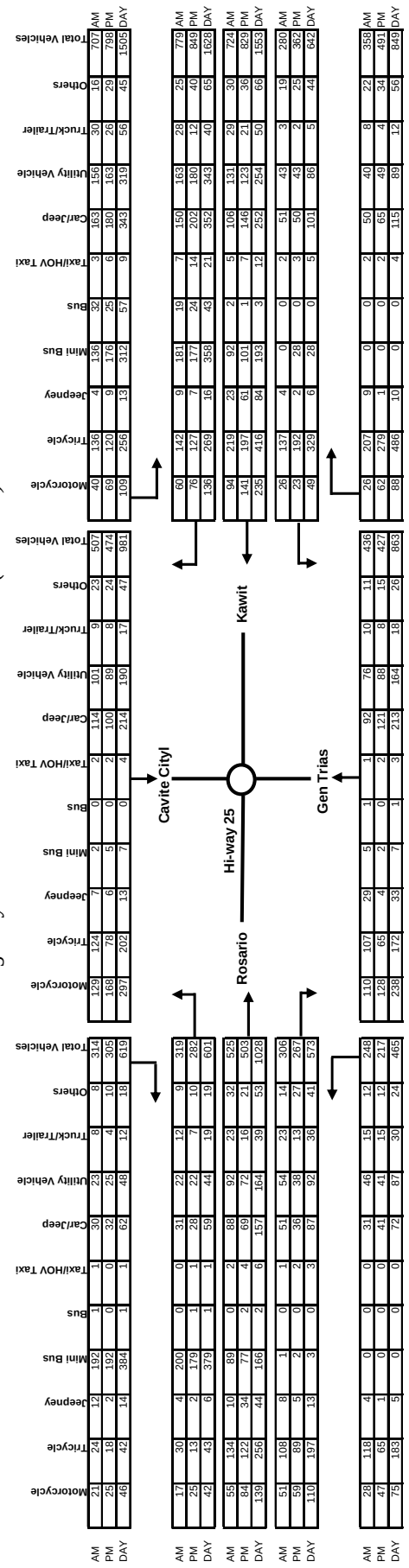


Figure 4.10 Intersection Traffic Volume (Station No.3)
Highway 25 – General Alvarez Intersection (Noveleta)

Figure 4.11 Intersection Traffic Volume (Station No.4)

General Trias Drive – A Soriano Highway / Bakaw Road Intersection (General Trias)

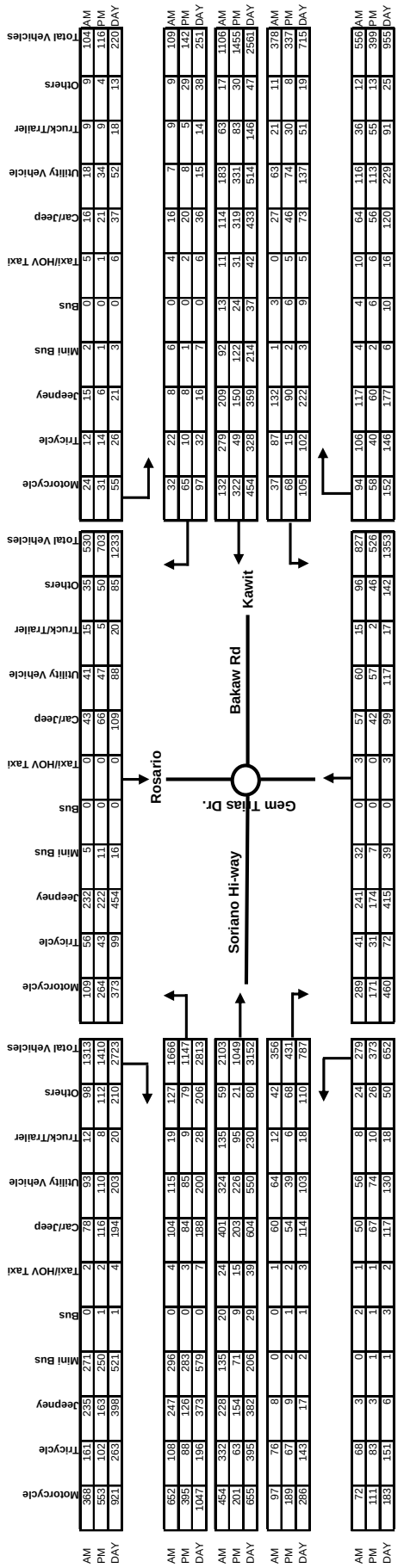


Figure 4.12 Intersection Traffic Volume (Station No.5A)

A Soriano Highway – Governor's Drive Intersection (Naic)

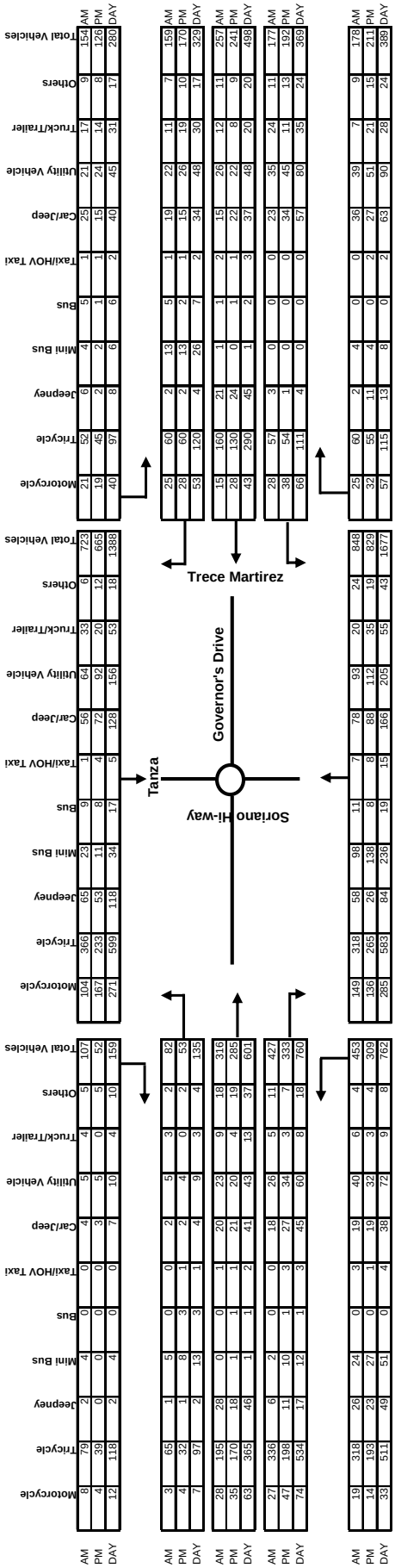


Figure 4.13 Intersection Traffic Volume (Station No.5B)

A Soriano Highway – Governor's Drive Intersection Bypass (Naic)

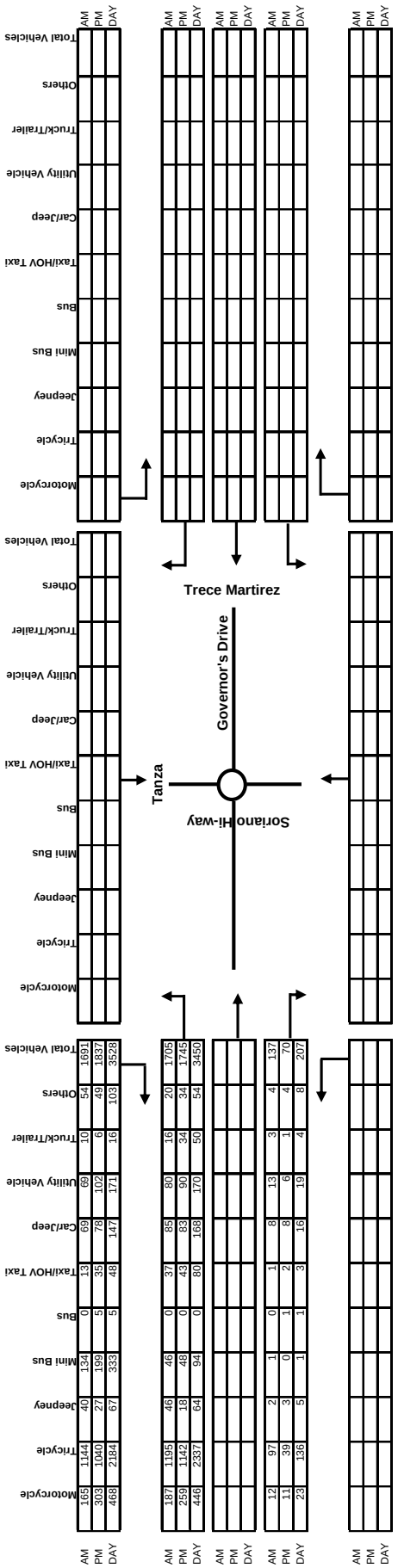


Figure 4.14 Intersection Traffic Volume (Station No.6)

Tanza-Indang Road – Governor's Drive Intersection (Trece Martires City)

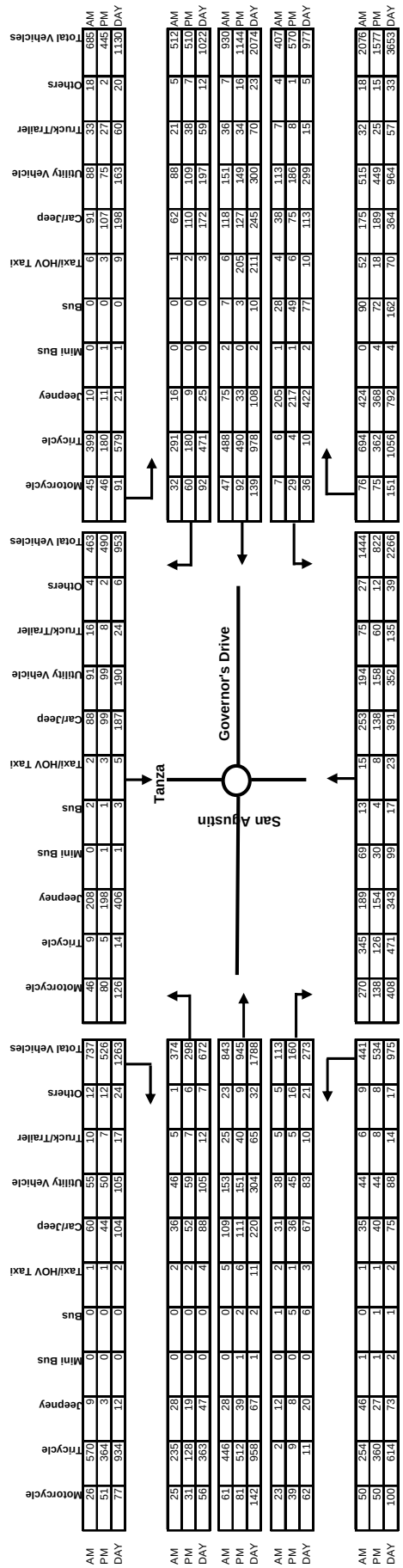


Figure 4.15 Intersection Traffic Volume (Station No.7)

General Trias-Amadeo Road – Governor's Drive Intersection (Manggahan Junction, General Trias)

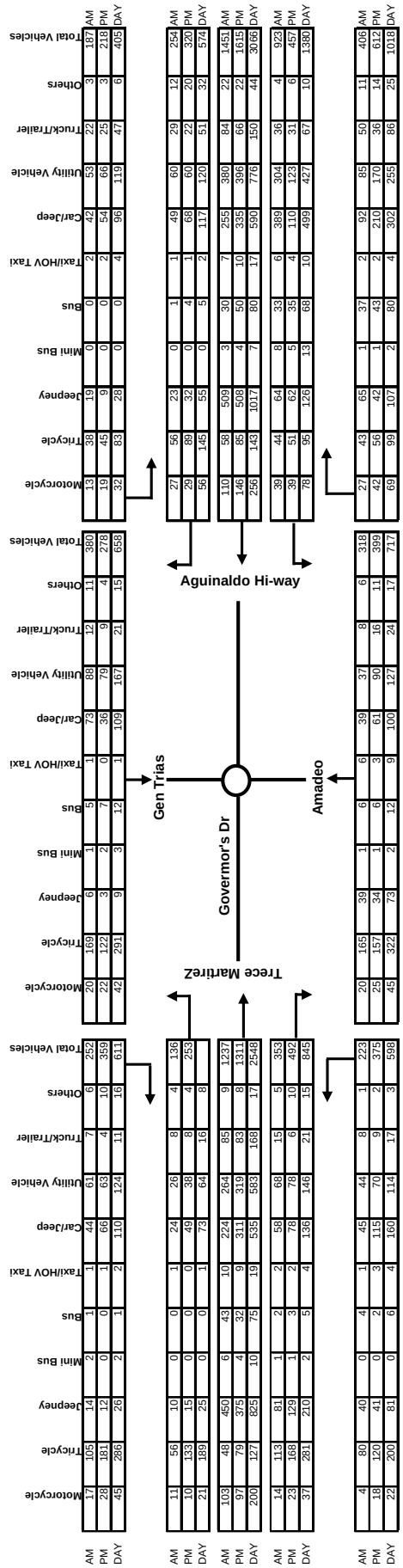


Figure 4.16 Intersection Traffic Volume (Station No.8A)

Aguinaldo Highway – Governor's Drive Intersection (Palapala Junction, Dasmariñas)

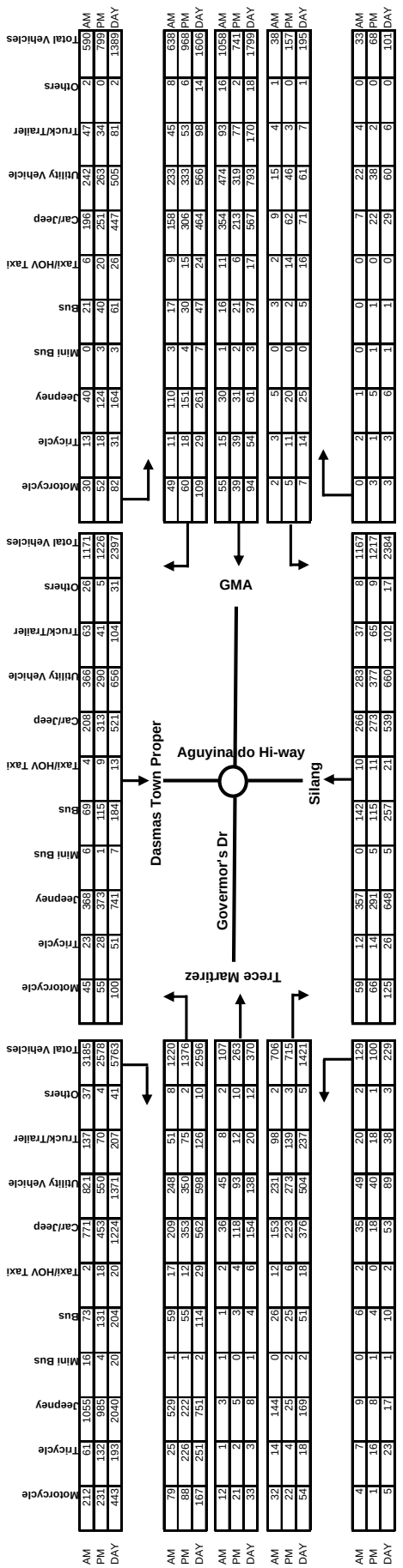


Figure 4.17 Intersection Traffic Volume (Station No.8B)

Aguinaldo Highway – Governor's Drive Intersection – SLEx Bypass (Dasmariñas)

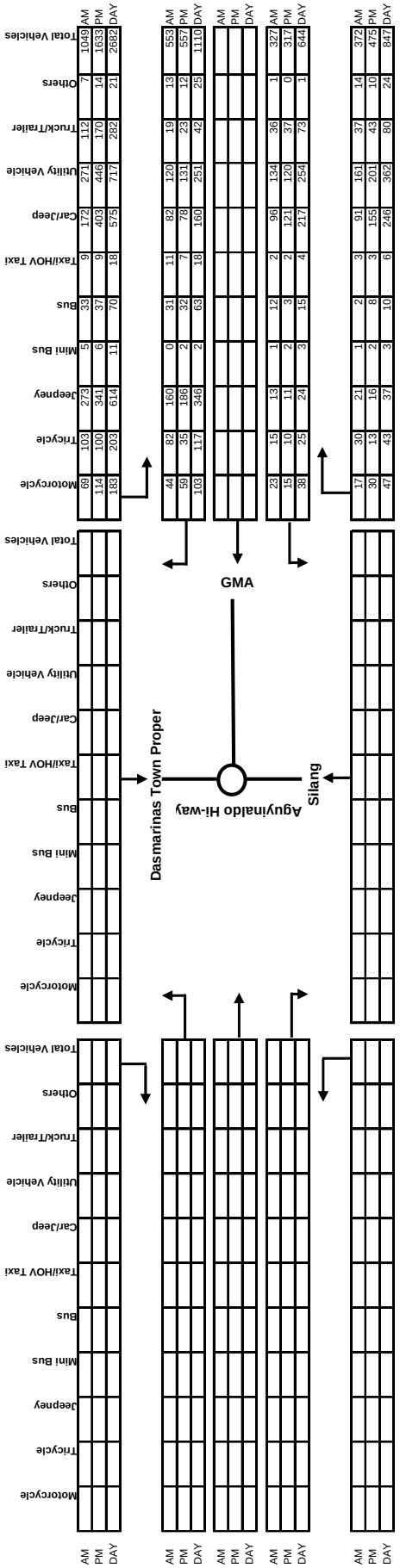


Figure 4.18 Intersection Traffic Volume (Station No.9)

Governor's Drive Intersection – Molino-Paliparan Road Intersection (Dasmariñas)

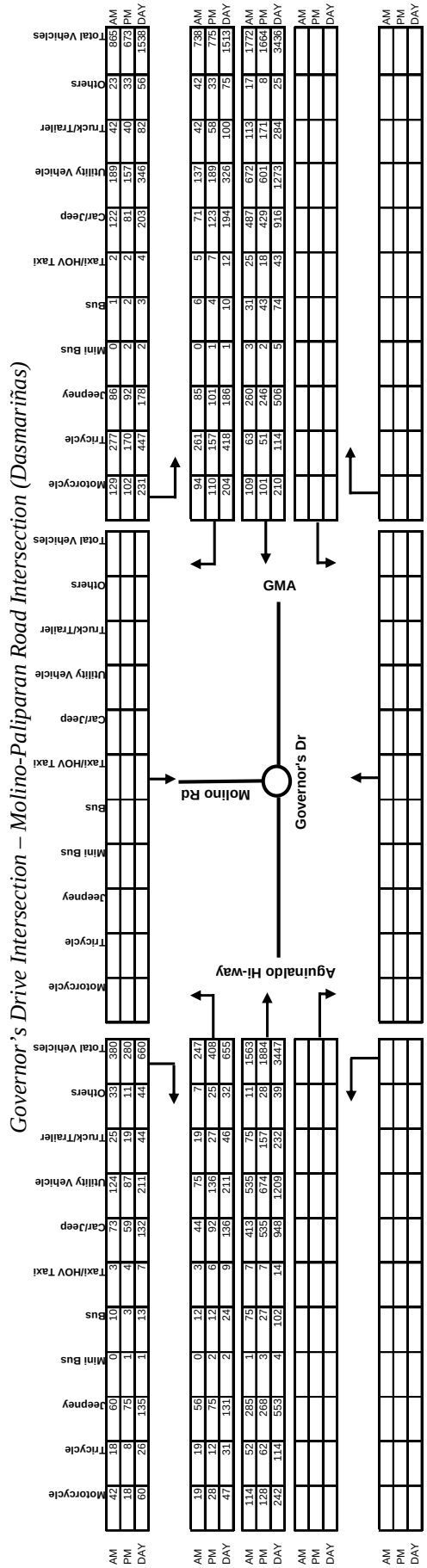


Figure 4.19 Intersection Traffic Volume (Station No.10)

SLE Southwoods Exit

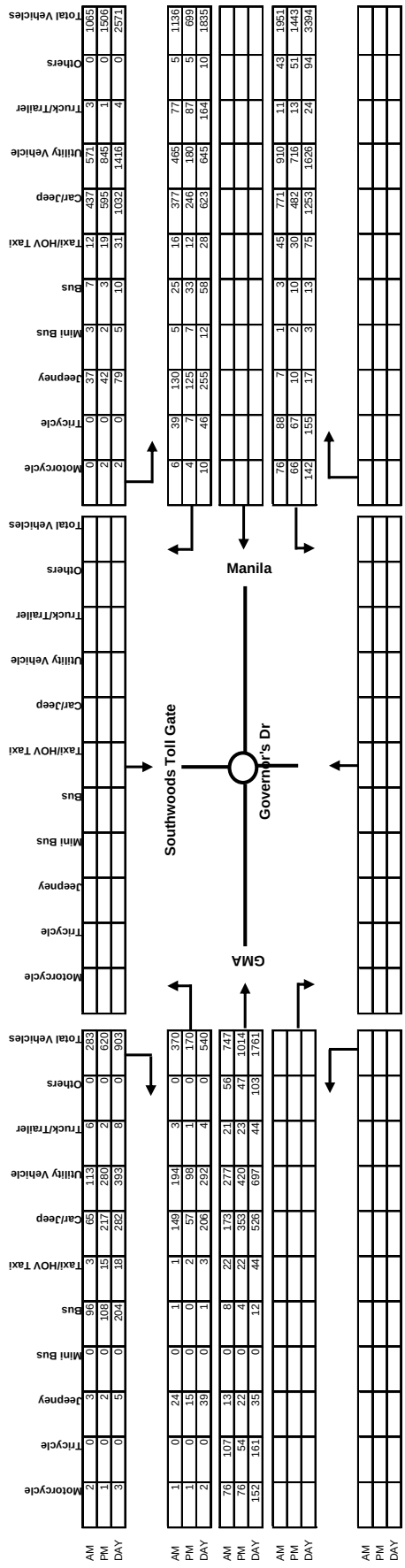
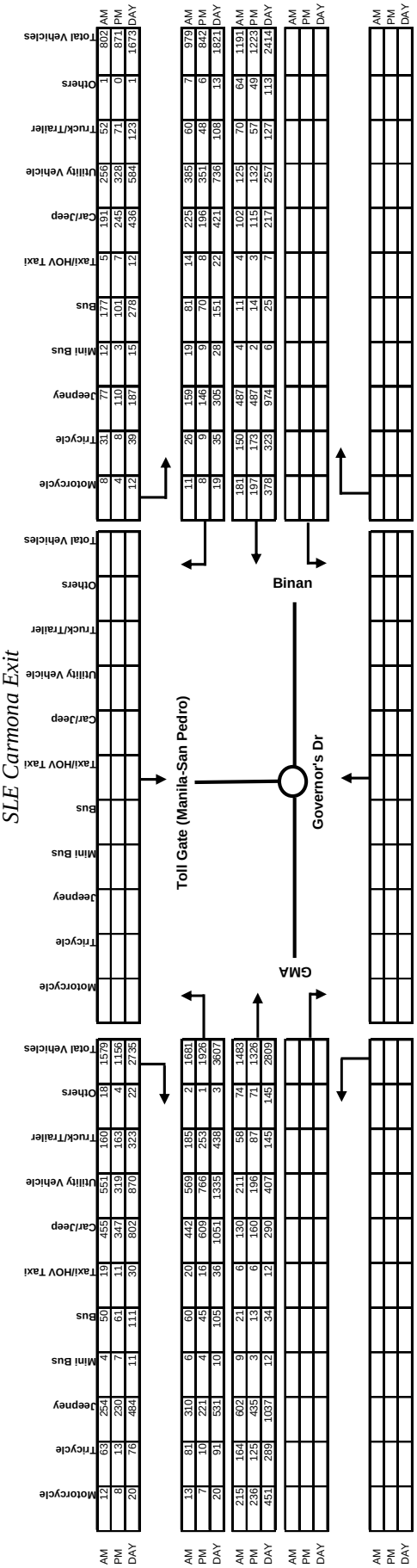


Figure 4.20 Intersection Traffic Volume (Station No.11)

SLE Carmona Exit



4.3 Travel Speed Survey

A summary of results of the travel speed survey is shown in Table 4.4. Detailed results are presented in Traffic Survey Report Volume 3: Travel Speed Survey Report (TSR-V3).

