

**CAPA**  
**INGLÈS**

**Contra Capa**

**MAPA INGLÊS**



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*The figures mentioned in this work refer to constant Reais in July of 1998. Being so, they do not reflect the adjustments of toll tariffs by the IGP-M\*, as set forth in the concession agreement.*





# Executive Summary

Anchieta-Imigrantes System (“SAI”) is of the greatest importance for São Paulo and for Brazil.

It represents the richness way, between the industrial parks of Baixada Santista [Santos Lowland] (inputs) and the Planalto [plateau] (manufactured); it is the link between the Port of Santos and the others highways which spread all over the country regions. Pass through it cargoes which come to be up to four times larger than those carried through the railway which links the port to the Planalto.

Leisure makes that passengers’ vehicles be the main responsible for the great traffic volume in the system. Great part of the population of the whole State of São Paulo, makes the coast as its main point of refuge. Being so, in the weekends, school vacations, and holidays, traffic assumes tourist demands features.

ECOVIAS S.A. is a company created specially to administrate the SAI, under the concession system, in accordance with the modern institutional picture, which has been installed in the country for the administration of certain public services.

ECOVIAS objective is to offer to the users of SAI, a service of the highest quality, with enough competitive prices. The importance of SAI, to the international competition of national products is essential. As an important channel of importation of inputs and exportation of manufactured products, and agriculture and cattle raising, ECOVIAS is entirely aware of SAI influence in national economy.

## Direct Influence Population

The municipalities in São Paulo metropolitan region are 39, and 9 in Santos region, which are within the area of SAI direct influence. Indirectly, all the State of São Paulo and some other States are influenced by the system.

The population of such municipalities is as follows:

### POPULATION OF THE STATE OF SÃO PAULO

Region	Population
<i>São Paulo</i>	9,839,066
ABCD	1,748,157
<i>Others</i>	6,177,493
<b>Metropolitan Region of São Paulo</b>	<b>17,764,716</b>
<b>Metropolitan Region of Baixada Santista</b>	<b>1,306,993</b>
<b>Others</b>	<b>15,047,401</b>
<b>State of São Paulo</b>	<b>34,119,110</b>

Source: Residing Population - “IBGE” [Brazilian Institute of Geography and Statistics] - 1996 Data

In ABCD region, the main activities consist of the production of parts and components for automobile industry.

In the metropolitan region of Baixada Santista, activities are complementary between municipalities. So, within this group, we have port, industrial, trade activities, as well as activities faced to the real state, tourism and leisure markets.

The Port of Santos is the largest Brazilian port, with a movement of 35.10 million of tons (1995), and Cubatão industrial complex has industries in the steel and iron, chemical, cement, fertilizers, petrochemical and petroleum refine sectors. Studies of the Institute of Economic Research - “FIEPE”, indicates that 60% of the cargo moved in the port of Santos are transported through trucks which have in SAI their main access.

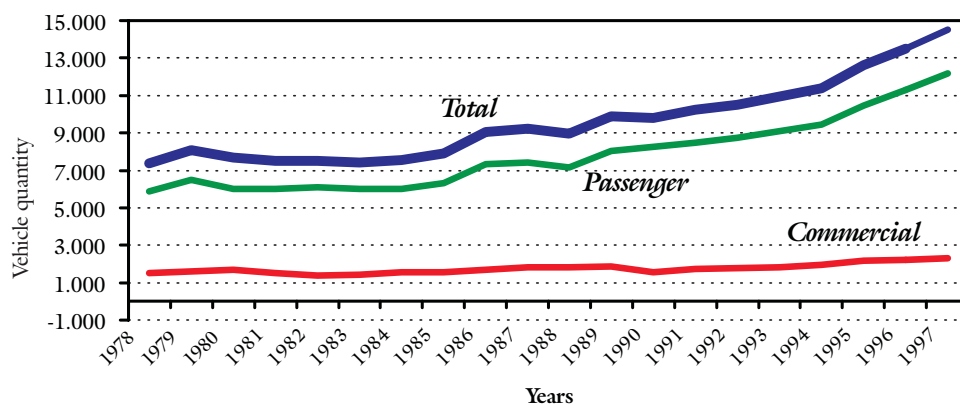
Due to the fact that highways are established in such regions, the trips, which occur through them, have the following features:

- Regular and oscillatory in reason of labor, for instance, the flow between São Paulo and the ABCD region, and between São Vicente and Cubatão.
- Heavy cargo conveyance between São Paulo, Santos and Cubatão.
- Tourist in the weekends, towards Guarujá, Bertioga, Praia Grande and the South Coast.

Trips motivated by tourism and leisure are the ones which actually impact the highway system, resulting, during peak periods, in Anchieta highway, in a volume four times bigger than the average “VDM” and, in Imigrantes highway, six times bigger.

The graph below shows data consolidated over a background concerning the tollhouses of Piratininga and Riacho Grande, evidencing the greatest traffic volume passengers’ vehicles, representing approximately 80% of the total.

### Anchieta + Imigrantes (in thousands)



Source: Proposal from “PRIMAV” to the Highway Department - “DER”.

Note: The graph above presents only the traffic background of Anchieta and Imigrantes Highways.

## Highways Description

### Anchieta Highway (“SP 150”)

Inaugurated in 1947. Constituted of two tracks with two strips, one of them ascending and the other descending. With an extension of 55.9 kilometers, it crosses the Municipalities of São Paulo, São Bernardo do Campo, Cubatão and Santos. It has 36.1 km of marginal tracks. It has a tollhouse in Riacho Grande, which tariff, by June 1998, was of R\$ 4.20 for each vehicle with 2 axles.



### ***Imigrantes Highway (“SP 160”)***

Planalto tracks of the Imigrantes Highway were inaugurated in 1974, and the ascending track of Serra sector, in 1976. At Planalto it has two tracks with three strips in both directions. At Serra it counts on an ascending track with three strips; at Baixada it presents two tracks with two strips, in both directions. The Highway crosses the Municipalities of São Paulo, Diadema, São Bernardo do Campo, São Vicente, Cubatão and Praia Grande. It has a tollhouse in Piratininga, which tariff is of R\$4.20 for each vehicle with 2 axles in June/98. Further to such main tollhouse, it has three blocking tolls in Diadema, Eldorado and Batistini, which tariffs, by June 1998 were, respectively, R\$ 0.40, R\$ 0.80 and R\$ 1.40 for each vehicle with 2 axles.

### ***Planalto Interconnection (Imigrantes-Anchieta) (“SP 041”)***

Located in the Municipality of São Bernardo do Campo, it has an extension of 8 km in double track, and has no tollhouse.

### ***Padre Manoel da Nóbrega Highway (“SP 55/170”)***

It started to be part of SAI in 1985, after duplicated. Located in Baixada, crossing the municipalities of Santos, Cubatão, São Vicente and Praia Grande. It has a tollhouse in São Vicente, which tariff by June 1998 was of 4.20 for each vehicle of 2 axles.

### ***Baixada Santista Interconnection (“SP 059”)***

It has 1.8 km of extension and no tollhouses.

### ***Cônego Domênico Rangoni Highway (SP 55)***

It crosses Santos and Guarujá and has a tollhouse in Santos, which tariff, by June, was of R\$ 4.20 for each vehicle with e axles.

## **Background**

The Planalto Paulista and Baixada Santista, since the beginning of settlement, always had interdependence ties. In spite of the two regions being separated by Serra do Mar [Sea Mountains], everything that São Paulo City and the interior of the Country needed, arrived from Santos and traveled over rough ways, up to Planalto, on donkeys' backs.

