

# CHAPTER ONE

## 1.2.3 CALA Expressway

Project	Section	Length (Km)	
		Segment	Total
CALA Expressway	CE-1	2.35	-
	CE-2	1.60	-
	CE-3	15.60	19.55
	CE-4	14.00	17.95
	CE-5	3.70	-
	CE-6	1.65	-
	CE-7	15.00	20.35

The CALA Expressway includes three (3) alternative alignments, namely, Alternative 1A (CE1 to 3), Alternative 1B (CE1, 2 & 4) and Alternative 2 (CE5 to 7).

### 1.2.3.1 Alternative 1A

Alternative 1A, as mentioned, is composed of CE 1, 2 and 3. CE-1 runs from Governor's Drive to NS6 of North-South Road. CE-2 then continues from NS-6 to Aguinaldo Highway at Silang. CE-3 veers northwest as it enters the Sta. Rosa Industrial Complex using the existing link road to the Mampalasan Interchange of SLEX at Biñan, Laguna. Alternative 1A traverses rolling terrain between Silang and Sta. Rosa Industrial Complex then a relatively flat area within the industrial park area.

This route serves as an alternative to the Sta. Rosa-Tagaytay Road, thus lessening congestion. Other advantages of this alternative are minimum adverse environmental impact (since the segment will use existing road alignment) and its efficient linkage to other road networks. It has, as its disadvantages a longer route; higher capital investment due to longer waterway structures required and ROW acquisition and compensation, as it passes through Ayala Land Property.

### 1.2.3.2 Alternative 1B

This alternative also passes through CE-1 and CE-2, then continues southeast towards subdivision areas at the south of Sta. Rosa Industrial Complex. It runs parallel to an existing waterway, and then connects to the Sta. Rosa Interchange of SLEX. It cuts through some developed residential and industrial areas and crosses over the same waterway twice. Its major advantages are the following: (i) it offers the shortest route and will affect a smaller number of structures; (ii) its connection with Mampalasan will not cause congestion at the Mampalasan Interchange and will reduce its capital requirement; and (iii) it will cause minimal environmental impact and may serve as an alternative route to Sta. Rosa-Tagaytay Road. Disadvantages associated with this option include: (i) it will require more bends approaching Mampalasan and will affect proposed large developments and lands owned by large investors and development corporations; (ii) it might also aggravate the Sta. Rosa Interchange traffic situation and would create adverse environmental impact as it crosses and runs parallel and adjacent to a major existing waterway; and (iii) it will pass through Ayala Land property and has a higher capital requirement.

### 1.2.3.3 Alternative 2

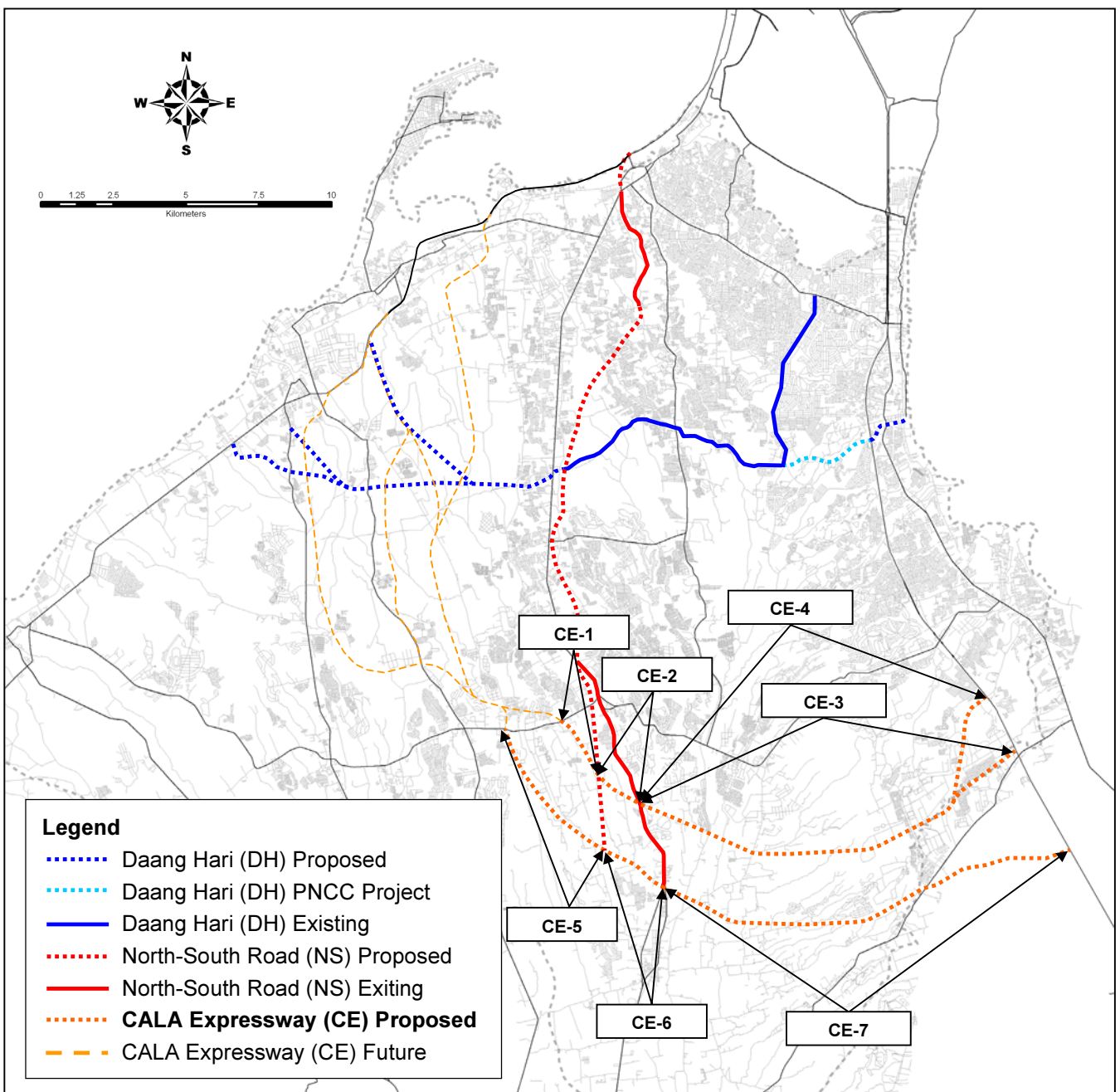
Located further south of Alternatives 1A and 1B, Alternative 2 runs parallel for 2.5 kilometers then begins its alignment 4.5 kilometers west of the Aguinaldo Highway-

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Governor's Drive Junction. It traverses over rolling terrain from Governor's Drive and relatively flat land along residential and industrial subdivisions in the Sta. Rosa and Cabuyao areas. It ends up in the Asia Brewery-Greenfields Interchange of the SLEX.

With the lowest cost of development among the three alternatives, it will cause fewer disturbances, minimal environmental and social impacts as it traverses generally open land and will attract traffic to this area. It offers a more efficient transportation network linkage with the SLEX. It, however, lacks adequate linkage support at the interchange which will require traffic from adjoining service roads to merge with expressway traffic at that point and will, also, require several turning curves. Despite the above factors, Alternative 2 was selected in the consultative meeting attended by LGU representatives on account of its regional and technical advantages.

Figure 1-3. CALA Expressway Alignment



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**Table 1-4 Results of Evaluation of Alternative Alignments CALA Expressway**

Alternative Alignment	Traffic / Technical			Regional Development			Environment			Total
	Easiness during Construction	Adequacy of the Alignment	Magnitude of Capital Requirement	Network Efficiency	Support Growth Corridors / Industrial Areas	Tourism Devmt.	Magnitude of Disturbance	Easiness in ROWA	Less impact on Agriculture, Fisheries and Forestry	
<b>CALA EXPRESSWAY</b>	<b>30%</b>			<b>40%</b>			<b>30%</b>			<b>100%</b>
	5	10	15	15	15	10	10	15	5	
<b>CE-1, 2, 3 Governor's Drive to SLEX via Mamplasan Interchange</b>										
PROVINCE OF CAVITE	3	6	13	15	10	6	8	12	3	76
SILANG	2	7	13	8	8	5	10	15	5	73
<b>CAVITE Average</b>										
<b>CE-1, 2, 4 Governor's Drive to SLEX via Sta Rosa Interchange</b>										
PROVINCE OF CAVITE	4	8	15	15	12	8	8	10	3	83
SILANG	2	7	15	10	8	5	10	15	5	77
<b>CAVITE Average</b>										
<b>CE-5, 6, 7 Governor's Drive to SLEX via ABB Interchange</b>										
PROVINCE OF CAVITE	5	10	10	15	15	10	10	15	5	95
SILANG	5	10	10	15	15	10	7	10	3	85
<b>CAVITE Average</b>										
										<b>90</b>

Source: 4<sup>th</sup> Stakeholders' Meeting of this Project.

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## 1.2.4 Geographic Area of Influence/Coverage

There are six (6) municipalities and two (2) cities that are directly within the area of influence. These municipalities are in the province of Cavite, namely, Bacoor, Dasmariñas, Imus, Gen. Trias, Silang and Tanza. In Laguna, Sta. Rosa City will be affected by the CALA Expressway. The project will also affect the City of Muntinlupa of Metro-Manila. Table 1-5 shows the barangays that will be directly affected by the ROW of the road projects.

**Table 1-5 Geographic Coverage of Road Projects**

Proposed Road	Municipality	Barangay	With FGD <sup>1/</sup>	With HH Survey <sup>2/</sup>
North-South	Bacoor	Talaba 2	✓	✓
		Talaba 3	✓	✓
		Talaba 7	✓	✓
		Zapote 5	✓	✓
		Mambog 3	✓	
		Mambog 4	✓	✓
	Dasmariñas	Burol	✓	
		San Agustin 1	✓	
		San Agustin 2	✓	✓
		Salitran 1	✓	
		Salitran 2	✓	
		Salitran 3	✓	
		Salitran 4	✓	
		Sampaloc 1	✓	
		Sampaloc 2	✓	
		Sampaloc 3	✓	
		Paliparan 1	✓	
		Langkaan *	✓	
	Imus	Anabu 1-G	✓	
		Buhay na Tubig	✓	✓
Pasong Buaya		✓		
Silang	Biga 1	✓	✓	
	Biga 2	✓	✓	
East-West (Daang Hari Road)	General Trias	Bacao 1	✓	
		Bacao2	✓	
		Navarro	✓	
		Pasong Camachile 1	✓	
		Pasong Camachile 2	✓	✓
		Tapia	✓	✓
	Imus	Anabu 2-D	✓	
		Anabu 2-E	✓	
		Malagasang 2-B	✓	✓
		Malagasang 2-C	✓	✓
	Muntinlupa City	Poblacion	✓	✓
		Tunasan	✓	
		NBP	✓	
	Tanza	Amaya 1	✓	

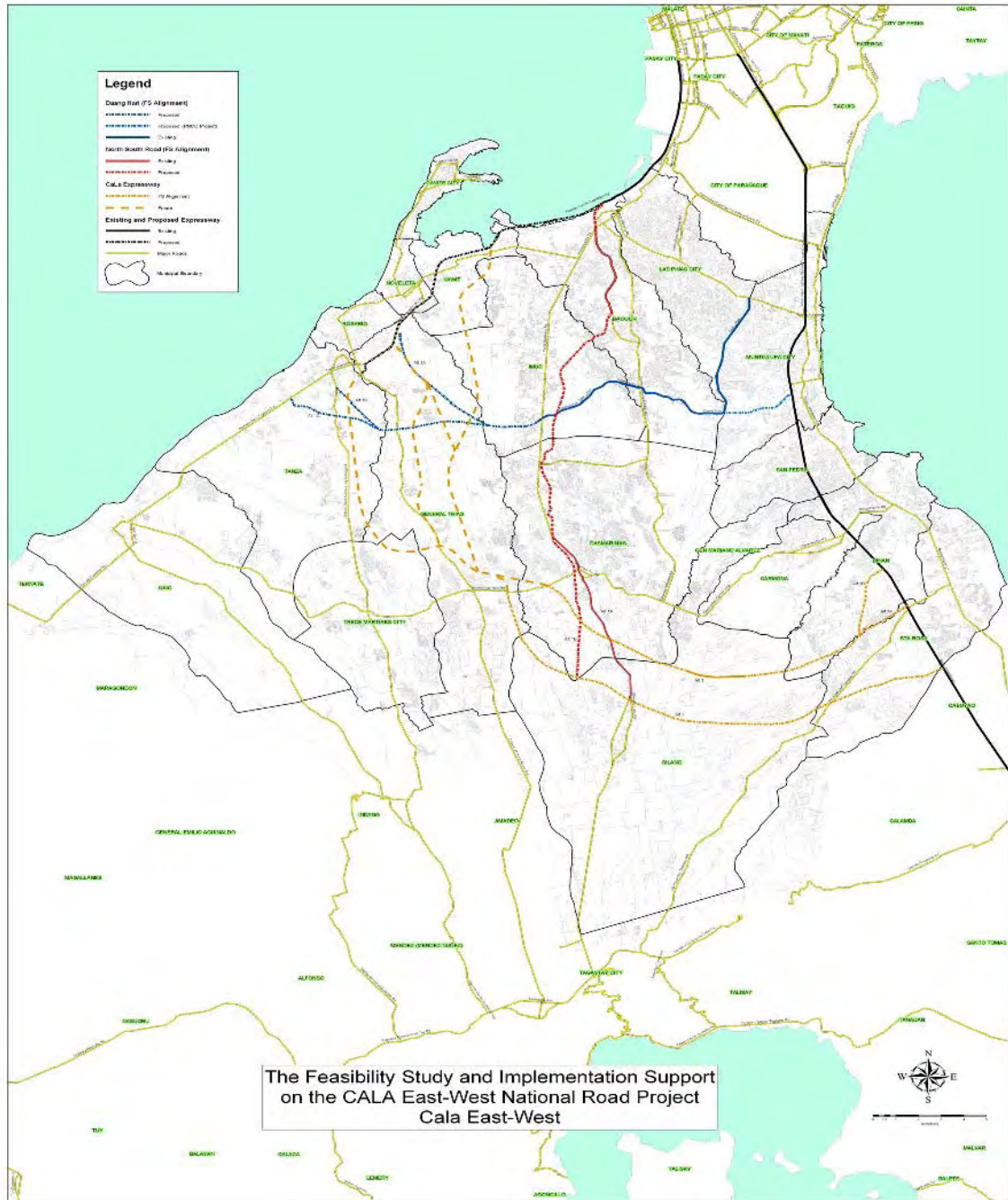
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		Biga	✓	✓
		Bunga	✓	✓
		Mulawin	✓	✓
		Sanja Mayor	✓	✓
		Santol	✓	
CALA Expressway	Biñan	Biñan, Poblacion	✓	
		Bungahan	✓	
		Ganado	✓	
		Loma	✓	
		Mamplasan	✓	
	Dasmariñas	Lankaan	✓	
	General Trias	San Francisco	✓	
	Sta. Rosa	Don Jose	✓	
		Sto. Domingo	✓	
	Silang	Batas	✓	
		Biluso	✓	
		Carmen	✓	
		Iba	✓	
		Kaong	✓	
		Maguyam	✓	
Munting ilog		✓		
Sabutan		✓	✓	
Tibig	✓			

- 1/ Focus Group Discussions conducted in the affected barangays
- 2/ Household Inventory Survey conducted for directly affected households.
- 3/ Two road alignments intersect at this barangay.

**Figure 1-4. Geographic Coverage of the Road Projects**



## **1.3 Objectives of the RAP**

In the feasibility study of the CALA Project, resettlement is one area that needs to be addressed, thus a Resettlement Action Plan (RAP) is required. It has been designed to reduce the adverse impacts of the project-affected persons (PAPs) of the affected municipalities/cities within the provinces of Cavite and Laguna and Metro-Manila. The RAP will identify the PAPs, impact benefits and entitlements, resettlement strategies and the institutional arrangement for each affected Local Government Unit (LGU).

Beyond compensation of loss of property, the RAP also aims to help chart the course of reconstruction activities. Studies indicate that there are often several risks that are associated with resettlement.<sup>1</sup> The following are some of the risks as a result of displacement that the RAP aims to address:

### **A. From Loss of Land to Land Restoration through Financial Compensation**

Expropriation of land removes the main foundation upon which people's productive systems, commercial activities and livelihoods are constructed. In the Project, loss of land will be compensated with financial package equivalent to replacement cost of land that will enable the PAPs to re-establish at a site of their choice.

### **B. Loss of Houses to House Reconstruction at Replacement Cost**

Studies indicate that only 25% of wooden materials can be utilized once the housing structure is demolished, and zero percent for concrete structures. This also implies that about 12% of the residential structures that will be affected would be able to reconstruct 25% only of the salvaged materials if they are to reestablish new dwelling units. The policy however, is that structures that will be significantly affected, i.e., more than 20 % of the structures, the entire structure will be compensated with total replacement value, regardless of the salvageable value indicated above. In this instance, owners of affected structures stand to become better-off after the project than before in terms of the replacement of old (even fully depreciated) structures with new ones and still recover salvageable materials to add to their new structures.

### **C. Insecurity of Tenure to House and Land Ownership**

Loss of houses and land often brings insecurity to households, especially women who are often responsible for home improvement. Informal dwellers will be provided opportunities to relocate to government or private socialized housing where they can amortize and eventually own houses and lands according to their income.

### **D. Loss of Jobs and Income to Self-employment or Re-employment**

The incidence of chronic or temporary joblessness is expected during the resettlement period as PAPs are bound to reconstruct their homes. The survey results indicate that PAPs with commercial business will be affected as well as those

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<sup>1</sup> Michael Cernea, 1997 *The Risks and Reconstruction Model for Resettling Displaced Populations*, *World Development* 25(10): 1569-87 (1997); also see Ranjit Dwivedi, *Models and Methods in Development-Induced Displacement (Review Article)*, *Development and Change* 33(4):709-732 (2002).

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who are presently employed within their present location. There will also be an expected increase in transportation cost for those who will be resettled outside Bacoor. To mitigate this risk, the Project will compensate for loss of temporary income by providing financial assistance during the reconstruction period, equivalent to the income loss, but not less than the prevailing minimum wage.

Informal dwellers that will suffer permanent loss of income as a result of displacement will be provided with assistance on job placement and access to income generating opportunities. Institutions like the Department of Social Welfare and Development (DSWD), the Department of Trade and Industry (DTI), Department of Labor and Employment (DOLE), Cavite and Laguna provincial governments and other private agencies involved in urban poverty alleviation, job placement, will be tapped to enable affected families to gain access to basic services, employment and credit assistance.