Table 4.4 Summary of Travel Speed Survey by Route

Route Name	Direction		Length (km)	Mode of Transport	Average Travel Speed (km/h)				Ave. No. of Stops (times/km)				Average Ratio of Stopping Time (%)			
	From	To			AM	Off	PM	Total	AM	Off	PM	Total	AM	Off	PM	Total
Zapote - Silang (Aguinaldo Highway)	Silang	Zapote	29.0	Car	26.48	27.06	26.60	26.71	0.44	0.13	0.55	0.37	14.88	19.89	31.75	22.17
				Truck	27.64	27.37	25.74	26.92	1.51	1.27	1.58	1.45	26.65	15.33	32.70	24.89
				Jeepney	23.39	23.28	23.35	23.34	1.59	1.87	1.89	1.79	33.98	34.65	26.82	31.82
				Bus	26.91	26.81	26.82	26.85	1.45	1.51	1.44	1.47	29.21	22.35	23.78	25.11
	Zapote	Silang	29.0	Car	26.86	26.93	26.57	26.79	0.97	0.56	0.77	0.77	25.23	7.91	12.67	15.27
				Truck	24.56	24.77	24.63	24.65	0.98	0.86	1.22	1.02	30.64	23.48	20.91	25.01
				Jeepney	23.38	23.06	23.53	23.32	1.15	1.19	1.06	1.13	29.88	17.01	19.90	22.26
				Bus	26.00	26.71	25.61	26.11	0.94	1.10	1.14	1.06	33.40	29.76	29.74	30.97
Naic - Binan (Governors Drive)	Binan	Naic	46.3	Car	36.29	45.17	33.20	38.22	0.26	0.56	0.77	0.53	24.44	4.77	18.38	15.86
				Truck	34.69	40.33	33.12	36.05	0.55	0.41	0.56	0.51	23.13	12.76	18.54	18.14
				Jeepney	34.87	35.52	34.86	35.09	0.95	0.90	0.93	0.93	14.06	12.14	39.92	22.04
				Bus	34.69	40.33	33.12	36.05	0.55	0.41	0.56	0.51	23.13	12.76	18.54	18.14
	Binan	Naic	20.7	Car	34.94	44.84	32.76	37.51	0.55	0.21	0.61	0.46	23.46	6.50	23.85	17.94
				Truck	34.44	42.66	32.15	36.42	0.52	0.35	0.54	0.47	21.93	12.81	26.05	20.26
				Jeepney	37.67	36.40	35.41	36.49	0.42	0.34	0.36	0.37	27.54	20.13	18.53	22.07
				Bus	34.94	44.84	32.76	37.51	0.55	0.21	0.61	0.46	23.46	6.50	23.85	17.94
Bacoor-Governors Drive (Molino Road)	Bacoor	Governors Drive	46.3	Car	24.11	21.90	21.80	22.60	0.58	0.42	0.42	0.47	12.20	9.57	6.26	9.35
				Truck	21.51	21.66	20.04	21.07	0.58	0.42	0.42	0.47	14.16	9.51	5.81	9.82
				Jeepney	22.93	19.99	20.55	21.16	1.26	1.26	1.26	1.26	18.78	16.45	19.92	18.38
	Governors Drive	Bacoor	46.3	Car	25.32	25.50	23.14	24.65	0.48	0.34	0.37	0.40	6.87	7.57	7.00	7.15
				Truck	24.59	25.51	21.05	23.72	0.48	0.34	0.37	0.40	7.90	7.42	6.37	7.23
				Jeepney	22.25	16.52	16.64	18.47	0.97	0.97	0.97	0.97	34.23	22.93	21.95	26.37
Aguinaldo Highway-Molino Road (Salawag-Salitran Road)	Salawag	Salitran	4.1	Car	34.96	35.98	34.89	35.28	0.61	0.41	0.54	0.52	4.81	3.53	3.37	3.90
				Truck	32.61	32.91	32.61	32.71	0.95	0.88	0.82	0.88	5.67	5.22	5.17	5.35
				Jeepney	31.20	31.45	30.66	31.11	1.02	1.16	1.09	1.09	5.48	7.65	6.89	6.67
	Salitran	Salawag	4.1	Car	36.61	37.55	36.42	36.86	0.54	0.34	0.34	0.41	2.99	2.04	2.03	2.35
				Truck	34.32	36.17	34.82	35.10	0.48	0.27	0.41	0.39	2.93	1.64	2.05	2.21
				Jeepney	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aguinaldo Highway - Governor's Drive (Tirona Highway)	Governor's Drive	Aguinaldo Highway	28.8	Car	21.94	23.54	22.32	22.60	1.45	1.23	1.55	1.41	16.17	17.55	12.38	15.36
				Bus	19.37	26.11	21.16	22.21	1.81	1.60	1.68	1.69	21.05	13.52	10.21	14.93
				Truck	34.62	35.77	32.80	34.40	0.66	0.63	0.88	0.72	6.34	7.40	8.40	7.38
	Aguinaldo Highway	Governor's Drive	28.8	Car	24.49	23.49	22.89	23.62	1.33	1.24	1.56	1.38	15.43	13.37	20.69	16.50
				Bus	23.42	23.03	21.78	22.74	1.59	1.40	1.62	1.54	18.67	14.64	10.53	14.62
				Truck	35.07	36.44	34.23	35.25	0.78	0.58	0.81	0.72	7.41	7.09	16.26	10.26
Calamba - Batangas Port Area	Batangas Port Area	Calamba	54.7	Car	48.55	50.61	47.12	48.76	0.19	0.15	0.16	0.17	2.14	2.28	0.67	1.69
			52.8 *	Bus	42.48	42.56	41.94	42.33	0.22	0.28	0.27	0.26	2.10	2.91	2.48	2.50
				Truck	47.61	52.62	53.68	51.30	0.36	0.19	0.34	0.29	4.96	1.85	3.91	3.57
	Calamba	Batangas Port Area	54.7	Car	44.78	48.08	38.29	43.72	0.19	0.18	0.29	0.22	2.56	2.78	2.58	2.64
			52.8 *	Bus	43.09	42.86	43.10	43.02	0.30	0.37	0.37	0.34	3.82	5.27	31.69	13.59
				Truck	47.72	45.83	43.74	45.76	0.16	0.13	0.32	0.20	1.83	1.26	30.90	11.33
Manila Port Area - Calamba (Via South Luzon Tollway)	Calamba	Manila Port Area	51.5	Car	44.82	51.29	50.38	48.83	0.65	0.43	0.31	0.46	9.82	8.58	7.50	8.63
			47.4 **	Bus	51.18	57.26	58.56	55.67	0.45	0.32	0.37	0.38	6.85	8.21	9.53	8.20
			46.4 ***	Truck	48.40	51.75	50.83	50.33	0.37	0.29	0.33	0.33	4.81	4.77	5.77	5.12
	Manila Port Area	Calamba	51.5	Car	50.99	61.94	42.92	51.95	0.36	0.33	0.57	0.42	12.87	11.27	12.55	12.23
			47.4 **	Bus	53.14	55.44	45.47	51.35	0.32	0.27	0.75	0.45	7.24	6.09	42.03	18.45
			46.4 ***	Truck	51.79	54.63	45.22	50.55	0.28	0.14	0.54	0.32	5.67	4.34	8.83	6.28

* - Survey trip distance from Calamba to Poblacion Jct. To Batangas City Port Area, where bus and truck traffic take a different route.

** - Survey trip distance fro Calamba to Taft Avenue, Manila, where buses take Taft Ave. to/from Lawton area.

*** - Survey trip distance from Calamba to Intersection of Quirino Highway and Osmena Highway, where trucks take a right turn towards Plaza Dilaw.

4.4 Public Transport Routes

Survey results indicate the following findings:

- The long distance routes are plied by the buses while the short distance routes are plied by jeepneys and FX/HOV which compete with each other.
- Buses do also compete with jeepneys and FX/HOV modes but only for portions of their total routes.

Detailed results are presented in Traffic Survey Report Volume 4: Public Transport Route/Service Frequency Survey Report (TSR-V4). Figures 4.21 to 4.23 show the public transport service coverage in the study area.

Figure 4.21 Bus Service Coverage

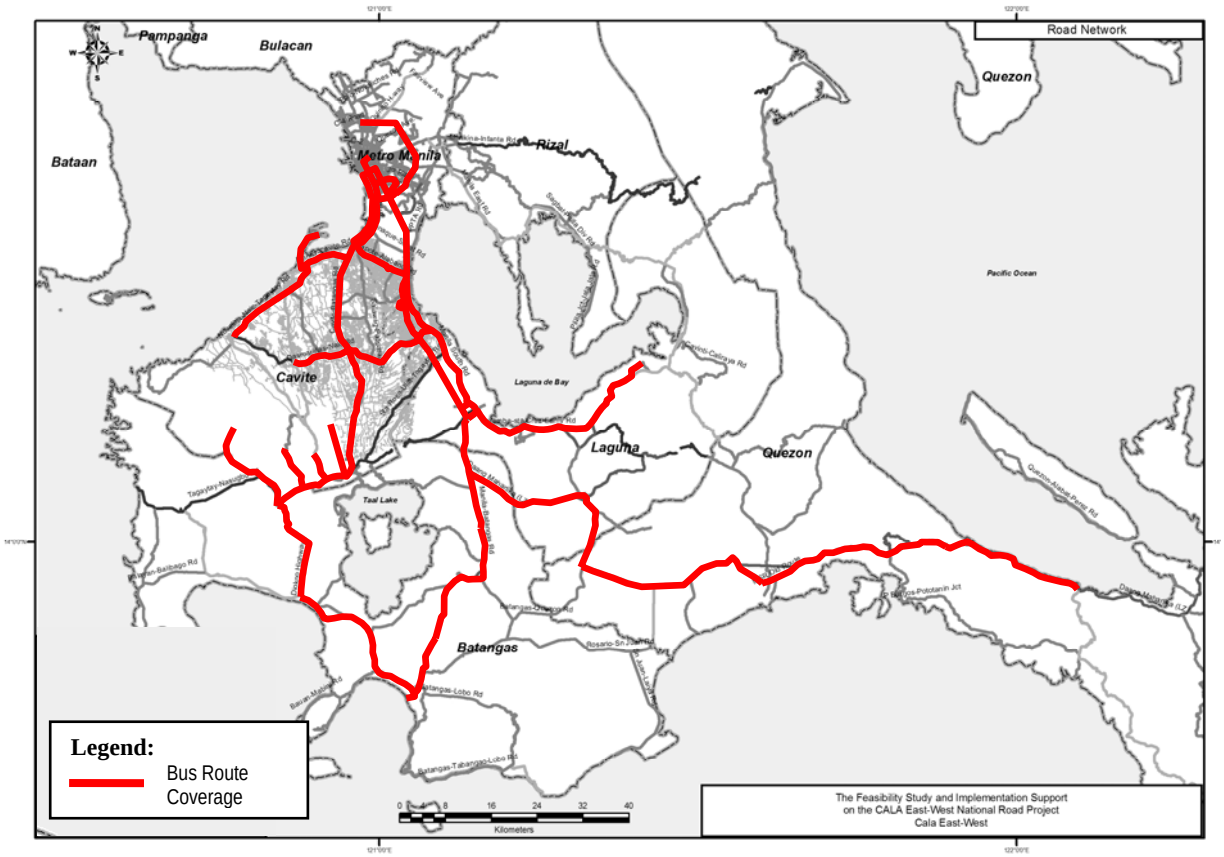


Figure 4.22 Jeepney Service Coverage

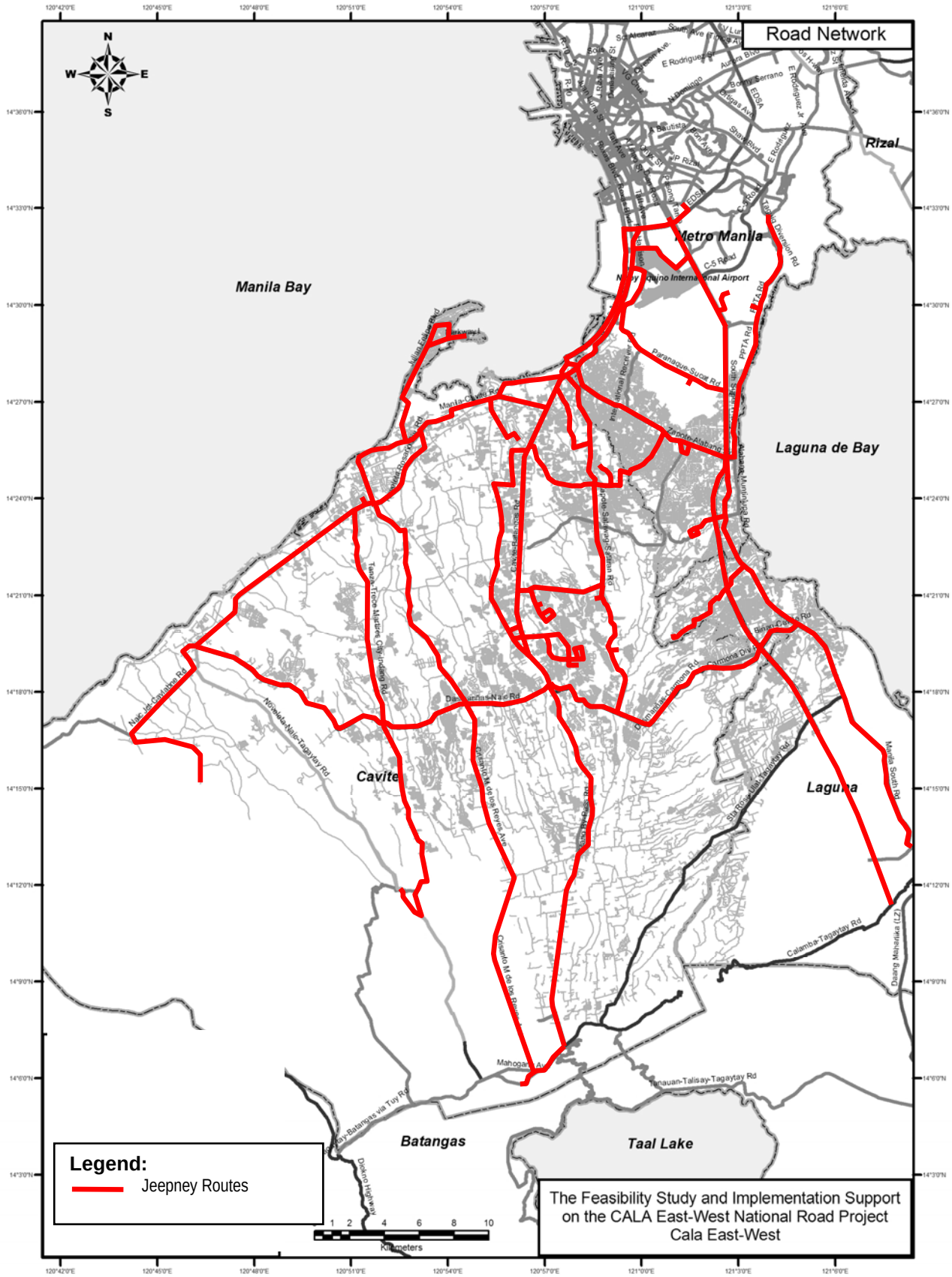


Figure 4.23 FX / HOV Service Coverage

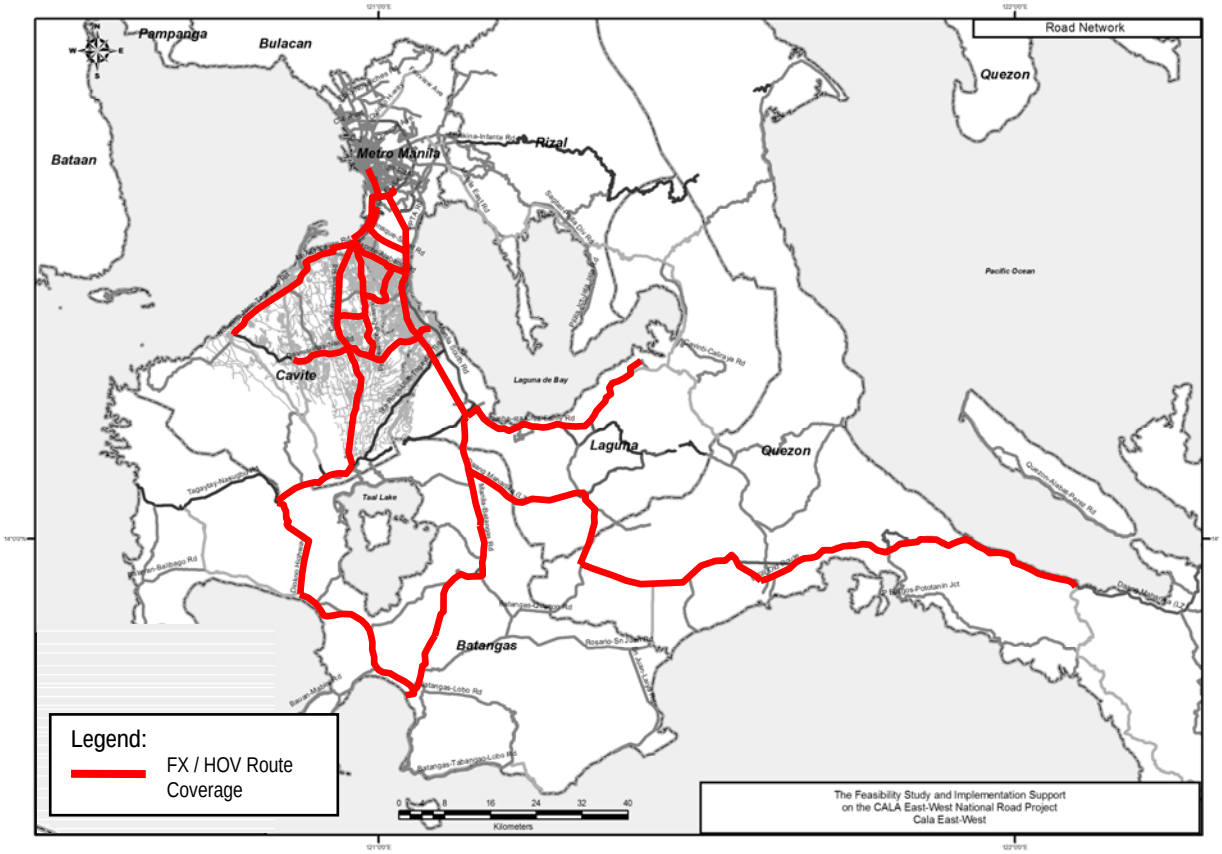


Table 4.5 List of Bus Routes Operating in the CALA Area

Route Name			via (1)	via (2)	via (3)
Alabang	-	Batangas	Lipa	Tanauan	
Alabang	-	Calamba			
Alabang	-	Calauag			
Alabang	-	Lemery			
Alabang	-	Lucena (Quezon)	Dalahican		
Alabang	-	Malanday	Edsa	McArthur	
Alabang	-	Navotas	Edsa		
Alabang	-	Novaliches	Edsa	Mindanao Ave.	
Alabang	-	Novaliches	Edsa	Quirino Hiway	
Alabang	-	Plaza Lawton			
Alabang	-	San Pablo			
Alabang	-	San Pedro	Pacita		
Alabang	-	SM Fairview	Lagro	Commonwealth Ave.	
Alabang	-	Sta. Cruz (Laguna)			
Alfonso	-	Baclaran	Silang	Tagaytay	
Alfonso	-	L. Bonifacio	Tagaytay		
Alfonso	-	Pasay	Dasmariñas	Silang	
Alfonso	-	Zapote (Bacoor, Cavite)			
Almanza	-	Plaza Lawton			
Amadeo	-	Baclaran	Silang	Tagaytay	
Amadeo	-	P. Lawton	Tagaytay		
Atimonan (Quezon)	-	Cubao (QC)			
Ayala	-	Pamplona	SSH		
Bacacay (Albay)	-	Pasay City (MM)			
Bacoor	-	Divisoria	Coastal Road		
Bacoor	-	Divisoria (Mla.)	Quirino Ave.		

Route Name			via (1)	via (2)	via (3)
Bagamanoc (Catanduanes)	-	Pasay City (MM)	Sabloyon		
Balangiga (E. Samar)	-	Manila	Catbalogan		
Balatan (Cam. Sur)	-	Pasay City (MM)	Iriga		
Balayan (Batangas)	-	Manila			
Balayan (Batangas)	-	Pasay City (MM)	Tagaytay		
Balibago	-	Buendia			
Balibago	-	Lawton			
Baras (Catanduanes)	-	Pasay City (MM)	Sabloyon		
Batangas	-	Buendia	Lipa	Tanauan	
Batangas City (Bat.)	-	P. Lawton			
Batangas City Pier	-	Cubao (QC)	Edsa		
Batangas City Pier	-	L. Bonifacio			
Batangas City Pier	-	Monumento			
Batangas City Pier	-	P. Lawton	Biñan		
Batangas City Pier	-	P. Lawton	SSH		
Batangas City Pier	-	Pasay City (MM)	Lipa		
Bato (Leyte)	-	Pasay City (MM)			
Bauan (Bat.)	-	P. Lawton	Batangas City SSH		
Bay (Lag.)	-	P. Lawton	Masapang Hway		
Biñan (Lag.)	-	Ayala Center			
Biñan (Lag.)	-	Buendia	Expressway		
Biñan (Lag.)	-	Cataluña & España			
Biñan (Lag.)	-	L. Bonifacio (Mla.)	S. Expressway		
Biñan (Lag.)	-	Lawton			
Biñan (Lag.)	-	So Bus Terminal (Manila)			
Biñan (Lag.)	-	So. Bus Terminal	San Pablo		
Bombon (Camarines Sur)	-	Cubao (QC)			
Borongan (E. Samar)	-	Manila	Daet (CN)		
Borongan (E. Samar)	-	Pasay City (MM)	Allen		
Buhi (Camarines Sur)	-	Cubao (QC)			
Buhi (Camarines Sur)	-	Pasay City (MM)			
Bulan (Sorsogon)	-	Pasay City (MM)	Daet (CN)		
Bulan (Sorsogon)	-	Pasay City (MM)			
Cabuyao (Lag.)	-	Ayala Center			
Cabuyao (Lag.)	-	L. Bonifacio	Sta. Rosa		
Cagayan de Oro City (Mis. Or)	-	Pasay City (MM)			
Calamba (Lag.)	-	Buendia	P. Rizal		
Calamba (Lag.)	-	Crossing (Mandaluyong?)	P. Rizal		
Calamba (Lag.)	-	Cubao (QC)	Mayapa		
Calamba (Lag.)	-	Edsa, Kamias			
Calamba (Lag.)	-	P. Lawton	Biñan		
Calamba (Lag.)	-	P. Lawton	Mayapa		
Calatagan		Pasay City (MM)			
Calauag (Quezon)	-	Buendia			
Calauag (Quezon)	-	Cubao	Gumaca		
Calauag (Quezon)	-	Monumento	Lucena		
Calauag (Quezon)	-	Sampaloc (Manila)			
Calbayog City (W. Samar)	-	Cubao (QC)			
Calbayog City (W. Samar)	-	Pasay City (MM)			
Carmona	-	P. Lawton	Pres. Quirino	Taft	
Catarman (N. Samar)	-	Cubao (QC)			
Catarman (N. Samar)	-	Manila	Daet (CN)		
Catarman (N. Samar)	-	Pasay City (MM)	Naga		
Catbalogan (Samar)	-	Cubao (QC)			
Catbalogan (W. Samar)	-	Pasay City (MM)			
Cavite City	-	Zapote	Las Piñas		
Cavite City	-	Baclaran	Coastal Road		

Route Name			via (1)	via (2)	via (3)
Cavite City	-	Buendia	Ayala		
Cavite City	-	L. Bonifacio	Noveleta		
Cavite City	-	P. Lawton	Quirino Ave.		
Cavite City	-	Vito Cruz (Manila)	Baclaran	Coastal Road	
Cavite City	-	Zapote (Las Piñas)	Noveleta		
Cotta (Lucena, Quezon)	-	Manila			
Daet (Camarines Norte)	-	Cubao (QC)	Labo	Sta. Elena	
Daet (Camarines Norte)	-	Manila			
Dasmarinas		Plaza Lawton			
Dasmariñas	-	Ayala			
Dasmariñas	-	Divisoria	Coastal Road		
Davao City (Davao DS)	-	Pasay City (MM)			
Donsol (Sorsogon)	-	Pasay City (MM)	Daet	Naga	Legaspi
FTI	-	Ragay (Cam. Sur)	Maharlika Hiway		
FTI Terminal	-	Sabang San Jose Camarines Sur			
Gasan (Marinduque)	-	P. Lawton	Balanacan Port		
Gen. M. Alvarez	-	Ayala	Carmona		
Gen. M. Alvarez	-	Ayala Loop Buendia Ave. Extension			
Gen. M. Alvarez	-	P. Lawton	Ayala	Carmona	SSH
Gen. M. Alvarez	-	P. Lawton	Zapote		
Gen. M. Alvarez	-	Vito Cruz (Manila)			
Gubat (Sorsogon)	-	Cubao (QC)			
Gubat (Sorsogon)	-	Pasay City (MM)	Daet	Naga	
Guinavangan (Quezon)	-	Cubao (QC)			
Guinavangan (Quezon)	-	Sampaloc (Manila)			
Guluan (E Samar)	-	Pasay City (MM)			
Guluan(E & W Samar & Catbalogan)	-	Manila			
Gumaca (Quezon)	-	Pasay City (MM)			
Imus	-	Ayala (Makati, MM)			
Indang	-	Baclaran	Quirino Ave.		
Indang	-	Baclaran	Trece Martirez		
Indang	-	Pasay Rotonda	Trece Martirez		
Irosin (Sorsogon)	-	Cubao (QC)			
Irosin (Sorsogon)	-	Pasay City (MM)			
Jose Panganiban (Cam. Norte)	-	Pasay City (MM)			
Lagonoy (Cam. Sur)	-	Cubao (QC)			
Lagonoy (Cam. Sur)	-	Pasay City (MM)			
Legaspi City (Albay)	-	Cubao (QC)	Buhi	Ligao	
Legaspi City (Albay)	-	Cubao (QC)	Daet	Naga	
Legaspi City (Albay)	-	Manila			
Legaspi City (Albay)	-	Pasay City (MM)	Cubao		
Legaspi City (Albay)	-	Pasay City (MM)	Daet		
Lemery (Batangas)	-	Buendia	Lipa	Tanauan	
Lemery (Batangas)	-	Cubao (QC)			
Lemery (Batangas)	-	L. Bonifacio			
Lemery (Batangas)	-	P. Lawton			
Lemery (Batangas)	-	Pasay City (MM)			
Lemery (Batangas)	-	Timog (QC)			
Libmanan (Cam. Sur)	-	Cubao (QC)			
Libmanan (Cam. Sur)	-	Pasay City (MM)	Daet		
Ligao (Albay)	-	Pasay City (MM)			
Liliw (Lag.)	-	Manila	Sta. Cruz		
Liloan (S. Leyte)	-	Cubao (QC)			
Liloan (S. Leyte)	-	Pasay City (MM)			