The coffee culture, in the second half of the 19<sup>th</sup> century, introduces the inverse movement, that is, the exporting one. Transportation, now, starts to be done through the railway.

The railway transportation was showing its limitations due to the difficult topology of the region where Serra do Mar is located. With the advent of the 20<sup>th</sup> century, the highway transportation gains room and the richness flow of the region requires roads with better traffic capabilities and comfort.

The economical growth of the beginning of this century formed genuine islands of development at the coast, which were maintained disintegrated in connection with the development of the whole State. In 1947, Via Anchieta began to implement a modern link between the Planalto and the Coast. Flow became easy, providing for development between the two regions, making easier the exchange of goods, encouraging the access to leisure, allowing the implementation of industrialization poles and providing guidelines to the occupation of the ground.

As all dynamic process of accelerated economical growth, such activities originated a significant increase in traffic volume, which quickly started to provoke frequent traffic jams.

Upon the construction of Imigrantes, in the middle of the 70's, it started to operate the Anchieta/Imigrantes system, offering better quality services to such important connecting link, between the Planalto and the Coast.



Nevertheless, the accelerated growth of SAI usage, in the latest years, became compulsory the construction of the Imigrantes descending track, as a way of mitigate the frequent traffic jams.

Under such context, the government of the State of São Paulo executed the privatization of SAI exploitation concession agreement, subject matter of this report.

### **Concession Agreement**

Executed on May 27<sup>th</sup>, 1998, and with operations initiating as of May 29<sup>th</sup>, 1998, ECOVIAS has the following main duties and obligations, during a 20-year period:

- Performance, administration and inspection of granted services (road operation, mechanical help, users attendance)
- Support in the performance of services not granted (highway police, scales, speed control)
- Administration and inspection of complementary services

ECOVIAS shall have basically two main responsibilities:

- Maintain and improve current operational conditions of SAI, modernizing the services rendered, and
- Make a number of investments, the most important being the construction of the descending track of Imigrantes.

The revenues concerning the providing of such services shall arise from the collection of toll tariffs, and from other non-operational revenues, associated with the nature of the concession agreement.

## **Economical Importance of the Region**

The State of São Paulo is the most developed region of the country. During the whole 20<sup>th</sup> century this region have concentrated the national industrialization process. In such a way, it became the economic center of the country, attracting domestic and international migratory flows, being the scenery of the most important investments in automobile, heavy construction, overall manufacturing, agriculture and industry, and service sectors.

Its population was almost entirely rural in the 50's. It became urban over the 40 subsequent years, through a vigorous industrialization process. Presently, the State of São Paulo takes its first steps towards the development of a strong service activity, following global patterns of economical cycles. The production, manufacturing and agricultural-industrial activities are being conducted to the countryside of the State of São Paulo, and to other contiguous States. All such transformations, however, have not changed the primary vocation of the Port of Santos, of being the gate of entrance and exit of regional products.

Such vocation becomes more significant in the proportion that the inter-modal transportation systems enhance its affluence to the Port of Santos region. We add to this fact the productivity earnings in the execution of port services through the modernization of the attending structure made after the privatization process of the Port of Santos. In such a way, the trend of traffic enhancement in SAI is confirmed, as the present studies in this document indicate.

## **ECOVIAS S.A.**

ECOVIAS S.A. is a company held by C.R. Almeida Group, a traditional company in Paraná, engaged with the heavy construction sector. ECOVIAS was constituted, especially with the objective of exploiting SAI operations; although C.R. Almeida Group also operates other highway concessions in Paraná and Rio Grande do Sul.





### **Mission**

To provide good quality services, at competitive prices, to the users of SAI, having as a reference the importance of such system both to the national regional economy and to the individuals who use it with leisure purposes.

### **Strategic Partnerships**

ECOVIAS has an operational and technological partnerships covenant with two traditional Italian companies having international reputation in such area of performance: ASTM - Autostrada Torino-Milão S.p.A., which operates the highway between Turin and Milan, and Impregilo, which is the largest heavy construction company in Italy.

## **Economical and financial aspects**

### **Investments**

The expected investment amount R\$ 953 million, to be expended during the 20 years of enforcement of the concession agreement. Approximately 55% of such amount, that is, it is estimated R\$ 525 million of expenditures in the first 5 years, in the construction works of Imigrantes descending track.

### **Revenues**

Revenues start in a level of R\$ 160 million per year, during the first 5 years, and ECOVIAS estimates that they will jump to the degree of R\$ 200 million, as from the sixth year, due to the commencement of the operation of the descending track, and, subsequently, the restructuring of tariffs, which shall happen with such a implementation. It is estimated a traffic growth of approximately 3% per annum, which would raise revenue to the level of R\$ 300 million, at the end of 20 years.

### **Operational Disbursements**

The operational disbursements shall be greater in the initial stage of the concession, in reason of the adaptation and implementation of new services. Notwithstanding, projections indicate a steadiness for operational expenses along the period, due to technological improvements that shall be implemented. Among the operational expenses are included insurances and guaranties to the grantor power, which items represent important relative participation to ECOVIAS cost structure.

### **Payment of Concession Rights**

The concession agreement set forth a variable remuneration of 3% over the gross revenue, obtained by ECOVIAS further to the payment of a fixed value, adjusted by the Average General Price Index - "IGPM", of R\$ 87 million. Such amount is paid in 240 monthly installments during the concession term.

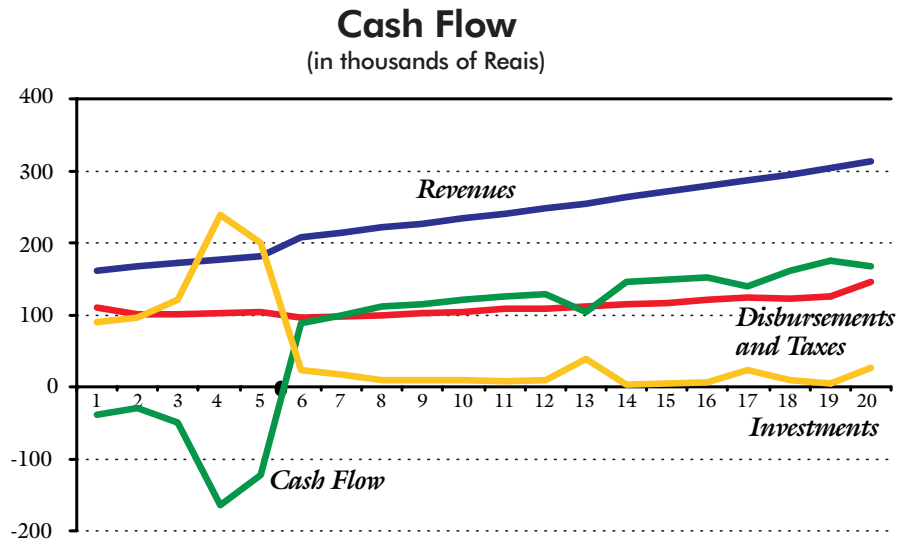
### **Taxes**

On the revenues of ECOVIAS incur the Employees' Profit Participation Program - "PIS" and the Tax for Social Security Financing - "COFINS". On its profits incur the Social Contribution and the Income Tax. In the graph below, tax value is added to the disbursements.



**Cash flow**

The following graph shows that ECOVIAS operational cash flow shall demand funding in the first 5 years of project implementation, due to strong investments in the Imigrantes descending track. It is estimated that the cash generation in the other 15 concession years widely supersedes the funding volume required to the initial stage.