## E. Food Insecurity to Adequate Nutrition and Better Health Care

Forced uprooting increases the risk of malnutrition especially among children and women. The sudden drop in the availability of food crops and income are predictable during physical relocation. A number of the PAPs, 35 out of 605 interviewed, are farmers. As PAPs give priority to relocation and reconstruction, displacement and unemployment disrupt crop production. There is also high increase in the decline in health from displacement, usually caused by stress, insecurity, psychological trauma, and outbreak of illnesses which strongly affect infants, children, pregnant women and the elderly.

During transfer and reconstruction, the Project will ensure provision of cash and food and medical assistance to address basic needs of displaced families during the transfer phase. The Project will also ensure the provision of basic facilities such as adequate water and electricity as well as ensure the availability of health workers in the resettlement sites.

## F. Loss of Community Assets and Structures

Power and water lines, and structures such as barangay halls, day care center and two schools have been identified within and near the ROW. The Project will ensure that these public buildings and structures will be restored or compensated based on its replacement costs.

## G. Disruption to Schooling/Education

Resettlement often tends to disrupt children's education. Children must often share in household chores during house reconstruction and contribute to the family income by working for others or by hawking and peddling. The Project will ensure that school children of the resettled families will be given priority accommodation in the host schools. The LGU in coordination with the Department of Education (DepEd) will be tapped to facilitate this. As much as possible, relocation will be scheduled during school vacation periods.



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## **1.4 DPWH Guidelines on Land Acquisition and Resettlement**

The following sections have been obtained from the Department of Public Works and Highway (DPWH) Infrastructures Right-of-Way (IROW) Procedural Manual, which sets out the processes of land acquisition and resettlement, and describes each in detail as regards to the procedures; people and/or agencies involved; and other pertinent aspects of donation, purchase and transfer of ownership. Figure 1.5 presents the procedural process.

### **1.4.1 ROW Process**

- (i) Upon approval of the project for funding, the eligibility of Project Affected Persons (PAPs), affected structures and improvements shall be determined immediately after the cut-off date, when the validation of census of PAPs and tagging of improvements will be started. The cut-off date will be identified after the completion of detailed engineering studies when the road alignments shall have been approved.
- (ii) The first mode of acquisition shall be to request donation from the property owner.
- (iii) If the property owner does not donate the property, then negotiations for purchase of land and improvements, shall follow based on the provisions of Republic Act 8974 and its IRR. Hence, the first offer shall be the current BIR zonal value for land, and replacement cost for improvements (there shall be no salvage value). If the first offer is not accepted, the value of the second offer shall be based on the resolution of the appropriate Appraisal Committee subject to the approval of the Implementing Office (IO). If the IO does not agree with the Appraisal Committee's Resolution, then the IO shall engage the services of an Independent Land Appraiser to determine the value. The value of the second offer shall be the lower of the two values. In case the property owner refuses the second offer, the IO initiates expropriation proceedings.
- (iv) The IO obtains and validates all necessary documents for ROW claims.
- (v) ROW claims shall be screened, fully verified and validated, and the supporting documents authenticated in accordance with the checklist in the IROW Procedural Manual prior to payment.
- (vi) The Legal Staff in the DPWH Regional Office IV shall review Deeds of Absolute Sale (DAS) up to Php 5 Million. Legal Service at the Central Office shall review Deeds of Absolute Sale over Php 5 Million.
- (vii) Approval processes for the issuance of Deed of Absolute Sale are as follows:
  - District Engineer up to Php 3 Million
  - Regional Director up to Php 5 Million
  - Project Director up to Php 5 Million
  - Assistant Secretary up to Php 10 Million

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- Undersecretary up to Php 15 Million
  - Secretary any amount
- (viii) Valid claims for all lands, structures and other improvements will be paid in full in accordance with government rules and regulations. The IO shall pay all taxes and encumbrances of the property up to the amount in the Deed of Absolute Sale, and shall then deduct the amount of the capital gains tax and encumbrances from the payment due to property owner.
- (ix) The ROW and Resettlement PMO shall monitor the releases and disbursement of ROW funds made by the IOs.
- (x) All IOs shall properly liquidate all ROW disbursements and submit quarterly reports of payments made for all claims to the ROW and Resettlement PMO.
- (xi) IO shall properly file all documents pertaining to the acquisition of ROW and shall effect the transfer of titles or other tenurial instruments in the name of the Republic of the Philippines within three months from the perfection of the Deed of Absolute Sale, or in the case of expropriation, from the date of full payment.
- (xii) District Offices shall be responsible and accountable for the proper management of ROW and ensure that encroachments, structures, and informal settlers are not allowed within the ROW limits. All District Engineers through the Regional Directors shall submit monthly reports of the status of ROW to the IROW and resettlement PMO.
- (xiii) In the event that utility company does not comply with the IO notification to relocate the utility within the specified time period, the IO shall issue a final notice to the utility company with a time period specified. If the utility company still does not comply with the final notice, the IO shall clear the utility and bill the utility company accordingly.
- (xiv) All utilities must be fully cleared from the ROW before the issuance of the Notice of Award for the project.
- (xv) The use of ROW for facilities and utilities shall be in accordance with DPWH guidelines and will be strictly enforced by the respective District Office.
- (xvi) The IO shall prepare the final as-built ROW Plan upon completion of the project, for submission to the ROW and Resettlement PMO.

### **1.4.2 The IROW PMO**

The Project Management Office (PMO) for Infrastructure Right of Way and Resettlement (IROW PMO) was created by virtue of Department Order (D. O.) No. 5, Series of 2003 to supervise the full implementation of the improved process. The said department order was subsequently amended through D. O. No. 79, Series of 2003, placing the IROW PMO under the Office of the Secretary (Please refer to Appendix A2.)

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The Project Director for the IROW-PMO shall be the Project Director of the PMO – Action Office for Resettlement of Squatter Families (AORSF). As stipulated in the said D. O. the IROW-PMO and Resettlement PMO were created by merging the PMO – AORSF and the PMO – Manggahan Floodway. In addition, non-legal staff of the Site Acquisition and Law Enforcement Division (SALED) involved in site-acquisition, as well other appropriate staff needed from other offices within the Department, as determined by the IROW PMO. The Project Director would be detailed to the IROW PMO. As specified in D.O. No. 5, Series of 2003, IROW PMO shall have the following roles and responsibilities: (i) Supervise the improved ROW process in all IO; (ii) Coordinate with the BIR, Appraisal Committees, and other appropriate agencies for updating of valuations.

### **1.4.3 Turnover of ROW Through Donation**

There are established procedures to acquire ROW by requesting the property owners to donate the land needed for public use. The Lead Office/Person is the Project Implementation Office (RO/DEO ROW Agent), supported by the PMO Director, Regional Director and District Engineer(s).

As stated in DO No. 5, Series of 2003, the first mode of ROW acquisition should be to request donation from the property owner. Since this process will involve a lot of persuasion from the part of the DPWH, the ROW Agent to be assigned to undertake the task must be carefully selected. He/she must be persuasive but not annoyingly persistent, confident, but not too aggressive. Before negotiating with the owner, the ROW Engineer must be well prepared in terms of familiarity with the procedures as well as the laws and guidelines that govern it. This is important to gain the respect and trust of the landowners. In addition, he must also be capable of conveying to the property owners the benefits that they will gain if they donate their property.

At this point, several project disclosures to the property owner are accomplished, and the needs to acquire their properties well explained during the conduct of Environmental Impact Assessment (EIA). The procedures involve include: (i) listing of the property through parcellary survey; (ii) letter informing the scheduled visit; (iii) review of the ROW alignment with the property owners; (iv) explain benefits of the project; (v) if required/agreed, prepare the owner to donate the property; and (vi) preparation of deed of donation and agreement to demolish and remove improvements (ADRI).

### **1.4.4 ROW Acquisition Through Purchase**

To acquire property through purchase, the Project Implementation Office (RO/DEO ROW Agent), will be assisted by the PMO Director, Regional Director and District Engineer(s), Appraisal Committee, and Independent Land Appraisal.

ROW Acquisition through purchase is resorted to when the property owner refuses to donate his property. The first offer is based on estimates computed in the Land Acquisition Plan and Resettlement Action Plan (LAPRAP). That is, for land, compensation is computed based on BIR zonal valuation, and for improvements, on replacement cost (with no salvage value), as described in the I.R.R. of R. A. 8974.<sup>2</sup>

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<sup>2</sup> Note that the zonal valuation used in this Draft RAP is 1998 and will need updating

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As stated in D.O. No. 5 Series of 2003, if the property owner refuses the first offer, a second offer will be made based on the recommendation of the Appraisal Committee, or an Independent Land Appraiser, whichever is lower. It is assumed that prior to negotiations, the Parcellary Survey Report and the LAPRAP have been prepared and duly approved by concerned authorities. The property owner shall be given 15 days within which to accept the second offer as payment for his property, in accordance with Section 7 of IRR for RA 8974. The procedures involved are as follows:

1. Using the Parcellary Survey Report and the LAPRAP, determine the number and names of the land owners.
2. Prepare the Notice of Taking informing the property owners about the need to acquire their property to give the way to a government project.
3. In the same letter, request the landowner to submit to the Implementing Office copies of the following:
  - Copy of Transfer Certificate of Title, Original Certificate of Title, Emancipation Patent, or Certification of Land Occupancy Award (TCT/OCT/EP/CLOA)
  - Tax declaration
  - Tax clearance
4. When the landowner submits proof of ownership, make the first offer based on the compensations indicated in the respective LAPRAP prepared.
5. If the owner fails, or refuses to submit proof of ownership, prepare a second Notice of Taking. In the said notice, mention that if they don't respond within 15 days, then the DPWH shall initiate expropriation proceedings. (For procedures to be followed in expropriating land for ROW, please refer to Section 2.12)
6. If the owner accepts the offer, execute a contract of sale between the owner and the DPWH, and an Agreement to Demolish and Remove Improvements (ADRI). A permit to enter the property should be issued by the property owner so that the project may commence.
7. If the owner rejects the offer, the IO, through its Director, shall request the respective Appraisal Committee of the concerned LGUs to appraise land and improvements to be affected by the ROW.
8. The Appraisal Committee will then form its own Technical Team, supported by representatives from the IO, and the Commission on Audit (COA) to conduct appraisal.
9. Based on field survey and research, the Appraisal Committee shall compute just compensation for land and improvements, and utilities affected, in accordance with R. A. 8974 along with its IRR and submit resolution to the IO.

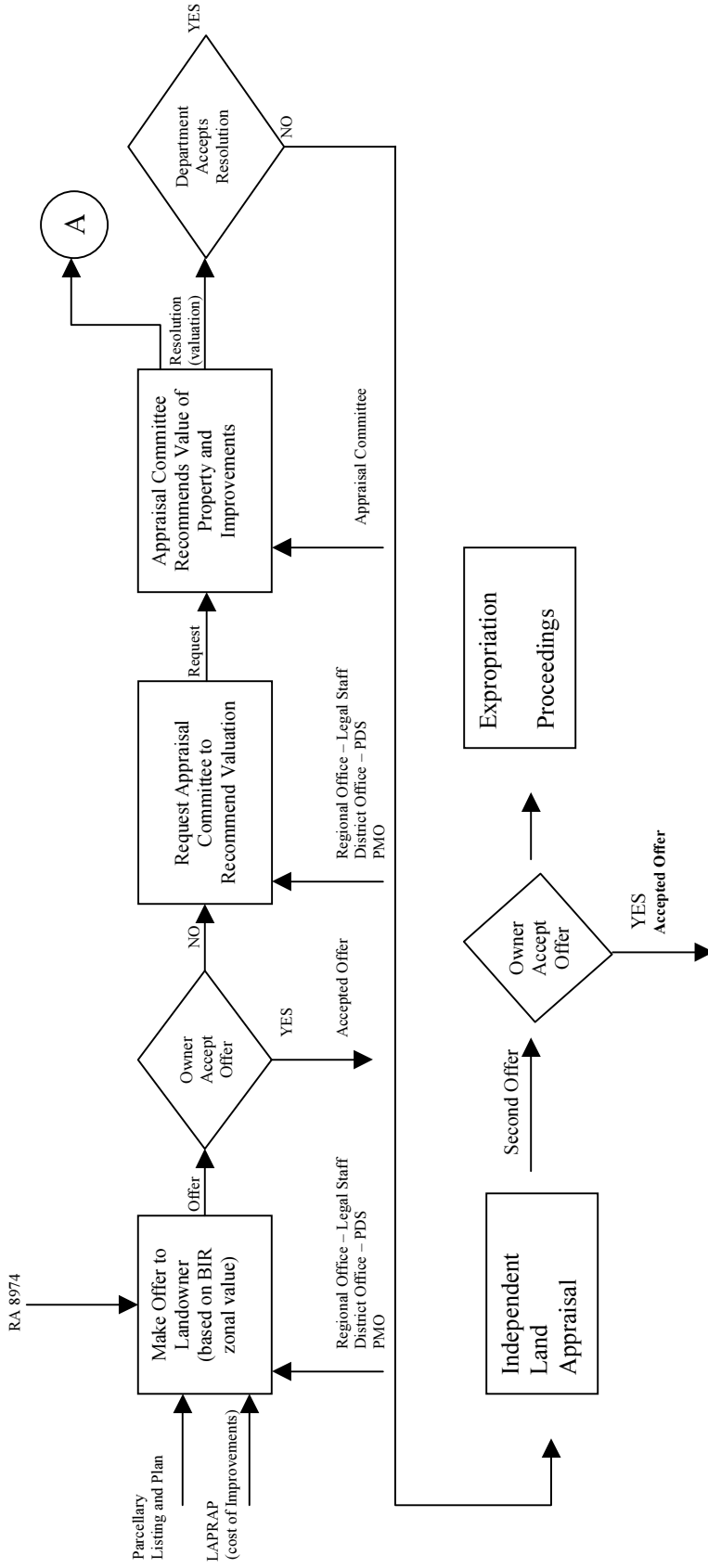
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10. If the valuation based on the resolution of the Appraisal Committee is accepted by the IO, proceed to Step 13.
11. If the valuation based on the resolution of the Appraisal Committee is rejected by the IO, it shall engage the services of an Independent Land Appraiser (ILA) to make its own valuation of the land, along with the improvements in it. Rejection of the said resolution may be based on the following considerations:
  - Valuation of properties deviated by  $\pm 20\%$  from the value obtained in the LAPRAP
  - A member of the Appraisal Committee is related to the landowner by kinship
  - When there is high probability of political intervention
12. Compare the appraisal values submitted by the Appraisal Committee and the ILA. The lower of the two values shall be the basis of the second offer to be made.
13. Make an offer in writing to the property owner. In accordance with Section 7 of the IRR for RA 8974, the property owner is given 15 days within which he shall decide whether to accept the offer as payment for his property or not.
14. If the owner rejects the second offer, expropriation proceedings shall be initiated. Please refer to Section 2.12 for procedures to be followed.
15. If the owner accepts the second offer, proceed to Section 2.9 for procedures on executing the Deed of Absolute Sale (DAS).

Figure 1-5 Land Acquisition and Infrastructure Right of Way (Acquisition of ROW)



Source: Department of Public Works and Highways, Improved IROW (Infrastructures Right-of-Way) Manual,

## CHAPTER TWO

### 2. REVIEW AND ANALYSIS OF SOCIO-ECONOMIC DATA

In this Chapter, a broad overview of the project area along with description of demography is presented first. This is followed by a brief review of land use and settlement patterns. Third, the methodology of data collection is discussed. Finally, an analysis of the data is presented highlighting the project impacts/potential losses likely to be experienced by the affected households and general acceptability of the project by the affected persons and communities.

#### 2.1 Project Area – An Overview

The Project area covers the municipalities of Bacoor, Imus, Dasmariñas Tanza, Gen. Trias and Silang in Cavite; the City of Sta. Rosa in Laguna; and the City of Muntinlupa in Metro Manila.

**Table 2-1 Demographic Characteristics in the Project Area**

Province/ Municipality /City	Population	Household Population	Number of Households	Share to Total Population of Province (in %)
<b>CAVITE</b>	<b>2,063,161</b>	<b>2,049,758</b>	<b>428,879</b>	<b>100.00</b>
Bacoor	305,699	305,382	64,067	14.82
Dasmariñas	379,520	378,135	77,315	18.40
Gen. Trias	107,691	107,077	23,299	5.22
Imus	195,482	195,043	42,232	9.47
Silang	156,137	151,744	30,847	7.57
Tanza	110,517	109,782	23,059	5.36
<b>LAGUNA</b>	<b>1,965,872</b>	<b>1,959,080</b>	<b>417,886</b>	<b>100.00</b>
Sta. Rosa	185,633	185,082	43,625	9.44
<b>NCR</b>	<b>9,932,560</b>		<b>2,132,989</b>	<b>100.00</b>
Muntinlupa	379,310	370,310	78,016	3.82
<b>Total*</b>	<b>2,292,769</b>	1,802,555	<b>382,460</b>	--

\* Total of affected municipalities and cities in the project area only.

Source: NSO, May 2000

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**Table 2-2 Profile of Population in CALA area**

INDICATOR	City of Muntinlupa			Cavite			Laguna		
	1990	1995	2000	1990	1995	2000	1990	1995	2000
Total Population	278,411	379,310	399,846	1,152,534	1,610,324	2,063,161	1,370,232	1,631,082	1,965,875
Average Annual Population Growth Rate (in percent)	7.37	7.02	-1.12	4.10	6.47	5.45	3.48	3.32	4.08
Sex Ratio (No. of Males per 100 Females)	92.3	97.6	95.9	99.7	99.0	97.7	100.2	99.5	98.5
No. of Households	53,499	78,016	80,981	222,151	323,532	428,879	269,342	337,018	417,932
Average Household Size	5.1	4.7	4.8	5.2	5.0	4.8	5.1	4.8	4.7
Proportion of Urban Population	100.0	100.0	100.0	76.2	n.a.	86.8	74.4	n.a.	83.5
Proportion Density (in sq. km.)	6,995.3	9,542	10,046.4	796.2	1,112.5	1,602	765.6	911.3	1,117



## CHAPTER TWO

### 2.1.1 Province of Cavite

The Province of Cavite is situated south of Luzon and has a total land area of 142,706 hectares. It is bounded by the Province of Batangas in the south, Province of Laguna in the east, and Province of Rizal on the northwest (Table 2-3). Metro Manila is on the north of Cavite and the China Sea is on the west.

The province is divided into three congressional districts, 20 municipalities, and 829 barangays. It has three cities – Trece Martires, Cavite and Tagaytay – and four satellite islands – Corregidor, Caballo, Fraile, and Limbones. The seat of the provincial government is located at Trece Martires City, the former capital. There are three physiographic divisions: the lowland and the coastline areas, the central area characterized by rolling and undulating areas, and the hilly and mountainous upland areas.