Route Name			via (1)	via (2)	via (3)
Lipa City (Batangas)	-	Gil Puyat (Mla)			
Lucban (Quezon)	-	Gov. Forbes (Mla)	Pagsanjan		
Lucena (Dalahican, Quezon)	-	P. Lawton			
Lucena City (Quezon)	-	Buendia	San Pablo	Alaminos	
Lucena City (Quezon)	-	Cubao (QC)	Edsa		
Lucena City (Quezon)	-	P. Lawton			
Lucena City (Quezon)	-	Pasay City (MM)			
Maasin (Leyte)	-	Metro South Internodal Terminal			
Maasin (S. Leyte)	-	Cubao (QC)			
Maasin (S. Leyte)	-	FTI (Taguig)			
Maasin (S. Leyte)	-	Manila	Daet (CN)		
Maasin (S. Leyte)	-	Pasay City (MM)	Naga		
Macalaya (Sorsogon)	-	Pasay City (MM)			
Magallanes	-	Baclaran	Silang	Tagaytay	
Majayjay	-	Manila	Masapang Hway		
Malanday	-	Muntinlupa	EDSA	Monumento	
Manito (Albay)	-	Pasay City (MM)	Legaspi		
Maragondon	-	Baclaran (MM)	Coastal Road		
Maragondon	-	P. Lawton	Tanza		
Maragondon	-	Vito Cruz (Manila)			
Matnog (Sorsogon)	-	FTI Alabang			
Matnog (Sorsogon)	-	Parañaque (MM)	S. Exp		
Matnog (Sorsogon)	-	Pasay City (MM)			
Mendez	-	Baclaran	Silang	Tagaytay	
Mendez	-	P. Lawton	Tagaytay		
Mendez	-	Pasay Rotonda			
Moonwalk		Quiapo	Buendia Ave.		
Mulanay (Quezon)	-	Cubao (QC)	Atimonan		
Nabua (Cam. Sur)	-	Pasay City (MM)			
Naga City	-	FTI (Taguig)			
Naga City (Cam. Sur)	-	P. Lawton			
Naga City (Cam. Sur)	-	Pasay City (MM)	Daet (CN)		
Naga City (Cam. Sur)	-	Sampaloc (Manila)	Quirino Hiway		
Nagcarlan	-	Manila	Calumpang		
Naic	-	Baclaran	Redemptorist		
Naic	-	P. Lawton			
Naic	-	Vito Cruz (Manila)	Salinas	EPZA	
Nasugbu (Batangas)	-	Pasay City (MM)	Lian	Tagaytay	
Naval (Leyte)	-	Metro South Internodal Terminal			
Naval (Leyte)	-	Pasay City (MM)			
Navotas Terminal	-	Pacita Complex	Edsa		
Novaliches Terminal	-	Pacita Complex	Malinta Exit	Edsa	
Ormoc (Leyte)	-	Cubao (QC)			
Ormoc (Leyte)	-	Manila	Daet		
Ormoc (Leyte)	-	Metro South Internodal Terminal			
Ormoc (Leyte)	-	Pasay City (MM)	Abuyog	Baybay	
Ormoc (Leyte)	-	Pasay City (MM)	Naga		
Ormoc (Leyte)	-	Pasay City (MM)	Palompon		
Pacita Complex	-	SM Fairview	EDSA		
Pacita Complex (SP, Lag.)	-	Buendia	Susana heights	San Pedro	
Pacita Complex (SP, Lag.)	-	Cubao (QC)			
Pacita Complex (SP, Lag.)	-	Fairview	Cubao	Crossing	Alabang
Pacita Complex (SP, Lag.)	-	L. Bonifacio (Mla.)	SSH		
Pacita Complex (SP, Lag.)	-	Lagro	Fairview		

Route Name			via (1)	via (2)	via (3)
Pacita Complex (SP, Lag.)	-	Malabon (Letre)	Crossing	Cubao	Ortigas
Pacita Complex (SP, Lag.)	-	Monumento	Alabang		
Pacita Complex (SP, Lag.)	-	Navotas Terminal	EDSA		
Pacita Complex (SP, Lag.)	-	Novaliches Terminal	MalintaEx	EDSA	
Pacita Complex (SP, Lag.)	-	P. Lawton	SSH		
Pacita Complex (SP, Lag.)	-	SM Fairview	EDSA		
Padilla (Antipolo, Rizal)	-	Alabang	SSH		
Padre Burgos (S. Leyte)	-	Pasay City (MM)			
Palompon	-	Cubao (QC)	Quirino Hiway	Ormoc City	
Paracale (Cam. N.)	-	Pasay City (MM)			
Pilar (Sorsogon)	-	Pasay City (MM)			
Pintuyan (Panaoanis, SL)	-	Pasay City (MM)	Manaplag		
Pio Duran (Albay)	-	Pasay City (MM)			
Polangui (Albay)	-	Pasay City (MM)			
Prieto Diaz (Sorsogon)	-	Pasay City (MM)			
Pulong Sta. Cruz (Sta. Rosa, Lag.)	-	Manila			
Ragay (Cam.S)	-	FTI Term	Maharlika Hiway		
Rawis (Laoang, N.Samar)	-	Cubao (QC)			
Rawis (Laoang, N.Samar)	-	Manila	Daet		
Sabang (San Jose, Cam. Sur)	-	Pasay City (MM)			
Sampaloc (Quezon)	-	Cubao (QC)			
San Andres (Que.)	-	P. Lawton	Calauan		
San Francisco (Que.)	-	Pasay City (MM)			
San Juan (Bato, Cam. Sur)	-	Pasay City (MM)			
San Narciso (Quezon)	-	Pasay City (MM)			
San Pablo	-	Buendia	Alaminos		
San Pablo	-	Cubao (QC)	Calamba		
San Pablo	-	Pasay	Turbina	Calamba	
San Pedro (Lag.)	-	Ayala Center	Pacita		
San Pedro (Lag.)	-	Buendia	Susana heights		
San Pedro (Lag.)	-	Cubao (QC)	Expressway		
San Pedro (Lag.)	-	Lawton (LiB, Mla)	Muntinlupa		
San Pedro (Lag.)	-	Monumento	SSH		
Sawanga (Bacon, Sorsogon)	-	Pasay City (MM)			
Silago (S. Leyte)	-	Pasay City (MM)			
Silang	-	P. Lawton			
Silang	-	Vito Cruz (Manila)	Pala-pala	Dasmariñas (Bayan)	
Siniloan (Lag.)	-	L. Bonifacio (Mla.)			
Siniloan (Lag.)	-	Manila	Bay	Pila	
Siniloan (Lag.)	-	PICC (Mla)	Buendia		
Sorsogon (Sor.)	-	Cubao (QC)	Edsa	Pasay	
Sorsogon (Sor.)	-	Pasay City (MM)	Legaspi		
Sta. Cruz	-	Buendia	P. Rizal	Calamba	Los Baños
Sta. Cruz	-	Cubao (QC)	Calamba		
Sta. Cruz	-	Cubao (QC)	Masapang Hway		
Sta. Cruz	-	Edsa, Kamias			
Sta. Cruz	-	Manila	Masapang Hway		
Sta. Cruz	-	Pasay	Calamba	Los Baños	
Sta. Magdalena (Sor.)	-	Pasay City (MM)	SSH		
Sta. Rosa	-	P. Lawton	SSH		
Tabaco (Albay)	-	Cubao (QC)	Legaspi	Naga	
Tabaco (Albay)	-	FTI (Taguig)	Ragay		
Tabaco (Albay)	-	Manila	SSH		
Tabaco (Albay)	-	Pasay City (MM)	Lucena	Gumaca	Naga
Tagaytay	-	Pasay	Mahogany	Silang	Mendez
Tanza	-	Baclaran	Redemptorist		

Route Name			via (1)	via (2)	via (3)
Ternate	-	Lawton	Maragondon	Naic	
Trece Martires	-	Baclaran	Rosario		
Trece Martires	-	P. Lawton	Tanza		
UP Los Baños IRRI (Lag.)	-	UP Diliman (QC)			

Table 4.6 List of Jeepney Routes Operating in the CALA Area

Route Name			via (1)	via (2)	via (3)
Alabang	-	Alabang Twins			
Alabang	-	Almanza			
Alabang	-	Baclaran	Ninoy Aquino Ave.		
Alabang	-	Baclaran	San Isidro	Zapote	
Alabang	-	Bagumbayan	Bicutan		
Alabang	-	Balibago			
Alabang	-	Balibago (Sta. Rosa)	National Road		
Alabang	-	Balibago (Sta. Rosa)	SSH		
Alabang	-	Bicutan (lower)	SSH	Sucat	Kanan
Alabang	-	Bicutan (lower)			
Alabang	-	Biñan	National Road		
Alabang	-	Calamba	National Road		
Alabang	-	Carmona	National Hiway		
Alabang	-	Carmona	Expressway		
Alabang	-	Carmona Bulihan			
Alabang	-	EDSA/SSH	Expressway		
Alabang	-	FTI	SSH		
Alabang	-	GMA	Carmona	Expressway	
Alabang	-	GMA	Carmona	National Road	
Alabang	-	GMA	National Road		
Alabang	-	Langgam (San Pedro)			
Alabang	-	Muntinlupa	National Road		
Alabang	-	Muntinlupa Bilibid Prison	Katarungan Village		
Alabang	-	Paliparan (Dasma)	SSH	Governor's Drive	Carmona
Alabang	-	Pasay Rtd	FTI Service Rd		
Alabang	-	Pasay Rtd	Nichols Air Base Service Rd		
Alabang	-	Pasay Rtd	SSH		
Alabang	-	San Joaquin	Bicutan		
Alabang	-	Signal Village	SE Service Rd		
Alabang	-	Sucat	Cupang (East Service Rd)		
Alabang	-	Zapote (Las Piñas)			
Alabang GMA Alab Carmona	-	Bulihan			
Alabang-Muntinlupa	-	Langgam (San Pedro)			
Almanza (LP)	-	Baclaran			
Amadeo	-	Tagaytay			
Ayala (Landmark)	-	Bahayang Pag-asa	Ayala Ctr. Terminal		
Ayala Center	-	Imus	Zapote		
Baclaran	-	DBB-C	Aguinaldo Hway	Coastal Road	Resettlement Area
Baclaran	-	DBB-I	Coastal		
Baclaran	-	Imus	Resettlement Area	Bacoor	
Baclaran	-	Bacoor	Redemptorist		
Baclaran	-	Bahayang Pagasa Subd.	Coastal Road		
Baclaran	-	Dasmariñas Bagong Bayan			
Baclaran	-	Imus	Imus Terminal		

Route Name			via (1)	via (2)	via (3)
Baclaran	-	Magallanes	Cavite Coastal Road		
Baclaran	-	Moonwalk	Quirino		
Baclaran	-	Zapote (Bacoor)	Cavite		
Baclaran	-	Zapote (Las Piñas)			
Bacoor	-	DBB 1	Salitran Rd.	Resettlement Area	
Bacoor	-	DBB C	Imus	Kadiwa	
Bacoor	-	GMA	Dasmariñas Bayan		
Bacoor	-	Silang	Dasmariñas		
Bacoor	-	Tagaytay	Dasmariñas	Silang	
Bacoor	-	Tanza	Kawit	Noveleta	
Bacoor	-	Trece Martirez	Dasmariñas		
Bacoor (Queen's Row A&B)	-	Talon	Marcos Alvarez		
Bacoor (Queen's Row)	-	Talon	Marcos Alvarez		
Bacoor (Soldier's Hills 4)	-	Talon	M. Alvarez		
Bacoor (Zapote)	-	Binakayan	Mabolo		
Bacoor (Zapote)	-	Imus (Pag-asa)	Molino Road		
Bacoor (Zapote)	-	Molino (Bacoor)	Golden City	Ligas	San Nicolas
Bacoor (Zapote)	-	Paliparan	Molino Road		
BF Homes Subd Ikot	-	-			
Binakayan	-	Noveleta			
Binakayan (Kawit)	-	Zapote (Las Piñas)			
Biñan	-	Cabuyao			
Biñan	-	Calamba	Cabuyao	Sta. Rosa	San Antonio
Biñan	-	Calamba Crossing			
Biñan	-	Carmona			
Biñan	-	GMA			
Biñan	-	San Pedro			
Brgy. Ayala Alabang	-	Alabang Market			
Cabuyao	-	Calamba	Sta. Rosa	San Antonio	
Cabuyao	-	Calamba (Checkpoint)			
Cabuyao	-	Marinig	Gulod		
Calamba	-	San Pedro	National Road		
Calamba	-	San Pedro	Carmona Exit		
Camella Homes Spring	-	Las Piñas	M. Alvarez		
Camella Springville	-	Las Piñas	Marcos Hway		
Dasma Resetl (Paliprn)	-	Baclaran	Coastal Road		
Dasmariñas	-	Baclaran			
Dasmariñas	-	Silang	Palapala		
Dasmariñas	-	Zapote	Imus		
Dasmariñas	-	DBB G-1			
Dasmariñas	-	GMA	Governor's Drive		
Dasmariñas	-	Trece Martirez	Governor's Drive		
Dasmariñas (Bayan)	-	GMA	Aguinaldo Hway	Governor's Drive	
Dasmariñas (Bayan)	-	Paliparan 3			
Dasmariñas (Bayan)	-	Trece Martirez	Aguinaldo Hway	Governor's Drive	
Dasmariñas (Paliparan)	-	Zapote	Molino	Camella Homes	Mary Homes
Dasmariñas (Paliparan 3)	-	Baclaran	Pag-asa	Molino Rd.	
Dasmariñas (Paliparan 3)	-	Baclaran	Talaba		
Dasmariñas	-	GMA	Paliparan	Governor's Drive	

Route Name			via (1)	via (2)	via (3)
(Paliparan 3)					
Dasmariñas Resettlement	-	Baclaran	Coastal Road		
Dasmariñas Resettlement	-	Zapote			
Dela Salle (Dasma, Cav.)	-	Bahayang Pag-asa (Bac. Cav.)			
Golden City Subd.	-	Molino Market	Talon		
Imus	-	Bacoor	Aguinaldo Hway		
Imus	-	Binakayan			
Imus	-	Dasmariñas	Salitran Rd.	DBB 1	Resettlement Area
Imus	-	Dasmariñas	Anabu		
Imus	-	Dasmariñas	DBB-C	Resettlement Area	
Imus	-	Dasmariñas	Malagasang		
Imus	-	Indang	Dasmariñas		
Imus	-	Silang	Dasmariñas		
Imus	-	Tagaytay	Dasmariñas	Silang	
Imus	-	Trece Martirez	Dasmariñas		
Imus	-	Zapote (Las Piñas)			
Imus	-	Zapote			
Imus (Bagong Pag-asa)	-	Baclaran	Aguinaldo Hway	Coastal Road	Molino
Kawit (Cavite)	-	Zapote (Las Piñas)			
Lawton	-	Zapote			
Manggahan	-	Amadeo	Gateway		
Manggahan	-	Gateway			
Manggahan	-	Malabon			
Manggahan	-	Tejero	Malabon		
Molino	-	Zapote all in Bacoor			
Moonwalk	-	Queensrow	Alvarez		
Pacita Complex (Sn Pedro)	-	Sucat (Parañaque)			
Pasay Rtd	-	Carmona	SSH		
Pasay Rtd	-	Carmona	Biñan		
Queen's Row Village	-	Talon	M. Alvarez		
Ridgeview (Camella Muntinlupa)	-	Market Alabang	San Pedro	SLEX	
Silang	-	Zapote (Las Piñas)			
SM Ayala (Greenbelt)	-	Bahayang Pag-asa			
Soldier's Hills 2	-	Talon	M. Alvarez		
T. Martirez	-	Zapote (Las Piñas)	Aguinaldo		
Talon	-	Molino Pag-asa	M. Alvarez		
Talon	-	Paliparan (Dasma)	Molino Rd		
Tanza	-	Zapote			
Tanza	-	Zapote	Las Piñas		
Trece	-	Naic			
Trece	-	Rosario	Tanza		
Trece	-	Tanza			
Trece Martirez	-	Zapote (Las Piñas)			
Zapote	-	Bacoor (SM)	Real	Kabila	Aguinaldo Hiway
Zapote	-	Bulihan	Letran		
Zapote	-	DBB-C	Salitran		
Zapote	-	GMA			
Zapote	-	Paliparan	Salawag		
Zapote	-	Rosario	Talaba		
Zapote	-	Tagaytay	Bacoor	Imus	Dasmariñas

Table 4.7 List of HOV/FX Routes Operating in the CALA Area

Route Name	via (1)	via (2)	via (3)
Baclaran	Paliparan		
Baclaran - Paliparan	Molino		
Paliparan -			
Baclaran - Dasmariñas	Paliparan		
Baclaran - Naic	Bacao		
Baclaran - Tanza	Bacao		
Batangas -	Lian		
Batangas - Pier	Lipa		
Camella - Molino	Bayanan		
Camella - Molino	Bayanan	Soldiers	
Cavite City -	Bacoor		
Cavite City	Island Cove		
Imus	Bacoor		
Paliparan	City Homes	Golden City	
Sucat	Paliparan		
Tanza	EPZA	Bacao	
Camella - Molino	Bayanan		
Cavite City -	Bacoor		
Imus -	Bacoor		
Molino - Camella	Bayanan		
Trece - Alabang	Alabang		
Trece Martires - Alabang	Carmona		
Trece Martires - Alabang	Daang Hari		
Trece Martires - Calamba	Carmona		
Alabang - Balibago	Sta. Rosa		
Baclaran -	Zapote		
Batangas -	Calabarzon		
Batangas Pier	Calabarzon		
San Pedro	Pacita		
Sta Cruz -	Los Banos		
Alabang - Dasmariñas	Daang Hari		
Alabang - Dasmariñas	Gov. Drive		
Alabang - Dasmariñas/De La Salle	Daang Hari		
Alabang - Imus	Daang Hari		
Alabang - Imus	Gov. Drive		
Alabang - RITM BFAD	Filinvest		
Alabang - RITM BFAD	Muntinlupa		
Alabang - SM Southmall	Southmall		
Alabang - Sta. Cruz	Pagsanjan		
Alabang - Tagaytay	Sta. Rosa Exit		
Alabang - Tejero	Daang Hari		
Alabang - Trece Martires	Gov Drive		
Alabang - Victoria Homes	Daang Hari		
Alabang - Zapote	Casimiro		
Dasmariñas - Balibago	Sta. Rita		
Dasmariñas - Balibago	Sta. Rosa		
Dasmariñas - Batangas Pier	Lemery	Tagaytay	
Dasmariñas - Batangas Pier Bauan	Tagaytay	Pagsanjan	
Dasmariñas - Lipa	Carmona		
Dasmariñas - Lucena	Sto Tomas		
Dasmariñas - Pacita	San Pedro		
Dasmariñas - Pacita	San Pedro	Southwoods	

4.5 Bus Terminal Passenger Count

Table 4.8 shows a summary of passenger count in each surveyed major bus terminal in the study area. Detailed results are presented in Traffic Survey Report Volume 5: Bus Terminal Passenger Count Survey Report (TSR-V5).

Table 4.8 Number of Passengers by Route at Major Bus Terminals

Station No.	Terminal Name	No. of Passengers		
		Incoming	Outgoing	Total
01-A	BACLARAN (INFRONT OF MCDONALD) TERMINAL	74	1,432	1,506
	Baclaran-Cavite City	27	258	285
	Baclaran-Noveleta	0	33	33
	Baclaran-Indang via Trece Martires City	47	1068	1115
	Baclaran-Indang via Dasmariñas	0	73	73
01-B	BACLARAN (MINI-BUS)-CAVITE (NAIC/TANZA) TERMINAL	67	1,534	1,601
	Baclarñññan-Naic	0	43	43
	Baclaran-Naic via Bacao	0	175	175
	Baclaran-Naic via Noveleta	0	160	160
	Baclaran-Naic via Salinas	3	90	93
	Baclaran-Naic via Tanza	62	801	863
	Baclaran-Naic via Tejero	2	265	267
01-C	DMML-BUS TERMINAL (INFRONT OF LRT)	1,261	458	1,719
	Baclaran-Alfonso	1174	404	1578
	Baclaran-Alfonso via Silang	0	0	0
	Baclaran-Alfonso via Tagaytay	0	5	5
	Baclaran-Indang	75	46	121
	Baclaran-Tagaytay	12	3	15
01-D	SAULOG TERMINAL (INFRONT OF LRT)	0	2,610	2,610
	Baclaran-Calatagan	0	210	210
	Baclaran-Indang	0	1,312	1,312
	Baclaran-Mendez	0	1,088	1,088
02	LAWTON BUS TERMINAL	4,451	8,929	13,380
	Lawton-Alabang	0	54	54
	Lawton-Balayan	0	354	354
	Lawton-Batangas	0	574	574
	Lawton-Dasmariñas	0	4,136	4,136
	Lawton-Dasmariñas via Palapala	0	48	48
	Lawton-GMA	0	168	168
	Lawton-GMA via Carmona	0	56	56
	Lawton-Indang	0	5	5
	Lawton-Lemery	0	0	0
	Lawton-Lipa via Tanauan	0	29	29
	Lawton-Nasugbu	0	309	309
	Lawton-Pacita	0	2,133	2,133
	Lawton-Palapala	0	147	147

Station No.	Terminal Name	No. of Passengers		
		Incoming	Outgoing	Total
	Lawton-Silang	0	854	854
	Lawton-Silang via Imus	0	43	43
	Lawton-Tagaytay	0	19	19
	From Cavite to Lawton	2,378	0	2378
	From Batangas to Lawton	2,073	0	2073
03	TRECE MARTIRES BUS TERMINAL	4,235	6,801	11,036
	Trece-Baclaran	1,276	2,760	4,036
	Trece-Indang	2,959	4,041	7,000
04-A	ALABANG BUS TERMINAL (METROPOLIS)	1,906	682	2,588
	Alabang-Batangas	0	282	282
	Alabang-Calauag	10	397	407
	Alabang-Lemery	0	3	3
	To Alabang	1,896	0	1,896
04-B	ALABANG BUS TERMINAL (DELA ROSA)	46	3,468	3,508
	Alabang-Batangas	0	2,110	
	Alabang-Lucena	35	1,318	
	To Alabang	11	40	
06	NAIC BUS TERMINAL	0	2,256	2,256
	Naic-Zapote	0	2,256	2,256
07	CAVITE CITY BUS TERMINAL	0	656	656
	Cavite City-Baclaran	0	0	0
	Cavite City-Naic	0	133	133
	Cavite City-Tanza	0	91	91
	Cavite City-Zapote	0	432	432
08	AYALA CENTER TERMINAL	3	4,683	4,686
	Landmark-Balibago Complex	3	894	897
	Landmark-Biñan	0	431	431
	Landmark-Calamba/Sta. Cruz	0	385	385
	Landmark-Dasmariñas	0	544	544
	Landmark-GMA/Carmona	0	682	682
	Landmark-San Pedro/Pacita	0	1,747	1,747

4.6 Axle Load Distribution and Origin Destination Survey

(1) Axle Load Distribution

Axle load survey results are shown from Table 4.9 to Table 4.10.

(2) Traffic Volume Count

Concurrent with the Axle Load Survey, a Traffic Volume Count Survey was also conducted to enable expansion of axle loads into truck traffic ADT or AADT. Further, the percentage of a specific vehicle type among the total road traffic can also be estimated. Lastly, traffic volume survey results can also be used as traffic

congestion indicators. Traffic volume levels are presented in Traffic Survey Report Volume 6: Axle Load Survey Report (TSR-V6). Preliminary observations are as follows:

Along Aguinaldo Highway

- There is a pronounced morning peak from 6am to 10am. As this area can be considered a Metro Manila suburb area, it can be concluded that the peak flow correspond to travel to work in the Metro Manila area. There is also a pronounced afternoon/evening peak from 4pm to 8pm.
- While no detailed computations has been undertaken, there is a case that traffic flows can be considered at Level of Service C or D approximately corresponding to a volume capacity ratio of 0.70. Road capacity is much less than the standard 1,700pcu/hour/lane due to high roadside friction.
- Jeepney traffic is comparable with private vehicle traffic.

Along Carmona

- There is no pronounced peak period reflecting the local nature of the traffic.
- While no detailed computations have been undertaken, there is a case that traffic flows can be considered at Level of Service C or D approximately corresponding to a volume capacity ratio of 0.70. Road capacity is much less than the standard 1,700pcu/hour/lane due to high roadside friction.
- Jeepney traffic is almost comparable with private vehicle traffic.