Source: ECOVIAS

# Main Risk Factors

## Risks that affect toll revenues

The greatest source of revenue is that arising out of the toll tariffs. Such revenues depend on the number of vehicles transiting through SAI. Many factors determine the traffic volume expected, some of them being out of Company's control. ECOVIAS made detailed studies in order to foresee the demand evolution through SAI, using sophisticated projection methodologies detailed in this work. Although ECOVIAS believes that the projection, in this work, result from trustworthy information and have been based in reasonable suppositions, it not assures that such projections come to concretize.

### ***Variables which affect the project***

The traffic growth depends, significantly, of demographic changes, destiny of the macroeconomic policies, of the taxation rules, interest rates policy, fuel prices regulations, infrastructure development, social steadiness and other factors, mainly in the region embraced by SAI. Nevertheless, in the latest 20 years, period when SAI already operated with tolls, the country has passed by extremely adverse situations with respect to its development project. We have observed high inflation taxes, prohibitive interest rates, currency exchange crisis, uncertainties in business environment, unsteadiness at the employment level, among others difficulties within the business environment. Within this turbulent scenery, the movement of vehicles in SAI, by this period, practically duplicated.

### ***Traffic Studies***

Traffic studies effected by specialized consultants were made using several analysis methods, and include a great number of premises. The studies and projections which were the basis for economical and financial projections, are subject to a number of uncertainties and unexpected factors including, among others, the economical growth rate in the region, time of performance of the works provided by the concession agreement, governmental macroeconomic policies, tax regulations and fuel prices.

### ***Competition***

There are many other highways leading traffic to coast regions. Nevertheless, most of such highways have more obsolete features of design and, therefore, provide less comfort to the tourist user. Moreover, the journey through such roads is longer, what leads users to use SAI. The conveyor user has no feasible alternatives to take his products to the Port of Santos up to Planalto region. There is some competition from a railway system with a limited transportation capacity, and with few possibilities of feasible expansion, due to geographic conditions of the region. Although ECOVIAS believes that such factors continue enhancing the use of SAI, it cannot be assured that the traffic volume of SAI is maintained or will grow.

### ***Risks of maladjustments between the construction cost and the tariff value***

In accordance with the concession agreement, the toll tariff is adjustable by the Average General Price Index - "IGPM". Of course, it is reasonable to foresee the risk that the operational costs and the investments have an evolution different from that experimented by the index number or by the evolution of toll tariffs.



## **Risks in connection with the concession agreement**

### ***Prior termination of the concession agreement***

The company main asset is the concession agreement, which gives to the Company the right of operate the SAI. The concession agreement (see Attachment 1), may be rescinded by *a)* expiration of the contractual term, *b)* expropriation due to public interest reasons, since there is an indemnity previously paid, pursuant to the terms provided under the concession agreement, *c)* through an expiration statement in the event that ECOVIAS, fully or partially, cannot enforce with the contractual obligations, as specified under the concession agreement, or in case of the concession assignment, or the holding of ECOVIAS, without prior consent from the contracting party, *d)* by rescission, through ECOVIAS initiative, in the event of the non-compliance, by the contracting party, of its obligations, or in case of “force majeure”, and *e)* due to the bankruptcy or extinction of ECOVIAS. Although ECOVIAS consider that the terms and conditions of the concession agreement are fully enforceable, no warranty may be given that such terms and conditions shall be accomplished.

## **Risks in connection with the economical environment**

### ***Alteration of the macroeconomic basis***

Company characteristics and the operations occur in Brazil. Brazil business environment still presents features of high interference by the Brazilian Government, which has been exercising and continues to exercise strong influence in many aspects of the Brazilian economy. Such measures may affect the private sector, including ECOVIAS operations. Brazil presented, in the past, periods of low growth and recession, high inflation rates, currency devaluation, and lack of access to the international capital market. The reiteration of any of such conditions may affect ECOVIAS operations.

### ***Alteration of the regional economical basis***

Traffic estimates arise out of certain development premises of economical activities in the region influenced by SAI. The economical evolution of the country, through the regionalization of the development process, the migration of production activities to other regions, due to several reasons, including tax ones, may materially alter the SAI demand profile. Such perspectives are contemplated in the projections here presented, and entrepreneurs have full conviction that the highway and port complex here described, form a basic operational set to the economic competitiveness of the region. This fact assures the investments flow in infrastructure, towards the modernization of operations. Such investments shall have an assured return through the users growing demand, who permanently seeks cheaper ways to outflow their products making them accessible, at costs each time lower, to the national and international customers.

## **Risks in connection with the management of the operation**

### ***Set of management staff***

The Company has little time of experience related to the management of such kind of business. As in any new undertaking, business plans and Company strategies are being continuously re-appraised. ECOVIAS, aware of the risks that radical management ruptures may cause to ventures of such a size, used most of the technical staff of the former operator of SAI, such as to avoid troubles and interruptions. Furthermore, the joint venture with ASTM aims, exactly, to complement such experience of the existing technical staff. An extensive and permanent training program shall be implemented in a way to assure the accomplishment of productivity targets provided for by the economical projections presented.



### ***Environmental***

SAI operation is located in a critical region, in connection with the point of view of the nature preservation - Serra do Mar. The governmental environmental bodies already approved the project of the new descending track, since 1989. ECOVIAS shares the same environmental worries than the several entities linked to Mata Atlântica [Analeptic Forest]. In such a way, the implementation of new projects shall have as reference the preservation and permanent care with the ecosystem comprising the SAI.

### **Regulatory risk**

ECOVIAS is subject to a series of regulations and supervisions applicable to companies operating in Brazil, including environmental labor laws, consumer protection, and mainly, regulations concerning concession activities. Although ECOVIAS believes that the regulatory environment for the concessions activity has been indicating a great worry for the assurance of a steady institutional panorama, for companies interested in utilities provision, formerly performed by governmental agencies, it can be assured that current law and regulation does not affect ECOVIAS in a negative manner.

# Economic Basis of the Project

## Social-economy of SAI Area

The Anchieta-Imigrantes Highway System links two important regions of the State of São Paulo, both of them with a metropolitan nature: São Paulo and Baixada Santista. It can be observed, in the following table, the economical importance of these two regions, regarding the population contingent, power consumption, and municipal revenues:

**PICTURE I**

INDICATORS		STATE	RMSP(*)	%	RMBS(*)	%	TOTAL	%
Area (km <sup>2</sup> )		248,6	8,051	3.2	2,373	1.0	10,424	4.2
Population (thousand inhabitants)		32,669	15,902	48.7	1,265	3.9	17,168	52.6
Electric power consumption (MWh)	Residential	18,643,588	9,980,326	53.5	1,020,989	5.5	11,001,315	59.0
	Industrial	38,592,066	16,140,117	41.8	3,168,133	8.2	19,308,250	50.0
	Other Activities	9,448,808	5,845,793	61.9	474,166	5.0	6,319,959	66.9
Added value (billion R\$)		161,077	86,015	53.4	5,562	3.5	91,577	56.9
Municipal Revenue (billion R\$)		9,203	5,185	56.3	417	4.5	5,602	60.9
Per capita Investment (R\$)		61	85	-	96	-	85.8	-

(\*) RMSP (São Paulo Metropolitan Region)  
RMBS (Baixada Santista Metropolitan Region)

### São Paulo Metropolitan Region

The RMSP, the most important urban aggregation of the country, is constituted of 39 municipalities, being created in 1974. It occupies an area of 8,051km<sup>2</sup>, having, therefore, 3.2% of the State territory.

Concerning population, its participation in connection with the State is of 48.7%, with 15,902,412 inhabitants in 1994. It is emphasized the high urbanization rate, 98%, and the high demographic density, 1,975 inhabitants/km<sup>2</sup>.