**Table 2-3 Land Area and Income Classification of Cavite Province by City/Municipality**

City/Municipality	No. of Barangays	Land Area (hectares)	Income Classification
<i>District I</i>			
*Bacoor	73	5,240	1 <sup>st</sup>
<i>District II</i>			
*Dasmariñas	73	8,234	1 <sup>st</sup>
*Gen. Trias	33	11,768	1 <sup>st</sup>
*Imus	97	9,701	1 <sup>st</sup>
*Tanza	41	9,630	1 <sup>st</sup>
<i>District III</i>			
Silang	64	15,641	1 <sup>st</sup>
Province of Cavite	829	142,706	1 <sup>st</sup>

*Sources: Provincial Physical Framework Plan: Province of Cavite 2005-2010 for land area and number of barangays; and DOF for income class.*

### 2.1.2 Sta. Rosa and Biñan, Laguna

The Province of Laguna is located some 30 kilometers south of Metro Manila, with a total land area of 175,973 hectares. Laguna is bounded in the east by the Sierra Madre Range, south by the Province of Quezon, and west by the provinces of Batangas and Cavite. The provincial terrain is mainly of narrow plains extending along the shores of the Laguna de Bay. On the northwestern part of the province are few elevated portions with Makiling and Mount Banahaw at more than 1,000 meters above sea level. The province has 29 municipalities, 1 city, and 673 barangays principally located east and southeast of the Laguna de Bay. Sta. Cruz is the capital town of the province. The 29 municipalities and 1 city are administratively divided into 4 political districts (Table 2-4). The study area includes Biñan and Sta. Rosa, both in the province's 1<sup>st</sup> political district.

**Table 2-4 Profile of the 1<sup>st</sup> District of Laguna Province**

City/Municipality	No. of Barangays	Land Area (hectares)	Income Classification
District I			
Biñan	24	4,350	1 <sup>st</sup>
Santa Rosa	18	3,910	1 <sup>st</sup>
Total (District I)	59	11,060	1 <sup>st</sup>
Province of Laguna	671	175,973	1 <sup>st</sup>

Source: Provincial Physical Framework Plan: Province of Laguna 1993-2002 for land area and number of barangays; and DOF for income class.

### 2.1.3 Muntinlupa and Las Piñas Cities

Muntinlupa City is composed of nine (9) heavily populated Barangays registering an average population density of 8,122 persons per square kilometer in the year 2000. With a population of 379,310 in 2000, it showed a negative growth of -5.14% for the 1995-2000 periods. Las Piñas, meanwhile, had a population of 472,780 in 2000.

### 2.1.4 Projected Population

The study team projected that the study area (CALA area and the southern part of Metro-Manila area) will have about eight (8) million people within the next 20 years, equivalent to the population of Metro Manila now. The southern part of Metro Manila will have five (5) million inhabitants and the Cavite-Laguna study area will have about three (3) million.

The population of Bacoor, between 1980 to 2000, increased from 25 persons in 1980 to 85 persons per hectare; Imus, from only 3 persons per hectare to 12; Dasmariñas had from 8 persons per hectare to 58 persons. Carmona, 8 to 22. GMA has 132 per hectare (because of resettlement); Biñan, from 29 to 70 and San Pedro, from 40 to 126.

Metro Manila is still experiencing a rapidly growing population, but land area is limited. The suburban region of Laguna and Cavite is expected to cater to the rapid urban expansion of the metropolis

## 2.2 Land Use and Settlement Pattern

*Settlement Pattern.* The area is semi-urban/urban with multi-centered developments, rural industrialization and primary industrialization and urban growth in both provinces. The regional growth pole and the administration center is in Trece Martires; dispersed sub-centers of Metro Manila are in the Muntinlupa and Las Piñas municipalities; urban centers are emerging in Bacoor, Kawit, Noveleta, Rosario, Cabuyao, Carmona, Biñan, San Pedro, Sta. Rosa and GMA.

The agro-business center is in Silang and some nature preserve and resorts have been developed in Tagaytay and Los Baños and Ternate. The few remaining agricultural areas are in Maragondon, Magallanes and Gen. Emilio Aguinaldo.

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*Development Trends.* Based on past trends, large-scale industrial estate developments have cropped up in the CALA area. There had also been relocation of industries from Metro Manila, because of the 50 kilometer-radius ban and the attraction of cheaper yet accessible sites outside the metropolitan area. This was followed by growth in related subsectors such as transport, trade, construction, and services; the influx of population from Metro Manila and the countryside, especially because of low and middle income housing projects.

*Development Scenarios:* The study team came up with possible development scenarios for CALA area: one follows the current trend – that is, to continue being dependent on Metro Manila; second, is to be driven by new urban center network; third, is to be driven by industrialization; and fourth, to combine the three (3) scenarios. During the Second Stakeholders' Meeting, the consensus among stakeholders was to consider a fourth scenario - a holistic scenario – which would include dependency to Metro Manila, at the same time, urban core development in Cavite and industrialization will be further encouraged in Canlubang, Laguna, Carmona, Trece Martires, General Trias, Imus, Dasmariñas and Rosario in Cavite.<sup>1</sup>

### **2.3 Methodology/Study Processes**

The socio-economic profiles for Cavite and Laguna as well as the affected municipalities were researched and relevant data were studied. For this, the internet was used where provincial and municipal profiles were inadequate. Sources include the National Statistics Board and National Statistics Office websites.

Ocular surveys were conducted along the different alignments particularly where road configurations crossed populated areas. Inputs were solicited from knowledgeable resource persons (e.g. – MPDC staff) as to the possible difficulties that would be encountered in ROW acquisitions as well as to public perception and reactions to the project.

A Perception Survey was also conducted in 58 affected barangays covering both the indirectly and directly affected households. Random sampling was done for the indirectly affected (696 samples) while 100% sampling was done for the affected households on all alternative road alignments (826 samples). As such, the study covered both beneficiaries and affected persons with the project area. The purpose of the perception survey was to assess responses of the general population in the project area as well as those likely to be affected by the ROW. Focused Group Discussions (FGDs) were also conducted at different periods during the feasibility study in order to have a heightened awareness of the frame of mind of the project-affected-persons (PAPs) as well as to enhance efforts at information dissemination. Participants at these FGDs were either formal or informal leaders of the barangays who exert influence in the community.<sup>2</sup>

### **2.4 Directly/Indirectly Affected Persons**

The directly affected persons are those who will likely experience loss of land and structures/business as they are within the stipulated road ROW while indirectly affected persons include those living within the project affected barangays as well as

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<sup>1</sup> CALA Study Interim Report, May 2006.

<sup>2</sup> CALA Social Study Report, February 2006

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those households on the buffer zones likely to be affected during project construction, disruption caused by construction, including temporary loss of jobs and incomes. These are people who will experience secondary impact of the projects. The total number of directly affected households on the selected alignments is 605 distributed as follows: 423 on the North-South Road, 172 on the East-West Road, and 10 on the CALA Expressway.

### 2.5 Socio-economic Profiles of the PAPs

#### 2.5.1 Sex Distribution

Female respondents accounted for 52.1% of the total (315 out of 605) while males (290) comprised 47.9% for all three road alignments. Respondents from the North-South alignment showed the highest female percentage, 54.9% while the lowest percentage of female respondents was shown by those from the East-West alignment at 46.5%.

**Table 2-5 Distribution of Respondents by Sex**

Sex	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Female	232	54.85	80	46.51	3	30.00	315	52.07
Male	191	45.15	92	53.49	7	70.00	290	47.93
<b>Total</b>	<b>423</b>	<b>100.00</b>	<b>172</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>605</b>	<b>100.00</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

#### 2.5.2 Age Brackets of Respondents

The East-West alignment showed a more mature group of respondents with those in the 45 to 54 year-old bracket being dominant. Over-all, one-third (28.3%) of respondents belong to the 35 to 44 year-old bracket, with more than one-fourth (25.5%) of respondents belonging in the 25 to 34 age bracket and 22.8% in the 45 to 54 age bracket.

**Table 2-6 Age of Respondents**

Age	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
18 & Below	3	0.71	1	0.58	0	0.00	4	0.66
19 - 24	23	5.44	4	2.33	0	0.00	27	4.46
25 - 34	113	26.71	38	22.09	3	30.00	154	25.45
35 - 44	119	28.13	49	28.49	3	30.00	171	28.26
45 - 54	86	20.33	49	28.49	3	30.00	138	22.81
55 - 64	53	12.53	13	7.56	1	10.00	67	11.07
65 & Above	26	6.15	18	10.47	0	0.00	44	7.27
<b>Total</b>	<b>423</b>	<b>100.00</b>	<b>172</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>605</b>	<b>100.00</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

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### 2.5.3 Occupation of Respondents

A relatively large portion, 20.5% of respondents reported that their main sources of income as craft or related worker. This is significant to this group of respondents since the proposed development -will be increasing income opportunities brought about by a more efficient transportation system.

The second biggest group of respondents indicated that they were self-employed or store owners (122 out of 605 respondents or 20.2%). The next group in size (10.9%) were service workers and private executives/managers with 5 respondents (or 0.83%) falling under this category. As shown in the following table, majority of the respondents are not dependent on land or water based employment for sources of income. However, 11.2% (68 out 605) of the respondents are either agricultural, forestry or fishery workers (Table 2-7).

**Table 2-7 Occupation of Respondents**

Main Occupation of Household Head	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Senior official or manager	2	0.47	3	1.74	0	0.00	5	0.83
Professional practitioner	14	3.31	16	9.30	0	0.00	30	4.96
Technicians	7	1.65	2	1.16	0	0.00	9	1.49
Clerk	7	1.65	7	4.07	0	0.00	14	2.31
Sales or service worker	38	8.98	28	16.28	0	0.00	66	10.91
Farmer/Owner	4	0.95	2	1.16	5	50.00	11	1.82
Farmer Tenant	6	1.42	6	3.49	1	10.00	13	2.15
Farm Laborer/Wage earner	11	2.60	4	2.33	4	40.00	19	3.14
Fisherman	25	5.91		0.00	0	0.00	25	4.13
Plant or machine operator	11	2.60	3	1.74	0	0.00	14	2.31
Craft or related worker	111	26.24	13	7.56	0	0.00	124	20.50
Self-employed/store owner	103	24.35	19	11.05	0	0.00	122	20.17
Unemployed	31	7.33	9	5.23	0	0.00	40	6.61
Others	36	8.51	47	27.33	0	0.00	83	13.72
No Answer	17	4.02	13	7.56	0	0.00	30	4.96
<b>Total</b>	<b>423</b>	<b>100.0</b>	<b>172</b>	<b>100.0</b>	<b>10</b>	<b>100.0</b>	<b>605</b>	<b>100.0</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.5.4 Household Size

The household size of directly affected respondents within the ROW of each of the proposed roads is given in Table 2-8. Majority of the households are fairly large in size with about 36.5% of the households composed of 4 to 5 and 22.8% are composed of 6 to 8 members for all 3 roads.

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**Table 2-8 Household Size**

Household Size	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
1	28	6.62	10	5.81	0	0	38	6.28
2	36	8.51	17	9.88	0	0	53	8.76
3	51	12.06	17	9.88	1	10	69	11.40
4-5	161	38.06	52	30.23	8	80	221	36.53
6-8	98	23.17	39	22.67	1	10	138	22.81
> 8	14	3.31	10	5.81	0	0	24	3.97
<b>Average HH Size</b>	<b>4.28</b>		<b>3.99</b>		<b>4.60</b>		<b>4.20</b>	

Source: Household Inventory conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

Average household size is 4.3 for the North-South alignment; 4.0 for the East-West alignment; and 4.6 for the CALA Expressway. The average household size for all three alignments is 4.2 persons.

### **2.5.5 Religion**

Almost all respondents (90.1%) are Christians (Roman Catholics, Protestants, Iglesia ni Kristo or other Christian sects) and only 62 respondents belonged to other religious denominations. A mere six (6) of these were Muslims. Respondents who supplied no answers as to their religion totalled seven (7).

### **2.5.6 Monthly Income**

On the whole, 177 respondents representing 29.3% reported monthly incomes under P5,000 a figure that approximates the national figure of households living below the poverty line. Of the three alignments, the North-South alignment has the most number of households living below the poverty line with 32.2%, while the East-West alignment respondents showed 23.8% households living below the poverty line. Only 20.5% (124 households) on the overall earned a monthly income between P10,000 to 19,000 with the East-West alignment displaying 22.7% in this income bracket. Forty-nine (49) or 8.1% of respondents did not answer the question.

A special survey is needed to determine the income losses of the affected commercial establishments and tenants of agricultural lands that will be affected by the different road alignments.

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**Table 2-9 Household Income**

Income Level (Peso)	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Below 5,000	136	32.15	41	23.84	0	0.00	177	29.26
5,001 - 10,000	156	36.88	25	14.53	0	0.00	181	29.92
10,001 - 15,000	55	13.00	21	12.21	2	20.00	78	12.89
15,001 - 20,000	22	5.20	18	10.47	6	60.00	46	7.60
20,001 - 25,000	11	2.60	12	6.98	0	0.00	23	3.80
25,001 - 30,000	1	0.24	11	6.40	0	0.00	12	1.98
30,001 - 35,000	6	1.42	7	4.07	1	10.00	14	2.31
35,001 - 40,000	3	0.71	1	0.58	1	10.00	5	0.83
40,001 - 45,000	0	0.00	4	2.33	0	0.00	4	0.66
45,001 - 50,000	2	0.47	2	1.16	0	0.00	4	0.66
50,001 - 55,000	1	0.24	2	1.16	0	0.00	3	0.50
55,001 - 60,000	0	0.00	0	0.00	0	0.00	0	0.00
60,001 - 65,000	0	0.00	1	0.58	0	0.00	1	0.17
65,001 - 70,000	0	0.00	0	0.00	0	0.00	0	0.00
70,001 - 75,000	2	0.47	2	1.16	0	0.00	4	0.66
75,001 - 80,000	1	0.24	0	0.00	0	0.00	1	0.17
80,001 - 85,000	0	0.00	0	0.00	0	0.00	0	0.00
85,001 - 90,000	1	0.24	0	0.00	0	0.00	1	0.17
90,001 - 95,000	0	0.00	1	0.58	0	0.00	1	0.17
95,001 - 100,000	0	0.00	1	0.58	0	0.00	1	0.17
Over 100,000	0	0.00	0	0.00	0	0.00	0	0.00
No Answer	26	6.15	23	13.37	0	0.00	49	8.10
<b>Total</b>	<b>423</b>	<b>100.00</b>	<b>172</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>605</b>	<b>100.00</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.6 Gender Impacts and Dimensions

Of those interviewed, 52.1% were females (315 out of 605) while 290 (or 47.9%) males. Attendance in FGDs showed the same trends. Approximately three (3) females attended for every male present in the meetings.

The discussions in these FGDs were dominated by males; only a few females actually voiced out their opinions and concerns, indicating the under-representation of women in the consultation process.

A total of 79 respondents in the household inventory survey indicated concerns for women and vulnerable groups.

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**Table 2-10 Gender Concern**

Social and Environmental Concerns on New Roads	North-South Road		East-West Road		CALA Expressway		Total	
	No.	%	No.	%	No.	%	No.	%
Women and vulnerable groups	61	2.00	17	2.06	1	1.72	79	2.00

Additional data processing has to be undertaken in order to determine the different concerns indicated by women respondents and to describe the socio-economic profile of women-headed households. Special programs will be needed for aging men and women whose physical frailty will be severely affected by the physical exertion of relocating. Other vulnerable groups are those with household members living apart. The road project may have positive results on them. If commuting time is considerably reduced, maintaining separate households or living arrangements may no longer be needed for these families.

### 2.7 Perception of the PAPs about the Project

This section discusses the project awareness, source of project information, project assessment, positive and negative impacts and the approval/disapproval of the project.

#### 2.7.1 Project Awareness

When asked if they were aware of the proposed project, 463 (76.5%) answered yes. The rest (142 or 23.5%) said they were not aware. Awareness was highest among the CALA Expressway respondents with 100% being aware of the proposed project as shown in the following table.

**Table 2-11 Awareness of the Proposed Project**

Awareness of the Proposed Project	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Yes	339	80.14	114	66.28	10	100.00	463	76.53
No	84	19.86	58	33.72	0	0.00	142	23.47
<b>Total</b>	<b>423</b>	<b>100.00</b>	<b>172</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>605</b>	<b>100.00</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

#### 2.7.2 Sources of Information

The two major sources of information for the respondents regarding the proposed project are the barangay officials (as indicated by 193 respondents representing 31.9%) and LGU staff (123 or 20.3%). Table 2-12 shows the different sources of information.



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**Table 2-12 Source of Information**

If Yes, Source of Information	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
From LGU Staff	114	26.95	4	2.33	5	50.00	123	20.33
From Neighbors	42	9.93	30	17.44	0	0.00	72	11.90
From Friends	22	5.20	11	6.40	1	10.00	34	5.62
From the Barangay Officers	162	38.30	27	15.70	4	40.00	193	31.90
From Radio	4	0.95	0	0.00	0	0.00	4	0.66
Advertisement	4	0.95	1	0.58	0	0.00	5	0.83
Others (From Surveyors)	3	0.71	46	26.74	0	0.00	49	8.10
No Answer	72	17.02	53	30.81	0	0.00	125	20.66
<b>Total</b>	<b>423</b>	<b>100.0</b>	<b>172</b>	<b>100.0</b>	<b>10</b>	<b>100.0</b>	<b>605</b>	<b>100.0</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.3 Project Assessment

A total of 66.9% of respondents assessed the proposed project as a good initiative of the government. Only 77 respondents assessed it as a bad initiative, while 72 declined to answer the question. This positive assessment is especially true in two alignments: the North-South and East-West alignments, with 69.3% and 59.3% of respondents, respectively, rating the project as a good initiative. A summary of project assessment is contained in Table 2-13.

**Table 2-13 Project Assessment**

Assessment if the Project is a Good Initiative	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Yes	293	69.27	102	59.30	10	100.00	405	66.94
No	55	13.00	22	12.79	0	0.00	77	12.73
Don't know	47	11.11	4	2.33	0	0.00	51	8.43
No Answer	28	6.62	44	25.58	0	0.00	72	11.90
<b>Total</b>	<b>423</b>	<b>100.00</b>	<b>172</b>	<b>100.00</b>	<b>10</b>	<b>100.00</b>	<b>605</b>	<b>100.00</b>

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.4 Positive Impacts of the Project

The respondents were allowed to select more than one impact during the survey. Hence, the weight of the selected impact per proposed road should be based on total

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respondents per road. That is, for North-South is 423 respondents, East-West is 172 and CALA Expressway is 10.