Table 4.9 Standard Axle Load Distribution (Station 1)

Axle Load in Metric Tons	Bus 1 Axle	2 Axle Truck	3-4 Axle Truck		Semi & Truck Trailer		All Trucks	
	Single	Single	Single	Tandem	Single	Tandem	Single	Tandem
=< 1.5	5	3	0	25	1	9	4	34
1.6 - 2.5	88	9	45	59	28	20	82	79
2.6 - 3.5	43	2	16	12	22	14	40	26
3.6 - 4.5	26	4	2	8	3	12	9	20
4.6 - 5.5	5	2	0	11	1	8	3	19
5.6 - 6.5	0	0	0	6	1	12	1	18
6.6 - 7.5	0	2	0	4	0	6	2	10
7.6 - 8.5	0	0	0	1	0	1	0	2
8.6 - 9.5	0	0	0	2	0	0	0	2
9.6 - 10.5	0	0	0	0	0	1	0	1
10.6 - 11.5	0	0	0	0	0	0	0	0
11.6 - 12.5	0	0	0	0	0	0	0	0
12.6 - 13.5	0	0	0	0	0	0	0	0
13.6 - 14.5	0	0	0	0	0	0	0	0
14.6 - 15.5	0	0	0	0	0	0	0	0
15.6 - 16.5	0	0	0	1	0	0	0	1
16.6 - 17.5	0	0	0	0	0	0	0	0
17.6 - 18.5	0	0	0	0	0	0	0	0
18.6 - 19.5	0	0	0	0	0	0	0	0
19.6 - 20.5	0	0	0	0	0	0	0	0
20.6 - 21.5	0	0	0	0	0	0	0	0
21.6 - 22.5	0	0	2	0	0	0	2	0
22.6 - 23.5	0	0	0	0	0	0	0	0
23.6 - 24.5	0	0	0	0	0	0	0	0
24.6 - 25.5	0	0	0	0	0	0	0	0
25.6 - 26.5	0	0	0	0	0	0	0	0
26.6 - 27.5	0	0	0	0	0	0	0	0
27.6 - 28.5	0	0	0	0	0	0	0	0
28.6 - 29.5	0	0	0	0	0	0	0	0
29.6 - 30.5	0	0	0	0	0	0	0	0
> 30.5	1	0	0	0	0	0	0	0
Total	168	22	65	129	56	83	143	212
Mean in Metric Tons Per Axle	2.798	3.045	2.923	2.884	2.607	3.747	2.818	3.222
Standard Axle Load/Axle	2.936	0.069	2.779	0.120	0.019	0.067	1.281	0.099
No. of Vehicles	84	11	65		43		119	
Standard Axle Load/Vehicle	5.872	0.138	3.017		0.155		1.717	

Table 4.10 Standard Axle Load Distribution (Station 2)

Axle Load in Metric Tons	Bus 1 Axle	2 Axle Truck	3-4 Axle Truck		Semi & Truck Trailer		All Trucks	
	Single	Single	Single	Tandem	Single	Tandem	Single	Tandem
=< 1.5	2	80	2	11	1	6	83	17
1.6 - 2.5	9	37	40	46	31	20	108	66
2.6 - 3.5	9	11	41	19	13	10	65	29
3.6 - 4.5	2	3	13	20	0	6	16	26
4.6 - 5.5	3	6	0	23	1	10	7	33
5.6 - 6.5	1	3	0	27	1	8	4	35
6.6 - 7.5	0	2	0	16	0	4	2	20
7.6 - 8.5	0	2	0	9	1	1	3	10
8.6 - 9.5	0	0	0	10	0	2	0	12
9.6 - 10.5	0	0	0	6	0	0	0	6
10.6 - 11.5	0	0	0	3	0	0	0	3
11.6 - 12.5	0	0	0	0	0	0	0	0
12.6 - 13.5	0	0	0	0	0	0	0	0
13.6 - 14.5	0	0	0	1	0	0	0	1
14.6 - 15.5	0	0	0	0	0	0	0	0
15.6 - 16.5	0	0	0	0	0	0	0	0
16.6 - 17.5	0	0	0	0	0	0	0	0
17.6 - 18.5	0	0	0	0	0	0	0	0
18.6 - 19.5	0	0	0	0	0	0	0	0
19.6 - 20.5	0	0	0	0	0	0	0	0
20.6 - 21.5	0	0	0	0	0	0	0	0
21.6 - 22.5	0	0	0	0	0	0	0	0
22.6 - 23.5	0	0	0	0	0	0	0	0
23.6 - 24.5	0	0	0	0	0	0	0	0
24.6 - 25.5	0	0	0	0	0	0	0	0
25.6 - 26.5	0	0	0	0	0	0	0	0
26.6 - 27.5	0	0	0	0	0	0	0	0
27.6 - 28.5	0	0	0	0	0	0	0	0
28.6 - 29.5	0	0	0	0	0	0	0	0
29.6 - 30.5	0	0	0	0	0	0	0	0
> 30.5	0	0	0	1	0	0	0	1
Total	26	144	96	192	48	67	288	259
Mean in Metric Tons Per Axle	2.923	1.924	2.677	4.839	2.521	3.761	2.274	4.560
Standard Axle Load/Axle	0.034	0.033	0.018	1.482	0.034	0.071	0.028	1.117
No. of Vehicles	13	72	96		36		204	
Standard Axle Load/Vehicle	0.068	0.065	2.981		0.178		1.458	

(3) Origin-Destination Survey

While the trucks are being weighed, OD survey was also conducted. The same vehicle classification was used in the conduct of this survey. The detailed results of OD of commodities (in terms of tons) by commodity type are presented in TSR-V6.

As shown in Figure 4.24, the study area has been divided into internal and external zones, with the former corresponding to each municipality (though some municipalities have been subdivided into smaller zones). Commodities were classified according to the DPWH commodity coding scheme, which may also be referred in the Appendix of TSR-V6.

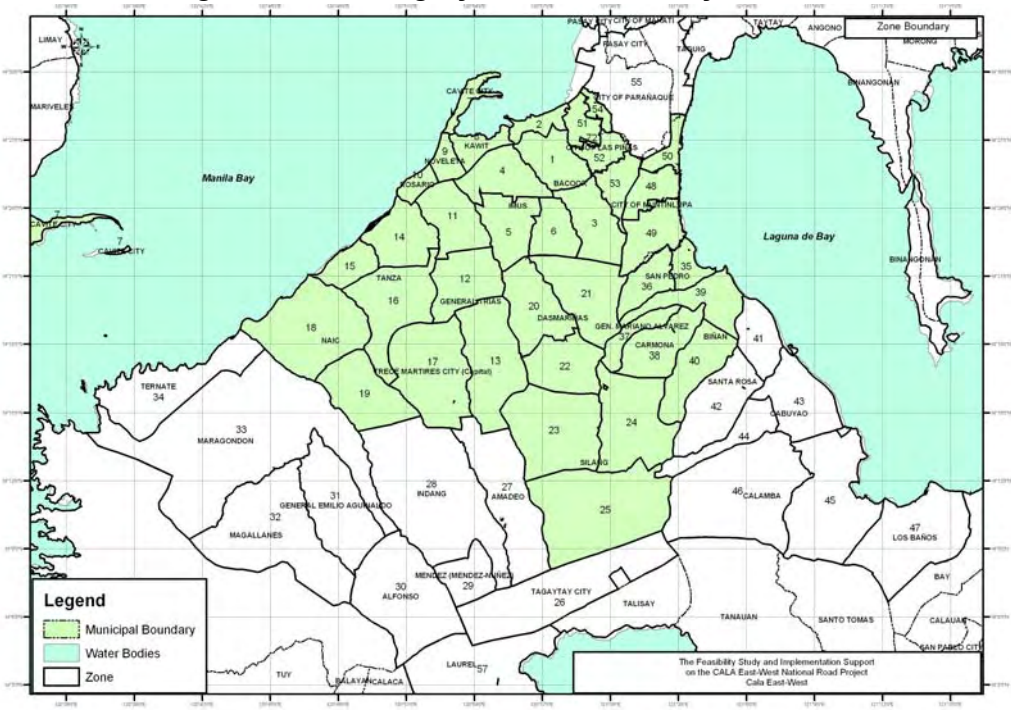
The following OD patterns were observed in Station 1:

- The trucks passing through these stations basically follow a North-South trip pattern.
- Approximately 650 trucks of various configurations pass through this road section daily.
- Commodity flow is mainly to/from the Metro Manila area and Dasmariñas.

The following patterns were observed in Station 2:

- The trucks passing through these stations basically follow an East-West trip pattern.
- Approximately 1,000 trucks of various configurations pass through this road section daily.
- Though not so pronounced, main destination area Carmona and further to the Calamba area.
- Though not so pronounced, some traffic to/from Manila uses the Governor's Drive as an alternative route.

Figure 4.24 Zoning System in the Study Area



4.7 Resident Interview

Detailed survey results are presented in Traffic Survey Report Volume 7: Resident Interview Survey Report (TSR-V7). The succeeding discussion presents the summary survey results.

(1) Household Information

Survey respondents are almost evenly distributed with regard to the location of their houses. The average age of the respondents is about 42 years old. Male respondents (55%) outnumber the female respondents (45%). Occupation of respondents is listed in Table 4.11.

More than a third (35.45%) of the total number of respondents has monthly household income of below ₱5,000 while a slightly higher percentage (36.35%) indicated monthly income of between ₱5,000 to ₱10,000. Only 7.35% of respondents indicated income of over ₱20,000.

Table 4.11 Occupation of Respondents

Occupation	No	Percent
Management and Executive Worker	52	2.58
Professional	152	7.55
Technical and Associate Professional	86	4.27
Clerical Worker	89	4.42
Service and Shop Worker / Marker Sales Worker	281	13.95
Skilled Agriculture Forestry & Fishery Worker	51	2.53
Craft and Related Worker	108	5.36
Plant and Machine Operator and Assembler	80	3.97
Student (Elementary)	0	.00
High School and University	20	.99
Housewife	361	17.92
Jobless / Retired	200	9.93
Others	501	24.88
No answer	33	1.64
TOTAL	2,014	100.00

About 64% of the respondents do not have any driver's license. Average number of vehicles per household for the indicated vehicle types is less than one.

Of the total number of respondents, 59.5% live in traditional houses and about half (49.45%) of the houses are made with a combination of concrete and wood while Average area of the living room is 77.84 sq. meters while the average number of rooms is 2.09. Average age of the house is 15.82 years while the average length of stay in the present address is 17.78 years.

Table 4.12 Housing Characteristics of Respondents

Occupation	No	Percent
Type of House		
Traditional House	1,198	59.48
Apartment	156	7.75
High-rise apartment	37	1.84
Detached House	604	29.99
No answer	19	0.94
Structure of House		
Concrete	778	38.63
Concrete and wood	996	49.45
Wood	214	10.63
Shack	11	0.55
No answer	15	0.74

Three-fourths (75%) of the respondents own the houses where they presently live while 60.7% also own the land. For renters (14.35%), average rent is over ₱6,000.00 (₱6,043.81). Only less than a tenth (8.7%) indicated uncertain land ownership.

Table 4.13 Housing Ownership

Housing Ownership	No. of Houses	Percent
Self-owned	1,511	75.02
Government-owned house rented	99	4.92
Private house rented/borrowed	289	14.35
Religious group-owned	2	.10
Uncertain ownership	83	4.12
No answer	30	1.49
TOTAL	2,014	100.00

Table 4.14 Land Ownership

Land Ownership	No. of Lots	Percent
Self-owned	1,223	60.72
Government-owned land rented	169	8.39
Private land rented/borrowed	374	18.57
Religious group-owned	19	.94
Uncertain ownership	176	8.74
No answer	53	2.63
TOTAL	2,014	100.00

(2) Travel Information

Work to Home

More than a third (34.7%) of the respondents takes the jeepney in going to work and home. About 15% combined take the mini-bus and standard bus while a tenth (10%) take their car/jeep. A tenth (10%) do not take any vehicle but walk. Reason for the choice varies but no other choice (24%) ranks highest. Average travel time from work to home is 68 minutes and the average travel expense is ₱31.03. Nearly half (47.7%) of those who responded gave an overall trip assessment as good.

Table 4.15 Mode of Travel: Work to Home

Mode of Travel	Number	Percent
Walking	209	10.26
Pedicab	20	0.98
Bicycle	40	1.96
Motorcycle	138	6.77
Tricycle	309	15.17
Jeepney	707	34.71
Mini-bus	141	6.92
Standard Bus	179	8.79
Taxi	12	0.59
HOV Taxi	14	0.69
Car/Jeep	204	10.01
Utility Vehicle	34	1.67
School Bus	7	0.34
Truck	2	0.10
Others	21	1.03

Table 4.16 Reason for Choice of Mode of Travel: Work to Home

Reason for Choice	Number	Percent
Travel Time	289	14.57
Cost	247	12.46
Comfort	360	18.15
Safety	255	12.86
Convenience	362	18.26
No other choice	470	23.70

School to Home

Tricycle and jeepney are the most common modes of transport to school and home (29.22% and 29.16%, respectively). Only less than a tenth (7.2%) combined take the mini-bus and standard bus while 17% do not take any vehicle

but walk. Reason for the choice varies but safety and no other choice (21% each) rank highest. Average travel time from school to home is 36 minutes and the average travel expense is ₱17.54. Almost half (49.9%) of the respondents gave an overall trip assessment as good.

Table 4.17 Mode of Travel: School to Home

Mode of Travel	Number	Percent
Walking	295	17.34
Pedicab	37	2.18
Bicycle	13	0.76
Motorcycle	55	3.23
Tricycle	497	29.22
Jeepney	496	29.16
Mini-bus	63	3.70
Standard Bus	60	3.53
Taxi	2	0.12
HOV Taxi	6	0.35
Car/Jeep	78	4.59
Utility Vehicle	12	0.71
School Bus	80	4.70
Truck	2	0.12
Others	5	0.29

Table 4.18 Reason for Choice of Mode of Travel: School to Home

Reason for Choice	Number	Percent
Travel Time	195	11.78
Cost	228	13.77
Comfort	248	14.98
Safety	364	21.98
Convenience	264	15.94
No other choice	357	21.56

Shopping to Home

Nearly half (48.9%) of the respondents take the jeepney and while 23.7% take the tricycle to go shopping and home. Only 6.5% take the mini-bus and standard bus combined nearly the same percentage (6.7%) does not take any vehicle but walk. Reason for the choice varies but convenience (21.2%) and no other choice (23.4% each) rank highest. Average travel time from shopping to home is 42 minutes and the average travel expense is ₱23.04. About half (49.4%) of those who responded gave an overall trip assessment as good.

Table 4.19 Mode of Travel: Shopping to Home

Mode of Travel	Number	Percent
Walking	112	6.71
Pedicab	11	0.66
Bicycle	9	0.54
Motorcycle	41	2.46
Tricycle	395	23.68
Jeepney	815	48.86
Mini-bus	79	4.74
Standard Bus	31	1.86
Taxi	9	0.54
HOV Taxi	5	0.30
Car/Jeep	141	8.45
Utility Vehicle	8	0.48
School Bus	4	0.24
Truck	0	0.00
Others	8	0.48

Table 4.20 Reason for Choice of Mode of Travel: Shopping to Home

Reason for Choice	Number	Percent
Travel Time	160	9.81
Cost	245	15.02
Comfort	267	16.37
Safety	232	14.22
Convenience	346	21.21
No other choice	381	23.36

(3) Resident's Opinion on Transport Network Development

About half (49%) of those who responded assessed the overall traffic situation as just fair. Among the major roads considered, Governor's Drive ranked highest (53%) with a fair assessment followed by the South Luzon Expressway (49.7%).

Among the causes of traffic congestion, undisciplined people's driving manner (28.6%) ranked highest followed by increased car traffic (24.7%). Compared to 5 years ago, congestion has gone worse according to nearly two-fifths (38%) of the respondents although safety (36.97%) and convenience (37.11%) has improved to good. The existing road network in the province has been assessed as insufficient by 43.9% of the respondents.

The improvement of the Manila-Cavite Coastal Expressway Extension (28.21%) and widening of Governor's Drive (18.85%) were among the recommended road facilities/improvements in the study area. Among the proposed road alignments

under the CALA, the East-West Road Alignment A (15.38%) compares favorably than the East-West Road Alignment B.

Table 4.21 Recommended Road Facilities / Improvement in the Study Area

Road Project	Percent
East – West Road (Line A, north of Goveror's Drive)	15.38
East – West Road (Line B, south of Governor's Drive)	11.78
Widening of Governor's Drive	18.85
North – South Road	6.22
North – South Busway	6.51
Improvement of SLEX	11.63
Manila-Cavite Coastal Expressway Extension	28.21
Others	1.42

(4) Resident's Opinion on Transport Services

About 41% of those who responded rarely use the bus services. Main reasons for non-usage are the unavailability of bus route in the area (27.5%), no punctual schedule (25.4%) and high fare (21.6%).

Respondents' assessment of the bus service parameters varies but all have been assessed as fair. To improve the bus service, 17.8% believes that bus fare will have to be given attention while 13.4% indicated route network improvement. A total of 88.7% affirmed the necessity to improve and expand the service and 28.5% indicated the development of an elevated railway, bus service (23.3%) and rapid bus (18.2%).

(5) Project Perception and Acceptability

Important development during the last 5 Years

According to the respondents, major important developments in the last five years include the improvement on the road (57.4%) and establishment of commercial centers (30.4%).

Project Awareness

Less than half (46%) of those who responded are aware of the proposed CALA East-West Road Project. A total of 36.7% learned about the project from the local government unit staff while 27.5% learned about the project from the barangay officials.

Advantages and Disadvantages

There are several advantages of the respondents' current location and the good road condition registered the highest number of respondents followed by accessibility to workplace and city center; convenience of travel to other places; nearness to school,

93

market, and other facilities among others. The disadvantages include road congestion; being far from relatives; less access to transport modes, among others.

Perceived Changes

Several perceived changes had been presented to the respondents for their assessment.

According to the respondents, there had been improvement in the following aspects: traveling time (48.70%); comfort to travel (49%); availability of transport route (52%); availability of alternate route (50%); delivery of goods (45.6%); mobility (44%); road safety (39%); safety of pedestrian crossing (46.4%); safety (53.3%); accessibility to school (60%); accessibility to work (56.4%); accessibility to public transport (58%); accessibility to market (59%); accessibility to social facilities (51%); general accessibility (55%); business opportunities (52%); employment opportunities (53%); working efficiency (48.3%); land value (51.5%); and vending opportunities (45.7%).

On the other hand, the respondents also indicated worsening of the following aspects: traffic congestion (37.6%); cost of fuel for vehicles (48.7%); volume of speeding motorists (38.1%); squatter situation (37.5%); air pollution (36.5%); and respiratory illness (35.4%).

There had been no perceived changes in the following aspects: punctuality of commuting for work (38.2%); incidence of accidents (35.4%); safety of driving bikes (40%); business for tourists (50.6%); existing social networks (42%); incidence of flooding (33%); and attractive facilities (44%).

Project Desirability

Majority (89.9%) of those who responded indicated that the project is a good initiative.

Project Benefits

According to the respondents, more business opportunities rank high as one of the benefits that the project will bring followed by employment opportunities; working efficiency due to time saved; and solution of the congestion problem, among others.

Project Negative Impacts

Among the negative impacts that the respondents cited include relocation to other places; loss of work; loss of livelihood; and low compensation benefits, among others.

Project Approval

A total of 64.9% of the respondents generally approve of the implementation of the proposed CALA East-West Road Project, 34.5% of which strongly approves while a 30.5% somewhat approves. Only 8.4% of the total disapproves of the project.

4.8 Business Establishment

Detailed survey results are presented in Traffic Survey Report Volume 8: Business Establishment Interview Survey Report (TSR-V8). The succeeding discussion presents the summary survey results.

(1) Profile of Establishment

A total of 56% of the businesses visited for the interview are generally local entities while 9% are joint venture and 16% are owned by multinational companies. According to the respondents, more than a third (34%) of these are generally classified as small-sized while another more than a third (36%) are classified as medium-sized. The large businesses account for less than a third (29%) of the total.

Of the interviewed establishments, 43% have been in operation for 1-5 years; 28.9% have been in operation for 6-10 years; 23.8% for 10-19 years; and only 3% of the respondents operated for more than 20 years.

Most (57%) of the business establishments interviewed have between 1-9 employees; 22% have 10-99 employees and 20% have more than 200 employees. In terms of operating hours, 43.4% operate 8 hours a day while 20.6% operate 24 hours a day.

(2) Assessment of Current Transport Problems

Several typical current traffic conditions affecting the business and employees' transport had been presented to the respondents for their assessment.

Traffic Congestion

Traffic congestion in the study area has been generally regarded as "very bad" (78.9%).

Traffic Safety

Traffic safety is regarded as "very bad" by 34.3% of the respondents. Only 14.5% regarded it is still "good".

Air Pollution

Majority (73.2%) of the respondents indicated air pollution as "very bad".

Commuting to Establishment/Workplace

Nearly half (49.1%) of the respondents indicated commuting to establishment as "good" with 23.2% regarding the commute as "so-so".

Lack of Public Transport

Majority (59.4%) of the respondents still considered the lack of public transport as a problem. Nearly a fifth (18.2%) however, indicated it is a "so-so". More than a tenth (12.8%) indicated it as bad and very bad (9.3%).

Lack of Traffic Control/Management

Nearly two-fifths (38.2%) of the respondents indicated lack of traffic control/ management as not really a problem. But to more than a fourth (25.7%) of the respondents, it is very bad and bad (19.6%). More than a tenth (16.4%) indicated it is a "so-so".

(3) Suggested Solutions/Improvement Measures

Several suggested solutions/improvement measures had been presented to the respondents for their assessment if these can improve the current transport problems. Table 4.22 shows the respondents' assessment on such road projects.

Table 4.22 Assessment of Proposed Road Projects

Name of Road Project	Percent		
	Strongly Agree	Agree	Does Not Agree
East-West Road Construction (North of Governor's Drive)	55.0	32.8	5.0
East-West Road Construction (North of Governor's Drive)	55.0	32.1	5.0
Widening of Governor's Drive	43.7	29.2	15.5
North-South Road Construction	50.4	33.6	2.6
Widening of Aguinaldo Highway	76.0	18.8	
Widening of South Superhighway	50.1	26.3	4.3
Grade-separation at Major Intersections	43.0	25.8	4.3

4.9 Ambient Air Quality Measurement

Detailed survey results are presented in Environment Survey Report Volume 1: Air Quality Measurement Report (ESR-V1). The succeeding discussion presents the summary survey results.

The result of the 24-hour sampling activity and laboratory analyses are shown in Table 4.23. As shown in the table, total suspended particulates (TSP) are still lower than the National Ambient Air Quality Guideline for Criteria Pollutants for Short Term Period. Sulfur dioxides, nitrogen dioxides, and carbon monoxides have been undetected (ND) or below detection limit for the equipment used using equipment manufacturer's specification.

Table 4.23 Observed Ambient Air Concentrations of TSP, $S0_2$, $N0_2$ at Station No. 5

(in comparison with the National Ambient Air Quality Guideline for Criteria Pollutants for Short Term Period)

Parameter	Observed Concentration	DENR Standard*
Total Suspended Particulates (µg/Ncm)	84	230
$S0_2$ (µg/Ncm)	ND	180
$N0_2$ (µg/Ncm)	ND	150
C0 (µg/Ncm)	ND	10 - for 8 hrs averaging time

Reference: (DENR ADMINISTRATIVE ORDER NO. 2000–81 Series of 2000, Subject: IMPLEMENTING RULES AND REGULATIONS FOR RA 8749, Pursuant to the provisions of Section 51 of Republic Act No. 8749, otherwise known as the "Philippine Clean Air Act of 1999," and by virtue of Executive Order No. 192, Series of 1987).
ND – Not detected
Note: SO_2 Detection Limit = 5 µg/Ncm; NO_2 Detection Limit = 2.5 µg/Ncm;
CO Detection Limit = 0 to 100 ppm with 1 ppm increment.
* - 24 hours averaging time unless otherwise specified as per DAO 2000-81.

The inspection certificate and calibration records of the equipment used in the air quality measurements are compiled in ESR-V1.

4.10 Noise Level Measurement

Detailed survey results are presented in Environment Survey Report Volume 2: Noise Level Measurement Report (ESR-V2). The succeeding discussion presents the summary survey results.

The periodic average noise level recorded in decibels (dB) A [Logarithmic equivalent (Leq) form] are as shown in Table 4.24. The measurements in terms of the compass directions are meant to measure variabilities, and though not necessarily prescribed, is an extra effort just to know exactly how much are the variabilities (if any) in each direction. The hourly noise level measurement results are shown in ESR-V2.

Table 4.24 Average Periodic Noise Levels

Period	Average Periodic Noise Levels in decibels (dB)				DENR Allowable Standard (dB) – Class B Category
	Station 2	Station 3	Station 4	Station 5	
Morning	73.66	79.58	79.31	74.89	60
Daytime	71.98	80.38	77.92	78.62	65
Evening	72.18	77.29	73.06	75.2	60
Nightime	71.93	75.19	71.49	57.69	55

Note: Station number assignments corresponds to Traffic Count Survey station numbering

The propagation of noise level in all stations based on measurements failed to meet the DENR allowable standards for the different periods under the DENR Ambient

Noise Quality Standards Sec. 78 Chapter IV, Article 1 of NPCC Rules & Regulations, 1978 standard limits for Class B category.