After the significant expansion, between the 60's and the 70's, the average income of the region declined in the 80's, although have grown when expressed through minimum salaries.

Another aspect of the region income, is its concentration: more than 20% of the regional population have an income lower than 4 minimum salaries, 49% have up to 8 minimum salaries of income, and only 8% earn more than 30 minimum salaries, considering people who declare their income.

It is distinguished the ABCD region, consisting of Santo André, São Bernardo do Campo, São Caetano do Sul and Diadema municipalities. It is an industrial pole with an area of 636km<sup>2</sup> and population of 1,366,932 inhabitants, in 1993. With 8.5% of the RMSP population, it produces 18% of region richness, which corresponds to almost 10.8% of the entirety of the State of São Paulo.

The main industrial activities of the ABCD region are linked to autoparts manufacturing, automobile components, metallurgy, furniture, and automobiles assembly.

### ***Baixada Santista Region***

The newest metropolitan region of the State of São Paulo - Baixada Santista Metropolitan Region - was created by the Complementary Law number 815, of July 3<sup>rd</sup>, 1996. The RMBS is constituted of nine municipalities: Bertioga, Cubatão, Guarujá, Itanhaém, Mongaguá, Peruíbe, Praia Grande, Santos and São Vicente.

The area occupied by the RMBS is of 2,373km<sup>2</sup>, having a population of 1,265,401 inhabitants, in 1994.

Such region aggregates municipalities with inter-complementary vocations, that is, where are developed different business activities, from tourism and leisure to industries.

Thus, besides of port and industrial activities existing at the Port of Santos area, RMBS grows regarding the leisure market. Big plots and residential buildings, for weekends, grow besides fixed population residences. Restaurants and leisure ventures proliferate, enhancing tertiary services.

The largest cities are Santos, São Vicente, Guarujá and Cubatão, considered as medium-sized. The other cities are relatively small, as it is the case of Bertioga, Mongaguá and Peruíbe.

In connection with the employee's annual average volume, Cubatão has the highest number of people occupied in industry, that is to say, 19,237 people in 1993. With reference to the personnel occupation in trade, it is found a lower value: 3,701 people, despite of 10,470 people working in the services sector.

In such a way, it is realized that, among the employed population, approximately 58% is in industry, 11% in trade and 31% in services sector. The highest growth indexes may be found in trade, in which it can be observed that the number of employments have practically doubled from 1980 to 1993. On the other hand, it was not found such increase in industry.

In Santos, the situation tends to be inverted. A large portion of workers contingent is concentrated in the services sector, totaling 82,682 occupied people. In trade, such number amounts 24,521, although industry employs 12,967 people. In this case, approximately 69% of people employed is in services sector, 11% in industry, and 20% in trade. With respect with the annual growth, it can be observed a considerable increase within services sector.

In the City of Peruíbe, with an estimated population of 36,024 people, it is observed that approximately 56% of employed population is in the services sector, 15% in industry, and 29% in trade. Likewise in Santos, the highest indexes of manpower annual growth are in the services sector.

In general, the annual average volume of employment had a significant increase in services sector, except to the cities of Itanhaém and Mongaguá.

In connection with electric power consumption in urban residential units, it was found the existence of growth in the greatest number of cities. As for the power consumed in industry, Cubatão presents much higher indexes than the other cities maintaining the same consumption levels in the 1980-1993 period.

Given the features of both regions, concerning the mutual complementation of activities, the interface between each other is being emphasized, which leads to the enhancement of people and cargoes moving among the linking ways, irrespectively of the system used. It would be reasonable, though, to set out within traffic studies the growth levels attributed to SAI.

## **SAI Interfering/complementary systems**

### ***Port of Santos Organization***

In accordance with a study made in September of 1993, by "GEIPOT - Corredores de Transporte Centro-Leste, Santos e Paraná" [Transportation Corridors of the Center-East, Santos and Paraná] - the influence area of the Port of Santos comprises the southeast of Goiás, the Minas Gerais Triangle region, Mato Grosso, Mato Grosso do Sul, and obviously, the State of São Paulo.



There are public terminals, in the Port of Santos, operated by CODESP - Companhia Docas do Estado de São Paulo [São Paulo State Dock Company] itself, and private ones, operated by COSIPA, ULTRAFÉRTIL, DOW QUÍMICA and CARGILL, such port facilities being fully independent of the public wharf, operating in a land of its own proprietorship, or leased by the Union, and within the same, such companies move their proper cargo, or those of third parties.

Such terminals may use their manpower in the port operations on earth and on board, but from the port tariffs, they collect only the Port Using Fee (TUP).

The public terminals may have a special public use (concession of a CODESP public area to private port operators, through leasing agreements, as in the case of Libra, Cargill, etc.), by means of which, the lessees of the area may move containers, store goods of their own proprietorship, and other operations allowed by Law 8,630 (“Foremanship Law”). Such companies use CODESP manpower, and/or extra manpower offered by the unions, both to earth operations and ship operations.

Besides that, the terminals have a general public use: the utilized areas are of CODESP proprietorship (warehouses or yards for moving of goods, or public wharf) and the users make use of CODESP warehouses or of the private port warehouses.

The Port has a complete infrastructure itself for any of the services required to the loading, unloading and moving of goods in the area of its proprietorship. Besides that, it develops all the activities required to arrange the keeping of the access of ships of the wharf, as well as to the arrival of goods, by sea or earth. Of course, it further has an administrative and technical structure, in terms of personnel, to operate the loading, unloading and storage of such goods.

The cargoes arriving or leaving the Port, pass through railways and highways, among which, the main shall be below mentioned.

### **Highways**

#### *Rio Verde / Itumbiara - Santos*

The sector within the influence area has the extension of 570km, and through it is carried the soy in grains, a portion of which supplies São Paulo industries, and a portion is exported through the Port of Santos, and further, rice, corn and orange. Inputs and equipment for agriculture feature the main home cargoes.

Rio Verde is the city of the State of Goiás through which passes the State southeast production, towards São Paulo and Santos. This very route, after Itumbiara, is likewise used by cargoes coming from Minas Gerais Triangle Region (Uberaba and Uberlândia), and from the North of São Paulo.

#### *Cuiabá / Rondonópolis - Santos*

The main highway is “BR-364” [Brazilian Highway-364], which constitutes the natural outflow for the production of the North of Mato Grosso (mainly soy). Such cargo, and still others, from the Minas Gerais Triangle Region and North of São Paulo, seeks several highways to arrive to the Port of Santos. The home cargoes are the same of the above link.

#### *Campo Grande - Santos*

Cargoes with origin in the region of Campo Grande, MS - mainly the soy in grains -, destined to São Paulo industries and to the Port of Santos, avail, more frequently, of BR-262. The nature of the cargoes proceeding from the Port of Santos, similarly, does not differ from the other two sectors formerly mentioned.





## Railways

### *Corumbá / Campo Grande - Santos*

Such link is made through sectors in metric gauge of the SR-10, of RFFSA [Federal Railway Company] and FEPASA [São Paulo Railway Company], from where are transported, from Mato Grosso do Sul, the soy, soy mill and wheat, towards the port of Santos, and petroleum by-products, wheat, fertilizers and correction calcareous rocks, backwards.

### *Uberlândia / Ribeirão Preto - Santos*

This sector consists, mainly, of FEPASA railways and, to the final access to the Port, of RFFSA railways, totaling around 900km through narrow gauge, and serves the Southwest of Goiás and the Minas Gerais Triangle region. The cargo transported towards Santos is constituted, mostly, of soybean in grains, soy mill and coffee, and, at the regress, wheat, inputs and implements for agriculture.