Respondents view (42.5%) the project as a catalyst to generate more business opportunities in the future. During the FGDs the participants discussed the possibility that local and foreign investors will be encouraged to start new ventures or expand present operations due to the improvement of traffic conditions which the project will bring about. Then, 41.8% (or 253) of respondents also perceived that the project will create new employment opportunities to residents of Cavite, Laguna and Metro Manila. Other positive impacts cited by respondents are time-saving (231 respondents); and appreciation of real estate prices (229 respondents).

The project is also perceived to increase productivity of residents as well as boost savings due to improved traffic situations. Pressures for the conversion of agricultural land are also perceived to intensify as a consequence and thereby increasing land values. These, along with other positive impacts are enumerated in the following table.

**Table 2-14 Positive Impacts of the Project**

If Yes, What are the Perceived Positive Impacts 1/	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
More business opportunities	178	42.08	69	40.12	10	100.00	257	42.48
Employment opportunities	184	43.50	60	34.88	9	90.00	253	41.82
Working efficiency due to time saved	179	42.32	51	29.65	1	10.00	231	38.18
Increased land value	192	45.39	34	19.77	3	30.00	229	37.85
Improved road network	195	46.10	79	45.93	1	10.00	275	45.45
Solve the problem of congestion	161	38.06	53	30.81		0.00	214	35.37
Improved environmental condition	103	24.35	19	11.05	1	10.00	123	20.33
Greater access to work and basic services	100	23.64	35	20.35	8	80.00	143	23.64
<b>Total Responses</b>	<b>1292</b>		<b>400</b>		<b>33</b>		<b>1725</b>	

1/ Respondents were allowed to select more than one perceived positive impact.

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.5 Negative Impacts of the Project

Not many of the respondents viewed negative impacts of the project. For those who did, foremost in the list of perceived negative effects is the relocation of directly affected households, as cited by 73 respondents (12.1%). The possibility of eviction and relocation was an animated topic in FGDs, specifically, in barangay San Agustin in Dasmariñas where they had just experienced a demolition of a colony of informal dwellers, and where those concerned were very vocal in their opposition to the project. Low compensation benefits were also cited by 58 respondents as a perceived negative effect of the project. This was also true in FGDs, where, despite explanations that compensation was determined by the use of a formula, participants'

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expectations were pessimistic on the issue of compensation of land, structure and trees and crops. These perceived negative impacts are shown in Table 2-15.

**Table 2-15 Negative Impacts of the Project**

If No, What are the Perceived Negative Impacts	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Relocation to other place	41	9.69	32	18.60	0	0	73	12.07
Low compensation benefits	36	8.51	22	12.79	0	0	58	9.59
Loss of social network	40	9.46	20	11.63	0	0	60	9.92
Loss of work	28	6.62	16	9.30	0	0	44	7.27
Loss of livelihood	26	6.15	26	15.12	0	0	52	8.60
<b>Total Responses</b>	<b>171</b>		<b>116</b>		<b>0</b>		<b>287</b>	

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

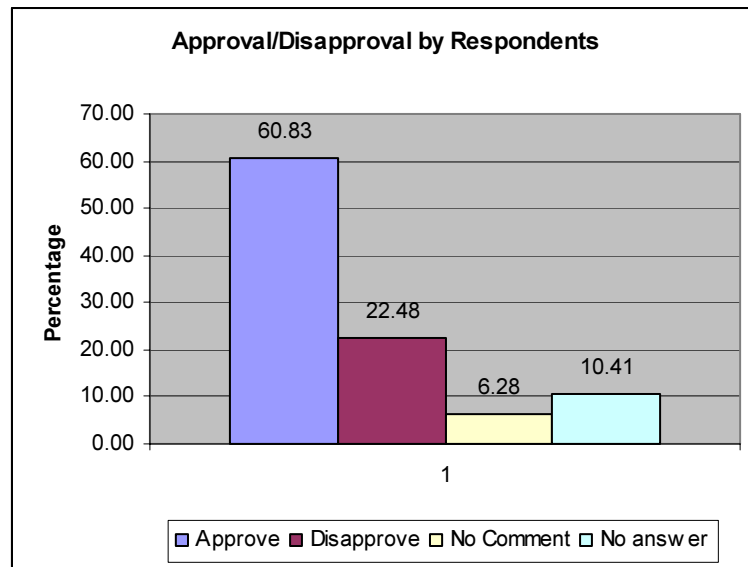
As seen above, loss of livelihood and loss of work are among those cited as negative effects. In the urban areas of the project, the informal sector or underground economy, where sales are largely dependent on the volume of human traffic, is dynamic and vibrant. The alternative alignment of North-South Road (not a selected alignment by the project) which requires the widening of Aguinaldo Highway will directly affect these sectors, resulting in a steep decline in sales and, therefore, their sources of livelihood. In Barangay Biga II, Silang Cavite where the widening of the Aguinaldo Highway is required, the affected barangay officials raised their concerns on the loss of their livelihood. (FGD with Barangay Officials and residents of Barangay Biga II, Silang Cavite, held on 16 December 2005 at Barangay Biga II- Barangay Captains residence).

Loss of farmland in rural areas where agriculture remains the primary source of income, will, likewise, disturb sources of livelihood and work. Tenants also expressed their concerns in FGDs that compensation will be paid to the land owners who, in turn, will be responsible for compensating tenants for disturbances caused by the project.

### 2.7.6 Approval/Disapproval of the Project

Overall, 60.8% of the directly affected respondents approve of the project. The approval and disapproval of the project are basically linked to the perceived positive and negative impacts as cited in Sections 2.7.4 and 2.7.5 respectively. Those who disapprove of the project account for 22.5% of all respondents of the three major alignments. Also on the whole, 6.3% had no comment and 10.4% gave no answer at all.

**Figure 2-1 Overall Approval/Disapproval by Respondents**

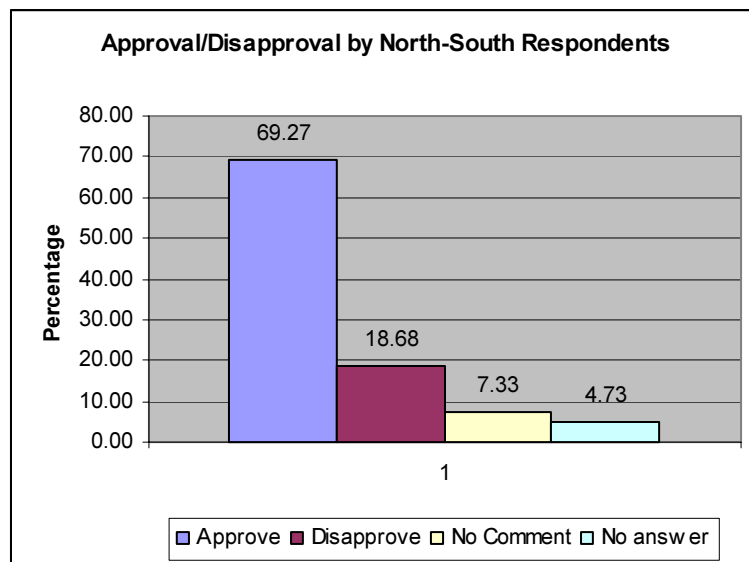


Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.6.1 North-South Road Respondents

Majority (69.3%) of the respondents approve of implementing the project. About 18.7% disapproved the project. Respondents who remained neutral and gave no comment totaled 7.3% (twenty respondents had no answers). The details are shown in the following figure.

**Figure 2-2 Approval/Disapproval by North-South Respondents**



Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

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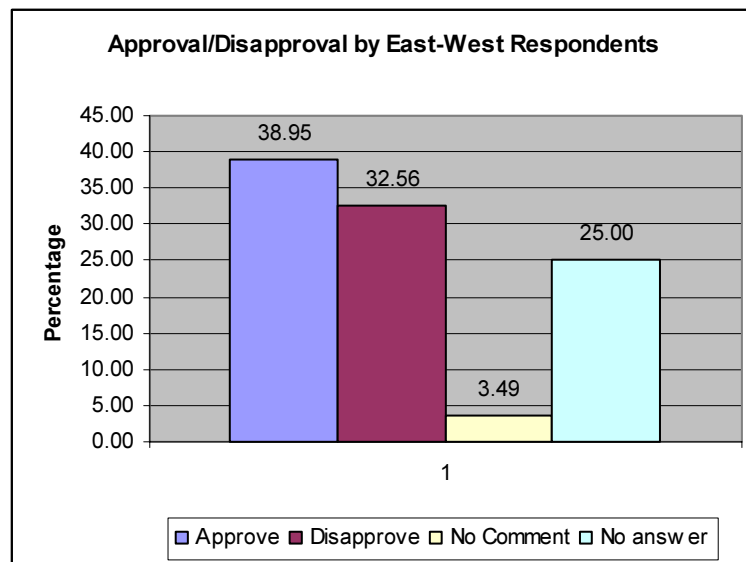
During the FGD in Barangay Biga II, Silang Cavite where the NS road will require the widening of the Aguinaldo Highway, the barangay officials opposed the proposed alignment (FGD with Barangay Officials and residents of Barangay Biga II, Silang Cavite, held on 16 December 2005 at Barangay Biga II-Barangay Captain's residence). Most of the barangay officials and residents of San Agustin I, who participated in the FGD expressed disapproval for the project unless the relocation site is for free. (FGD held at Barangay San Agustin I, Residents' Area, Barangay San Agustin I, Dasmariñas, Cavite, 10 December 2005).

### 2.7.6.2 East-West Road Respondents

Overall, 39.0% of East-West respondents approved the project. Based on the FGDs, the possibility of constructing a new access road from Daang Hari to SLEX makes the project very attractive to the East-West respondents. This means that the daily gridlock in the Zapote/Coastal area may be by-passed through the creation of new road segments in the East-West road alignment.

Around 32.6% of East-West respondents disapproved the project. Respondents who remained neutral accounted for 3.5%, while 25.0% had no answers. The details are shown in the following figure.

**Figure 2-3 Approval/Disapproval by East-West Respondents**

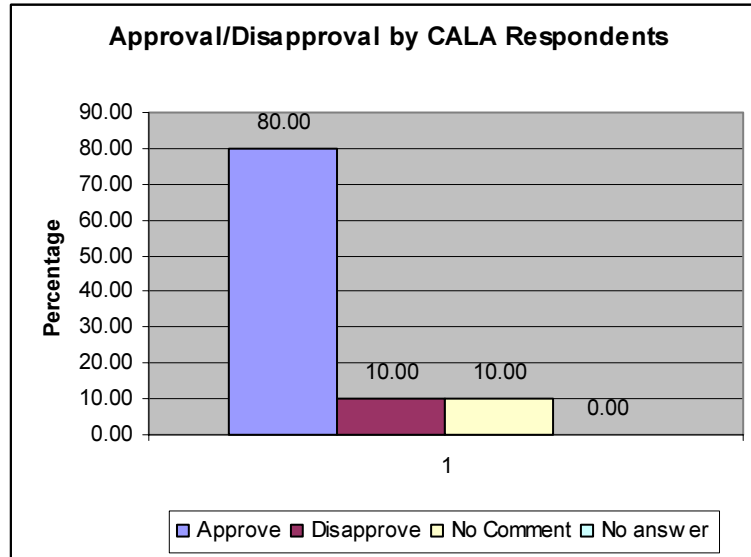


Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.6.3 CALA Expressway Respondents

CALA Expressway respondents had the highest approval of the proposed project accounting for 80.0% of total respondents. Only 10.0% disapproved the project. The CALA respondents who neither approved nor disapproved totaled 10.0%.

**Figure 2-4 Approval/Disapproval by CALA Respondents**



Source: Household Inventory Survey conducted by the Feasibility Study on the Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.7 Social and Environmental Concerns on the Project

While about 61% of respondents approved or were in favor of the project, almost all of them expressed their concerns on social and environmental issues for all phases of the project from pre-construction and construction to operation.

The following table (Table 2-16) shows the results of the perception survey conducted among the 605 respondents, grouped under their respective alignments, showing their concerns for each of the different phases of the project. It should be noted that the respondents were allowed to select more than one concern or issue. Hence, the degree of importance of selected concern/issue is based on total respondents per road. That is, for North-South is 423 respondents, East-West is 172 and CALA Expressway is 10.

The concerns of respondents for the different construction phases are discussed in succeeding sections. Also the results of FGDs are integrated in the discussions where and when appropriate relating to the qualitative aspects of the social components of the study.

## CHAPTER TWO

### *CALA East-West National Road Project*

**Table 2-16. Social and Environmental Concerns on the Project**

Social and Environmental Concerns on New Roads 1/	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Land (land collapse, soil erosion, subsidence)	165	39.01	53	30.81	10	100.00	228	37.69
Water (increase water run-off, water contamination)	196	46.34	50	29.07	10	100.00	256	42.31
Air (air pollution, offensive odor)	243	57.45	78	45.35	4	40.00	325	53.72
Noise and vibration	254	60.05	86	50.00	2	20.00	342	56.53
Terrestrial biological environment (flora and fauna)	122	28.84	39	22.67	0	0.00	161	26.61
Freshwater biological environment (flora and fauna)	125	29.55	22	12.79	0	0.00	147	24.30
Land use and zoning (change in land use)	140	33.10	25	14.53	0	0.00	165	27.27
Aesthetics and visual effects (landscape)	61	14.42	20	11.63	0	0.00	81	13.39
Archaeological and historical sites (damage/destruction)	96	22.70	24	13.95	0	0.00	120	19.83
Population (resettlement, influx of workers)	183	43.26	57	33.14	1	10.00	241	39.83
Economic activities (economic activities in and around project site)	140	33.10	24	13.95	1	10.00	165	27.27
Labor and employment (generation of employment opportunity, increased employment)	147	34.75	22	12.79	3	30.00	172	28.43
Housing and social services	162	38.30	21	12.21	6	60.00	189	31.24
Infrastructure and public utilities (disruption of public utilities)	150	35.46	20	11.63	4	40.00	174	28.76
Public health and safety (increased occupational hazards associated w/ project development)	149	35.22	44	25.58	1	10.00	194	32.07
Culture, lifestyle and values	77	18.20	43	25.00		0.00	120	19.83
Women and vulnerable groups	61	14.42	17	9.88	1	10.00	79	13.06
Inequality between beneficiaries and project-affected people	108	25.53	26	15.12	0	0.00	134	22.15
Conflict of interests	134	31.68	26	15.12	2	20.00	162	26.78
Waste	182	43.03	54	31.40	6	60.00	242	40.00
Accidents	161	38.06	64	37.21	7	70.00	232	38.35
Others	1	0.24	12	6.98	0	0.00	13	2.15
<b>Total Responses</b>	<b>3,057</b>		<b>827</b>		<b>58</b>		<b>3,942</b>	

1/ Respondents were allowed to select more than one issue.

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

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### 2.7.7.1 Pre-Construction

Respondents' concerns here include resettlement; inequities between project beneficiaries and PAPs; and conflicts of interest. Participants of FGDs, where discussions were less structured, freely asked questions and expressed their opinions and concerns on issues that were integral to the discussions, as shown in the following table.

**Table 2-17 Social and Environmental Concerns during Pre-Construction Phase**

Social and Environmental Concerns on New Roads	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Population (resettlement, influx of workers)	183	43.26	57	33.14	1	10.00	241	39.83
Inequality between beneficiaries and project-affected people	108	25.53	26	15.12	0	0.00	134	22.15
Conflict of interests	134	31.68	26	15.12	2	20.00	162	26.78

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.7.2 Construction Phase

Top on the list of concerns of the affected households are waste, accidents, and land collapse. The respondents fear that all these would occur during the construction phase. They expressed their concern that schoolchildren may meet accidents during construction. In addition, vehicles may also be involved in accidents because of the digging and the presence of heavy equipment. This fear was most evident to the East-West and North-South respondents considering that the proposed alignments will pass through their built-up areas and in two instances (in Salitran and Mambog) are near schools.

Another concern of respondents is the possibility of land collapse or subsidence during construction. The proposed road alignment will pass through highly congested areas. Houses and structures may be adversely affected because of the proximity of the construction site to their properties. Hence, without mitigating measures during construction, what they fear might just occur. Also, concerns were raised by the respondents about generation of personal waste and construction spoils in the construction sites. The presence of construction spoils will impede their accessibility and will likely pose hazards. Other social and environmental concerns during the construction phase are shown in the following table.



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**Table 2-18 Social and Environmental Concerns during Construction Phase**

Social and Environmental Concerns on New Roads	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Land (land collapse, soil erosion, subsidence)	165	39.01	53	30.81	10	100.00	228	37.69
Terrestrial biological environment (flora and fauna)	122	28.84	39	22.67	0	0.00	161	26.61
Freshwater biological environment (flora and fauna)	125	29.55	22	12.79	0	0.00	147	24.30
Archaeological and historical sites (damage/destruction)	96	22.70	24	13.95	0	0.00	120	19.83
Economic activities (economic activities in and around project site)	140	33.10	24	13.95	1	10.00	165	27.27
Labor and employment (generation of employment opportunity, increased employment)	147	34.75	22	12.79	3	30.00	172	28.43
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Waste	182	43.03	54	31.40	6	60.00	242	40.00
Accidents	161	38.06	64	37.21	7	70.00	232	38.35

Source: Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.7.7.3 Operation Phase

Based on the survey, 342 respondents of the total 605 respondents are concerned about the noise and vibration that will be caused by passing vehicles especially trucks with container vans. The expected improvement in the traffic flow will increase the speed of vehicles traversing the roads and this will also increase the noise and vibration caused by passing vehicles. The concern on air pollution is also raised by 325 respondents expecting an increase in traffic volume once the roads become operational.

Another environmental concern is the increase in surface run off and contamination (256 respondents). Surface run-off is caused by the inability of soil to absorb water because the soil compaction and the impermeable paved concrete surface of the road project. The details of the concerns of respondents are shown in the following table.

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**Table 2-19. Social and Environmental Concerns during Operational Phase**

Social and Environmental Concerns on New Roads	North-South Road		East-West Road		Cavite-Laguna Expressway		Total of 3 Alignments	
	No.	%	No.	%	No.	%	No.	%
Water (increase water run-off, water contamination)	196	46.34	50	29.07	10	100.00	256	42.31
Air (air pollution, offensive odor)	243	57.45	78	45.35	4	40.00	325	53.72
Noise and vibration	254	60.05	86	50.00	2	20.00	342	56.53
Land use and zoning (change in land use)	140	33.10	25	14.53	0	0.00	165	27.27
Aesthetics and visual effects (landscape)	61	14.42	20	11.63	0	0.00	81	13.39
Housing and social services	162	38.30	21	12.21	6	60.00	189	31.24
Public health and safety (increased occupational hazards associated w/ project development)	149	35.22	44	25.58	1	10.00	194	32.07
Culture, lifestyle and values	77	18.20	43	25.00	0	0.00	120	19.83
Women and vulnerable groups	61	14.42	17	9.88	1	10.00	79	13.06

Source Household Inventory Survey conducted by the Feasibility Study and Implementation Support on the Cavite-Laguna (CALA) East-West National Road Project

### 2.8 Social Acceptability

The CALA East-West National Road Project, based on the results of the survey, is socially acceptable to almost 61% of respondents. In the FGD, majority of the barangays are in favor of the project. In fact, all the affected barangays have submitted their resolutions of no objection to the project and endorsed the same for adoption in the Comprehensive Land Use Plan of their respective municipalities.