The main reason for this condition at the time of survey is the sustained vehicular traffic movement that passes through the sampling points with very minimal or absence of noise abatement structures and/or vegetation that would dampen the noise levels from such sources along the alignment where the sampling stations are located. The traffic count during the same date of the noise level measurement is appended in the Annex of ESR-V2.

The inspection certificate and calibration records of the sound level meters are compiled in ESR-V2.

4.11 Water Quality Sampling

Detailed survey results are presented in Environment Survey Report Volume 3: Water Quality Sampling and Laboratory Report (ESR-V3). The laboratory results of the water sampling activities are shown in Table 4.25 and Table 4.26. The pre-tabulated DENR laboratory results are compiled in ESR-V3.

(1) Imus River

The Imus River has been classified by the DENR as Class C waters under “Section 68. Water Usage and Classification” for fresh surface waters (rivers, lakes, reservoirs, etc.) of DAO 90-34. Class C waters has defined beneficial uses such as fishery water for the propagation and growth of fish and other aquatic resources; recreational water class II (for boating etc.), and as Industrial Water Supply Class I (for manufacturing processes after treatment). The laboratory results of Imus River as shown in Table 4.25 are therefore comparable only to the standards applicable to that class.

The Biological Oxygen Demand (BOD) observed values for the Imus River are generally below DENR’s minimum limits except during the morning sampling for Sampling locations 1 and 3, and during the evening for Sampling Station 2 where the observed values exceeded the DENR’s maximum limits.

Dissolved Oxygen (DO) observed values on the other hand exceeded DENR’s standard except during the morning sampling for Sampling Stations 1 and 3, and during the afternoon and evening samplings for Sampling Station 2.

Oil and grease observed values exceeded DENR’s standard except during the morning sampling for Sampling locations 1 and 2, and during the evening sampling for Sampling Station 2.

For Total Suspended Solids (TSS), the DENR specified a standard of not more than 30 mg/L increase. It is not clear however, where it will have to be referred to. In the case of the observations made, the observe values exceed the DENR standard only for Sampling Station 1 if comparisons will be made in between sampling periods.

The Total Coliform count in all of the sampling stations of Imus River was observably high compared to the DENR standard. The numbers are also observed to peak during the afternoon sampling period.

(2) Ylang-Ylang River

The Ylang-Ylang River has been classified by the DENR either as Class C waters for its downstream (Sampling Stations 1 and 2), and Class B (Sampling Station 3) for its upstream under “Section 68. Water Usage and Classification” for fresh surface waters (rivers, lakes, reservoirs, etc.) of DAO 90-34. Class C waters has defined beneficial uses such as fishery water for the propagation and growth of fish and other aquatic resources; recreational water class II (for boating etc.), and as Industrial Water Supply Class I (for manufacturing processes after treatment). Class B waters on the other hand has defined beneficial use as recreational water class I (for primary contact recreation such as bathing, swimming, skin diving, etc. particularly those designated for tourism purposes). The laboratory results of Ylang-Ylang River as shown in Table 4.26 are therefore comparable only to the standards applicable to that class.

Table 4.25 Water Quality Sampling and Laboratory Results – Imus River

Parameters	DENR Standard (Table 1 of DAO 90-34)	Sampling Location/Station Number/Period – Imus River								
		1			2			3		
		A.M	P.M.	Evening	A.M	P.M.	Evening	A.M	P.M.	Evening
Ammonia, mg/L	-	0.414	0.417	0.156	0.05	0.725	0.531	1.03	0.063	<0.001
Biological Oxygen Demand (BOD), mg/	**7(10)**	**18**	**5**	**6**	**4**	**7**	**20**	**14**	**1**	**1**
Color (Apparent Color), PCU	*	50	50	50	5	75	75	50	15	15
Dissolved Oxygen (DO), mg/L	**5**	**4.3**	**5.4**	**6.3**	**8**	**2.9**	**1.4**	**4.6**	**7.7**	**7.7**
Oil and Grease, mg/L	**2**	**1**	**6**	**6**	**1**	**6**	**9**	**5**	**7**	**2**
pH (On-site)	6.5 - 8.5	7.68	7.76	7.86	7.66	7.65	7.56	7.6	7.53	7.58
Phosphate (as Ortho), mg/L	0.4	0.995	0.489	0.568	0.572	2.12	2.58	1.78	0.572	0.564
Temperature (On-site), ^{0}C	3**	28.5	29.5	28.5	26.5	28.6	27.7	23	22.9	22.8
Total Dissolved Solids, mg/L	-	30490	34974	33936	309	476	461	455	284	288
Total Solids, mg/L	-	30499	35057	33971	321	507	475	470	293	316
Total Suspended Solids (TSS), mg/L	***	**9**	**83**	**35**	**12**	**31**	**14**	**15**	**9**	**28**
Total Coliform, MPN/100 mL	**5,000**	**24 x 10^3**	**50 x 10^2**	**30 x 10^3**	**24 x 10^4**	**90 x 10^4**	**30 x 10^4**	**13 x 10^3**	**50 x 10^3**	**30 x 10^3**
Fecal Coliform, MPN/100 mL	-	24 x 10^3	11 x 10^2	80 x 10^2	50 x 10^3	16 x 10^4	50 x 10^3	13 x 10^3	30 x 10^3	50 x 10^2

Station Identification:

Station 1 - Island Cove Bridge (Downstream in Kawit, Cavite)
Station 2 - Salitran Bridge (Midstream at the vicinity of De La Salle University, Dasmarinas, Cavite)
Station 3 - Balite 1 Bridge (Upstream in Barangay Balite, Silang, Cavite)

Excerpted Notes from DAO 90-34:

--- - Means the standard of these substances are not considered necessary for the present time, considering the stage of the A30 development and DENR capabilities, equipment and resources.
( ) - Values in parenthesis means maximum values
* - No abnormal discoloration from unnatural causes
** - The allowable temperature increase over the average ambient temperature for each month. This rise shall be based on the average of the maximum daily temperature readings recorded at the site but upstream of the mixing zone over a period of one (1) month.
*** - Not more than 30 mg/L increase

Table 4.26 Water Quality Sampling and Laboratory Results – Ylang-Ylang River

Parameters	DENR Standard (Table 1 of DAO 90-34)	Sampling Location/Station Number/Period – Ylang-Ylang River								
		1			2			3		
		A.M	P.M.	Evening	A.M	P.M.	Evening	A.M	P.M.	Evening
Ammonia, mg/L	-	0.921	0.723	0.383	0.658	1.11	0.656	0.002	0.007	0.015
Biological Oxygen Demand (BOD), mg/	**7(10)/5**	**3**	**4**	**3**	**7**	**8**	**9**	**1**	**1**	**1**
Color (Apparent Color), PCU	*	25	25	25	25	25	20	17	10	5
Dissolved Oxygen (DO), mg/L	**5**	**4.6**	**5.1**	**5**	**0.7**	**3.2**	**2.8**	**6.3**	**4.7**	**5.4**
Oil and Grease, mg/L	**2/1**	**3**	**7**	**2**	**11**	**6**	**5**	**9**	**2**	**5**
pH (On-site)	6.5 - 8.5	7.35	7.58	7.72	7.65	7.65	7.65	6.62	6.58	6.6
Phosphate (as Ortho), mg/L	0.4	1.36	1.17	0.661	1.24	0.995	1.08	0.359	0.353	0.359
Temperature (On-site), ^{0}C	3**	25.8	30	28.1	24.6	25.9	27	24.4	25.9	24.3
Total Dissolved Solids, mg/L	-	15472	19641	34099	423	423	431	262	266	242
Total Solids, mg/L	-	15497	19688	34155	454	459	464	286	294	267
Total Suspended Solids (TSS), mg/L	***	**25**	**47**	**56**	**31**	**36**	**33**	**24**	**28**	**25**
Total Coliform, MPN/100 mL	**5000/**	**24×10^4**	**30×10^3**	**24×10^3**	**16×10^5**	**24×10^4**	**24×10^4**	**30×10^4**	**30×10^3**	**50×10^3**
	1,000									
Fecal Coliform, MPN/100 mL	-	24×10^4	17×10^3	24×10^3	16×10^5	24×10^4	24×10^4	11×10^4	30×10^3	50×10^3

Station Identification:
- Station 1 - Noveleta Diversion Bridge (Downstream in Noveleta, Cavite)
- Station 2 - Ibayo Resort (Midstream at Barangay Zone 3, Dasmarinas, Cavite)
- Station 3 - Luksuhin Bridge (Upstream in Barangay Luksuhin, Silang, Cavite)

Excerpted Notes from DAO 90-34:

--- - Means the standard of these substances are not considered necessary for the present time, considering the stage of the A30 development and DENR capabilities, equipment and resources.

( ) - Values in parenthesis means maximum values On DENR Standard (N/N) - means Applicable Class/Class B Values

* - No abnormal discoloration from unnatural causes

** - The allowable temperature increase over the average ambient temperature for each month. This rise shall be based on the average of the maximum daily temperature readings recorded at the site but upstream of the mixing zone over a period of one (1) month.

*** - Not more than 30 mg/L increase

The Biological Oxygen Demand (BOD) observed values of the Ylang-Ylang River are generally within DENR's minimum and maximum limits.

Dissolved Oxygen (DO) observed values are within DENR's standard except for the afternoon sampling period for Sampling Station 1 and for both morning and evening sampling periods for Sampling Station 3.

Oil and grease observed values exceeded DENR's standard except during the evening sampling period for Sampling Station 1, and during the afternoon sampling period for Sampling Station 3.

For Total Suspended Solids (TSS), the DENR specified a standard of not more than 30 mg/L increase. It is not clear however, where it will have to be referred to. In the case of the observations made, the observe values are within the DENR standard if comparisons will be made in between sampling periods.

The Total Coliform count in all of the sampling stations of Ylang-Ylang River was observably high compared to the DENR standard. The numbers are also observed to peak during the afternoon sampling period for Stations 1 and 2, and during the evening for Station 3.

The inspection certificate, calibration records of the sampling and laboratory equipment, and the official certificates of compliance proficiency that verify reliable and accurate quality of equipment to be used for the analysis are compiled in ESR-V3.

Annex 1: Average Daily Traffic Volume

Average Daily Traffic Volume (Bothway)

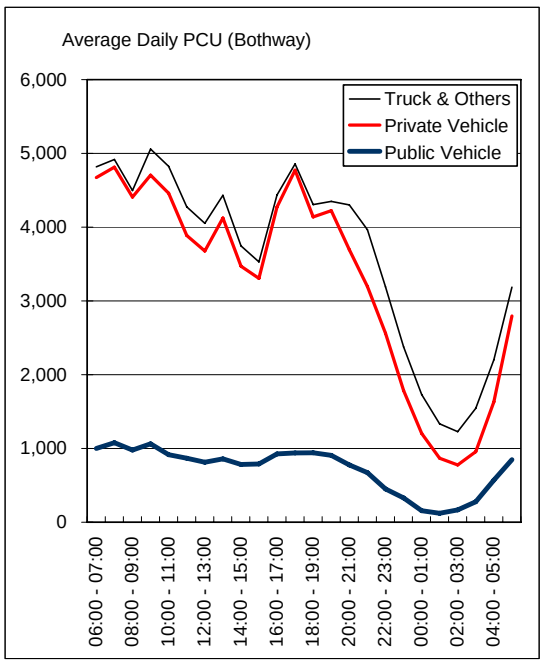
Survey Station : Manila-Cavite Expressway@Longos (Boundary of Metro Manila and Cavite)
Survey Date (2005.02.17 Thu to 2005.02.18 Fri & 2005.02.22 Tue to 2005.02.23 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	15	1	362	49	192	404	995	1,379	55	8	3,458
2	07:00 - 08:00	13	1	359	42	238	452	1,218	1,225	40	3	3,590
3	08:00 - 09:00	15	2	313	33	231	329	1,089	1,227	33	6	3,276
4	09:00 - 10:00	23	2	281	44	288	334	1,157	1,319	135	14	3,595
5	10:00 - 11:00	17	2	270	42	224	312	941	1,422	143	5	3,377
6	11:00 - 12:00	12	3	254	35	219	260	775	1,234	152	9	2,950
7	12:00 - 13:00	13	4	210	36	223	196	902	1,110	148	6	2,847
8	13:00 - 14:00	11	4	237	38	224	232	932	1,321	121	8	3,126
9	14:00 - 15:00	12	3	219	30	205	187	820	1,057	107	7	2,646
10	15:00 - 16:00	15	2	210	30	217	190	887	892	87	5	2,533
11	16:00 - 17:00	21	11	255	33	247	250	1,075	1,262	61	10	3,223
12	17:00 - 18:00	15	4	266	28	250	280	1,295	1,408	31	7	3,582
13	18:00 - 19:00	8	1	288	20	241	217	936	1,288	64	8	3,069
14	19:00 - 20:00	6	2	306	21	207	238	975	1,324	49	2	3,129
15	20:00 - 21:00	8	3	261	10	187	205	947	1,108	240	4	2,970
16	21:00 - 22:00	9	1	268	11	127	208	770	960	306	3	2,661
17	22:00 - 23:00	9	2	207	7	67	165	708	768	249	5	2,184
18	23:00 - 24:00	3	1	180	4	28	158	442	517	237	0	1,568
19	00:00 - 01:00	3	2	95	2	6	116	347	350	211	0	1,131
20	01:00 - 02:00	3	0	77	2	3	92	203	269	186	0	833
21	02:00 - 03:00	0	2	102	1	7	84	152	222	181	0	749
22	03:00 - 04:00	1	2	158	5	17	78	164	265	235	2	925
23	04:00 - 05:00	6	3	257	21	78	123	256	413	227	2	1,383
24	05:00 - 06:00	8	0	341	31	146	161	604	735	155	4	2,182
	16 hours Total	211	42	4,355	499	3,517	4,291	15,712	19,531	1,771	102	50,029
	24 hours Total	242	52	5,770	570	3,866	5,267	18,586	23,068	3,451	113	60,982
	24 hours/16hours (Real Result)	1.14455	1.25301	1.3248	1.14128	1.09939	1.22734	1.18296	1.18107	1.94917	1.10837	
	24 hours/16hours (Estimated)											
	24 hours Total	242	52	5,770	570	3,866	5,267	18,586	23,068	3,451	113	60,982
	7:00-9:00 Ratio	11.6%	4.8%	11.6%	13.2%	12.1%	14.8%	12.4%	10.6%	2.1%	7.1%	11.3%
	Average Occupancy (without Tricycle)	1.24	0.00	12.39	22.84	40.73	3.96	1.93	3.86	2.22	1.12	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	999	3,674	144	4,817
07:00 - 08:00	1,077	3,737	103	4,917
08:00 - 09:00	979	3,428	88	4,495
09:00 - 10:00	1,064	3,642	351	5,057
10:00 - 11:00	915	3,546	363	4,824
11:00 - 12:00	869	3,018	388	4,275
12:00 - 13:00	814	2,864	375	4,053
13:00 - 14:00	859	3,264	310	4,433
14:00 - 15:00	783	2,689	275	3,747
15:00 - 16:00	792	2,514	223	3,529
16:00 - 17:00	926	3,348	162	4,436
17:00 - 18:00	940	3,831	85	4,856
18:00 - 19:00	943	3,195	168	4,306
19:00 - 20:00	905	3,319	125	4,349
20:00 - 21:00	778	2,917	604	4,299
21:00 - 22:00	672	2,524	768	3,964
22:00 - 23:00	453	2,109	627	3,189
23:00 - 24:00	330	1,455	593	2,378
00:00 - 01:00	157	1,046	528	1,731
01:00 - 02:00	122	745	465	1,332
02:00 - 03:00	167	610	453	1,230
03:00 - 04:00	278	678	589	1,545
04:00 - 05:00	571	1,061	569	2,201
05:00 - 06:00	849	1,948	390	3,187

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	17,241	61,159	8,740	87,140
Estimated 24 hours Person Trips	241,944	146,012	7,779	395,735
PT/PCU	14.033	2.387	0.890	4.541



Average Daily Traffic Volume (Bothway)

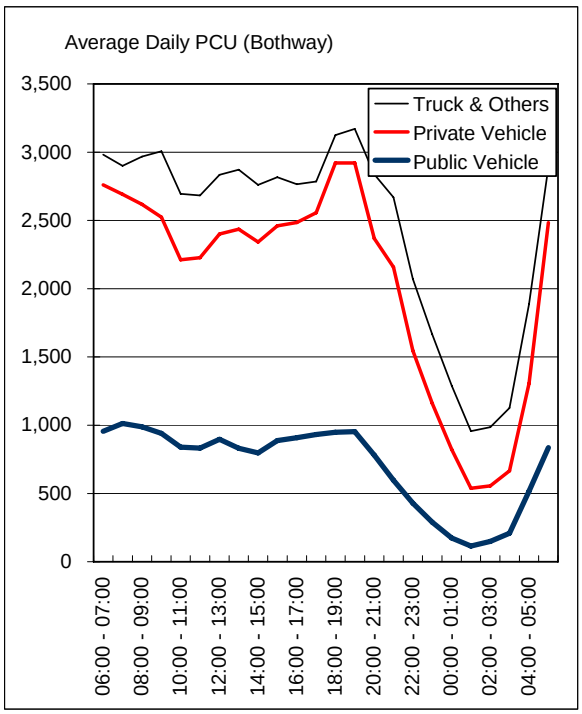
Survey Station : Aguinaldo Highway @ Bgy Real, Bacoor (between Tirona Highway and Mambog Road)
Survey Date (2005.02.17 Thu to 2005.02.18 Fri & 2005.02.22 Tue to 2005.02.23 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	198	38	482	5	113	141	541	662	69	50	2,297
2	07:00 - 08:00	331	25	505	2	126	107	547	582	70	34	2,328
3	08:00 - 09:00	230	24	481	4	131	99	526	591	129	28	2,241
4	09:00 - 10:00	195	40	460	2	125	75	521	594	184	23	2,218
5	10:00 - 11:00	154	28	392	3	124	63	430	536	185	18	1,932
6	11:00 - 12:00	148	31	385	5	124	47	450	553	176	18	1,937
7	12:00 - 13:00	154	33	431	5	122	70	491	574	168	15	2,062
8	13:00 - 14:00	154	40	399	5	113	58	498	650	167	19	2,101
9	14:00 - 15:00	150	24	384	4	109	54	521	599	157	27	2,026
10	15:00 - 16:00	152	17	436	1	117	73	509	606	133	25	2,067
11	16:00 - 17:00	172	31	444	3	120	73	516	600	96	41	2,094
12	17:00 - 18:00	181	28	455	5	122	86	494	632	56	90	2,146
13	18:00 - 19:00	222	19	436	14	138	134	561	763	65	44	2,393
14	19:00 - 20:00	192	15	455	3	134	149	627	707	89	28	2,398
15	20:00 - 21:00	135	19	377	3	107	109	546	559	182	16	2,049
16	21:00 - 22:00	110	13	289	4	80	105	571	533	201	10	1,913
17	22:00 - 23:00	93	15	235	4	37	80	359	407	205	11	1,443
18	23:00 - 24:00	55	16	157	1	26	66	286	314	199	8	1,127
19	00:00 - 01:00	38	12	105	1	8	47	222	230	185	6	851
20	01:00 - 02:00	28	11	70	3	4	37	131	153	167	1	602
21	02:00 - 03:00	16	8	89	5	5	35	122	153	169	6	605
22	03:00 - 04:00	18	18	117	2	16	39	131	175	184	2	699
23	04:00 - 05:00	69	16	256	3	65	71	215	299	231	6	1,228
24	05:00 - 06:00	119	24	409	6	107	127	384	692	155	23	2,044
	16 hours Total	2,875	422	6,807	63	1,903	1,439	8,347	9,738	2,124	482	34,198
	24 hours Total	3,309	538	8,243	85	2,168	1,939	10,194	12,160	3,618	543	42,795
	24 hours/16hours (Real Result)	1.15078	1.27639	1.21089	1.36	1.13929	1.34746	1.22128	1.24872	1.70339	1.12669	
	24 hours/16hours (Estimated)											
	24 hours Total	3,309	538	8,243	85	2,168	1,939	10,194	12,160	3,618	543	42,795
	7:00-9:00 Ratio	16.9%	8.9%	12.0%	6.5%	11.9%	10.6%	10.5%	9.6%	5.5%	11.3%	10.7%
	Average Occupancy (without Tricycle)	1.28	0.00	9.50	15.90	30.36	3.55	1.64	2.93	2.22	1.02	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	955	1,805	222	2,982
07:00 - 08:00	1,013	1,679	209	2,901
08:00 - 09:00	989	1,629	350	2,968
09:00 - 10:00	941	1,583	483	3,007
10:00 - 11:00	839	1,374	481	2,694
11:00 - 12:00	833	1,394	457	2,684
12:00 - 13:00	897	1,503	435	2,835
13:00 - 14:00	831	1,605	436	2,872
14:00 - 15:00	798	1,544	419	2,761
15:00 - 16:00	888	1,572	357	2,817
16:00 - 17:00	909	1,576	281	2,766
17:00 - 18:00	933	1,624	228	2,785
18:00 - 19:00	949	1,972	205	3,126
19:00 - 20:00	954	1,968	249	3,171
20:00 - 21:00	782	1,586	469	2,837
21:00 - 22:00	597	1,561	511	2,669
22:00 - 23:00	430	1,117	524	2,071
23:00 - 24:00	289	872	505	1,666
00:00 - 01:00	173	648	469	1,290
01:00 - 02:00	115	424	418	957
02:00 - 03:00	149	407	429	985
03:00 - 04:00	209	456	462	1,127
04:00 - 05:00	517	789	582	1,888
05:00 - 06:00	836	1,648	409	2,893

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	16,826	32,335	9,588	58,749
Estimated 24 hours Person Trips	145,460	63,448	8,586	217,494
PT/PCU	8.645	1.962	0.895	3.702



Average Daily Traffic Volume (Bothway)

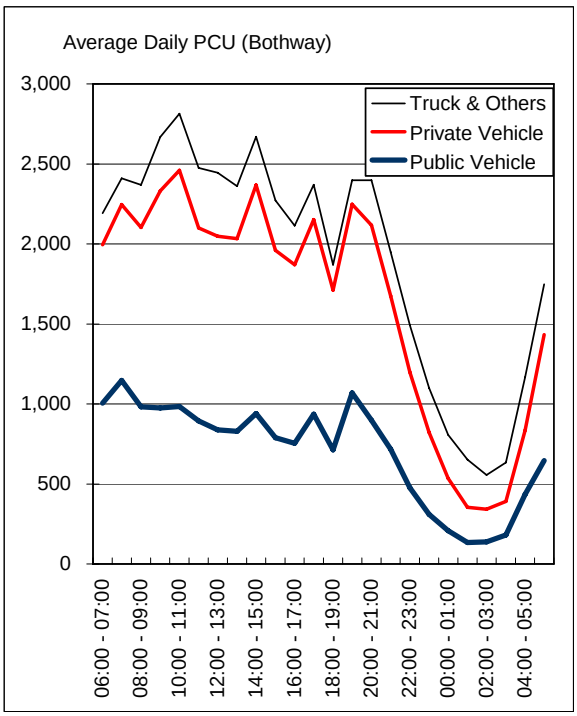
Survey Station : Aguinaldo Highway @ Bgy Anabu 2, Imus (north of Salawag-Salitran Road)
Survey Date (2005.02.15 Tue to 2005.02.16 Wed & 2005.02.16 Wed to 2005.02.17 Thu)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	103	9	523	4	107	50	426	306	77	6	1,609
2	07:00 - 08:00	155	4	616	2	110	43	388	401	64	5	1,786
3	08:00 - 09:00	120	4	505	1	112	32	378	440	103	8	1,701
4	09:00 - 10:00	110	7	481	2	126	30	442	557	132	8	1,893
5	10:00 - 11:00	102	10	465	11	136	35	428	644	138	9	1,976
6	11:00 - 12:00	107	5	414	2	135	31	395	489	147	9	1,733
7	12:00 - 13:00	83	5	381	8	128	26	408	493	153	16	1,698
8	13:00 - 14:00	85	9	410	4	105	16	430	484	124	20	1,684
9	14:00 - 15:00	98	10	468	1	118	19	359	675	120	2	1,868
10	15:00 - 16:00	132	7	356	1	127	21	467	423	122	7	1,660
11	16:00 - 17:00	111	6	358	3	107	24	417	421	94	9	1,548
12	17:00 - 18:00	141	8	443	4	133	30	449	455	85	7	1,751
13	18:00 - 19:00	122	15	321	3	114	33	481	288	60	10	1,445
14	19:00 - 20:00	136	3	537	2	130	56	367	460	58	5	1,752
15	20:00 - 21:00	95	4	441	2	117	64	384	473	108	13	1,699
16	21:00 - 22:00	74	3	336	1	106	47	286	387	109	3	1,350
17	22:00 - 23:00	49	4	245	1	54	31	214	298	117	3	1,014
18	23:00 - 24:00	45	2	163	1	32	17	152	214	111	1	737
19	00:00 - 01:00	12	1	117	1	16	10	104	137	108	1	506
20	01:00 - 02:00	16	2	84	0	5	11	71	86	118	2	392
21	02:00 - 03:00	6	3	88	1	3	13	55	85	86	0	338
22	03:00 - 04:00	6	5	106	2	10	14	62	84	97	0	385
23	04:00 - 05:00	22	3	211	4	57	23	98	174	131	6	727
24	05:00 - 06:00	49	4	295	1	102	39	189	351	123	9	1,160
	16 hours Total	1,769	106	7,053	48	1,907	554	6,501	7,390	1,690	135	27,151
	24 hours Total	1,973	128	8,360	58	2,185	709	7,444	8,818	2,579	155	32,407
	24 hours/16hours (Real Result)	1.11532	1.20853	1.18531	1.19792	1.14552	1.28094	1.14507	1.19323	1.52619	1.15242	
	24 hours/16hours (Estimated)											
	24 hours Total	1,973	128	8,360	58	2,185	709	7,444	8,818	2,579	155	32,407
	7:00-9:00 Ratio	13.9%	6.3%	13.4%	5.2%	10.1%	10.5%	10.3%	9.5%	6.5%	8.4%	10.8%
	Average Occupancy (without Tricycle)	1.25	0.00	7.88	18.60	30.37	2.27	1.62	3.07	2.27	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	1,005	990	197	2,192
07:00 - 08:00	1,147	1,098	165	2,410
08:00 - 09:00	982	1,121	266	2,369
09:00 - 10:00	975	1,355	338	2,668
10:00 - 11:00	984	1,476	354	2,814
11:00 - 12:00	894	1,206	375	2,475
12:00 - 13:00	838	1,210	397	2,445
13:00 - 14:00	829	1,204	328	2,361
14:00 - 15:00	939	1,429	301	2,669
15:00 - 16:00	789	1,171	312	2,272
16:00 - 17:00	754	1,116	244	2,114
17:00 - 18:00	935	1,217	218	2,370
18:00 - 19:00	713	998	159	1,870
19:00 - 20:00	1,068	1,180	150	2,398
20:00 - 21:00	899	1,217	282	2,398
21:00 - 22:00	717	958	274	1,949
22:00 - 23:00	476	722	294	1,492
23:00 - 24:00	310	512	278	1,100
00:00 - 01:00	209	326	271	806
01:00 - 02:00	134	220	297	651
02:00 - 03:00	139	202	214	555
03:00 - 04:00	181	210	243	634
04:00 - 05:00	435	400	332	1,167
05:00 - 06:00	646	787	315	1,748