### *Baixada Santista Railways*

To better understand the railway system with direct access to the Port of Santos, it is reasonable to know that, currently, there are roads operated by MRS Logística, FEPASA and by CODESP itself:

- MRS Logística - presently operates with only one wide gauge via (1.60m) in a sector with duplication capability; there is an integration of operation with CODESP to the delivery of wagons that access the Port. The periodicity is of 1 train every 15 minutes, constituted of 1 locomotive and 6 wagons. MRS expectation is of attend, in the future, only the Metropolitan Region, COSIPA, and Vale do Paraíba Region, due to the cost X distance ratio.
- FEPASA - serves with 2 kinds of single rail (1.00m and 1.60m)
- CODESP - responsible for the Port operation, it has multiple roads: in the railways interconnecting warehouses trains and vehicles transit. The expectation is to segregate the railway via, separating the internal flows in the warehouses.

As formerly said, most of the cargo transported through the railway system, is constituted, as a feature, of bulk cargoes. So, it is believed that the privatization of the RFFSA, and the future privatization of FEPASA, likewise expected for soon, attain essentially this nature of cargo, once unitized cargo trends to be continuously transported through the highway system. Such trends, therefore, maintain the profile and the intensity of truck flows in SAI.

### *Transported Cargoes*

Only around 46% of the production of the main cargoes transported to São Paulo and to the Port of Santos (rice, corn, soy, soy mill and wheat), originating from the Port influence area, are moved through such transportation roads.

Such volume, apparently low of transported cargo, has an explanation:

- the rice and corn produced area consumed (the first rather than the second one) almost entirely in the proper production region, and only around 3% of the rice and 4% of the corn that arrives in São Paulo and Santos;
- the soy in grains, and the soy mill are those who represent the largest transported volume, around 83% of the total was moved towards São Paulo and Santos. From such cargoes, most of the soy mill is destined to Santos;
- the wheat produced in the region is almost entirely consumed within the same; this product imports, which pass by the Port of Santos and are conducted to the mills in operation in the region, especially in São Paulo, represent around 3% of the cargo moving through the main roads above mentioned.

Note that the cargo movement between the Port of Santos and its hinterland, have as its sole highway access the Imigrantes Highway, from which only the sector near the Capital of the State, there are possibilities of access through other highways.

From a study by FIPE - Fundação Instituto de Pesquisas Econômicas [Institute of Economic Research], which used as source elements provided by CODESP - Companhia Docas do Estado de São Paulo, together with the data from the “Mensário Estatístico da CODESP” [CODESP Monthly Statistic Bulletin], it can be concluded that:

- around 60% of the cargo moved in the Port of Santos is transported by trucks. It is through Imigrantes that such volume transit towards the City of São Paulo, the Capital of the State, and towards the countryside of the State and other regions with influence area.
- The railways operated by FEPASA and by RFFSA receive 20% of the total of the cargo moved in the Port (considering all the public and private terminals), and which are originated or destined to the places above designated.
- 10% of the cargo outflows through pipe lines (around 40km) which link the terminals of the Port of Santos (including the Alemoa Terminal, where it is processed the moving of fluid bulks) and São Sebastião, with the large petrochemical complex located in Cubatão. Observe that the imports of unrefined petroleum for the four refineries of this complex (Cubatão, REVAP, REPLAN and RECAP) are processed in the Port of São Sebastião, which have better operational conditions than the Port of Santos.
- The remaining 10% refer to fluid bulks. They represent 20% of the cargo moved in the Port of Santos. As 10% use the pipe lines, the remaining 10% are divided between the railway and the highway system.

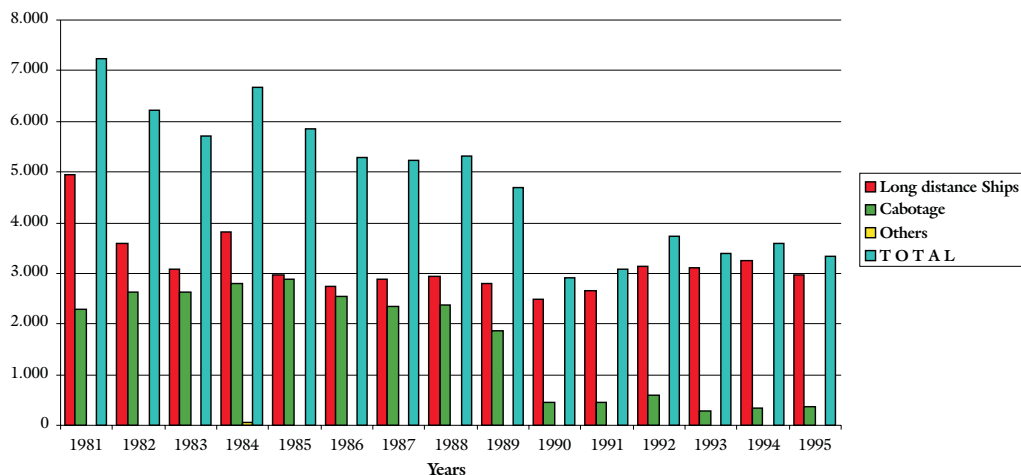
Note, further, that part of the soy produced in Mato Grosso is presently being taken to Belém through Rio Madeira [Madeira River]. It is very probable that in future, soy volumes in grains, and soy mill, originating from that region, have diminished in the export registries of the port of Santos.

### Evolution of Cargo Moved in the Port of Santos

The evolution of vessel movement in the Port of Santos is presented at Graph I. In such picture it is observed that the number of long distance ships is of around 3,000 in the latest ten years, although the cabotage reduced drastically their movements as from 1990. Such behavior means a reduction to a half in the number of vessels arriving and leaving the Port: in 1981 the total of vessels which moved in the Port was of 7,232, and in 1995 this total was reduced to 3,345.

Graph I

### Movement of Vessels as per its Nature

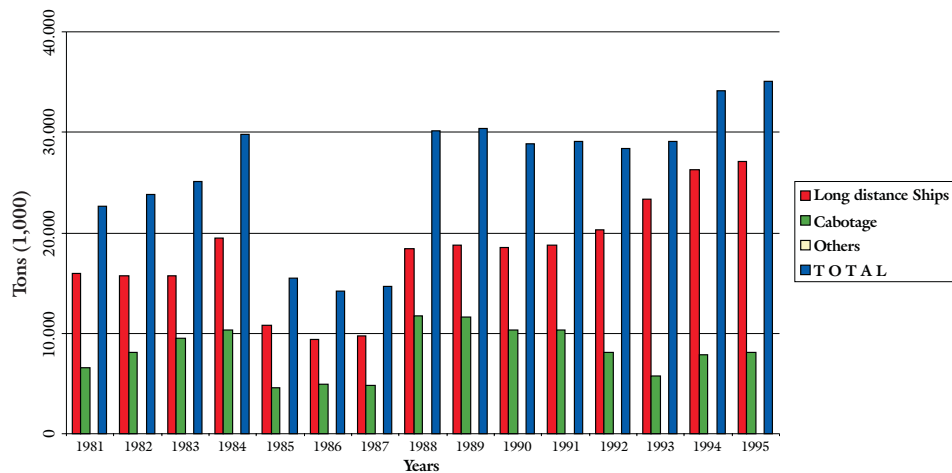


Source - Anuário Estatístico do Brasil - FIBGE

Indeed, the Port of Santos, in its best cabotage period (81/88), has not received more than 46% of the total movement of ships, and 37% of the total movement of moved its cargo. The State of São Paulo, due to the economical leadership made its trend, even before such period already operated more strongly with the long distance navigation. On the other side, however, the total movement of the cargo (Graph II), for the same period, showed an average growth of about 3% per year. Such moment, regarding the total moved cargo, although, did not happen in the same manner concerning the long distance navigation and cabotage.