Based on the various alignments of the three components of the proposed project, the priority alignment is the East-West Road since this alignment would connect to the South Luzon Expressway and by-pass the Bacoor area.

The respondents felt that the extension of the Manila-Cavite Coastal Expressway should be given priority by DPWH. The third priority is the widening of the Governor's Drive, which would decongest the central part of Cavite and facilitate the entry to the South Luzon Expressway. While these two priorities are not included in the study, the intended beneficiaries felt that these two alignments should be given priority.

The CALA alignment that will start in Sta. Rosa has been endorsed by all of the barangay officials. This alignment will open up new areas for development. In addition, there are less structures to be affected compared to the two other alignments.

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The North-South alignment will entail a large number of households to be resettled that may not be acceptable to the affected residents. The problematic areas in Bacoor, Imus, and Dasmarinas, which would involve compensating owners of permanent structures, would dramatically increase the ROW acquisition costs and would meet resistance among the affected households.

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## 3. THE POLICY FRAMEWORK

Several existing policies in the Philippines govern resettlement of people affected by development projects. These include national policies and local directives which are aimed to protect the Project Affected Persons. Therefore, the procedures to be carried out in the ROW acquisition and management process will be governed by the existing and relevant laws, rules and regulations, department orders, and other guidelines.

### 3.1 Philippine Laws/Regulations

The following laws/regulation would apply in the case of the project land acquisition and resettlement.

- Republic Act 8974 - Otherwise known as “*An Act to Facilitate the Acquisition of Right-of-Way, Site, or Location for National Government Infrastructure Projects and for Other Purposes*”, and its corresponding Implementing Rules and Regulations
- Republic Act 7279 otherwise known as the “*Urban Development and Housing Act of 1992*” and its corresponding Rules and Regulations
- Department Order 187 series of 2002, “*Strict Compliance to Inclusion of Preparation of Parcellary Plans and Cost Estimated for ROW Acquisition in Detailed Engineering of Infrastructure Projects*”
- Department Order No. 5, Series of 2003 “*Creation of the Infrastructure Right-of-Way and Resettlement Project Management Office (PMO) and the Implementation of the Improved Process*”

The basis of the Resettlement Policy is derived from the Bill of Rights of the Constitution of the Republic of the Philippines:

Article III, Section 1: No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied the equal protection of the laws.

Article II, Section 9: Private property shall not be taken for public use without just compensation.

Laws and regulations of the GOP, provincial and local government directives shall determine the policies for land acquisition and regulations and entitlements for the resettlement plan. The Implementing Rules and Regulations mandated by the 1992 Urban Housing and Development Act will govern the resettlement procedures, and RA 8974 will govern land acquisition and compensation.

Republic Act 7279 also known as the “Urban Development and Housing Act (UDHA) of 1992, provides urban land reform and housing policy for the urban poor. UDHA also enjoins local government to engage in land use planning and in the process allocate enough land for the actual number of homeless and under-privileged people

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within their boundaries. UDHA advocates that eviction and demolition must be carried in a just and humane manner. Specifically UDHA aims to:

- Prohibit construction of illegal squatters on danger areas
- Provide decent shelter to the underprivileged and homeless citizens in urban areas
- Guarantee secure and equitable tenure, ensure payment of just compensation
- Encourage people's participation in urban development process
- Develop capacity of LGUs in undertaking urban housing programs

This has been amended by RA 8368 (1997) which provides that squatter houses built before 1983 are entitled to relocation assistance prior to their displacement. RA 8974 will govern the project pertaining to ROW Acquisition. This policy establishes negotiated sale between the DPWH and the PAPs based on the following standards to determine the fair market value:

- (i) The classification and use for which the property is suited
- (ii) The development costs for improving the land
- (iii) The value declared by the owner
- (iv) The current selling price of similar lands in the vicinity
- (v) The reasonable disturbance compensation for the removal and/or demolition of certain improvements on the land and for the value for improvement thereon.
- (vi) The size and shape or location, tax declaration and zonal valuation of the land
- (vii) The price of the land as manifested in the ocular findings, oral as well as documentary evidence presented, and
- (viii) Such facts and events as to enable the affected property owners to have sufficient funds to acquire similarly – situated lands of approximate areas as those required from them by the government, and thereby facilitate themselves as early as possible.

In case of expropriation, DPWH shall immediately pay the owner: (a) 100% of the value of the property based on the BIR zonal valuation. Other relevant policies applicable to the CALA Project are:

- (1) PD 170, Revised Highway Act

States that it is illegal to use, occupy and convert any portion of the ROW.

- (2) EO 1035

Provides for the conduct of: (i) Feasibility study; (ii) Public information campaign; (iii) Parcellary survey; and (iv) Assets inventory. Other features of the Executive Order are:

- Resettlement/relocation of tenants, farmers and other occupants.
- Financial assistance to displaced tenants, cultural minorities and settlers equivalent to the average annual gross harvest for the last 3 years and not less than Php15,000 per ha.

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- Compensation for improvements on land acquired under Commonwealth Act 141.
- Government has power to expropriate in case agreement is not reached

Its provisions on land acquisition and disturbance compensation have been amended by the RA 8974 and Comprehensive Agrarian Reform Law (RA 6657) which prescribes compensation based on the average of the past three (3) years).

(3) MO 65, Series of 1983:

Lists various modes for the acquisition and payment of compensation for ROW, such as: (i) easement of ROW where the owner is paid the land value to use the land but the owner still retains ownership over the same; (ii) quit claim where the Government has the right to acquire 20/60m of the land acquired through CA 141. In such cases, only improvements will be compensated; (iii) expropriation if other options fail. The government agency concerned has the right to take immediate possession, control and disposition of the property.

(4) Supreme Court Ruling (1987)

The Supreme Court ruling defines just compensation as fair and full equivalent for the loss sustained, taking into account improvements, location, capabilities, etc. Thus, the value given by the appraisal committee can only serve as a guide for negotiation.

(5) 1987 Philippine Constitution and RA 7192

Mainstreams gender concerns in development projects

(6) Art. III Section 10, 1987 Philippine Constitution

Community participation in development initiatives is encouraged in this article.

The above laws are summarized in Table 3-1. The Project Management Office (PMO) for Infrastructure Right of Way (IROW) and Resettlement was created by virtue of DPWH D. O. No. 5, Series of 2003 to supervise the full implementation of the improved process. The said D.O. was subsequently amended by D. O. No. 79, Series of 2003, placing the IROW PMO under the office of the Secretary DPWH. As specified in D.O. No. 5, Series of 2003, IROW PMO shall have the following roles and responsibilities: (i) supervise the improved ROW process in all Implementing Offices (IO); and (ii) coordinate with the BIR, Appraisal Committees, and other appropriate agencies for updating of land valuations.

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**Table 3-1 Summary of Relevant Policies on Land and Resettlement**

<b>Policy</b>	<b>Subject</b>	<b>Description</b>
Eviction and demolition	RA 7279 – UDHA	Observance of just and humane manner in eviction and demolition
Land Valuation and compensation	RA 8974	Modes of land acquisition, procedures in expropriation and compensation
Resettlement options	RA 6026	Provides options and assistance to squatters
Compensation for lost crops	RA 6657 on Comprehensive Agrarian Reform Law)	Compensation for lost crops, displaced tenants and settlers
Eminent domain	Cir. No. 35 and RA 7160 of 1990	Allows government to exercise eminent domain on payment of just compensation
Community participation	Art. III Sec. 10, 1987 Philippine Constitution	Participation communities in development initiatives
Gender and development	RA 7192	Mainstreaming gender concerns in development projects

### **3.2 Past Experiences with Resettlement and “Lessons Learned”**

Resettlement of project-affected persons is always a challenging and risky proposition. This is primarily due to loss of productive assets, disruption of economic activities associated with dislocation and relocation and loss of income/employment by the affected families. While the Government of the Philippines (GOP) is dedicated to resettlement of project-affected persons, particularly informal dwellers affected by development projects, the experience of resettlement to date has been mixed and uneven. This is primarily due to the fact that DPWH is only a coordinating agency while bulk of the resettlement work is carried out by the National Housing Authority (NHA) and local government units (LGUs). NHA is the national agency for “socialized” housing program and responsible for resettlement of informal dwellers affected by development projects. Therefore, approach to and management of resettlement involves inter-agency cooperation and high level coordination among agencies involved in the process.

How has DPWH performed with respect to resettlement in the past road projects? In case of land acquisition, DPWH pays 100 percent of the value of the property/assets acquired based on “zonal” valuation, which is lower than the market or replacement value. Further, available reports on resettlement implementation in road projects are not very encouraging. For example, the Sixth Road Project funded by the Asian Development Bank (ADB) faced numerous problems, including relocation and compensation dispute and grievances by the affected families. The Project is almost four years behind schedule due to lack of attention to resettlement during early stage of project preparation as well resettlement implementation work. Similarly, the JBIC

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Study on the impact of road projects in Metro Manila reported many implemented issues with regard to resettlement management. Key implementation issues include (i) delay in payments of compensation; (ii) loss of jobs; (iii) decline in family income; and (iv) problems at the resettlement staging area prior to resettlement. The highlights of the resettlement programs were the following:

- Security of tenure, particularly by the informal dwellers, at the resettlement site helped improve housing and quality of life in post-resettlement period.
- “In-city” relocation strategy was favorably viewed by the affected families, which enabled the resettlers to keep their jobs/employment and access to basic services.
- No major disruption in social life and schooling for children.

In case of NHA-sponsored “socialized” housing, the frequently cited problems with regard to resettlement are: (a) lack of funds and affordable land for in-city resettlement; (b) distant or off-city resettlement sites with lack of civic amenities; and (c) lack of livelihood opportunities at resettlement sites. The “lessons” from resettlement experience in the Philippines in general and road projects in particular have been used to designing resettlement framework plan in the CALA East-West National Road Project.

## **3.3 Project Resettlement Framework**

A. Payment for Land Acquisition– Payment for the land will be given to the registered owner of the land. Proof of ownership of a parcel of land is a Torrens Title legally issued in the name of the owner. A tax declaration receipt is not proof of ownership. It is merely a receipt to prove that a person has paid real estate taxes for a certain parcel of land. There may be legal impediments that may prevent the person paying real estate taxes in acquiring full ownership of the said land.

Tax declaration may ripen into full ownership upon application for titling with the DENR, provided the said parcel of land is classified as alienable and disposal land. There are lands classified as inalienable lands, which are beyond the commerce of man and cannot be privately owned. The Government has the right to acquire 20/60 meters of the land acquired through Commonwealth Act 141. Only improvements will be compensated.

All land titles are registered with the concerned government agencies. The DPWH researchers called ROW agents will research and verify land titles subject for compensation. This is being done to weed out spurious or fake titles. Payment will be done after undergoing a process of verification. If the offered price for the land is low, the landowner may ask for a better price. The price may be negotiated. The last recourse of DPWH is a court case in the event the landowner is not amenable to sell his property at the offered price. However, to prevent this legal eventuality, consultations are being undertaken to thresh out issues and concerns of directly affected households.

B. Payment for Structure - During this feasibility study, the directly affected households and their structures were identified based on the road alignment. In the detailed engineering phase, the houses will be photographed, tagged and estimated to determine the right of way cost. All improvements undertaken after the cut off date



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will not be compensated anymore. The structure will be paid based on the replacement value as of the cut off date. Hence, values of structures at the feasibility phase will be inflated based on the projected inflation rate 5 years or 10 years from this time. The replacement value of a structure at present will also be inflated because the cost of construction materials will surely increase with time.

*C. Compensation of Trees and Crops* – The owners of the trees and crops will be compensated based on the values in the provincial and/or municipal assessor's office.

There may be trees that have no listed value in the provincial or municipal assessors' offices. In these cases, the values of trees or crops in the Department of Agriculture or the Department of Environment and Natural Resources will be the bases of valuation.

*D. Partial Effects on Structures and Lands* - There are cases when a structure will not be totally affected by the project. If only one-fifth (20%) of a house will be affected by the project, the livability of the structure may be affected. The owner together with the DPWH ROW Engineer shall assess if the remaining structure is still livable and safe. If it is livable and safe, then, only the affected portion of the house will be compensated. If it is not livable and safe, then the owner will be compensated for the whole structure.

This is also true with partially affected lands. If the parcel is a residential, commercial, industrial or institutional land, the question is whether the remaining land is still livable or viable for continued occupancy. In agricultural land, the question is whether the remaining land can still sustain a viable agricultural activity like farming. If the properties have been impaired in any way by the project such that they are no longer livable or economically viable to sustain the existing usage, for example, agricultural or commercial activities, then the whole property will be compensated. Portions of land actually used or impaired because of the project will be compensated by the project. The original title will be sub-divided to reflect the portions paid by the government and new titles will be issued in favor of the government and the owner. Lands not compensated by the government will be retained by the owner and this will be reflected in the new title of the owner.

*E. Relocation* – Relocation is one of the options of households who own the structures but not the land on which it is built. DPWH will supply the necessary information about the directly affected households to the municipality based on the data generated during the various stages of the project. The municipality as part of its counterpart for the project will then prepare a relocation site based on the actual number of households who opted for resettlement in this project. The host municipality will shoulder the costs, offer alternative relocation sites, and provide the basic services needed by the relocated households. If the directly affected households are not willing to be relocated, their structures will be paid the replacement value and the households assisted to transport their families and belongings

The size of the household has not been a factor considered in the design of the relocation lot. Relocation sites have the more or less the same lot sizes. One of the reasons for the conduct of the survey for resettlement is to determine the average family size of all directly affected households so that these data would help in determining the size of the relocation lots. The survey will also ask for the income of

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households to determine their paying capacities, which is also an important factor in determining the size of the relocation lots. If the lot prices exceed their paying capacities, many relocated households may not be able to pay the full amount within the agreed amortization period and may only lead to future foreclosure. There will be no forced eviction without court order.

The next step will be disclosure activities where dislocated households will be informed about their relocation options and compensation. The objective of this disclosure is to avert the need for forced eviction by providing acceptable compensation. The foreign funding agency will fund the entire cost of project construction while the government counterpart is the ROW acquisition costs since the foreign funder will not release any amount for the construction unless DPWH has resolved the ROW issues and has paid the affected owners 100% of the compensation, to be compensated at least a month before actual construction can begin.

*F. Alignment* – as a rule, the road alignments proposed by DPWH will try to avoid structures particularly those providing public services such as schools and hospitals. Proposed road alignments veered away from structures that are very expensive such as the main transmission lines for electricity. This study has determined if such structures will be affected by the road alignment and has proposed alternative alignments for the proposed road project.

*G. Public Hearing* – Public hearing required by the DENR as part of the EIA process to decide on whether to issue or not to issue the Environmental Compliance Certificate (ECC) has been undertaken during the feasibility study phase. Barangay consultations were undertaken to inform the affected residents and to elicit the views, concerns and issues on the proposed project.

*H. Land Valuation* - If the offered price for the properties is perceived to be low and the landowner asks for a better price DPWH will commission an independent appraiser to determine the replacement cost. As a last recourse, DPWH can file expropriation through the power of eminent domain of the state. However, to prevent this legal eventuality, consultations are being undertaken to thresh out issues and concerns of directly affected households. It should be pointed out that this power of eminent domain has repeatedly been sustained by the Supreme Court in a number of leading cases but the resolution of such cases can take a long time and may delay project implementation.

*I. Compensation of Tenants* - Tenancy relationship is an agreement between the owner of the land and the tenant. The legal tenant of the land will be paid based on the comprehensive Agrarian Reform Law. In cases wherein the tenant will be dispossessed from the land that he tills, the prescribed compensation to be given to the tenant is equivalent to one year income from the harvest based on the average of the past three years. In ADB financed projects, the land preparation cost is assessed separately. The total amount should be not be less that Php15, 000 per hectare.

*J. Conversion of Agricultural Land to Road Use* -- This is a road project of DPWH, which entails the construction of a road passing through land with various uses such as agricultural, residential, commercial and industrial. It is submitted that to build a road in these lands with various uses does not require the usual conversion processes as enunciated by the Comprehensive Agrarian Reform Law. .

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K. Inherited Land - Inheritance is one of the legal modes of transferring land ownership. As long as heirs have all the legal papers to prove that ownership was once lodged in the person who died and the persons claiming the land are the legal heirs, DPWH will have to compensate the heirs. DPWH will have to study the claim to ensure that the right persons are being compensated for the land that will be affected by the project.

L. Transparency – The residents will be given updates during the various stages of the project. This feasibility study aims to determine among others the ballpark figure on the right of way acquisition cost for a certain road alignment. There are certain areas where there are alternative alignments. The team, through consultations with possible directly affected households is trying to find out the best road alignment with the least dislocation and cost. Three consultations have already been conducted with the officials of the municipality and the affected barangays.

In the detailed engineering stage, the households to be relocated will be positively identified. Before the actual relocation, prior information and consultations will be provided and conducted and the teams to be assigned will again coordinate with the barangay and municipal officials. Disclosure meetings will be held, which will provide detailed valuation for the land or structure to the directly affected owners. The owner may agree and endorse the valuation or seek to have a reconsideration of the valuation of the land or structure.