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	16,995	22,326	6,601	45,922
Estimated 24 hours Person Trips	133,267	43,225	6,007	182,499
PT/PCU	7.842	1.936	0.910	3.974



Average Daily Traffic Volume (Bothway)

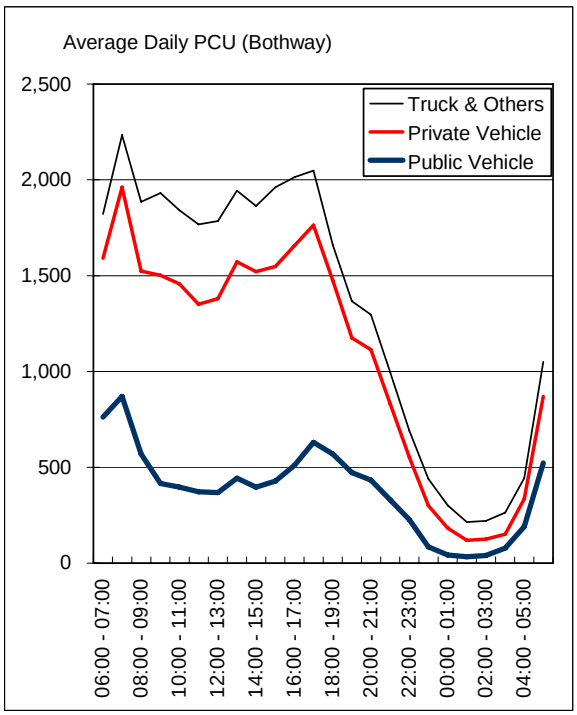
Survey Station : Governor Drive @ Bgy San Francisco, General Trias (between Manggahan and Palapala)
Survey Date (2005.02.15 Tue to 2005.02.16 Wed & 2005.02.16 Wed to 2005.02.17 Thu)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	141	57	405	11	69	9	356	278	79	33	1,438
2	07:00 - 08:00	162	37	487	17	57	14	443	386	97	29	1,729
3	08:00 - 09:00	118	35	322	11	35	9	365	360	139	14	1,408
4	09:00 - 10:00	105	33	227	10	30	7	382	441	167	12	1,414
5	10:00 - 11:00	118	40	224	8	24	7	364	434	149	11	1,379
6	11:00 - 12:00	100	39	206	7	26	3	343	401	162	12	1,299
7	12:00 - 13:00	83	38	205	7	25	11	318	436	157	11	1,291
8	13:00 - 14:00	106	45	248	3	33	11	358	482	145	9	1,440
9	14:00 - 15:00	102	44	222	6	27	8	330	502	133	9	1,383
10	15:00 - 16:00	108	43	235	6	33	8	329	498	160	13	1,433
11	16:00 - 17:00	77	43	278	2	45	5	354	508	136	17	1,465
12	17:00 - 18:00	139	44	360	5	41	8	355	483	100	36	1,571
13	18:00 - 19:00	126	34	303	3	55	8	298	372	67	17	1,283
14	19:00 - 20:00	105	39	246	2	50	7	281	253	74	7	1,064
15	20:00 - 21:00	90	28	245	2	31	4	252	264	72	3	991
16	21:00 - 22:00	68	26	175	2	32	5	189	188	65	2	752
17	22:00 - 23:00	43	21	132	2	13	5	113	128	55	1	513
18	23:00 - 24:00	19	15	49	1	5	3	85	80	56	0	313
19	00:00 - 01:00	13	19	23	2	2	2	54	53	47	1	216
20	01:00 - 02:00	5	11	19	0	2	2	29	35	38	0	141
21	02:00 - 03:00	4	15	21	0	4	3	27	35	38	0	147
22	03:00 - 04:00	8	17	44	1	5	2	26	28	45	0	176
23	04:00 - 05:00	19	17	93	3	23	2	44	61	43	1	306
24	05:00 - 06:00	92	31	298	4	35	5	108	136	70	6	785
	16 hours Total	1,748	625	4,388	102	613	124	5,317	6,286	1,902	235	21,340
	24 hours Total	1,951	771	5,067	115	702	148	5,803	6,842	2,294	244	23,937
	24 hours/16hours (Real Result)	1.11613	1.2336	1.15474	1.12745	1.14519	1.19355	1.0914	1.08845	1.2061	1.0383	
	24 hours/16hours (Estimated)											
	24 hours Total	1,951	771	5,067	115	702	148	5,803	6,842	2,294	244	23,937
	7:00-9:00 Ratio	14.4%	9.3%	16.0%	24.3%	13.1%	15.5%	13.9%	10.9%	10.3%	17.6%	13.1%
	Average Occupancy (without Tricycle)	1.29	0.00	10.99	16.51	30.88	2.06	1.81	2.31	2.22	1.09	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	762	829	231	1,822
07:00 - 08:00	870	1,092	272	2,234
08:00 - 09:00	570	954	362	1,886
09:00 - 10:00	416	1,086	430	1,932
10:00 - 11:00	396	1,061	384	1,841
11:00 - 12:00	372	979	417	1,768
12:00 - 13:00	368	1,013	404	1,785
13:00 - 14:00	443	1,129	372	1,944
14:00 - 15:00	396	1,126	342	1,864
15:00 - 16:00	428	1,120	413	1,961
16:00 - 17:00	510	1,147	357	2,014
17:00 - 18:00	630	1,133	286	2,049
18:00 - 19:00	569	906	185	1,660
19:00 - 20:00	472	703	192	1,367
20:00 - 21:00	433	681	183	1,297
21:00 - 22:00	330	499	165	994
22:00 - 23:00	227	325	139	691
23:00 - 24:00	85	215	140	440
00:00 - 01:00	42	140	119	301
01:00 - 02:00	33	86	95	214
02:00 - 03:00	40	85	95	220
03:00 - 04:00	78	73	113	264
04:00 - 05:00	190	144	109	443
05:00 - 06:00	523	347	181	1,051

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	9,177	16,873	5,979	32,029
Estimated 24 hours Person Trips	79,257	29,107	5,363	113,727
PT/PCU	8.636	1.725	0.897	3.551



Average Daily Traffic Volume (Bothway)

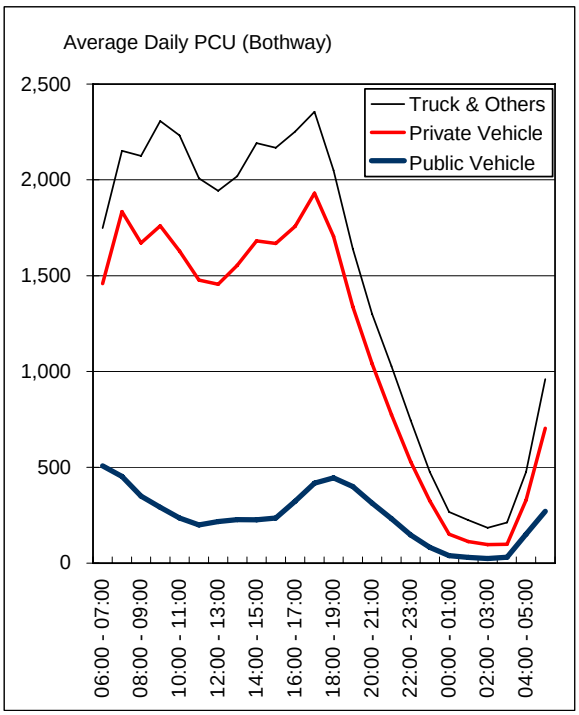
Survey Station : Governor Drive @ Bgy Paliparan, Dasmarinas (between Molino Rd and Gen Mariano Alvarez)
Survey Date (2005.02.15 Tue to 2005.02.16 Wed & 2005.02.16 Wed to 2005.02.17 Thu)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	136	653	304	4	23	14	290	400	98	45	1,966
2	07:00 - 08:00	164	416	263	5	26	21	414	592	106	55	2,059
3	08:00 - 09:00	132	232	214	1	15	28	364	584	164	46	1,777
4	09:00 - 10:00	123	174	174	1	14	15	390	681	209	26	1,806
5	10:00 - 11:00	101	144	153	1	3	13	348	664	232	26	1,683
6	11:00 - 12:00	100	124	130	1	2	19	315	604	202	28	1,522
7	12:00 - 13:00	92	169	134	1	7	20	301	588	187	22	1,518
8	13:00 - 14:00	108	163	145	3	3	13	317	639	180	16	1,586
9	14:00 - 15:00	81	138	144	2	4	17	302	737	197	17	1,637
10	15:00 - 16:00	97	159	147	1	7	19	311	711	189	27	1,666
11	16:00 - 17:00	110	158	190	3	18	16	391	659	185	34	1,759
12	17:00 - 18:00	141	204	246	2	23	19	398	696	141	75	1,943
13	18:00 - 19:00	163	208	260	6	24	12	385	540	122	41	1,757
14	19:00 - 20:00	122	129	211	1	42	9	331	373	115	15	1,346
15	20:00 - 21:00	101	285	176	3	22	9	196	326	99	14	1,228
16	21:00 - 22:00	63	125	129	3	17	9	167	230	97	10	849
17	22:00 - 23:00	52	46	86	2	8	9	109	163	86	4	563
18	23:00 - 24:00	28	28	51	1	3	4	77	102	60	2	353
19	00:00 - 01:00	13	31	26	0	0	2	35	47	46	1	199
20	01:00 - 02:00	7	19	19	0	1	5	26	32	45	0	152
21	02:00 - 03:00	7	23	15	0	1	3	15	34	35	0	132
22	03:00 - 04:00	13	18	18	0	2	2	17	30	45	0	144
23	04:00 - 05:00	31	56	80	1	15	7	38	81	59	1	366
24	05:00 - 06:00	89	158	145	3	25	11	110	188	93	24	843
	16 hours Total	1,832	3,478	3,015	33	248	248	5,216	9,020	2,518	494	26,099
	24 hours Total	2,070	3,854	3,454	38	301	289	5,641	9,696	2,986	524	28,850
	24 hours/16hours (Real Result) 24 hours/16hours (Estimated)	1.13022	1.10827	1.14561	1.16923	1.21414	1.16331	1.08149	1.07489	1.1859	1.05972	
	24 hours Total	2,070	3,854	3,454	38	301	289	5,641	9,696	2,986	524	28,850
	7:00-9:00 Ratio	14.3%	16.8%	13.8%	13.2%	13.5%	16.8%	13.8%	12.1%	9.0%	19.1%	13.3%
	Average Occupancy (without Tricycle)	1.33	0.00	11.83	14.03	17.65	2.65	1.86	3.38	2.09	1.04	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	507	951	290	1,748
07:00 - 08:00	453	1,381	318	2,152
08:00 - 09:00	350	1,321	454	2,125
09:00 - 10:00	291	1,469	547	2,307
10:00 - 11:00	235	1,393	604	2,232
11:00 - 12:00	199	1,278	532	2,009
12:00 - 13:00	216	1,239	488	1,943
13:00 - 14:00	227	1,327	465	2,019
14:00 - 15:00	226	1,456	510	2,192
15:00 - 16:00	235	1,433	500	2,168
16:00 - 17:00	323	1,434	495	2,252
17:00 - 18:00	417	1,513	426	2,356
18:00 - 19:00	445	1,260	345	2,050
19:00 - 20:00	400	939	303	1,642
20:00 - 21:00	313	727	260	1,300
21:00 - 22:00	231	544	253	1,028
22:00 - 23:00	147	382	217	746
23:00 - 24:00	82	243	152	477
00:00 - 01:00	39	112	116	267
01:00 - 02:00	30	82	113	225
02:00 - 03:00	24	72	88	184
03:00 - 04:00	31	68	113	212
04:00 - 05:00	151	178	147	476
05:00 - 06:00	270	434	256	960

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	5,839	21,238	7,987	35,064
Estimated 24 hours Person Trips	46,684	46,764	6,788	100,236
PT/PCU	7.995	2.202	0.850	2.859



Average Daily Traffic Volume (Bothway)

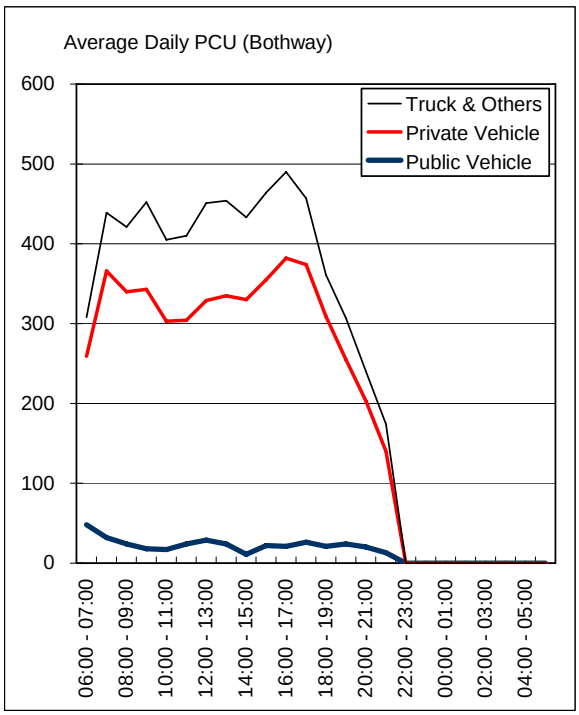
Survey Station : Amadeo - General Trias Road @ Bgy Tapia, General Trias
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	54	119	17	8	5	1	47	99	16	9	374
2	07:00 - 08:00	76	167	13	3	4	1	99	141	23	16	542
3	08:00 - 09:00	39	73	13	0	2	1	87	144	29	9	396
4	09:00 - 10:00	55	77	9	1	2	2	95	141	39	11	430
5	10:00 - 11:00	48	86	7	1	3	2	78	128	38	8	396
6	11:00 - 12:00	35	112	12	3	2	1	82	125	39	8	416
7	12:00 - 13:00	34	174	16	3	1	1	85	136	45	9	502
8	13:00 - 14:00	44	67	14	2	0	1	82	144	46	4	402
9	14:00 - 15:00	33	60	7	0	0	2	84	149	40	5	378
10	15:00 - 16:00	35	64	13	0	1	1	89	155	41	6	404
11	16:00 - 17:00	41	164	12	1	1	0	89	174	38	15	532
12	17:00 - 18:00	71	122	10	1	5	3	93	154	25	20	502
13	18:00 - 19:00	64	110	11	0	3	1	69	133	17	9	415
14	19:00 - 20:00	46	79	8	2	5	1	65	101	20	3	328
15	20:00 - 21:00	33	81	9	3	2	1	46	85	14	2	272
16	21:00 - 22:00	36	48	5	2	1	1	33	55	13	3	196
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	738	1,600	172	29	35	15	1,219	2,060	481	134	6,481
	24 hours Total	738	1,600	172	29	35	15	1,219	2,060	481	134	6,481
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	839	2,014	210	34	41	20	1,423	2,405	780	148	7,913
	7:00-9:00 Ratio	13.6%	11.9%	12.4%	8.8%	14.5%	10.2%	13.0%	11.8%	6.7%	16.2%	11.8%
	Average Occupancy (without Tricycle)	1.34	0.00	8.85	10.22	11.67	1.58	1.52	3.61	1.86	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	48	211	49	308
07:00 - 08:00	32	334	73	439
08:00 - 09:00	24	316	81	421
09:00 - 10:00	18	325	109	452
10:00 - 11:00	17	286	102	405
11:00 - 12:00	24	280	106	410
12:00 - 13:00	29	300	122	451
13:00 - 14:00	24	311	119	454
14:00 - 15:00	11	319	103	433
15:00 - 16:00	22	333	109	464
16:00 - 17:00	21	361	108	490
17:00 - 18:00	26	348	83	457
18:00 - 19:00	21	288	52	361
19:00 - 20:00	24	231	52	307
20:00 - 21:00	20	183	37	240
21:00 - 22:00	13	127	34	174
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	449	5,311	2,098	7,858
Estimated 24 hours Person Trips	2,688	11,989	1,605	16,282
PT/PCU	5.987	2.257	0.765	2.072



Average Daily Traffic Volume (Bothway)

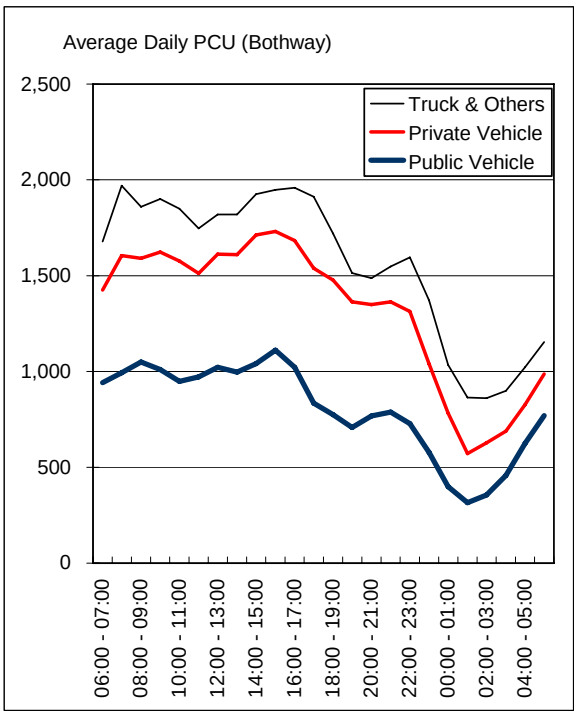
Survey Station : Aguinaldo Highway @ Bgy Zapote II, Bacoor (boundary of Bacoor and Las Pinas)
Survey Date (2005.02.17 Thu to 2005.02.18 Fri & 2005.02.22 Tue to 2005.02.23 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	241	154	533	92	2	20	120	175	16	213	1,564
2	07:00 - 08:00	383	137	543	109	8	29	155	200	20	316	1,897
3	08:00 - 09:00	273	82	578	121	2	27	140	186	24	211	1,640
4	09:00 - 10:00	225	90	540	131	3	41	159	216	36	188	1,627
5	10:00 - 11:00	217	59	521	110	2	25	154	248	41	170	1,545
6	11:00 - 12:00	196	65	537	110	2	26	159	189	41	133	1,456
7	12:00 - 13:00	203	66	570	107	4	31	159	217	44	98	1,497
8	13:00 - 14:00	216	43	570	93	2	29	156	233	48	90	1,477
9	14:00 - 15:00	220	50	591	99	3	32	182	251	44	103	1,574
10	15:00 - 16:00	231	54	626	109	5	42	155	223	41	116	1,599
11	16:00 - 17:00	295	40	589	90	3	40	178	224	37	185	1,677
12	17:00 - 18:00	326	56	469	84	3	47	197	226	40	273	1,719
13	18:00 - 19:00	294	31	438	76	3	42	212	227	30	170	1,520
14	19:00 - 20:00	190	37	409	60	3	62	172	224	18	105	1,276
15	20:00 - 21:00	203	31	438	66	6	56	180	172	25	76	1,252
16	21:00 - 22:00	157	36	450	72	3	67	161	179	51	56	1,230
17	22:00 - 23:00	175	15	424	58	3	58	206	161	94	49	1,241
18	23:00 - 24:00	97	16	344	33	6	60	138	137	122	28	980
19	00:00 - 01:00	67	28	249	16	1	67	104	106	96	13	746
20	01:00 - 02:00	57	31	201	8	2	50	58	72	113	11	599
21	02:00 - 03:00	38	43	224	13	0	49	71	78	86	19	620
22	03:00 - 04:00	39	66	288	16	1	41	57	69	68	41	683
23	04:00 - 05:00	66	139	377	36	4	28	57	55	49	73	882
24	05:00 - 06:00	128	151	446	65	2	21	56	61	20	118	1,066
	16 hours Total	3,866	1,027	8,398	1,525	50	613	2,635	3,385	553	2,498	24,547
	24 hours Total	4,531	1,514	10,950	1,768	67	985	3,380	4,122	1,198	2,849	31,361
	24 hours/16hours (Real Result)	1.17216	1.47371	1.3039	1.15934	1.34343	1.60735	1.28273	1.21776	2.16833	1.14031	
	24 hours/16hours (Estimated)											
	24 hours Total	4,531	1,514	10,950	1,768	67	985	3,380	4,122	1,198	2,849	31,361
	7:00-9:00 Ratio	14.5%	14.4%	10.2%	13.0%	14.3%	5.6%	8.7%	9.3%	3.6%	18.5%	11.3%
	Average Occupancy (without Tricycle)	1.38	0.00	7.32	7.11	23.39	2.47	1.92	3.25	2.27	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	942	483	253	1,678
07:00 - 08:00	993	612	364	1,969
08:00 - 09:00	1,050	540	270	1,860
09:00 - 10:00	1,011	612	278	1,901
10:00 - 11:00	949	628	272	1,849
11:00 - 12:00	972	540	235	1,747
12:00 - 13:00	1,022	590	208	1,820
13:00 - 14:00	997	613	210	1,820
14:00 - 15:00	1,041	672	213	1,926
15:00 - 16:00	1,111	620	217	1,948
16:00 - 17:00	1,022	661	276	1,959
17:00 - 18:00	835	704	373	1,912
18:00 - 19:00	775	702	243	1,720
19:00 - 20:00	708	656	149	1,513
20:00 - 21:00	768	582	137	1,487
21:00 - 22:00	788	576	184	1,548
22:00 - 23:00	728	585	283	1,596
23:00 - 24:00	578	461	333	1,372
00:00 - 01:00	399	384	252	1,035
01:00 - 02:00	315	257	292	864
02:00 - 03:00	355	273	232	860
03:00 - 04:00	457	232	210	899
04:00 - 05:00	626	201	196	1,023
05:00 - 06:00	770	216	168	1,154

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	19,209	12,398	5,844	37,451
Estimated 24 hours Person Trips	94,278	28,551	5,667	128,496
PT/PCU	4.908	2.303	0.970	3.431



Average Daily Traffic Volume (Bothway)