**Graph II**

**Moved Cargo Regarding the Nature of Navigation**



Source - Anuário Estatístico do Brasil - FIBGE

While cargoes operated in long distance showed a certain steadiness regarding growth evolution, those transported through the cabotage navigation suffered strong oscillations in the same period, mainly from 1990 and thereafter. It was the most intense phase of Brazilian economic recession (not to forget that São Paulo, on that time, represented around 40% of Brazilian Gross Internal Product - “PIB”), which have only started its slow recovery as from 1994.

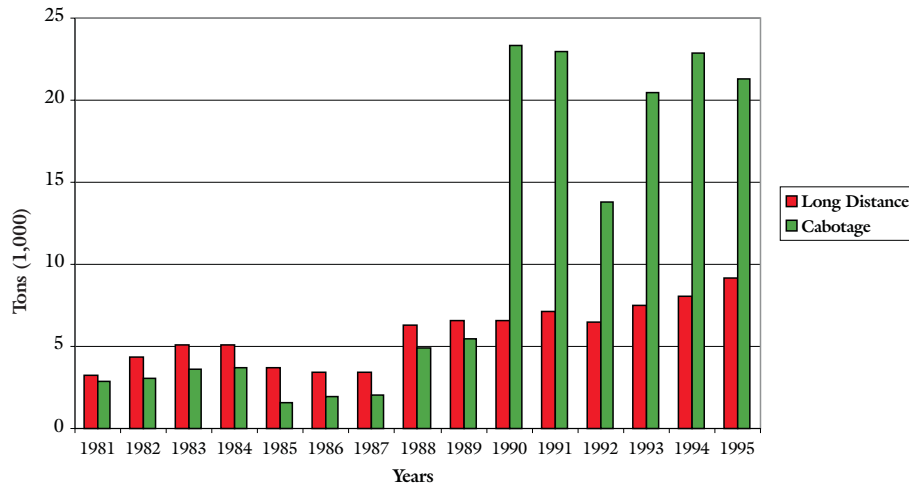
The fact is that such phenomena may bring some indications that result in other questions interfering in the projection of the volume of goods which may transit through the highway in study.

Dividing the cargo volume in connection with the nature of navigation (Graph III), by the respective number of vessels it is possible to note that:

- in the case of long distance ones, comes from around 3,000t/vessel, in 1981, to around 9,000t/vessel, in 1995, that is, the capacity of vessels operating in the Port have triplicated;
- regarding the cabotage, this very index suffer radical transformation once it comes from around 3,000t/vessel, in 1981, to around 21,000t/vessel, in 1995, that is, vessels capacity increased 7 (seven) times.

**Graph III**

**Cargo Regarding the Nature of Vessel**



Source - Anuário Estatístico do Brasil - FIBGE

Actually, as from 1990, the prevailing of cabotage cargoes started to be that of bulks (mainly iron ore, at COSIPA terminal, and at Petrobrás terminals). It was also observed that, as from that very year, there was an increase of cargo in containers, which may be greatly attributed to the movement of long distance, mainly in the case of fruit exports.

In Picture II, it is presented the cargo moved in the Port of Santos, by terminal and nature of cargo, for 1995. Note that the main products moved in the Port of Santos are, with respect to the total moved cargo: iron ore (9.48%), mineral coal (8.00%), fertilizer (5.80%), sugar (overall cargo + bulk cargo = 7.75%), siderurgical products (4.06%), diesel oil (3.96%), soybean in grains (3.49%), wheat (3.25%), sulfur (3.18%), pellettized citrics (3.07%), gasoline (2.34%), GLP (2.12%), citric juices (1.93%), caustic soda (1.92%), salt (1.88%).

Picture II

**MOVED CARGO PER TERMINAL KIND AND CARGO NATURE**

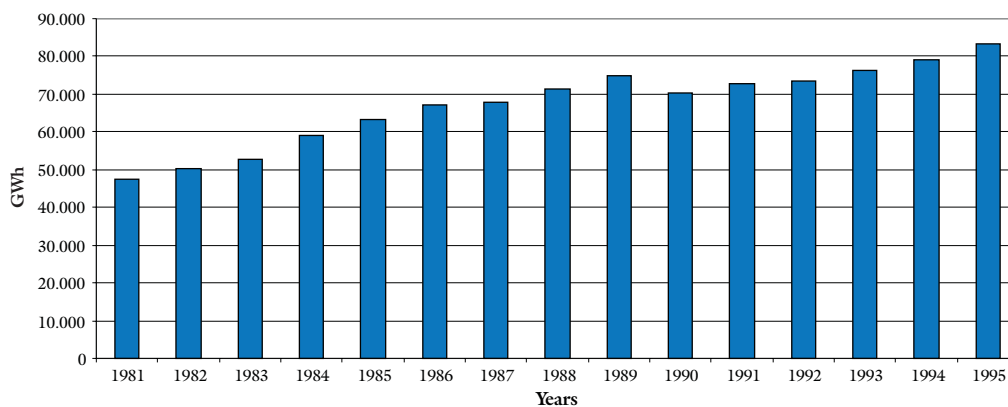
Kind of cargo/terminal	Public terminals		Private terminals				Total	Overall Total	% of total Overall
	Codesp	Cosipa	Cutral e	Dow Quím.	Cargill	Ultra Fertil			
Overall cargo	11,340,651	1,234,437					1,234,437	12,575,088	35.81
Sugar	1,941,576						0	1,941,576	5.53
Siderurgical products	192,324	1,234,437					1,234,437	1,426,761	4.06
Coffee in grains	440,286						0	440,286	1.25
Paper and carton	306,484						0	306,484	0.87
Citric juices	256,78						0	256,78	0.73
Parts for automobiles	216,067						0	216,067	0.62
Pneumatics	121,121						0	121,121	0.34
Fruit	110,476						0	110,476	0.31
Others	7,755,537						0	7,755,537	22.09
Solids in bulk	6,844,853	5,990,915	287,573	0	1,167,160	650,193	8,095,841	14,940,694	42.55
Mineral coal	150,896	2,656,799					2,656,799	2,807,695	8.00
Iron ore		3,329,116					3,329,116	3,329,116	9.48
Fertilizer	1,565,386					470,529	470,529	2,035,915	5.80
Soybean in grains	977,093				246,729		246,729	1,223,822	3.49
Wheat	1,140,601						0	1,140,601	3.25
Sulfur	935,181					179,664	179,664	1,114,845	3.18
Pelletized citrics	574,421		287,573		216,933		504,506	1,078,927	3.07
Sugar in bulk	349,51				428,433		428,433	777,943	2.22
Salt	660,392						0	660,392	1.88
Pelletized Soybean	94,418				275,065		275,065	369,483	1.05
Cement	202,425						0	202,425	0.58
Other solids in bulk	194,53	5					5	199,53	0.57
Fluids in bulk	6,593,540	0	229,203	587,43	0	185,412	1,002,045	7,595,585	21.63
Diesel oil	1,391,161						0	1,391,161	3.96
Caustic soda	364,142			309,426			309,426	673,568	1.92
Gasoline	822,071						0	822,071	2.34
GLP	745,39						0	745,39	2.12
Citric juices	448,602		228,512				228,512	677,114	1.93
On - board consumption goods	597,557						0	597,557	1.70
Fuel oil	583,764						0	583,764	1.66
Ethyl Alcohol	169,036						0	169,036	0.48
Other fluids in bulk	1,471,817		691	278,004		185,412	464,107	1,935,924	5.51
Total	24,779,044	7,225,352	516,776	587,43	1,167,160	835,605	10,332,323	35,111,367	100.0

This group represents more than 60% of the total cargo movement in the Port of Santos, from which around 40% are solid bulks, a little more of 12% are fluid bulks and only around 8% are overall cargo.