### **3.4 Project Compensation Policy and Entitlements**

#### **3.4.1 Eligibility**

Eligible beneficiaries shall include those who at the time of the survey are settled on the ROW and on any of the proposed land for expansion or slope protection of the project. The cut-off date for the eligibility of beneficiaries will take effect as soon as the ROW has been validated by detailed engineering studies and approved by the DPWH Secretary. The eligible beneficiaries entitled to benefits and assistance shall include the following: (1) Legitimate owners of land and structures, including improvements; (2) Occupants, including renters, of structures; and (3) Users of land, including tillers

#### **3.4.2 Entitlements**

DPWH will provide the following entitlements to eligible PAPs:

- (i) Financial assistance (also referred to as subsistence allowance) of P15,000 each to PAPs whose agricultural land, which are covered by a full title, tax declaration or some proof of traditional ownership (such as usufruct when the PAPs belong to an indigenous community), will be severely affected (i.e., total asset lost).
- (ii) Financial assistance equivalent to the business losses sustained by the PAP conducting business on severely affected main structures (e.g., store, shop, warehouse, and similar structures) which are constructed on lands that are covered by titles, tax declaration with full title, tax

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- declaration or some proof of traditional ownership (such as usufruct when the PAPs belong to an indigenous community).
- (iii) Inconvenience allowance of P10,000 each to PAPs who hold full title, tax declaration or some proof of traditional ownership (such as usufruct when the PAP belongs to an indigenous community), to the land where their severely affected houses stand and who have to transfer elsewhere and not to a relocation site.
  - (iv) Rehabilitation assistance in the form of special skills training or other development activities to PAPs whose only source of income are severely affected and may have to engage in some other income-earning activities. This rehabilitation assistance may also be granted to vulnerable groups, like indigenous people, women, elderly, persons with disability, etc. DPWH will coordinate closely with concerned government agencies that have the mandate and the expertise to undertake rehabilitation assistance, such as the conduct of skills training.
  - (v) Financial assistance to agricultural tenants, settlers/occupants, and cultural minorities displaced from their agricultural land (i.e., severely affected) equivalent to the average annual gross harvest for the last 3 years but not less than P15,000 per ha (EO 1035), aside from the cash payment/compensation for their crops actually damaged by the project. It may also be given to owners of the land acquired under CA 141 for the area or portion subject to section 112 thereof.
  - (vi) Transportation to PAPs who are relocating, including shanty dwellers who opt to go back to their place of origin (e.g., province) or to shift to government assigned relocation sites.
  - (vii) Transitional allowance equivalent to one month rent of a similar structure within the same area to house tenants of affected main structures who will have to find a new place on account of the project;
  - (viii) Land for Land Compensation: Replacement land for residential and agricultural lands will be as close as possible to the land that was lost. All replacement land for residence, commerce and agriculture will be provided with secured tenure status.

Plans for acquisition of land and other assets will be carried out in consultation with the PAPs who will receive prior information regarding the compensation options and financial assistance available to them. Any acquisition of, or restriction on access to resources owned or managed by PAPs as a common property will be mitigated by arrangements ensuring access of those PAPs to equivalent resources on a continuing basis. Priority assistance will be provided to vulnerable families especially female-headed households. DPWH and the RIC will ensure that they will be assisted in the demolition and/or transfer to the resettlement sites.

The project will ensure that students will immediately be enrolled in the nearest public school and that they should be given priority admission. The resettlement transition period will be minimized and the acquisition of assets needed for the project (by the way of a Writ of Possession in the event of expropriation proceedings), as well as all

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resettlement activities including compensation, will be completed at least one month prior to the initiation of construction work.

### 3.4.3 Compensation and Assistance

The entitlements and benefits are indicated in the Compensation Matrix below. These apply to eligible beneficiaries identified above after the validation of the census survey, of which the cut-off date is to be decided by the Resettlement Committee.

**Table 3-2 Compensation Matrix**

Type of Loss		Application	Entitled Person(s)	Compensation
1	Arable land		Owners of arable land with full title or tax declaration to the land or those who are covered by customary law (e.g., possessory rights, usufruct) or other acceptable proof of ownership.	<ul style="list-style-type: none"> <li>• Cash compensation at replacement cost based on the appraisal by an independent appraiser.</li> <li>• Cash compensation for perennials of commercial value as determined by DENR or the concerned appraisal committee</li> <li>• PAPs will be given sufficient time to harvest crops on the subject land</li> </ul> <p>As per RA 6189 and EO 1035:</p> <ul style="list-style-type: none"> <li>• Disturbance compensation equivalent to five times the average of the gross harvest on the land holding during the five preceding years but not less than P15,000.</li> <li>• Rehabilitation assistance (skills training and other development activities) equivalent to P15,000 will be provided in coordination with other government agencies if the present means of livelihood is no longer viable and the PAP will have to engage in a new income activity</li> </ul>
2	Residential land and/or Commercial land		Owners of structures with full title or tax declaration to the land or those who are covered by customary law (e.g., possessory rights, usufruct) or other acceptable proof of ownership.	<p>For the portion of the land needed:</p> <ul style="list-style-type: none"> <li>• Cash compensation at replacement cost equivalent to the appraised value as determined by an independent appraiser.</li> </ul>
3	Main Structure/ commercial	Entire structure affected OR	Owners or residential	<ul style="list-style-type: none"> <li>• Cash compensation at replacement cost for the entire</li> </ul>

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Type of Loss	Application	Entitled Person(s)	Compensation
		<p>when the remaining structure becomes unviable for continued use, with or without a building permit</p> <p>structures with no title or tax declaration to the land or other acceptable proof of ownership.</p> <p>Leases of affected structures, including shanty dwellings in urban areas</p>	<p>structure, as determined by the concerned appraiser.</p> <ul style="list-style-type: none"> <li>• Cash compensation at replacement cost for the entire structure, as determined by the concerned appraiser.</li> <li>• Cash compensation at replacement cost for the entire structure, as determined by the concerned appraiser.</li> <li>• Shanty dwellers in urban areas who opt to go back to their place of origin in the province or be shifted to government relocation sites will be provided free transportation.</li> <li>• PAPs who have business activities affected due to partial impact on the structure are entitled to a subsistence allowance for the loss of income during the reconstruction period. Subsistence allowance is equivalent to P10,000 per PAP.</li> <li>• Informal dwellers who opt to be relocated at the government's resettlement site will not receive any cash compensation for the structure. Transportation assistance will be provided to in transporting the salvaged materials.</li> <li>• Cost of resettlement which includes land development and housing is estimated at P60,000.</li> <li>• Rehabilitation assistance in the form of skills training and other development activities and equivalent to Php15,000 will be provided in coordination with other government agencies if the present means of livelihood (e.g., house cum shop) is no longer viable and the PAP will have to engage in a new income activity.</li> <li>• 3-month notice on the schedule of demolition.</li> <li>• PAF is given transitional allowance equivalent to one month rent of a similar structure within the same area.</li> </ul>

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Type of Loss		Application	Entitled Person(s)	Compensation
				<ul style="list-style-type: none"> <li>• For house tenants renting structures outside of, or within the ROW, and who have to transfer elsewhere, free transportation will be provided.</li> <li>• Renting shanty dwellers in urban areas who opt to go back to their place of origin in the province or be relocated to government relocation sites will be provided free transportation plus food allowance during travel period.</li> <li>• If renters choose to relocate in government resettlement sites, a rent scheme will be offered according to the prevailing rent for socialized housing.</li> </ul>
4	Independent shops (structures)	Shops, with or without building permit, partially affected and the remaining structures are still viable for continued use.		<ul style="list-style-type: none"> <li>• Compensation in cash at replacement cost for affected portion of the structure, including the cost of restoring the remaining structure, as determined by the concerned appraisal committee with no deduction for salvaged building materials.</li> <li>• As determined by the RIC, PAPs will be entitled to transitional allowance to cover for their computed income loss during the demolition and reconstruction of their shops, but not to exceed a one-month period.</li> <li>• Three-month notice on the schedule of demolition.</li> <li>• As determined by the RIC, shop renters will be entitled to a transition allowance to cover for their computed income loss during the period that their business is interrupted, but not to exceed 1-month period.</li> <li>• If shifting (either permanently or temporarily) is required, shop renters are entitled to free transportation.</li> <li>• Rehabilitation assistance in the form of skills training and other development activities and equivalent to P15,000 budget will be coordinated with other</li> </ul>

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Type of Loss		Application	Entitled Person(s)	Compensation
				government agencies if the present means of livelihood is no longer viable and the PAP will have to engage in a new income activity.
5	Electric and/or water connection	Loss of, or damage to, affected assets partially or entirely	PAPs	<ul style="list-style-type: none"> <li>• Compensation to cover cost of restoring the facilities</li> </ul>
6	Public Facilities	Loss of, or damage to, public infrastructure	Utility agencies or government offices	<ul style="list-style-type: none"> <li>• Compensation in cash at replacement cost to respective agencies</li> </ul>
7	Trees	Loss of trees	PAPs	<ul style="list-style-type: none"> <li>• Compensation for fruit bearing trees as determined by DENR</li> </ul>
8	Livestock	Loss of livestock	PAPs	<ul style="list-style-type: none"> <li>• Compensation on loss of livestock per head.</li> </ul>

### 3.4 Outstanding Tasks

Due to the preliminary level of project planning and design, the Preliminary RAP is considered a planning tool only. There are gaps and outstanding tasks that have to be addressed by the EA after the feasibility study is complete. These include, among others, updating of the inventory of affected households and assets, inventory of affected businesses, identification of relocation sites and related implementation issues, income and livelihood restoration measures for vulnerable groups. A brief list of outstanding work and processes are presented below.

- Parcellary Survey: This should be done to validate excess property that may have to be compensated, because the property that will be acquired may exceed 20% of the landholding and the remaining property will no longer be viable for its current use.
- Survey of Commercial Improvements: The business losses of commercial improvements will have to be separately surveyed.
- Survey of Utilities: There should be a survey of electric posts, water pipe mains, irrigation canals and private subdivision developments that will be affected.
- Zoning Amendments: The proposed road alignments and their ROW will have to be indicated in the zoning plan and ordinance and development guidelines should be prescribed for the affected parcels:
  - The proposed ROW should be integrated in any proposed development, considering that CALA Expressway will have limited access



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- That developments abutting the proposed national highways roads be required an easement of five (5) meters that will facilitate off-road parking, loading and unloading
  - Proposed intersections should at least be spaced 200 meters apart along the proposed national highways to allow travel at design road speeds.
  - Proposed development applications within the ROW shall be required a waiver on improvements which should stipulate their agreement to demolish said improvements at no cost to the government. Financial compensation for temporary easements may be designed and authorized, until such time that the project is approved and ROW acquisition can be paid.
  - Additional FGDs have to be conducted for women – headed households, senior citizens, people with disability, informal settlers and tenants, and the youth who make up the vulnerable groups.
- Call-back Surveys: Field interviewers in close coordination with barangay officials should return to those who refused to be interviewed in the first household survey and FGDs in order to complete the cost estimates for the RAP.
  - Survey of Alternative Realignment: Based on stakeholders' consultation meetings, minor realignments of the highways have been proposed around Citti Italia and Governor Mangubat Ave/La Salle Place after the social survey was completed. A follow-up survey is now underway to update the database through addition and deletion of households from the inventory, based on the current realignment. This should be reflected in any future update of this draft RAP.
  - Setting of Cut-off Dates: Since the ROW alignments are almost final, the cut-off dates should be determined and property developers be informed so that they can integrate these road projects into their development plan.
  - Security of ROW Alignments: Coordination with LGUs should be undertaken to secure ROWs from further encroachment. Minimum financial assistance to the barangay council may be negotiated for their security services.
  - Evaluation of Alternative Relocation Sites: The listed private socialized housing projects (Chapter 5: Table 5-4) will have to be evaluated as to availability and costs. The site selection, development etc. must be undertaken in consultation with the affected persons/communities and LGUs.
  - Zonal Valuation Update: Coordination with BIR-zonal valuation as the 1998 zonal valuation needs updating.
  - Other Coordination Works: Coordination with livelihood agencies to develop plans regarding livelihood assistance.

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### 4. ROW ACQUISITION

As presented in Chapter 1, the selected road alignments as approved by the stakeholders during the Cavite and Laguna consultations for the feasibility study include the following routes:

- (i) For the North-South Road, it is Alternative 1 comprising of NS-1, NS-2, NS-3, NS-4 and NS-5. This route, with a ROW of 30 meters, is 27.8 kilometers long and covers an area of 83.40 hectares. Of the five (5) road segments that make up the approved route, one of them, NS-2, will be using the existing Molino Boulevard alignment.
- (ii) For the East-West Road, it is Alternative 3, which is made up of DH-1, DH-2, DH-3 and DH-6<sup>1</sup>. On the whole, this stretch travels a total of 26.3 kilometers, but without DH-1 and DH-2<sup>2</sup>, the alignment now measures 21.0 kilometers and covers an area of 63.0 hectares. It, likewise, has a ROW of 30 meters. It must be noted that DH-3 already exists. Thus, from a total ROW of 63.0 hectares, only 33.0 hectares need to be acquired. DH-3 is the part of Daang Hari, which traverses the Molino Road where the recently opened SM is located.
- (iii) For the CALA Expressway, Alternative 2 was approved during the Cavite and Laguna consultation, which consists of CE-5, CE-6 and CE-7<sup>3</sup>. Having a ROW of 50 meters, it runs a total of 20.35 kilometers covering 101.75 hectares of land. It uses no existing road alignment but traverses mostly open fields.

Overall, the ROW of the three (3) roads totaled to 69.15 kilometers requiring a total area of 248.15 hectares of land. Table 4-1 gives a detailed description of each road segment of the selected alignments. It should be noted that some sections were re-labeled in the feasibility study report for logical numbering.

There is no ROW acquisition for the segment that will pass through the National Bilibid Prison since it is government property. Moreover, this segment (or DH-2) will be implemented by PIC/PNCC thereby relieving DPWH from acquiring the land and relocating the PAPs. However, the results from the household inventory survey of DH-2 are included in the formulation of the RAP for the Environmental Impact Statement of the proposed roads.

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<sup>1</sup> DH-6 has been re-labeled as DH-4 in the feasibility study report for continuity of section numbering of the selected road alignment but is the same alignment referred to in this report. .

<sup>2</sup> DH-1 is part of the road network for Metro Manila while DH-2 will be implemented by Philippine Infrastructure Corporation of PNCC. Hence, these two road segments were not considered in the feasibility study.

<sup>3</sup> CE-5 to CE-7 has been re-labeled as CE-1 to CE-4 in the feasibility study report for the selected road alignment but is the same alignment referred to in this report.

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**Table 4-1 Length, Width and Area of ROW and Description of Road Alignments and Sections**

Alignment/ Road Section	Length (in kms)	ROW (in meters)	Area (in hectares)	Description of Road Section
<b>DAANG HARI (DH)</b>	21.0	30.0	63.0	
<b>DH-1</b>	Part of network but not part of feasibility study since it under Metro Manila road project.			From the old national road towards Manila South Road leading to Susana Heights
<b>DH-2</b>	Part of network but not part of feasibility study since it will be implemented by PIC/PNCC.			From Susana Heights Interchange to Daan Hari.
<b>DH-3 (existing)</b>	10.00	30.00	30.00	Existing Daang Hari in Bacoor and intersects with Molino Road where the recently opened SM Mall is located, then connects to Aguinaldo Highway
<b>DH-6 (now DH-4)</b>	11.00	30.00	33.00	Re-labeled as DH-4 in the feasibility study report. It is from Imus to Tanza and connects to Tanza-Naic Caylabne Road.

Alignment/ Road Section	Length (in kms)	ROW (in meters)	Area (in hectares)	Description of Road Section
<b>NORTH-SOUTH ROAD</b>	27.80	30.00	83.40	
<b>NS-1</b>	1.39	30.00	4.17	From Radial 1, at the end of the Manila-Cavite Coastal Road (Bacoor), then to Niog at the St. Dominic Area; then to the Molino Boulevard;
<b>NS-2 (Existing)</b>	4.61	30.00	13.83	Existing Molino Boulevard alignment with an unopened section in Niog area;
<b>NS-3</b>	5.10	30.00	15.30	East of Bahayang Pag-asa, veers away from Molino Blvd towards Aguinaldo Highway and connects with Daang Hari;
<b>NS-4</b>	7.50	30.00	22.50	Extends from Daang Hari, passes Salitran Road, runs parallel to Aguinaldo, then intersects it at San Agustin 2, Dasmaringas;
<b>NS-5</b>	9.20	30.00	27.60	Starts at intersection of Aguinaldo, traverses slightly south-westerly almost parallel to Aguinaldo, then connects to the CALA Expressway;

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Alignment/ Road Section	Length (in kms)	ROW (in meters)	Area (in hectares)	Description of Road Section
<b>CALA EXPRESSWAY</b>	20.35	50.00	<b>101.75</b>	
<b>CE-5 (now CE-4)</b>	<b>3.70</b>	<b>50.00</b>	<b>18.5</b>	Re-labeled as CE-4 in the feasibility study (F/S) report. It starts from Governors' Drive and connects to NS-5;
<b>CE-6 (now CE-3)</b>	<b>1.65</b>	<b>50.00</b>	<b>8.25</b>	Re-labeled as CE-3 in the F/S report. It is from NS-5 ending to Aguinaldo Highway at Silang Junction;
<b>CE-7 (now CE-1 and CE-2)</b>	<b>15.00</b>	<b>50.00</b>	<b>75.00</b>	Re-segmented and re-labeled to CE-1 and CE-2 in the F/S report. CE-1 is from the Asia Brewery/SLEX Interchanges to Tagaytay-Sta.Rosa Road. CE-2 is from Tagaytay-Sta. Rosa Road to Silang/Aguinaldo Highway Junction.
<b>TOTAL, 3 ROADS</b>	<b>69.15</b>	<b>30-50</b>	<b>248.15</b>	

#### 4.1 Residential Lands

A total of 605 households surveyed indicated an estimated land area of 118,042 square meters, or 4.76% of the total ROW requirements of 248.15 hectares for all three roads are residential land. Based on an averaged BIR Zonal Valuation, the total amount required for acquiring the surveyed residential lands will conservatively amount to P 212 million.

The following discusses the verifiable losses of the PAPs in terms of land and structures that will have to be compensated. They are grouped according to affected barangay (and municipality) and for each approved road segment.

#### North-South Road

A total of 423 structures will be affected by the North-South Road alignment, located in three (3) municipalities and nine (9) barangays. The majority of these are in Bacoor where NS-1 will pass through heavily populated areas. Of those affected by the proposed North-South Road, a large majority (74.38%) occupy land below 100 square meters in size. More than half (37.59%) are living on public land. Nearly half, or 46.57%, have only been occupying the land for less than 10 years. Only 14.42% own both their house and the land it is built upon while 36.93% are illegal tenants. It should also be noted that 3.55% reportedly own houses on land that they are renting.

Many of these people are living in houses below 50 square meters in floor area. Another 25.0% and 12.1% have living areas ranging from 51-100 square meters and 101-150 square meters, respectively. Their houses consist mostly of either 1-storey or 2-storey single detached houses though the former far outweigh the number of the latter (34.99% and 20.09% respectively). Those living in shanties connected with each other comprise 38.77%. Almost all of these houses have GI roofing and have

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walls built either of concrete, wood or a combination of these two materials. More than half of them earn monthly incomes of from below P5, 000 up to P10, 000.

### Segment NS-1

*Bacoor*: NS-1 lies in the northern portion of Bacoor City and will affect four (4) barangays, namely, Zapote 5, Talaba 2, Talaba 3 and Talaba 7. Although only 1.39 kilometers long, a total of 331 structures will be affected by this road segment, encompassing 4.17 hectares. A great majority of the PAPs occupy land with areas less than 100 square meters, their houses mostly standing on public grounds (65.22%), although 45 respondents (or 13.60%) were uncertain regarding the status of the land. The remaining 21.18% occupy private land. They have been occupying the land for varying lengths of time, the biggest group (47.87%) for less than 10 years.