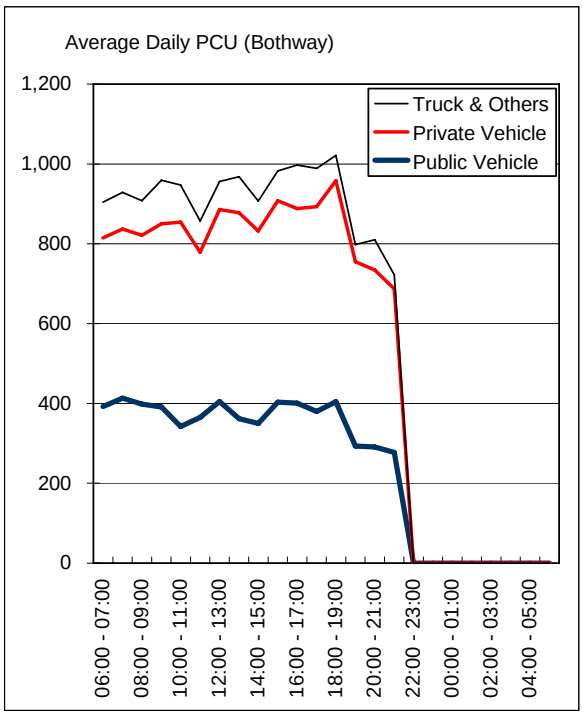
Survey Station : Tirona Highway (Highway 25) @ Bgy Marulas, Kawit
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	79	118	79	152	23	21	134	156	17	48	825
2	07:00 - 08:00	105	146	104	148	18	16	151	146	12	62	906
3	08:00 - 09:00	97	142	71	162	25	23	141	146	16	49	869
4	09:00 - 10:00	99	115	60	167	26	14	173	158	28	39	877
5	10:00 - 11:00	115	87	49	150	22	13	179	187	23	35	858
6	11:00 - 12:00	95	99	46	171	21	9	149	149	19	32	787
7	12:00 - 13:00	74	79	71	165	26	14	156	189	18	26	816
8	13:00 - 14:00	70	73	39	173	22	11	164	211	28	20	809
9	14:00 - 15:00	83	71	45	161	21	10	172	181	20	25	787
10	15:00 - 16:00	74	73	58	184	21	13	169	197	22	19	828
11	16:00 - 17:00	101	86	83	157	21	17	152	187	26	44	872
12	17:00 - 18:00	122	81	72	149	24	18	174	185	13	65	901
13	18:00 - 19:00	121	61	71	168	23	26	191	192	9	42	902
14	19:00 - 20:00	91	39	40	135	16	15	170	163	7	27	699
15	20:00 - 21:00	94	46	35	137	17	10	162	159	20	27	706
16	21:00 - 22:00	76	38	22	134	22	12	173	132	10	10	628
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	1,492	1,351	942	2,510	344	239	2,605	2,733	284	566	13,065
	24 hours Total	1,492	1,351	942	2,510	344	239	2,605	2,733	284	566	13,065
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	1,698	1,701	1,150	2,993	406	311	3,041	3,190	461	625	15,577
	7:00-9:00 Ratio	11.9%	16.9%	15.2%	10.4%	10.3%	12.4%	9.6%	9.1%	6.0%	17.6%	11.4%
	Average Occupancy (without Tricycle)	1.37	0.00	7.14	16.08	44.91	3.04	1.60	2.54	2.19	1.08	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	392	423	89	904
07:00 - 08:00	413	424	92	929
08:00 - 09:00	398	423	87	908
09:00 - 10:00	391	459	109	959
10:00 - 11:00	342	512	93	947
11:00 - 12:00	365	414	78	857
12:00 - 13:00	405	481	70	956
13:00 - 14:00	362	516	90	968
14:00 - 15:00	350	482	75	907
15:00 - 16:00	403	505	74	982
16:00 - 17:00	401	487	109	997
17:00 - 18:00	380	513	96	989
18:00 - 19:00	404	554	63	1,021
19:00 - 20:00	293	462	43	798
20:00 - 21:00	291	443	76	810
21:00 - 22:00	277	410	35	722
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	7,028	8,802	1,777	17,607
Estimated 24 hours Person Trips	74,590	16,232	1,686	92,508
PT/PCU	10.613	1.844	0.949	5.254



Average Daily Traffic Volume (Bothway)

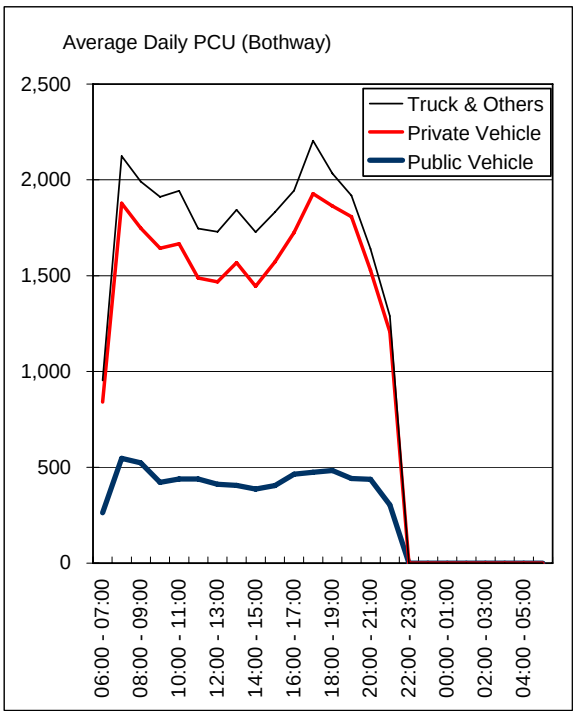
Survey Station : Molino Road @ Bgy Molino IV, Bacoor (boundary of Bacoor and Dasmarinas)
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	123	50	174	0	1	31	168	219	24	52	841
2	07:00 - 08:00	292	67	356	0	7	57	369	527	63	89	1,825
3	08:00 - 09:00	210	54	341	2	6	56	320	506	75	56	1,623
4	09:00 - 10:00	151	77	279	2	1	59	308	520	94	33	1,522
5	10:00 - 11:00	138	84	292	0	1	83	275	525	99	30	1,525
6	11:00 - 12:00	119	102	291	1	1	53	250	457	97	15	1,384
7	12:00 - 13:00	104	85	271	3	1	64	243	458	96	21	1,345
8	13:00 - 14:00	116	49	270	1	0	62	259	518	101	21	1,395
9	14:00 - 15:00	118	64	256	1	1	66	273	436	104	23	1,339
10	15:00 - 16:00	111	61	269	1	0	72	294	489	98	16	1,409
11	16:00 - 17:00	139	61	308	2	0	85	321	515	75	31	1,535
12	17:00 - 18:00	202	71	311	1	3	80	400	583	74	92	1,816
13	18:00 - 19:00	228	51	311	2	7	69	360	566	49	49	1,690
14	19:00 - 20:00	181	34	292	1	1	65	327	593	37	19	1,548
15	20:00 - 21:00	169	36	288	1	3	62	250	464	39	16	1,326
16	21:00 - 22:00	105	38	201	1	1	56	250	359	31	7	1,046
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	2,501	981	4,506	16	30	1,017	4,663	7,731	1,153	567	23,164
	24 hours Total	2,501	981	4,506	16	30	1,017	4,663	7,731	1,153	567	23,164
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	2,847	1,235	5,501	19	35	1,325	5,443	9,025	1,871	626	27,928
	7:00-9:00 Ratio	17.6%	9.8%	12.7%	7.9%	33.9%	8.5%	12.6%	11.4%	7.4%	23.0%	12.3%
	Average Occupancy (without Tricycle)	1.28	0.00	8.86	9.70	21.06	3.02	1.68	2.36	2.32	1.02	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	262	579	112	953
07:00 - 08:00	546	1,332	246	2,124
08:00 - 09:00	524	1,224	243	1,991
09:00 - 10:00	422	1,221	268	1,911
10:00 - 11:00	439	1,228	276	1,943
11:00 - 12:00	439	1,049	258	1,746
12:00 - 13:00	411	1,057	261	1,729
13:00 - 14:00	406	1,163	274	1,843
14:00 - 15:00	386	1,059	283	1,728
15:00 - 16:00	404	1,168	260	1,832
16:00 - 17:00	464	1,261	219	1,944
17:00 - 18:00	474	1,454	276	2,204
18:00 - 19:00	484	1,380	170	2,034
19:00 - 20:00	441	1,367	110	1,918
20:00 - 21:00	438	1,090	112	1,640
21:00 - 22:00	304	902	83	1,289
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	8,351	21,823	5,303	35,477
Estimated 24 hours Person Trips	49,659	38,127	4,978	92,764
PT/PCU	5.946	1.747	0.939	2.615



Average Daily Traffic Volume (Bothway)

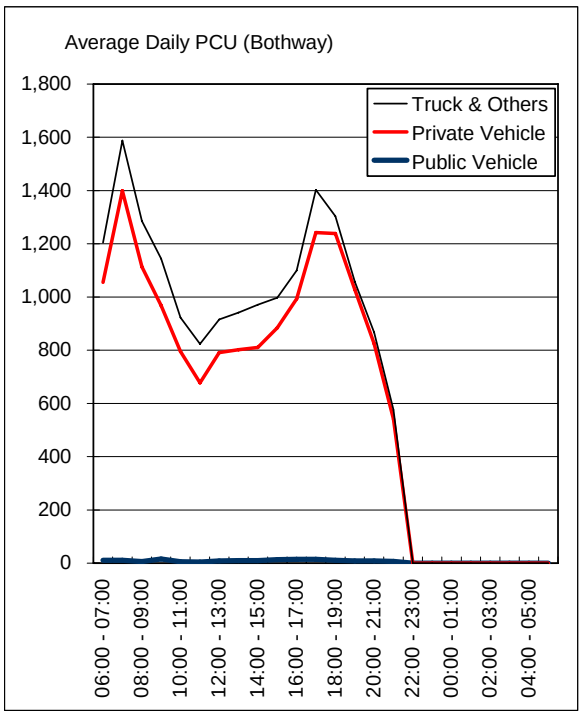
Survey Station : Daang Hari @ Bgy Molino IV, Bacoor (boundary of Cavite and Metro Manila)
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	129	6	7	1	0	28	376	392	25	87	1,049
2	07:00 - 08:00	150	6	5	1	2	39	473	542	31	113	1,359
3	08:00 - 09:00	106	6	4	1	0	33	329	466	44	63	1,049
4	09:00 - 10:00	73	6	6	2	3	27	268	415	60	26	883
5	10:00 - 11:00	47	7	3	0	0	24	231	340	47	10	707
6	11:00 - 12:00	36	5	2	1	0	14	196	298	57	3	609
7	12:00 - 13:00	39	7	2	4	0	17	221	351	50	1	689
8	13:00 - 14:00	47	7	5	1	1	12	245	345	53	7	720
9	14:00 - 15:00	53	8	5	0	1	16	237	350	63	4	736
10	15:00 - 16:00	53	7	6	3	0	22	259	376	44	5	773
11	16:00 - 17:00	76	4	6	1	2	23	310	408	37	15	881
12	17:00 - 18:00	132	10	7	2	0	17	437	485	39	64	1,191
13	18:00 - 19:00	115	3	3	3	2	17	390	518	19	17	1,086
14	19:00 - 20:00	72	5	5	0	0	16	327	433	11	2	869
15	20:00 - 21:00	53	5	5	1	0	9	270	346	17	1	704
16	21:00 - 22:00	44	3	2	1	2	7	191	214	14	2	477
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	1,222	92	70	17	10	316	4,756	6,275	608	415	13,779
	24 hours Total	1,222	92	70	17	10	316	4,756	6,275	608	415	13,779
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	1,390	116	85	20	12	411	5,552	7,325	986	458	16,356
	7:00-9:00 Ratio	18.4%	9.9%	9.9%	4.9%	12.7%	17.3%	14.4%	13.7%	7.5%	38.3%	14.7%
	Average Occupancy (without Tricycle)	1.26	0.00	4.58	6.45	12.55	3.32	1.40	1.81	2.22	1.00	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	11	1,044	149	1,204
07:00 - 08:00	11	1,388	189	1,588
08:00 - 09:00	6	1,108	171	1,285
09:00 - 10:00	16	952	176	1,144
10:00 - 11:00	5	790	128	923
11:00 - 12:00	4	673	146	823
12:00 - 13:00	8	783	125	916
13:00 - 14:00	9	793	139	941
14:00 - 15:00	9	801	161	971
15:00 - 16:00	13	871	113	997
16:00 - 17:00	14	979	107	1,100
17:00 - 18:00	14	1,228	160	1,402
18:00 - 19:00	11	1,227	65	1,303
19:00 - 20:00	8	1,021	29	1,058
20:00 - 21:00	8	817	42	867
21:00 - 22:00	7	534	35	576
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	182	17,574	2,923	20,679
Estimated 24 hours Person Trips	670	24,158	2,647	27,475
PT/PCU	3.681	1.375	0.906	1.329



Average Daily Traffic Volume (Bothway)

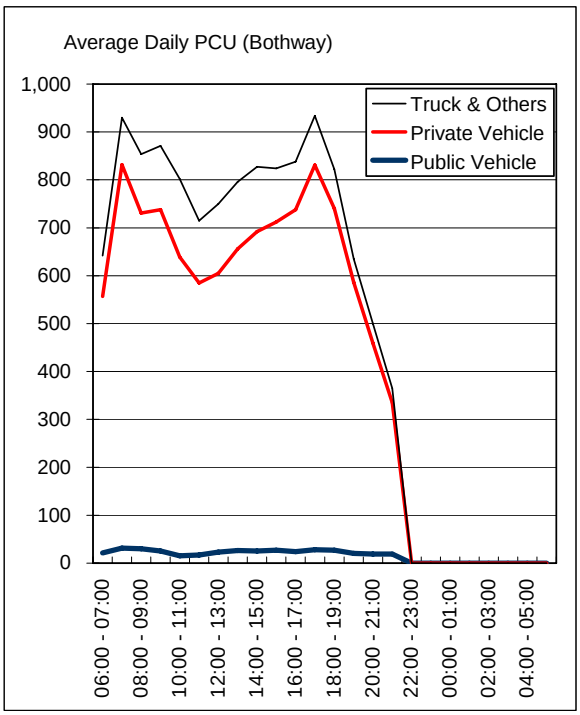
Survey Station : Salawag - Salitran @ Bgy Jose Abad Santos, Dasmarinas
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	61	299	13	1	1	5	179	222	23	29	830
2	07:00 - 08:00	84	432	20	0	1	18	251	332	29	26	1,191
3	08:00 - 09:00	83	357	18	1	1	16	233	280	41	22	1,050
4	09:00 - 10:00	77	267	15	1	1	11	207	312	48	15	951
5	10:00 - 11:00	63	236	10	1	0	9	181	275	62	9	842
6	11:00 - 12:00	56	206	11	1	0	9	163	251	49	9	751
7	12:00 - 13:00	51	192	14	2	0	9	157	264	52	15	754
8	13:00 - 14:00	52	174	17	1	0	6	175	288	51	12	774
9	14:00 - 15:00	51	192	16	1	1	10	180	305	53	4	810
10	15:00 - 16:00	55	203	16	3	0	9	208	298	44	4	837
11	16:00 - 17:00	63	288	14	2	1	9	190	329	34	15	942
12	17:00 - 18:00	77	309	15	1	3	8	296	315	30	28	1,080
13	18:00 - 19:00	83	288	13	0	4	5	237	296	25	21	969
14	19:00 - 20:00	56	228	11	0	2	4	193	234	17	6	749
15	20:00 - 21:00	46	159	10	0	2	5	143	184	13	8	570
16	21:00 - 22:00	28	96	12	0	1	7	111	125	11	3	392
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	982	3,921	220	10	16	136	3,100	4,306	578	222	13,489
	24 hours Total	982	3,921	220	10	16	136	3,100	4,306	578	222	13,489
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	1,118	4,936	269	12	18	177	3,619	5,027	938	245	16,357
	7:00-9:00 Ratio	14.9%	16.0%	14.0%	4.2%	10.9%	19.0%	13.4%	12.2%	7.4%	19.4%	13.7%
	Average Occupancy (without Tricycle)	1.33	0.00	3.37	17.00	14.92	2.02	1.71	2.98	2.60	1.01	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	21	536	85	642
07:00 - 08:00	31	801	98	930
08:00 - 09:00	30	701	123	854
09:00 - 10:00	25	713	133	871
10:00 - 11:00	15	624	163	802
11:00 - 12:00	17	568	130	715
12:00 - 13:00	23	582	145	750
13:00 - 14:00	26	630	140	796
14:00 - 15:00	25	667	135	827
15:00 - 16:00	27	685	112	824
16:00 - 17:00	24	714	100	838
17:00 - 18:00	28	803	103	934
18:00 - 19:00	27	713	82	822
19:00 - 20:00	20	566	49	635
20:00 - 21:00	19	440	41	500
21:00 - 22:00	19	316	30	365
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	457	11,759	2,590	14,806
Estimated 24 hours Person Trips	1,382	23,040	2,688	27,110
PT/PCU	3.024	1.959	1.038	1.831



Average Daily Traffic Volume (Bothway)

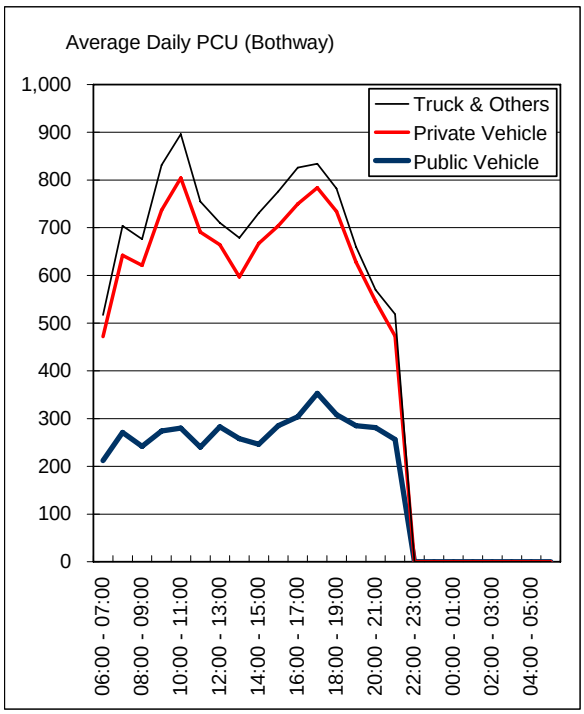
Survey Station : Don P Campos Ave (Provincial Road leading to Dasmarinas Town Proper)
Survey Date (2005.02.17 Thu & 2005.02.22 Tue)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	40	315	109	1	24	5	100	95	6	30	722
2	07:00 - 08:00	66	354	123	1	43	5	134	140	13	31	908
3	08:00 - 09:00	65	351	110	0	39	5	146	138	15	19	886
4	09:00 - 10:00	85	488	109	1	55	4	161	180	24	35	1,141
5	10:00 - 11:00	95	432	115	0	54	6	181	204	26	29	1,139
6	11:00 - 12:00	77	435	100	0	46	7	156	175	13	31	1,039
7	12:00 - 13:00	59	360	108	1	61	5	132	150	12	16	901
8	13:00 - 14:00	59	280	104	1	51	3	116	134	26	18	790
9	14:00 - 15:00	60	278	100	0	49	5	138	172	18	20	838
10	15:00 - 16:00	66	311	124	1	50	5	137	170	20	22	904
11	16:00 - 17:00	80	405	129	1	55	7	160	168	21	25	1,048
12	17:00 - 18:00	88	456	151	2	62	7	158	158	13	19	1,112
13	18:00 - 19:00	85	438	134	0	54	9	134	170	12	20	1,052
14	19:00 - 20:00	72	301	108	1	61	4	132	122	7	16	823
15	20:00 - 21:00	55	209	122	0	50	4	89	103	2	19	650
16	21:00 - 22:00	31	151	108	0	47	5	81	80	3	39	544
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	1,080	5,560	1,850	7	797	82	2,153	2,357	226	386	14,495
	24 hours Total	1,080	5,560	1,850	7	797	82	2,153	2,357	226	386	14,495
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	1,229	6,999	2,258	8	941	107	2,514	2,751	367	426	17,598
	7:00-9:00 Ratio	10.7%	10.1%	10.3%	6.5%	8.7%	8.4%	11.1%	10.1%	7.4%	11.6%	10.2%
	Average Occupancy (without Tricycle)	1.41	0.00	8.96	7.40	17.07	1.84	2.24	2.62	3.16	1.02	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	212	260	45	517
07:00 - 08:00	271	371	62	704
08:00 - 09:00	242	379	55	676
09:00 - 10:00	274	463	94	831
10:00 - 11:00	280	524	92	896
11:00 - 12:00	240	451	64	755
12:00 - 13:00	283	381	46	710
13:00 - 14:00	258	339	82	679
14:00 - 15:00	246	421	64	731
15:00 - 16:00	285	419	72	776
16:00 - 17:00	304	446	76	826
17:00 - 18:00	353	431	50	834
18:00 - 19:00	308	426	48	782
19:00 - 20:00	285	343	32	660
20:00 - 21:00	281	265	24	570
21:00 - 22:00	256	217	46	519
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	5,280	7,169	1,343	13,792
Estimated 24 hours Person Trips	36,355	14,781	1,593	52,729
PT/PCU	6.885	2.062	1.186	3.823



Average Daily Traffic Volume (Bothway)

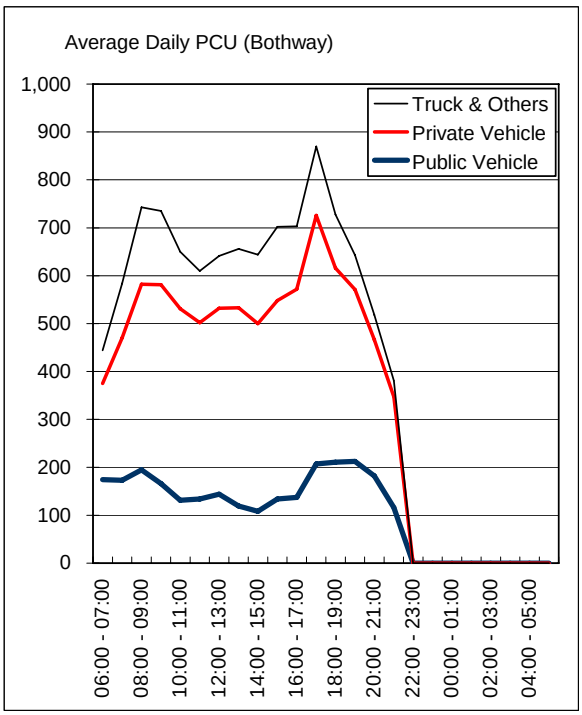
Survey Station : Tanza - Trece Martires - Indang Road @ Bgy Sanja Mayor, Tanza
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	166	298	114	3	0	2	74	50	12	40	756
2	07:00 - 08:00	188	390	115	0	0	3	96	94	28	44	957
3	08:00 - 09:00	175	391	123	5	2	4	100	153	47	44	1,042
4	09:00 - 10:00	180	356	107	2	2	4	119	158	51	27	1,004
5	10:00 - 11:00	143	328	82	5	1	5	115	158	39	23	895
6	11:00 - 12:00	126	343	84	4	2	6	100	148	32	28	871
7	12:00 - 13:00	131	342	95	2	0	4	116	151	35	23	897
8	13:00 - 14:00	124	250	78	2	0	3	115	173	43	16	802
9	14:00 - 15:00	126	248	68	1	2	2	107	164	46	29	791
10	15:00 - 16:00	130	277	88	0	1	4	108	175	53	22	857
11	16:00 - 17:00	185	353	87	3	2	10	99	178	42	27	983
12	17:00 - 18:00	302	392	136	1	2	8	118	200	36	56	1,247
13	18:00 - 19:00	296	312	140	1	0	3	123	127	23	54	1,078
14	19:00 - 20:00	253	219	138	3	0	4	107	114	17	31	885
15	20:00 - 21:00	196	145	108	8	5	4	90	86	13	21	674
16	21:00 - 22:00	164	93	72	6	0	1	57	83	9	12	495
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	2,881	4,736	1,632	41	16	61	1,640	2,209	523	493	14,229
	24 hours Total	2,881	4,736	1,632	41	16	61	1,640	2,209	523	493	14,229
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	3,279	5,962	1,992	48	19	80	1,914	2,578	848	544	17,264
	7:00-9:00 Ratio	11.1%	13.1%	11.9%	9.3%	10.6%	7.5%	10.2%	9.6%	8.8%	16.1%	11.6%
	Average Occupancy (without Tricycle)	1.50	0.00	11.40	4.94	6.53	2.17	1.94	3.63	2.47	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	174	201	69	444
07:00 - 08:00	173	297	114	584
08:00 - 09:00	195	387	161	743
09:00 - 10:00	166	415	154	735
10:00 - 11:00	131	400	119	650
11:00 - 12:00	134	368	108	610
12:00 - 13:00	144	388	109	641
13:00 - 14:00	119	414	123	656
14:00 - 15:00	108	392	144	644
15:00 - 16:00	134	414	154	702
16:00 - 17:00	137	435	131	703
17:00 - 18:00	207	519	144	870
18:00 - 19:00	211	405	112	728
19:00 - 20:00	212	359	72	643
20:00 - 21:00	182	284	52	518
21:00 - 22:00	116	231	34	381
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	3,098	6,884	2,665	12,647
Estimated 24 hours Person Trips	23,065	18,184	2,658	43,907
PT/PCU	7.445	2.641	0.997	3.472



Average Daily Traffic Volume (Bothway)