Taking the values of the cargo moved in the Port, projections were made concerning the kind of navigation and as per the total of cargo moved. In order to make the study of cargo movement, in the Port, a little deeper, it was tried to establish a correlation between such movement and the electric power (as an indicator of economical activity level) consumed in the State of São Paulo (Graph IV): the immediate influence area of the Port is, with no doubt, the most important area of total influence.

**Graph IV**

**Electric Power Consumption - State of São Paulo**



Source - CESP

**Comments on Projections**

To make the estimate for the movement of cargo per kind of navigation, and for the total of moved cargo, it was used a regression straight line to each one of the 16 observations series (1981/96), with a confidence interval of 95%, but results (except to the case of long distance navigation) were not encouraging ones, once the correlation coefficients  $R^2$  have indicated that the error could be big.

It was tried, subsequently, the adjustment of several curves regarding the available data, using, likewise, a confidence interval of 95%, and the correlation coefficients being calculated, have indicated, for long distance, an exponential curve, with  $R^2 = 0.88$ ; for movement through cabotage, a potential curve with  $R^2 = 0.72$  (obviously, due to the big variations observed, a data elimination was required) and for the total movement of cargo, similarly, a potential curve, with  $R^2 = 0.78$ .

The long distance cargo projections were those which presented better adjustment, as well as those of total of cargo, in which distortions were not observed, although they have suffered strong influence from the data of the cabotage movement. In fact, the cabotage movement showed strong oscillations, which have sensibly prejudiced the adjustment. From its 16-year series, only 6 (six) points could be used.

Note that the cargo total projection to the year 2000 has not exceeded the 1996 movement. It was also verified that in the projection where the long distance cargo presented an average growth for the projected period (5.1% per year) considerably higher than the observed period (3.7% per year). As for the growth of cargo transported by cabotage navigation, the same has not happened: while for the observed period such rate is placed at about 1.4% per year, for the projected period the average is of 0.6% per year. The total growth of the cargo for the observed period was placed at about 3.2% per year, while for the projected period such average raises to 4.1% per year. It is evidenced that the influence of the cargo movement through cabotage losses importance due to the more intensive growth of the long distance cargo movement.

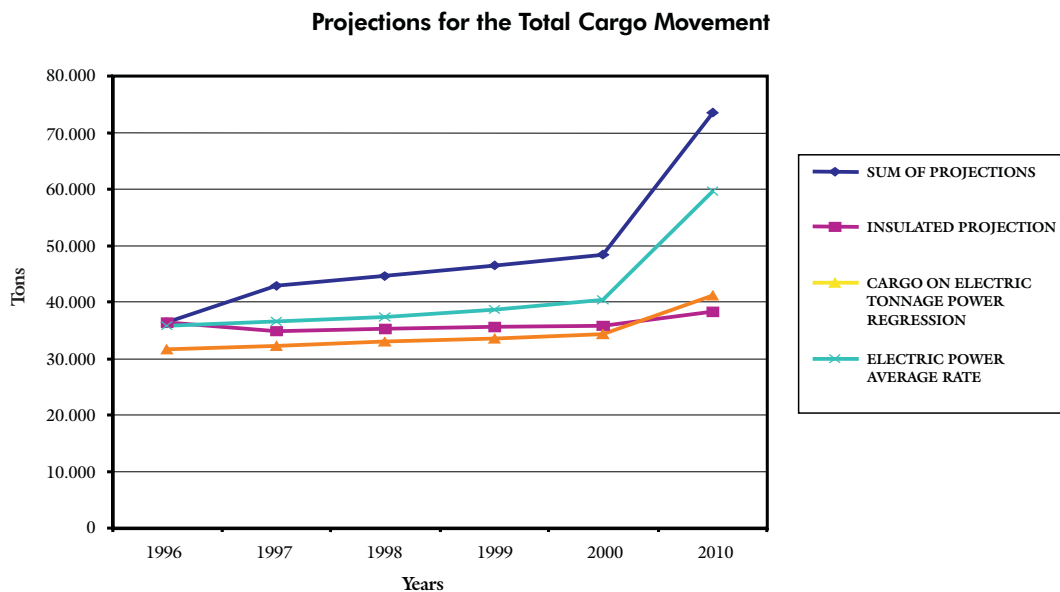
The insulated projection of the total of the moved cargo reveals that the observed values have grown at an average of 3.2% per year, while the projected data have not achieved the average of 0.9% per year, what has defined the rejection of such values as a hypothesis of work.

It was further tried to correlate data from the cargo movement with the power consumption for the same period. The first observation is that the correlation index between the two variables is relatively low (0.23). Therefore, any estimate from the regression equation of such variables could distort the products.

The option, then, was to make an estimate of the electric power consumption using the adjustment of a straight line (the best curve obtained), and establishing a growth direct ratio, taking as a growth rate for the total of the cargo, the same average rate of the estimated period for the electric power.

Such rate was placed at about 2.0% per year. It is not an unreasonable hypothesis as for the amount, once there are projections concerning the Brazilian economy growth for next year, at a range of 2%. Thus, nothing impedes that the growth average rate of the economy of the State of São Paulo equals to the Brazilian one, up to the year of 1998, once São Paulo continues to be an important factor in the projections of Brazilian Gross Internal Product [“PIB”]. On the other hand, there are conservatory projections that, as from 1999, including, the growth rate of Brazilian PIB shall be ranked at a level of 4% per year. Such averages shall be used to São Paulo economy.

So, it may be presented the Graph V below:



The Sum of Projections curve comprises the sum of the projections of moved cargo in each kind of navigation; the Insulated Projection is the estimate made to the total of cargo moved in the Port; the Cargo Regression on Electric Power curve comprises the product of the regression calculation of the first variable on electric power consumption in the State of São Paulo; finally, the Electric power Average Rate is the projection of electric power consumption in the State of São Paulo, in accordance with the increased geometric average for the observed period (1981/95).

#### **Expectations of the Cargo Movement in the State Horizon**

First of all, of course, we must consider the physical and operational conditions of the Port, as the first limiting factors to the increasing of cargo movement in their wharf and terminals. It is imagined that within the present limits, and taking into account the investment announces amounting R\$ 1.0 billion, such conditionals shall not retrench the expansion of the cargo movement in the Port.

What is announced by the Ministry of Transportation may generate in the Port of Santos, for the period up to the year 2000, a cargo movement much bigger than the present.

CODESP is effecting the privatization of loading terminals (13 were already privatized and 20 more are being prepared) which shall mean to have, up to the end of 1997, 60% of the port privatized. It is expected that, up to the end of 1998, are invested R\$ 1.5 billion, from which R\$ 850 million area already assured. The intention is to implement the 24-hour Port System, during the 362 days of the year.