Around 28.12% are occupying the land illegally while 26.25% are reportedly renting the land but own the structures. Those who own both house and land amount to 12.81% of the respondents. For those renting, land rental ranges from below P500 to P3, 000. Likewise for the range of house rental: from P500 to over P3, 000 per month with the greatest number paying above P3, 000 as house rental.

About half (50.63%) of the PAPs have living areas less than 50 square meters in size while 22.78% reported the size of their houses to be between 51 and 100 square meters. The rest (26.58%) occupy living areas over 100 square meters in size. A little more than 43% live in single-story detached houses while 23.55% are in 2-storey single detached units. 19.11% live in shanties connected to each other. A great majority of these houses (268 or 81.96%) have G.I. roofing. Only one (1) house had a nipa/cogon roof and nine (9) had roof tiles. 14.98% (49 houses) had other materials like plywood as roofs. Materials used for the walls of these houses are as follows:

a) All concrete	31.79%
b) Concrete and wood	31.48%
c) All wood	32.41%
d) Wood and sawali	3.09%
e) Nipa/cogon	0.31%
f) Others (plywood, etc.)	0.93%

Regarding income levels, a great bulk of respondents (93.92%) reported monthly incomes of between below P5, 000 and P20, 000. Three (3) respondents reportedly own livestock from which two (2) indicated and that they each earn less than P3, 000 per annum. The other one stated that he earns between P7, 001 and P9, 000 per annum from the livestock. There is no data indicated regarding what animals they raise. Thirteen PAPs reported having trees within the land they occupy. Although survey results indicated that the trees were industrial and fruit trees by nature, there were no figures provided as to the actual number of trees in question for each of these PAPs.

### Segment NS-2

*Bacoor*: This segment is the existing Molino Boulevard and therefore no structures are affected.

### Segment NS-3

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*Bacoor and Imus:* NS-3 will affect 27 structures located in Barangay Mambog III in Bacoor and barangays Buhay na Tubig and Anabu I-G in Imus in Cavite. As per the size of the land occupied, 45.45% have lot sizes less than 100 square meters and 36.36% have lot sizes between 101 and 200 square meters. Majority (63.64%) occupy private land. The remaining four (4) respondents (14.8%) stand on public property. Most of them have been living on the land for less than 10 years while two (2) have been there from 11 to 20 years. Three (3) own both house and lot while the majority (6 respondents) own the house but rent the land. The remaining two (2) rent both house and land. Land rental ranges from P1,000 to P2,500 per month, while monthly house rental ranges from P1,501 to P2,000.

Majority of the Buhay na Tubig PAPs have living areas with sizes below 50 square meters. Almost all live in one-storey single detached houses. Only was reported to have a two-storey single detached unit. All had G.I. roofing while their walls were either made of concrete (6 respondents) or a combination of wood and concrete (5). The bulk of those affected in this area reported monthly incomes of between P5, 000 to P15,000.

### Segment NS-4

*Dasmariñas:* Totaling 41 structures, those affected by NS-4 are from the barangays of Salitran 1, Salitran 2, and San Agustin 2 all in Dasmariñas City in Cavite.

Majority of these PAPs occupy lands between 101 and 200 square meters in size, while 18.18% have lots below 100 meters in size and 12.12% occupy land ranging from 201 to 300 square meters. Only 8.89% of the PAPs occupy public property, the rest (91.11%) are on private property. A large number of these people have been in the area less than 40 years; 32.5% having occupied the land for less than 10 years. A large number (74.47%) own both their houses and lands; 10.64% renting both house and land; while three (3) or 6.39% are occupying the land illegally.

For those not owning their houses, no data was obtained regarding land rental rates but three (3) respondents indicated monthly house rental rates, two (2) of them reportedly paying over P3,000 as monthly rental expense. It can be assumed that these figures apply to both house and land.

Most of the PAPs (95.56%) have living areas between less than 50 square meters up to 300 square meters. The largest numbers live in houses with floor areas between 51-100 square meters (17 respondents) and between 101-200 square meters (12). These houses are mostly either 1-storey or 2-storey single detached units with GI roofing and walls made of either concrete or a combination of wood and concrete. More than 90% of these PAPs earn below P15, 000 a month.

Sixteen (16) PAPs were registered as having trees; some of the data regarding number of trees per PAP were unobtainable though 90 trees were accounted for, 70 of them fruit trees. A respondent reportedly earns P5, 000 – P10, 000 a year from these trees. Three (3) PAPs raised livestock, one each of pigs, chickens and one undetermined. One of them stated an annual income of P3, 001 – P5,000 per annum.

### East-West Road

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A total of 172 structures will be affected by this alignment, although among the four segments, only DH-2 and DH-6 (re-labeled as DH-4 in the feasibility study) will affect structures. DH-2 will traverse NBP in Muntinlupa City, while DH-6 will affect structures in five (5) barangays in three (3) municipalities in Cavite. Of the structures to be affected, 77.19% are on land below 300 square meters in size. Majority of the land with structures are public land at NBP.

About 18.60% of the structures are on privately owned houses on owned land while 69.77% own their houses on public land with permission for use of said land. Almost half of the structures, or 46.91%, have floor areas below 50 square meters. 62.86% percent of the occupants have been on the land for less than 10 years. Of all the structures, 67.44% are one-storey single detached houses with 89.25% with GI roofing. Most walls are made of concrete, wood or a combination of these materials. Over-all, 3.49% of the houses are owned but are illegally occupying lands. As to their income levels, 23.84% earn less than P5,000 monthly.

### Segment DH-2:

*Muntinlupa:* A total of 112 structures will be affected by DH-2 in this area. All of these are standing on public property. Of these, majority occupy lands between below 100 – 300 square meters in size. A large number (73.33%) have reportedly been in the area for less than 10 years. One household is renting their house and land while four (4) are reportedly illegally occupying the land. Data on this question reports 18 answers under the heading “Others” probably because they have been tacitly allowed to live on the NBP premises.

Of the households with data, 40% have living areas with sizes below 50 square meters. All these houses are one-storey single detached units, except for one (a shanty). 84.85% have GI roofing while walls are of concrete (12.12%), wood (21.21%) or a combination of these materials (45.45%). The income range of almost half of the PAPs (48.28%) is below P5, 000 per month while another 48.00% earn between P5,000 – P15,000.

### Segment DH-6 (or DH-4)

*Imus,:* Traversing Malagasang 2b and 2c, DH-4 will affect 44 structures mostly located in Malagasang 2-C. Most of these structures (71.43%) are on land whose sizes range from 101 to 200 square meters. Only two (2) of these are on public land. The rest (85.71%) are on privately owned land.

Of these structures, 73.53% of these occupants own both house and land while seven (7) or 15.90% are occupying the land illegally. Majority of the structures (66.67%) have living areas 100 square meters or below and most have been occupied for less than 10 years. They are mostly one-storey single detached houses almost all with GI roofing. More than 80% have walls made of concrete or wood and concrete. Although two (2) are reportedly rented by their occupants, only one gave the monthly rental rate, between the P501 – 1,000 ranges. Majority 63.41% have monthly incomes of P10, 000 or less.

Only one PAP reportedly had trees on his property and these are fruit trees but data does not indicate whether he derives income from these trees nor the actual number

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of trees on his property. One PAP raises pigs, reportedly earning between P7, 000 – P9,000 a year from this activity.

*Gen. Trias:* Only 13 structures will be affected, one (1) live on land that is 1.6 hectares in size. No data was available to determine the status of land, whether private or public property and only one responded as to the status of tenure: renting land while house is owned. Land rental rate falls between the P1, 001 – P1,500 range.

Nine (9) of the respondents have living areas less than 50 square meters in size. They have been occupying their houses for different lengths of time, five are more than 10 years while the rest are less than 10 years. All the respondents have single-detached houses with GI roofing. One (1) had a wall made from wood and one (1) from a combination of concrete and wood. The rest have walls made of concrete.

Five (5) households reportedly earn less than P5, 000 a month each. One (1) household reported having four (4) industrial trees and 16 fruit trees on the property, deriving an annual income of P5, 000 from them. One (1) PAP has a fishpond from which he derives around P10, 000 yearly incomes.

*Tanza:* A total of 3 structures will be affected by DH-4 in Tanza in the barangay of Sanja Mayor. All of them are occupying lands of about 300 square meters in size. All structures are owned by tenants holding a Certificate of Land Ownership from the Department of Agrarian Reform.

These structures have floor areas of about than 50 square meters. All structures have been occupied for less than 10 years. All are one-storey single detached houses with GI roofing and concrete walls. Almost all earn monthly incomes of P10, 000 or less. One PAP had fruit trees on his property but the number is not indicated. He reportedly earns less than P5, 000 a year from these trees.

### **CALA Expressway**

*Silang:* The approved Alternative 2 of the CALA Expressway will affect 10 structures since it runs on generally open land. All structures are standing on CE-3. All of these are in Silang, Cavite in Barangay Sabutan. Majority (60%) of these structures are on lots more than 100 square meters in size and all are on private land. All house and lots are owned by the occupants. The living areas are generally 80 square meters or less in size. None has been in the area for more than 30 years.

The majority of the structures are one-storey single detached units with GI roofing and either concrete or concrete and wood walls. All PAPs did not indicate their incomes. The residential land costs, based on the household survey, are shown in Table 4-2.



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## CALA East-West National Road Project

**Table 4-2 Area and Value of Residential Lots, by Road and by Barangay**

Alignment/ Road Section/ Barangay	No. of Affected Households	Residential Lot Area (sq.m)		Residential Zonal Value (Php)		
		Low Estimate	High Estimate	Unit	Low Estimate	High Estimate
<b>DAANGHARI</b>	<b>172</b>	<b>51,291</b>	<b>76,937</b>	<b>P400 to P800</b>	<b>12,319,000</b>	<b>18,479,500</b>
DH 2 (NBP)	112	29,338	44,007	Government Land		
DH 3 (existing ROW)	0	0	0	Existing ROW		
DH 4	60	21,953	32,930	P400 to P800		18,479,500
MUS	44	3,813	5,720	P800	3,050,000	4,576,000
Malagasang 2B	7	465	698	P800	372,000	558,400
Malagasang 2C	37	3,348	5,022	800	2,678,400	4,017,600
N. TRIAS	13	17,240	25,860	P400 to P500	8,549,000	12,823,500
Pinagtipunan	10	16,530	24,795	500	8,265,000	12,397,500
Pasong Camachile 1	2	310	465	400	124,000	186,000
Pasong Camachile 2	1	400	600	400	160,000	240,000
NZA	3	900	1,350	P800	720,000	1,080,000
Sanja Mayor	3	900	1,350	800	720,000	1,080,000
<b>NORTH-SOUTH ROAD</b>	<b>423</b>	<b>66,126</b>	<b>98,696</b>	<b>P1,000 – P2,000</b>	<b>106,983,000</b>	<b>157,473,500</b>
NS 1	331	18,600	27,397	P1800-2000	35,697,000	53,534,000
BACOR	331	18,600	27,397	P1800-2000	35,697,000	53,534,000
Zapote 5	145	4,205	6,300	1800	7,569,000	11,340,000
Talaba 2	91	6,980	10,470	2000	13,960,000	20,940,000
Talaba 3	67	4,857	7,286	2000	9,714,000	14,572,000
Talaba 7	28	2,227	3,341	2000	4,454,000	6,682,000
NS 2 (existing ROW)	0	0	0	Existing ROW		
NS 3	27	17,151	25,727	P1,500	27,726,500	38,590,500
IMUS	27	17,151	25,727	P 1,500	25,726,500	38,590,500
Citta Italia, Mambog 4	13	7,536	11,304	P1,500	11,304,000	16,956,000
Buhay na Tubig	7	9,320	13,980	P 1,500	13,980,000	20,970,000
Anabu 1-G	7	295	443	P1,500	442,500	664,500
NS 4	65	30,375	45,572	P1,000-P1,500	43,559,500	65,349,000
DASMARIÑAS	65	30,375	45,572	P1,000-P1,500	43,559,500	65,349,000
Salitran 1	13	3,316	4,974	1000	3,316,000	4,974,000
Salitran 2	5	690	1,044	1000	690,000	1,044,000
San Agustin 2	47	26,369	39,554	1500	39,553,500	59,331,000
NS5	0	0	0	Agricultural Lands		
<b>CALA EXPRESSWAY</b>	<b>10</b>	<b>950</b>	<b>1,425</b>	<b>P1,500</b>	<b>1,425,000</b>	<b>2,137,500</b>
CE-1	0	0	0			
CE-2	0	0	0			
CE-3	10	950	1,425	1,500	1,425,000	2,137,500
Sabutan	10	950	1,425	1,500	1,425,000	2,137,500
CE-4	0	0	0			
<b>TOTAL, 3 ROADS</b>	<b>605</b>	<b>118,367</b>	<b>177,058</b>	<b>P400-P2,000</b>	<b>120,727,000</b>	<b>178,090,000</b>

Source: Residential lot area costs are based on BIR zonal value data.

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## 4.2 Commercial Developments.

Within the vicinity of major road intersections are roadside commercial uses, such as the intersections of NS-1 with Aguinaldo Highway at Talaba, Bacoor (Tropical Hut, Planter's Bank, pawnshop, Baliwag food outlet) and along road sides, of Manila-Cavite Coastal Road, some landscaping and furniture shops, Daang Hari at Dasmariñas (SM Molino and De la Salle University) and CALA Expressway at Silang (Villa Luz resort and restaurant). A set of sample photographs is presented below.



Stores along Coastal Road



Stores along Coastal Road



Commercial Spaces along Talaba Road



Commercial Spaces along Talaba Road

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### *CALA East-West National Road Project*



Tropical Hut & Federal Hardware at corner Aguinaldo & NS-2



Carinderia front of Citta Italia

NS-4 and NS-6 (reabeled as NS-5 in the feasibility study) cross Aguinaldo Highway near the Silang junction. NS-4 also crosses Salitran Road. The DH-3 intersection with Molino Road where SM shopping mall is located is an existing alignment and will therefore have no financial implication. CE-3 ends at the Silang Junction of Aguinaldo Highway and will affect Villaluz Resort and Restaurant.

**Table 4-3 List of Commercial Establishments by Road Alignment/Segment**

Road Alignment/Segment	Barangay	Commercial Establishments
<b>EAST-WEST ROAD</b>		
DH-4	Malagasang II-C Imus	PS trading hollow blocks
<b>NORTH-SOUTH ROAD (P)</b>		
NS-1	Zapote 5, Bacoor	mini coconut lumber drift wood store
NS-1	Talaba 3, Bacoor	#1 Hardware #3 Barber Shop #8 General Merchandise #9 Pawnshop #21 Dental Laboratory # 22, 24, 25, 27 Store #28 Tire Supply #43, 48, 50 Store
NS-1	Talaba VII, Bacoor	#16 Tropical Hut #15 Federal Hardware #17 Paul Haute Couture #31 UCPB (under construction) #14 Baliwag #1 Jarcia Machine Shop
NS-2	Buhay na Tubig, Imus	#2, 3, 4, 5, 6, 7, 8, 9, 10 Comm.
NS-4	Burol, Dasmariñas	#11-20 commercial
NS-4	San Agustin 2	apartment

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All these land parcels immediately abutting the highway are expected to have commercial, rather than residential or agricultural values, regardless of their current uses.

### 4.3 Industrial Lands

CE-4 will also intersect Governors' Drive in between the factory of Indocoil and Purefoods Processing Plant in Barangay San Francisco, General Trias. (FGD with barangay officials and residents of Barangay Biluso, Silang, Cavite was held, on December 12, 2005 at the Biluso Barangay Hall<sup>4</sup>).

### 4.4 Institutional Lands

- DH-2 – The road alignment will cross into the property of the New Bilibid Prison, approximately 100 meters from the corner of the maximum security wall. (FGD with barangay officials and residents of Barangay Tunasan, Muntinlupa City, held on 15 December 2005 in Tunasan Barangay Hall) and will affect a grotto and Japanese cemetery.
- DH-3 – in Anabu II-D, the alignment will be near the school and another commercial establishment. Safety measures were recommended
- CE-1 - Within the Sta. Rosa area, will affect, the proposed campus of the University of Sto. Tomas, the expansion of plans of Southern Luzon Medical Center and the Greenfield Development Area.
- NS-4 - A school in Salitran 2.
- Several barangays halls are located within the ROW.

Barangay Halls:

- NS-1 - Talaba 2  
Talaba 7
- NS-2 - Buhay na Tubig  
Day Care Center
- NS-4 - Salitran 4

### 4.5 Proposed Large Multi-Use Developments

Future considerations are also the proposed large scale multi-use developments, among which are the following:

- NS-1 – Crescent Hill Subdivision in Burol, Dasmariñas.
- NS-3 - One Asia/ Solar Properties at Buhay na Tubig, Imus, Cavite (FGD with barangay officials and residents of Barangay Buhay na Tubig, Imus, Cavite, held on 8 December 2005, Buhay na Tubig Barangay Hall)

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<sup>4</sup> All FGDs were documented in the Social Study for the Feasibility Study and Implementation Support on the Cavite –Laguna (CALA) East-West National Road Project, Vol. I, March 2006)

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- DH-4 - Land owned by William Gatchalian in Barangay Pasong Camachile I, General Trias, Cavite (FGD with barangay officials and residents of Pasong Camachile I, General Trias, Cavite, December 14, 2005 in PASCAM I Barangay Captain's residence).
- DH-4 - Property in Barangay Bacao I, General Trias of a Mr. Emilio Ching, a real estate developer (FGD with barangay officials and residents of Barangay Bacao I, General Trias, Cavite, held on 14 December 2005 at Bacao I Barangay Captain's residence)
- DH-4 - Stateland Subdivision in Malagasang 2-C
- CE-1 within the Sta. Rosa area, will affect, the development and expansion plans of Technopark, Greenfield City and Asian Brewery, Yulo Estate and Ayala Land.

### 4.6 Agricultural Lands

Although urban developments are highly visible along the existing roads, agriculture and vacant lands make up the balance in between major road alignments. Ironically, about five percent (5%) of PAPs mostly tenants are dependent on agricultural lands for their livelihood and among their issues are:

- DH-4 – Within Barangay Pinagtipunan, tenants will be negatively affected by the project because they will be displaced from the land that they till.
- NS-3 – Most of the areas affected in Barangay Pasong Buaya I are agricultural lands owned by a Taiwanese national and the tenants are local residents. (FGD held in Barangay hall, Pasong Buaya I, Imus, Cavite on 14 December 2005.