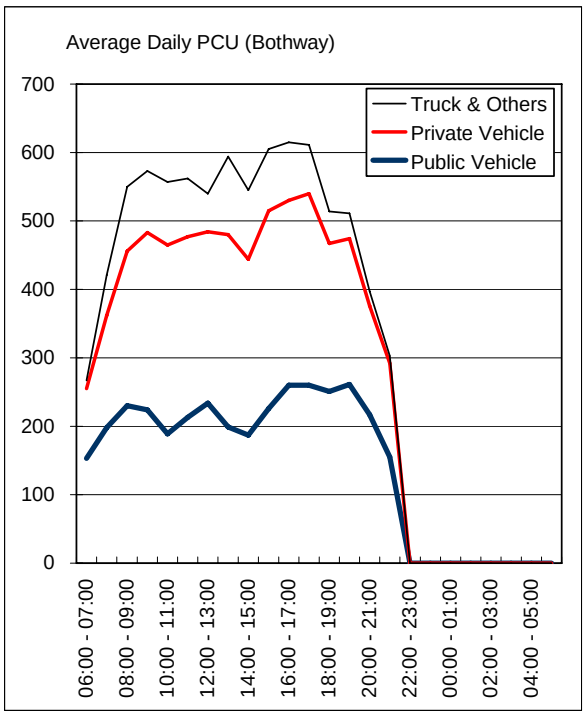
Survey Station : Noveleta - Tanza - Naic Road @ Bgy Capipisa, Tanza (Boundary of Naic and Tanza)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	63	34	42	52	7	3	38	28	5	1	270
2	07:00 - 08:00	101	40	41	80	9	9	50	47	23	3	400
3	08:00 - 09:00	95	40	37	98	14	4	64	85	36	6	477
4	09:00 - 10:00	94	51	27	109	11	8	65	103	35	2	503
5	10:00 - 11:00	77	64	12	100	11	5	67	120	35	5	493
6	11:00 - 12:00	68	46	13	111	14	8	70	109	32	5	473
7	12:00 - 13:00	59	44	20	115	16	9	57	109	22	3	452
8	13:00 - 14:00	56	45	9	106	14	8	70	122	45	1	474
9	14:00 - 15:00	55	48	13	92	16	12	53	114	40	1	441
10	15:00 - 16:00	54	67	16	120	11	16	60	127	35	2	506
11	16:00 - 17:00	91	45	27	134	10	17	62	104	34	2	523
12	17:00 - 18:00	139	54	27	136	8	12	61	107	26	6	574
13	18:00 - 19:00	113	35	41	112	11	6	45	86	17	5	469
14	19:00 - 20:00	83	25	34	124	13	4	37	97	14	2	431
15	20:00 - 21:00	69	15	31	101	10	5	38	63	8	1	338
16	21:00 - 22:00	58	10	19	82	3	4	33	54	4	1	265
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	1,271	658	407	1,668	172	127	866	1,470	409	41	7,087
	24 hours Total	1,271	658	407	1,668	172	127	866	1,470	409	41	7,087
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	1,446	828	496	1,989	203	165	1,011	1,716	663	45	8,563
	7:00-9:00 Ratio	13.6%	9.6%	15.6%	8.9%	11.1%	7.9%	11.2%	7.7%	8.7%	17.9%	10.2%
	Average Occupancy (without Tricycle)	1.46	0.00	9.09	9.70	19.96	4.99	2.12	3.88	2.34	1.00	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	153	102	12	267
07:00 - 08:00	198	164	59	421
08:00 - 09:00	230	226	94	550
09:00 - 10:00	224	259	90	573
10:00 - 11:00	189	276	92	557
11:00 - 12:00	213	264	85	562
12:00 - 13:00	234	250	56	540
13:00 - 14:00	199	281	114	594
14:00 - 15:00	187	257	101	545
15:00 - 16:00	226	289	90	605
16:00 - 17:00	260	270	85	615
17:00 - 18:00	260	280	71	611
18:00 - 19:00	251	216	47	514
19:00 - 20:00	261	213	37	511
20:00 - 21:00	217	159	21	397
21:00 - 22:00	155	137	11	303
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	4,134	4,266	1,702	10,102
Estimated 24 hours Person Trips	27,867	11,732	1,598	41,197
PT/PCU	6.741	2.750	0.939	4.078



Average Daily Traffic Volume (Bothway)

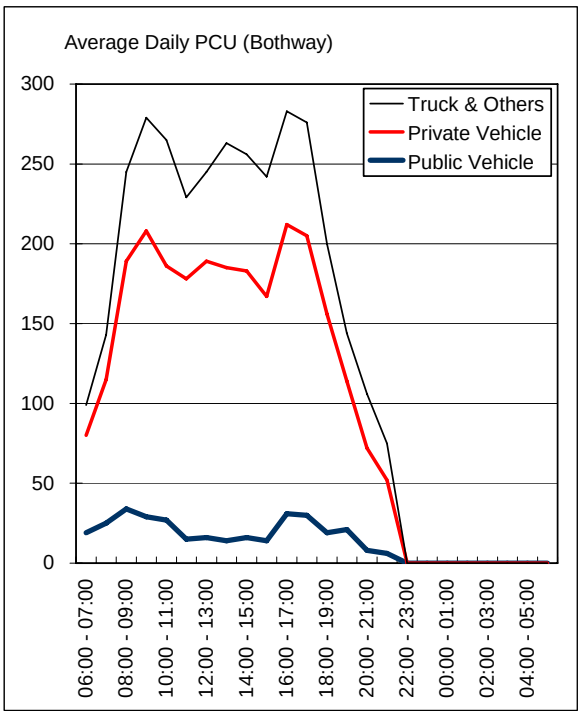
Survey Station : Governor Drive @ Bgy Cabuco, Trece Martires City (boundary of Tanza and Trece Martires)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	10	37	12	1	0	1	26	22	8	0	114
2	07:00 - 08:00	18	41	17	0	0	0	36	33	11	2	155
3	08:00 - 09:00	22	45	21	0	2	0	50	66	22	1	227
4	09:00 - 10:00	33	36	17	0	2	1	50	79	28	3	246
5	10:00 - 11:00	24	34	17	0	1	1	58	62	30	4	229
6	11:00 - 12:00	22	32	9	0	1	0	46	74	20	2	205
7	12:00 - 13:00	23	35	10	1	1	1	47	79	23	0	217
8	13:00 - 14:00	21	28	8	0	1	1	46	79	30	4	216
9	14:00 - 15:00	28	29	11	0	0	1	43	77	27	5	219
10	15:00 - 16:00	29	22	9	0	0	1	34	73	29	2	199
11	16:00 - 17:00	29	46	19	0	1	2	50	80	27	5	258
12	17:00 - 18:00	36	42	20	0	1	4	52	72	26	6	256
13	18:00 - 19:00	32	31	11	0	2	1	38	59	16	6	193
14	19:00 - 20:00	23	18	14	0	0	2	21	42	12	1	132
15	20:00 - 21:00	11	10	5	1	0	0	21	27	14	0	88
16	21:00 - 22:00	10	7	4	1	0	1	14	19	9	0	63
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	369	490	200	2	9	15	627	939	327	38	3,015
	24 hours Total	369	490	200	2	9	15	627	939	327	38	3,015
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	419	616	244	2	11	20	732	1,096	531	42	3,713
	7:00-9:00 Ratio	9.4%	13.9%	15.2%	0.0%	14.1%	0.0%	11.7%	8.9%	6.1%	4.8%	10.3%
	Average Occupancy (without Tricycle)	1.39	0.00	13.88	1.67	11.76	3.32	1.95	3.81	2.45	1.07	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	19	61	19	99
07:00 - 08:00	25	90	28	143
08:00 - 09:00	34	155	56	245
09:00 - 10:00	29	179	71	279
10:00 - 11:00	27	159	79	265
11:00 - 12:00	15	163	51	229
12:00 - 13:00	16	173	56	245
13:00 - 14:00	14	171	78	263
14:00 - 15:00	16	167	73	256
15:00 - 16:00	14	153	75	242
16:00 - 17:00	31	181	71	283
17:00 - 18:00	30	175	71	276
18:00 - 19:00	19	137	44	200
19:00 - 20:00	21	93	30	144
20:00 - 21:00	8	64	34	106
21:00 - 22:00	6	46	23	75
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	391	2,531	1,369	4,291
Estimated 24 hours Person Trips	3,518	6,248	1,345	11,111
PT/PCU	8.997	2.469	0.982	2.589



Average Daily Traffic Volume (Bothway)

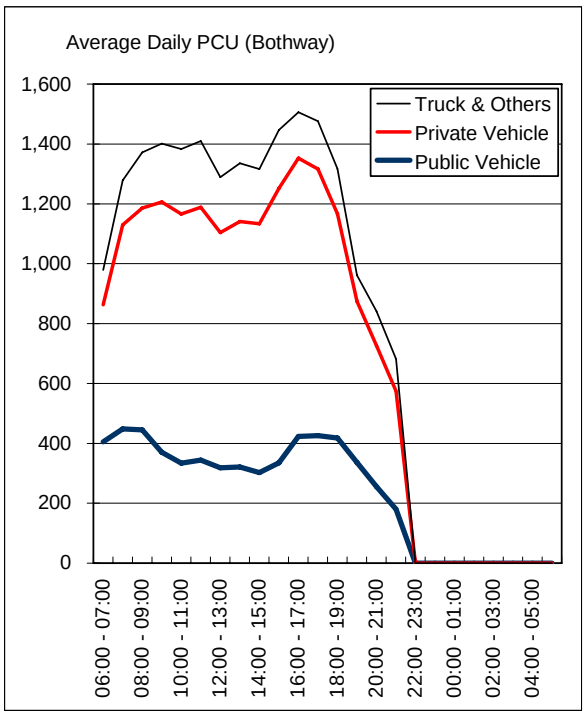
Survey Station : Aguinaldo Highway @ Biga II, Silang (boundary of Dasmarinas and Silang)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	40	14	216	3	39	5	110	220	41	15	700
2	07:00 - 08:00	61	19	233	4	46	6	233	282	49	27	959
3	08:00 - 09:00	57	14	225	1	54	3	242	319	68	18	997
4	09:00 - 10:00	67	14	184	1	47	3	258	370	73	13	1,027
5	10:00 - 11:00	53	15	159	2	47	4	266	364	82	12	1,002
6	11:00 - 12:00	63	16	167	2	46	8	241	383	86	8	1,017
7	12:00 - 13:00	45	13	148	3	46	3	220	366	70	10	923
8	13:00 - 14:00	51	17	149	2	48	6	221	384	73	12	961
9	14:00 - 15:00	61	14	144	0	44	5	233	383	70	9	959
10	15:00 - 16:00	55	10	160	1	48	7	264	418	72	16	1,048
11	16:00 - 17:00	53	8	207	4	54	8	278	416	59	7	1,092
12	17:00 - 18:00	68	16	216	1	50	8	298	374	59	13	1,101
13	18:00 - 19:00	64	11	210	1	52	9	257	307	59	4	971
14	19:00 - 20:00	36	5	162	2	46	3	194	220	33	5	702
15	20:00 - 21:00	28	4	117	0	40	2	163	198	45	2	598
16	21:00 - 22:00	23	5	79	1	31	5	119	174	43	0	477
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	821	192	2,771	23	733	82	3,593	5,173	978	166	14,531
	24 hours Total	821	192	2,771	23	733	82	3,593	5,173	978	166	14,531
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	934	241	3,383	27	866	106	4,195	6,039	1,587	183	17,562
	7:00-9:00 Ratio	12.5%	13.5%	13.5%	16.8%	11.5%	8.5%	11.3%	9.9%	7.3%	24.3%	11.1%
	Average Occupancy (without Tricycle)	1.36	0.00	10.36	17.97	34.15	2.84	1.88	2.37	2.47	1.11	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	405	458	116	979
07:00 - 08:00	448	682	148	1,278
08:00 - 09:00	445	741	186	1,372
09:00 - 10:00	370	836	195	1,401
10:00 - 11:00	334	832	217	1,383
11:00 - 12:00	344	845	221	1,410
12:00 - 13:00	318	786	185	1,289
13:00 - 14:00	321	820	194	1,335
14:00 - 15:00	302	832	182	1,316
15:00 - 16:00	335	917	195	1,447
16:00 - 17:00	423	930	153	1,506
17:00 - 18:00	426	890	160	1,476
18:00 - 19:00	418	749	150	1,317
19:00 - 20:00	336	538	87	961
20:00 - 21:00	255	471	115	841
21:00 - 22:00	180	394	108	682
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	6,846	13,693	4,152	24,691
Estimated 24 hours Person Trips	65,105	23,769	4,124	92,998
PT/PCU	9.510	1.736	0.993	3.766



Average Daily Traffic Volume (Bothway)

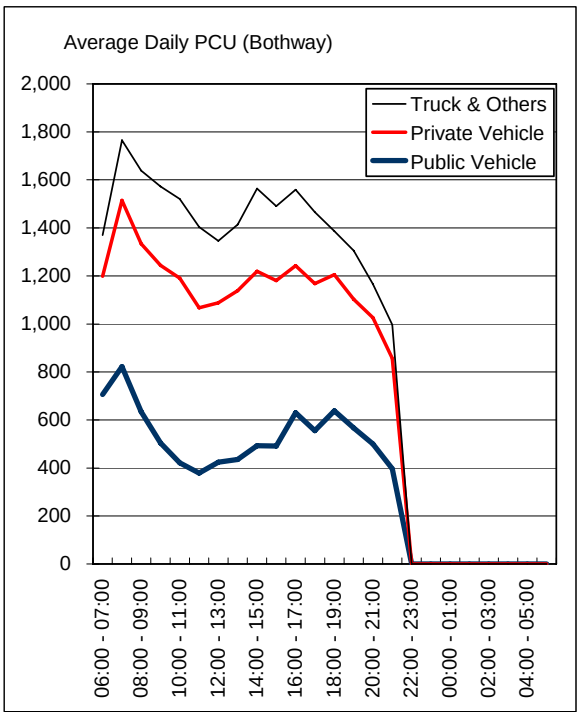
Survey Station : Carmona National Road @ Bgy Maduya, Carmona (boundary of Carmona and Binan)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	138	109	363	3	79	13	140	195	38	77	1,153
2	07:00 - 08:00	170	89	406	6	103	15	204	277	55	114	1,437
3	08:00 - 09:00	130	74	333	4	64	10	217	287	102	50	1,270
4	09:00 - 10:00	122	77	291	2	33	13	213	315	119	33	1,215
5	10:00 - 11:00	94	76	254	1	20	8	205	349	121	29	1,155
6	11:00 - 12:00	99	72	222	2	22	6	201	300	125	25	1,071
7	12:00 - 13:00	109	85	242	2	30	5	197	285	93	27	1,073
8	13:00 - 14:00	102	79	244	3	33	10	196	309	104	16	1,094
9	14:00 - 15:00	110	65	270	1	44	8	205	318	128	25	1,171
10	15:00 - 16:00	101	63	258	1	52	7	212	292	112	32	1,127
11	16:00 - 17:00	102	71	318	1	76	6	176	265	105	53	1,172
12	17:00 - 18:00	136	53	288	3	60	11	220	225	87	80	1,160
13	18:00 - 19:00	158	62	338	1	66	9	174	222	57	39	1,123
14	19:00 - 20:00	125	78	311	3	49	6	165	216	58	58	1,067
15	20:00 - 21:00	126	64	269	2	48	6	163	211	47	23	957
16	21:00 - 22:00	84	50	215	4	35	9	177	164	50	15	800
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	1,903	1,163	4,617	34	810	140	3,061	4,227	1,398	692	18,041
	24 hours Total	1,903	1,163	4,617	34	810	140	3,061	4,227	1,398	692	18,041
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	2,165	1,463	5,637	40	956	182	3,573	4,934	2,268	764	21,983
	7:00-9:00 Ratio	13.9%	11.1%	13.1%	23.8%	17.4%	13.8%	11.8%	11.4%	6.9%	21.4%	12.3%
	Average Occupancy (without Tricycle)	1.46	0.00	11.27	12.36	16.97	3.72	1.50	2.75	2.11	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	706	493	171	1,370
07:00 - 08:00	822	692	251	1,765
08:00 - 09:00	634	700	305	1,639
09:00 - 10:00	504	740	329	1,573
10:00 - 11:00	422	769	330	1,521
11:00 - 12:00	379	688	337	1,404
12:00 - 13:00	424	664	258	1,346
13:00 - 14:00	435	704	275	1,414
14:00 - 15:00	493	726	345	1,564
15:00 - 16:00	491	690	310	1,491
16:00 - 17:00	630	613	316	1,559
17:00 - 18:00	555	613	298	1,466
18:00 - 19:00	638	567	181	1,386
19:00 - 20:00	567	536	202	1,305
20:00 - 21:00	500	526	140	1,166
21:00 - 22:00	397	460	140	997
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	10,427	11,896	6,435	28,758
Estimated 24 hours Person Trips	80,257	22,784	5,569	108,610
PT/PCU	7.697	1.915	0.865	3.777



Average Daily Traffic Volume (Bothway)

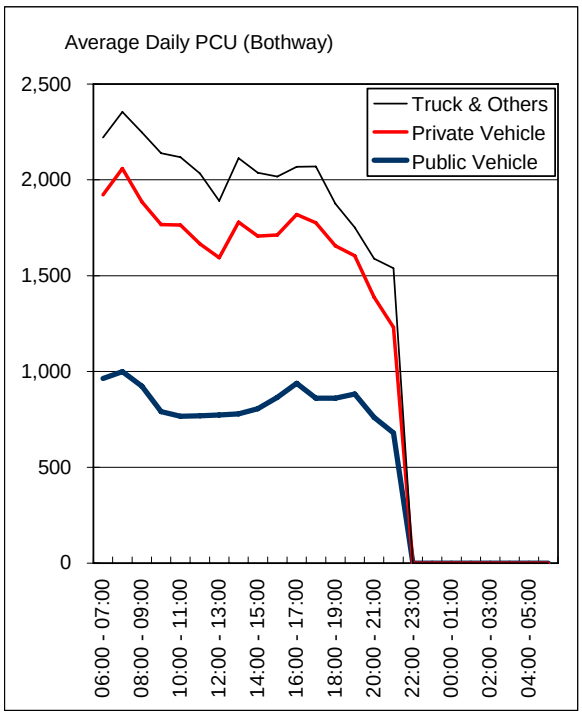
Survey Station : Manila South Road @ Bgy Tunasan, Muntinlupa (boundary of Metro Manila and Laguna)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	331	150	483	4	116	87	262	313	67	133	1,944
2	07:00 - 08:00	359	106	517	3	110	92	296	346	58	151	2,037
3	08:00 - 09:00	267	90	512	0	78	66	260	350	105	100	1,825
4	09:00 - 10:00	250	98	439	2	65	45	254	387	120	73	1,731
5	10:00 - 11:00	228	76	422	2	66	33	270	407	118	58	1,678
6	11:00 - 12:00	193	103	412	2	74	23	229	384	125	57	1,600
7	12:00 - 13:00	202	92	407	2	81	22	205	349	96	59	1,512
8	13:00 - 14:00	227	95	416	4	75	22	234	444	116	45	1,676
9	14:00 - 15:00	210	66	436	3	73	21	240	379	113	47	1,587
10	15:00 - 16:00	238	75	475	4	74	21	215	354	100	56	1,610
11	16:00 - 17:00	258	113	521	3	77	20	217	372	66	84	1,729
12	17:00 - 18:00	322	112	452	3	90	23	241	362	51	167	1,821
13	18:00 - 19:00	275	104	453	4	89	27	225	298	40	120	1,632
14	19:00 - 20:00	233	96	458	1	98	25	210	270	39	51	1,478
15	20:00 - 21:00	192	88	384	1	92	23	180	237	60	51	1,307
16	21:00 - 22:00	175	71	365	3	64	20	169	201	105	47	1,217
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	3,956	1,531	7,148	38	1,318	570	3,703	5,448	1,376	1,294	26,381
	24 hours Total	3,956	1,531	7,148	38	1,318	570	3,703	5,448	1,376	1,294	26,381
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	4,502	1,927	8,727	45	1,557	742	4,323	6,360	2,233	1,429	31,845
	7:00-9:00 Ratio	13.9%	10.1%	11.8%	5.5%	12.1%	21.3%	12.8%	10.9%	7.3%	17.5%	12.1%
	Average Occupancy (without Tricycle)	1.26	0.00	9.73	18.59	37.12	4.46	1.86	3.20	2.38	1.02	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	963	959	300	2,222
07:00 - 08:00	999	1,060	295	2,354
08:00 - 09:00	923	963	362	2,248
09:00 - 10:00	791	976	372	2,139
10:00 - 11:00	767	998	353	2,118
11:00 - 12:00	769	897	368	2,034
12:00 - 13:00	773	821	297	1,891
13:00 - 14:00	779	1,000	335	2,114
14:00 - 15:00	805	902	330	2,037
15:00 - 16:00	865	848	305	2,018
16:00 - 17:00	938	881	249	2,068
17:00 - 18:00	861	915	294	2,070
18:00 - 19:00	861	795	220	1,876
19:00 - 20:00	882	722	148	1,752
20:00 - 21:00	761	627	201	1,589
21:00 - 22:00	679	552	308	1,539
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	16,272	16,327	7,013	39,612
Estimated 24 hours Person Trips	143,562	37,400	6,770	187,732
PT/PCU	8.823	2.291	0.965	4.739



Average Daily Traffic Volume (Bothway)

Survey Station : Sta Rosa - Tagaytay Road @ Bgy Sto Domingo, Sta Rosa (boundary of Sta Rosa and Silang)
Survey Date (2005.02.15 Tue & 2005.02.16 Wed)
(UNIT:Vehicles)

	Survey Hour	Motorcycle	Tricycle	Jeepney	Minibus	Standard Bus	Taxi / HOV Taxi	Car / Jeep	Utility Vehicle	Truck / Trailer	Others	Total Vehicles
1	06:00 - 07:00	73	29	56	4	11	3	142	209	30	7	562
2	07:00 - 08:00	77	40	51	2	9	2	161	249	28	12	627
3	08:00 - 09:00	60	17	40	1	8	3	145	254	44	3	573
4	09:00 - 10:00	47	18	38	6	5	5	151	260	69	9	605
5	10:00 - 11:00	47	31	25	3	8	3	154	307	80	4	660
6	11:00 - 12:00	37	22	30	1	5	6	165	281	78	1	625
7	12:00 - 13:00	38	24	25	2	5	3	157	282	65	3	602
8	13:00 - 14:00	46	16	32	3	11	5	180	328	81	1	700
9	14:00 - 15:00	39	18	32	4	11	6	172	302	71	3	655
10	15:00 - 16:00	39	21	28	1	10	4	169	321	62	2	655
11	16:00 - 17:00	58	22	49	4	13	9	199	351	48	4	755
12	17:00 - 18:00	75	28	53	2	12	6	196	301	36	10	717
13	18:00 - 19:00	86	24	42	1	14	2	186	266	24	4	646
14	19:00 - 20:00	54	17	39	1	6	4	124	194	21	2	461
15	20:00 - 21:00	38	10	26	1	12	5	117	163	37	1	407
16	21:00 - 22:00	32	14	25	2	3	1	90	123	25	2	315
17	22:00 - 23:00	0	0	0	0	0	0	0	0	0	0	0
18	23:00 - 24:00	0	0	0	0	0	0	0	0	0	0	0
19	00:00 - 01:00	0	0	0	0	0	0	0	0	0	0	0
20	01:00 - 02:00	0	0	0	0	0	0	0	0	0	0	0
21	02:00 - 03:00	0	0	0	0	0	0	0	0	0	0	0
22	03:00 - 04:00	0	0	0	0	0	0	0	0	0	0	0
23	04:00 - 05:00	0	0	0	0	0	0	0	0	0	0	0
24	05:00 - 06:00	0	0	0	0	0	0	0	0	0	0	0
	16 hours Total	842	348	587	33	141	64	2,503	4,186	795	66	9,562
	24 hours Total	842	348	587	33	141	64	2,503	4,186	795	66	9,562
	24 hours/16hours (Real Result)											
	24 hours/16hours (Estimated)	1.13819	1.25892	1.22087	1.19254	1.18116	1.30332	1.16749	1.16735	1.62318	1.1043	
	24 hours Total	958	437	716	39	166	83	2,922	4,887	1,290	72	11,571
	7:00-9:00 Ratio	14.3%	12.9%	12.6%	6.4%	9.9%	5.4%	10.5%	10.3%	5.5%	20.7%	10.4%
	Average Occupancy (without Tricycle)	1.29	0.00	16.91	21.81	40.72	2.77	1.56	2.95	2.48	1.03	

(UNIT: PCU) without Tricycle

Survey Hour	Public Vehicle	Private Vehicle	Truck & Others	Total PCU
06:00 - 07:00	111	481	81	673
07:00 - 08:00	96	558	81	735
08:00 - 09:00	76	548	112	736
09:00 - 10:00	75	561	181	817
10:00 - 11:00	56	632	203	891
11:00 - 12:00	56	606	196	858
12:00 - 13:00	51	595	164	810
13:00 - 14:00	73	692	202	967
14:00 - 15:00	75	644	179	898
15:00 - 16:00	63	668	156	887
16:00 - 17:00	104	756	124	984
17:00 - 18:00	105	678	100	883
18:00 - 19:00	91	613	64	768
19:00 - 20:00	71	437	55	563
20:00 - 21:00	63	378	94	535
21:00 - 22:00	46	285	64	395
22:00 - 23:00	0	0	0	0
23:00 - 24:00	0	0	0	0
00:00 - 01:00	0	0	0	0
01:00 - 02:00	0	0	0	0
02:00 - 03:00	0	0	0	0
03:00 - 04:00	0	0	0	0
04:00 - 05:00	0	0	0	0
05:00 - 06:00	0	0	0	0

	Public Vehicle	Private Vehicle	Truck & Others	Total
Estimated 24 hours PCU	1,465	10,664	3,298	15,427
Estimated 24 hours Person Trips	19,724	20,435	3,277	43,436
PT/PCU	13.463	1.916	0.994	2.816