The balance of lands (from which commercial, industrial and institutional lands are still to be delineated) are as follows:

The balance of land left as agricultural land, commercial strips, and industrial lands in NS-4, NS-5, CE-2, CE-3, CE-4 and DH-4, which were not part of the household survey, will be determined later during the parcellary/ cadastral survey.

An orchard is noted in CE-2, Sabutan Silang, although the land is being occupied also by a hardware store.

An estimated 307 to 309 hectares of agricultural lands, with an estimated zonal valuation of P7.8 M to P7.9 M ranging between P20,000 to P60,000 per hectare, will be acquired for the ROW. Excluded are DH-2 to DH-3 and CE-4 segments, of which, DH-2 runs through National Bilibid Prison and is expected to be donated to the project and DH-3, an existing ROW.

Table 4.4 shows a range of estimate of agricultural lands based on the estimated ROW area (after deducting residential lands obtained from the household survey) and based BIR zonal valuation of 1998.

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**Table 4-4 Agricultural Land Area and Values**

Alignment/ Road Section 1/	Agricultural				
	Low estimate (in has)	High estimate (in has.)	Unit (P/sq.m.)	Low Estimate (in P000)	High Estimate (in P000)
<b>DAANG HARI ROAD)</b>	<b>32.35</b>	<b>32.55</b>	<b>400</b>	<b>129,400</b>	<b>130,200</b>
DH- 2	Government Land		-	-	-
DH- 3 (existing)	Existing ROW		-	-	-
DH- 4	32.35	32.55	400	129,400	130,200
<b>NORTH-SOUTH ROAD</b>	<b>78.78</b>	<b>80.21</b>	<b>400 - 600</b>	<b>317,800</b>	<b>325,080</b>
NS- 1	1.34	2.12	600	8,040	12,720
NS -2	Existing ROW		-	-	-
NS -3	15.30	15.30	400	61,200	61,200
NS -4	20.74	21.39	400	82,960	85,560
NS -5	41.40	41.40	400	165,600	165,600
<b>CALA EXPRESSWAY</b>	<b>76.40</b>	<b>76.65</b>	<b>300-400</b>	<b>237,100</b>	<b>238,100</b>
CE-1 and CE-2	50.00	50.00	300	150,000	150,000
CE-3	7.90	8.15	400	31,600	32,600
CE-4	18.50	18.50	300	55,500	55,500
<b>Total, 3 Roads</b>	<b>187.53</b>	<b>189.41</b>	<b>300-600</b>	<b>684,300</b>	<b>693,380</b>

1/ All areas traversed by alignments are included.

### 4.7 Income Losses

As a result of the need to relocate, the estimated income losses will depend on the current monthly income of the PAPs. Those earning below the current mandated wage rate for the region will be given financial assistance equivalent to one month minimum wage. The three estimates correspond to the lowest monthly level within the income category and the high income estimate is the highest income in the category. The medium estimate is midpoint between the low and high income ranges provided by the survey.<sup>5</sup> The following table shows the estimate income losses for all roads for PAPs who responded to the survey:

Estimates of income loss range from a low of P4.6 million to P9.7 million for all three proposed roads. Majority earn below 20,000 Income per month. Of the total number of respondents, 49 did not respond to the question. Additional livelihood assistance will be extended to PAPs earning below 5,000 but will not be entitled to resettlement assistance.

<sup>5</sup> Data with regard to income losses were collected using three possible ranges (low, medium and high). The presentations of income data in all tables (4-5 to 4-8) follow the format. The reported incomes are estimates only. Similarly data on house rent (tables 4-9 to 4-12) and land rental (tables 4-13 to 4-16) are presented following the reported low, medium and high ranges.

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**Table 4-5 Income Losses for All Roads**

Monthly Income	Income Losses for All Roads			
	No. of PAPs	Total Income		
		Low	Medium	High
Below 5,000	177	1,079,700	1,079,700	1,079,700
5,001 – 9,999	181	1,086,000	1,357,500	1,809,819
10,000 - 19,999	124	1,240,000	1,922,000	2,479,876
20,000 – 49,999	62	1,240,000	2,170,000	3,099,938
50,000 – 99,999	12	600,000	900,000	1,199,988
100,000 – 199,999	0	0	0	0
200,000 & over	0	0	0	0
No answer	49	no data	no data	no data
<b>Total</b>	<b>605</b>	<b>4,645,700</b>	<b>7,429,200</b>	<b>9,669,321</b>

### North-South Road

In the NS Road, the estimated financial assistance for income losses range from P3.2 million to P5.6 million, with majority earning below P10, 000 per month.

**Table 4-6 Income Losses for North South Road Alignment**

Monthly Income	Income Losses for North-South Alignment			
	No. of PAPs	Total Income		
		Low	Middle	High
Below 5,000	136	816,000	816,000	816,000
5,001 – 9,999	156	936,000	1,170,000	1,559,844
10,000 - 19,999	77	770,000	1,193,500	1,539,923
20,000 – 49,999	23	460,000	805,000	1,149,977
50,000 – 99,999	5	250,000	375,000	499,995
100,000 – 199,999	0	0	0	0
200,000 & over	0	0	0	0
No answer	26	no data	no data	no data
<b>Total</b>	<b>423</b>	<b>3,232,000</b>	<b>4,359,500</b>	<b>5,565,739</b>

### East-West Road

The estimated income losses range from a low P1.9 million to a high of P3.8 million, with majority of households losing less than P5, 000 per month. However, these households will be allotted at least the minimum wage for one month that they will be physically relocating from their houses to the site of their choice.

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**Table 4-7 Income Losses for the East-West Road Alignment**

Monthly Income	Income Losses for East-West Alignment			
	No. of PAPs	Total Income		
		Low	Middle	High
Below 5,000	41	246,000	246,000	246,000
5,001 – 9,999	25	150,000	187,500	249,975
10,000 - 19,999	39	390,000	604,500	779,961
20,000 – 49,999	37	740,000	1,295,000	1,849,963
50,000 – 99,999	7	350,000	525,000	699,993
100,000 – 199,999	0	0	0	0
200,000 & over	0	0	0	0
No answer	23	no data	no data	no data
<b>Total</b>	<b>172</b>	<b>1,876,000</b>	<b>2,858,000</b>	<b>3,825,892</b>

Additional livelihood assistance through concerned government agencies or NGOs will be allotted to the PAPs at ₱15, 000 each.

### CALA Expressway

**Table 4-8 Income Losses for the CALA Expressway Road Alignment**

Monthly Income	Income Losses for CALA Expressway Alignment			
	No. of PAPs	Total Income		
		Low	Middle	High
Below 5,000	0	0	0	0
5,001 – 9,999	0	0	0	0
10,000 - 19,999	8	80,000	124,000	159,992
20,000 – 49,999	2	40,000	70,000	99,998
50,000 – 99,999	0	0	0	0
100,000 – 199,999	0	0	0	0
200,000 & over	0	0	0	0
No answer	0	no data	no data	no data
<b>Total</b>	<b>10</b>	<b>120,000</b>	<b>194,000</b>	<b>259,990</b>

The 10 affected households will be budgeted a low of P120,000 to P259,990 as the potential income loss during the physical transfer. Majority of households earn below P20, 000 per month.



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### 4.8 Rental Land and Houses

House rentals being paid by 55 respondents amounted to ₱103, 232.80 based on low estimates and ₱281, 267.80 based on high estimates. These amounts correspond to the proposed financial assistance of one month rental for those who rent houses (including land) within the ROW.

Note that data on land and house tenure has to be validated with responses on house and lot rental. NS-1, particularly in Talaba 2, has the highest number of rental housing, majority of which amounted to more than ₱1, 000 per monthly.

**Table 4-9 No. of Renters and Range of Monthly Rental**

Municipality/ Barangay	Rent Land only	Rent House & Land/ House	Amount of Monthly Rent, House							Total	No data
			Below P500	501 - 1000	1001 - 1500	1501 - 2000	2001 - 2500	2501 - 3000	Above 3000		
NORTH-SOUTH ROAD	90	34	4	2	9	14	8	7	13	53	65
NS-1	84	27	4	2	7	9	4	6	11	43	62
NS-3	6	2	-	-	2	4	4	1	-	7	1
NS4	0	5	0	0	0	1	0	0	2	3	2
EAST-WEST ROAD	5	3	1	1	0	0	0	0	0	2	1
DH-2	0	1	1	-	-	-	-	-	-	1	-
DH-4	5	2	-	1	-	-	-	-	-	1	1
CALA EXPRESSWAY	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>95</b>	<b>37</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>14</b>	<b>8</b>	<b>7</b>	<b>13</b>	<b>55</b>	<b>66</b>

**Table 4-10 Amount of House Rent  
(Low Estimate)**

Road Alignment/Municipality/ Barangay	Amount of Monthly Rent, House							Total
	Below P500	501 – 1000	1001 - 1500	1501 - 2000	2001- 2500	2501- 3000	Above 3000	
<b>NORTH-SOUTH ROAD</b>	<b>100</b>	<b>501</b>	<b>9,009</b>	<b>21,014</b>	<b>4,002</b>	<b>17,507</b>	<b>39,013</b>	<b>91,146</b>
NS-1	100	501	9,009	13,509	4,002	17,507	33,011	77,639
NS-3	-	-	-	6,004	-	-	-	6,004
NS4	-	-	-	1,501	-	-	6,002	7,503
<b>EAST-WEST ROAD</b>	<b>100</b>	<b>501</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>601</b>
DH-2	100	-	-	-	-	-	-	100
DH-4	-	501	-	-	-	-	-	501
<b>CALA EXPRESSWAY</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,001</b>	<b>-</b>	<b>-</b>	<b>2,001</b>
CE-3	-	-	-	-	2,001	-	-	2,001
<b>Total</b>	<b>200</b>	<b>1,002</b>	<b>9,009</b>	<b>21,014</b>	<b>6,003</b>	<b>17,507</b>	<b>39,013</b>	<b>93,748</b>

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The following table shows the same estimates based on the middle price within the range.

**Table 4-11 Amount of House Rent  
(Medium Estimate)**

Municipality/ Barangay	Amount of Monthly Rent, House							Total
	Below P500	501 – 1000	1001 - 1500	1501 - 2000	2001- 2500	2501 - 3000	Above 3000	
<b>NORTH-SOUTH ROAD</b>	<b>250</b>	<b>750</b>	<b>11,250</b>	<b>24,500</b>	<b>4,500</b>	<b>19,250</b>	<b>52,000</b>	<b>112,500</b>
NS-1	250	750	11,250	15,750	4,500	19,250	44,000	95,750
NS-3	-	-	-	7,000	-	-	-	7,000
NS-4	-	-	-	1,750	-	-	8,000	9,750
<b>EAST-WEST ROAD</b>	<b>250</b>	<b>750</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,000</b>
DH-2	250	-	-	-	-	-	-	250
DH-4	-	750	-	-	-	-	-	750
<b>CALA EXPRESSWAY</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,250</b>	<b>-</b>	<b>-</b>	<b>2,250</b>
CE-3	-	-	-	-	2,250	-	-	2,250
<b>TOTAL</b>	<b>500</b>	<b>1,500</b>	<b>11,250</b>	<b>24,500</b>	<b>6,750</b>	<b>19,250</b>	<b>52,000</b>	<b>115,750</b>

The following table shows the high estimate, based on the highest value indicated in the data range:

**Table 4-12 Amount of House Rent  
(High Estimates)**

Municipality/ Barangay	Amount of Monthly Rent, House							Total
	Below P500	501 – 1000	1001 - 1500	1501 - 2000	2001- 2500	2501 - 3000	Above 3000	
<b>NORTH-SOUTH ROAD</b>	<b>499</b>	<b>75,000</b>	<b>13,500</b>	<b>28,000</b>	<b>5,000</b>	<b>21,000</b>	<b>35,000</b>	<b>177,999</b>
NS-1	499	75,000	13,500	18,000	5,000	21,000	35,000	167,999
NS-3	-	-	-	8,000	-	-	-	8,000
NS-4	-	-	-	2,000	-	-	-	2,000
<b>EAST-WEST ROAD</b>	<b>499</b>	<b>75,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>75,499</b>
DH-2	499	75,000	-	-	-	-	-	75,499
DH-4	-	-	-	-	-	-	-	-
<b>CALA EXPRESSWAY</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,500</b>	<b>-</b>	<b>-</b>	<b>2,500</b>
CE-3	-	-	-	-	2,500	-	-	2,500
<b>Total</b>	<b>998</b>	<b>150,000</b>	<b>13,500</b>	<b>28,000</b>	<b>7,500</b>	<b>21,000</b>	<b>35,000</b>	<b>255,998</b>

## CHAPTER FOUR

### 4.9 Land Rental

Out of 95 respondents who occupied rented land, only 17 indicated a rent value, and most of these are located in NS-1 within the Barangays of Talaba 2 and 3 of Bacoor.

**Table 4-13 Amount of Land Rent**

Municipality/ Barangay	Rent Land	Amount of Monthly Rent, Land								No data on Rent
		Below P500	501- 1000	1001- 1500	1501- 2000	2001 2500	2501- 3000	Above 3000	Total	
<b>NORTH-SOUTH ROAD</b>	<b>90</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>-</b>	<b>14</b>	<b>76</b>
NS-1	84	3	1	2	-	2	2	-	10	74
NS-3	6	-	-	2	1	1	-	-	4	2
<b>EAST-WEST ROAD</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>
DH-4	5	-	-	1	-	-	1	1	3	2
<b>CALA EXPRESSWAY</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL</b>	<b>95</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>17</b>	<b>78</b>

Based on the lower value, the low estimate of monthly rent of land that has to be given as compensation to renters is shown in the Table 4.14. Also, the estimated monthly rent on land, based on the middle value of the data range, that has to be extended to renters in terms of financial assistance is shown in the Table 4-15.

**Table 4-14 Monthly Rent on Land  
(Low Estimate)**

Municipality/ Barangay	Amount of Monthly Rent, Land							
	Below P500	501 - 1000	1001 - 1500	1501 - 2000	2001 - 2500	2501 - 3000	Above 3000	Total
<b>NORTH-SOUTH ROAD</b>	<b>300</b>	<b>501</b>	<b>4,004</b>	<b>1,501</b>	<b>6,003</b>	<b>5,002</b>	<b>-</b>	<b>17,311</b>
NS-1	300	501	2,002	-	4,002	5,002	-	11,807
NS-3	-	-	2,002	1,501	2,001	-	-	5,504
<b>EAST-WEST ROAD</b>	<b>-</b>	<b>-</b>	<b>1,001</b>	<b>-</b>	<b>-</b>	<b>2,501</b>	<b>3,000</b>	<b>6,502</b>
DH-6	-	-	1,001	-	-	2,501	3,000	6,502
<b>CALA EXPRESSWAY</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL</b>	<b>300</b>	<b>501</b>	<b>5,005</b>	<b>1,501</b>	<b>6,003</b>	<b>7,503</b>	<b>3,000</b>	<b>23,813</b>

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**Table 4-15 Monthly Rent on Land  
(Medium Estimate)**

Municipality/ Barangay	Amount of Monthly Rent, Land							Total
	Below P500	501 - 1000	1001- 1500	1501- 2000	2001- 2500	2501- 3000	Above 3000	
NORTH-SOUTH ROAD	750	750	5,000	1,750	6,750	5,500	-	20,500
NS-1	750	750	2,500	-	4,500	5,500	-	14,000
NS-3	-	-	2,500	1,750	2,250	-	-	6,500
EAST-WEST ROAD	-	-	1,250	-	-	2,750	4,000	8,000
DH-4	-	-	1,250	-	-	2,750	4,000	8,000
CALA EXPRESSWAY	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>750</b>	<b>750</b>	<b>6,250</b>	<b>1,750</b>	<b>6,750</b>	<b>8,250</b>	<b>4,000</b>	<b>28,500</b>

The most conservative estimate of monthly rent on land that has to be extended to renters as part of the disturbance compensation are shown in the following table.

**Table 4-16 Amount of Monthly Rent on Land  
(High Estimates)**

Municipality/ Barangay	Amount of Monthly Rent, Land							Total
	Below P500	501 - 1000	1001- 1500	1501- 2000	2001- 2500	2501- 3000	Above 3000	
NORTH-SOUTH ROAD	1,497	1,000	6,000	2,000	7,500	6,000	-	23,997
NS-1	1,497	1,000	3,000	-	5,000	6,000	-	16,497
NS-3	-	-	3,000	2,000	2,500	-	-	7,500
EAST-WEST ROAD	-	-	1,500	-	-	3,000	5,000	9,500
DH-4	-	-	1,500	-	-	3,000	5,000	9,500
CALA EXPRESSWAY	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>1,497</b>	<b>1,000</b>	<b>7,500</b>	<b>2,000</b>	<b>7,500</b>	<b>9,000</b>	<b>5,000</b>	<b>33,497</b>

### 4.10 Relocation of Utilities

In Bacoor and Dasmariñas where the NS road will cross the Aguinaldo Highway, provisions in the design will be made to avoid the relocation of the power lines to avoid the huge costs entailed by such activity. (FGD with Barangay Officials and residents of Barangay Biga II, Silang Cavite, held on 16 December 2005 at Barangay Biga II-Barangay Captain's residence).

Likewise, the alignment within Barangay BuroI, Dasmariñas, Cavite was designed along the side of NAPOCOR property because there are fewer structures. (FGD held in BuroI Barangay Hall, Barangay BuroI, Dasmariñas, dated 9 December 2005). Costs for relocation of utilities are included in the engineering design.

## CHAPTER FOUR

### 4.11 ROW Budget Estimates

**Table 4-17 ROW Budget Estimates<sup>6</sup>**  
(in millions of Pesos)

Description		North-South	Daang-Hari	CALA Expressway	Total
Land Acquisition 1/	Residential	157.5	18.5	2.1	178.1
	Agricultural	325.1	130.2	238.1	693.4
Replacement structures	Housing	109.1	38.6	2.3	150.0
Replacement of Commercial Structures	To be determined during detailed RAP.				
Income Losses 1/	All PAPs	5.6	3.8	0.3	9.7
	Tenants	0.1	0.2	0.3	0.6
Rental	Land	0.02	0.01	0	0.03
	Homes	0.2	0.1	0.002	0.302
Livelihood 2/		4.0	1.9	0	5.9
<b>Preliminary Total</b>		<b>601.62</b>	<b>193.32</b>	<b>243.10</b>	<b>1,038.03</b>

1/ High estimates were used.

2/ Livelihood assistance of P15,000 per PAP will be allocated.

<sup>6</sup> This table represents costs related to land acquisition, loss of structures (houses and commercial) and other associated losses such as rental, income and livelihoods. Estimates for replacement structures and other commercial enterprises (Table 4-3) were not available. Costs associated with resettlement, sites and services etc. are presented separately in Table 5-5.