The Port of Santos 2000 Project foresees the expansion of the Port, in accordance with the Strategic Guidelines partially developed by the PROAPS (Port of Santos Leasing and Joint Ventures Program), by the DIRET (Guidelines and Rules for the Transition of CODESP-Union Parity Commission) and by the PAI (Immediate Action Plan). Such Guidelines shall be complemented by:

- Port Zoning and Development Plan (legal provision to be approved by CAP);
- Multi-system Integration Plan;
- Environmental Macro-Zoning
- Port Areas Revitalization and Urban Integration Plan;
- Regional Development and Associated Port Activities Plan;
- Recycling and Re-professionalization Program;
- Port Quality Program

From what can be abstracted from the Port of Santos 2000, elaborated by CODESP, Port administrators know the aspects that must receive the investments, and they have developed a modernization and enlargement global program for the Port, what allow us to say that it shall not have any limitations imposed neither to the growth regarding the number of vessels nor to the moved cargo, either to the drainage basin, wharf extension, facilities and equipment point of view, or concerning operational aspects.

Nothing shall impede that the cargoes arrived in the Port, either regarding the typology or concerning the seasoning, suffer any prejudices from the point of view in connection with the logistics to be employed. The Port of Santos is the important link of the cargoes logistics chain (reception, storage, processing and distribution), and is qualified (even more in a near future) to move the cargo volumes expected.

The solid bulks, among which have relevant expression the iron ore, the mineral coal, the soy in grains, the wheat and the sulfur, represent around 43% of the total cargo moved in the Port. Such ratio may be affected, mainly because other roads being to absorb soy in grains cargoes, formerly allocated to the ports of the east corridor (Paranaguá and Santos), as it is the case of the exports in Mato Grosso and Mato Grosso do Sul through Rio Madeira, towards Belém.

At least in the next 5 (five) years, the fluid bulks, representing around 22% of the total of cargo moved in the Port, among them the diesel oil, the fuel oil, the petrol, the GLP, the citric juices and the caustic soda (proceeding from Alagoas), presently playing a relevant role, likewise, might not suffer significant increases, once, in the case of petroleum, the investments shall not bring material enhancements to the refining capabilities.

The remaining cargo moved in the Port of Santos (35% of the total) is represented by the overall cargo (mainly sugar, siderurgical products, and coffee in grains), including the unitized cargoes, among which the containers contribute with a significant portion and remarkable growth in the latest 6 years.

It is significant the amount of cargoes classified as Others (22% of the total of the overall cargo), which the greatest volume, likely, is being in any way, unitized. The overall cargo, maybe, can justify the greatest portion of raises projected.



The cargo which makes use of the cabotage, pursuant to data from the Mensário Estatístico of CODESP, changed its typology, the kind of vessel, and likely, the system, because it is evident the trend to reduction or, in a more optimism perspective, to the steadiness. The increase in the size of the vessels indicates that the vessels containing solids and fluids started to constitute the greatest number.

The overall cargo would constitute a small portion of the total of the cargo per cabotage. Note that presently the cabotage participation in the total of the cargo moved in the Port of Santos represents around 25% of the total.

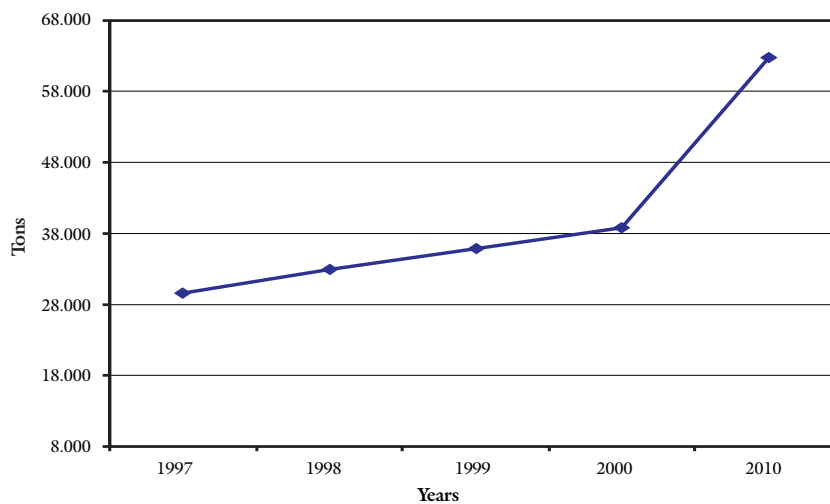
Of course, the long distance cargo shall be the responsible for any raises coming to occur within Port facilities, mainly in connection with solid bulks and overall cargo. Presently the cargo moved through long distances represents 75% of the total, and such participation trends to increase.

The greatest traffic volume in the highway and railways shall be constituted of solid bulks (iron ore, coal, fertilizer, wheat, and sulfur), as well as of trucks with overall unitized cargo. The fluid bulks making no use of the specialized ducts, shall participate, in a lower scale, of such movement.

Based in such elements, and in the basic projection studies, it may be said that the projections made for any kind of navigation is enough consistent with what can be expected for the cargo movement, considering the cargo typology.

It is expected that the long distance navigation develop in 1,000t, as below:

**Graph VI**  
**Cabotage Navigation Evolution**

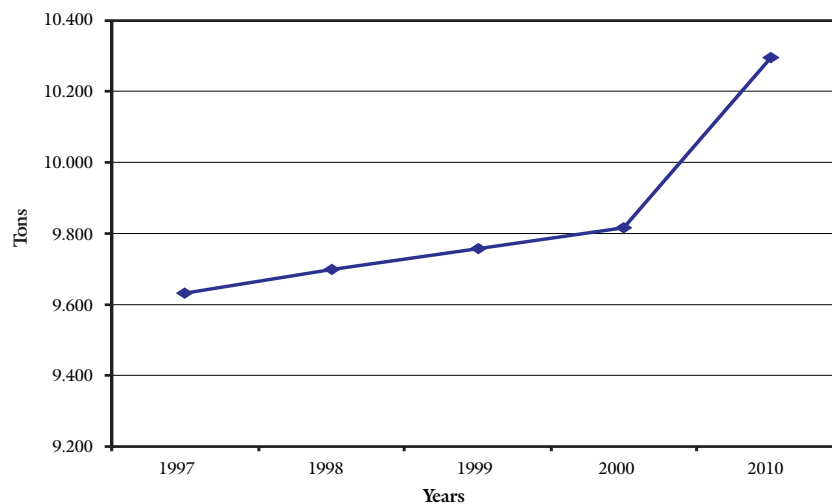


Along the period, the long distance navigation shall change from around 75%, in 1995, to near of 77.5% in 1997, 79.7% in 2000, and 86% in 2010. Note that the solid bulks, in the next 5 years, may keep the same growth rate verified in the observed period, and the overall cargo becomes the main portion increase.

On the other hand, cabotage navigation may develop in 1000t, at a maximum, as below:

**Graph VII**

**Cabotage Navigation Evolution**



For the projected period, it is unlikely that the current structure of cargo movement in the Port of Santos is changed, and there are no change perspectives in connection with the transport means used to take or get cargo in the Port.

Being admitted such a hypothesis, about 60% of the total of moved cargo shall be transported through trucks and similar, 30% (maybe less) shall use railways, and the remaining shall be conducted through pipes.

It is not expected that, considering the magnitude of the investments foreseen to the Port, the cargo movement trends to the stagnation, in accordance with the projection, taking as a basis the total of moved cargo. It is evident that the cabotage cargo strongly influenced in such projection. It is reasonable, a expectation of growth towards the horizon of the next 5 and 10 years, regarding the long distance cargo, specially considering the incentive plans to export announced by the Federal Government, as an instrument for the recovery of the Payments Balance, and as a leverage for the growth ratio of the PIB. Therefore, it can be discharged the growth rate suggested by the projection of the total of moved cargo.

The growth rate furnished by the correlation between electric power consumption in the State of São Paulo and the total of moved cargo in the Port of Santos is jeopardized in reason of the low correlation index ( $R^2 = 0.23$ ) among these two parameters.

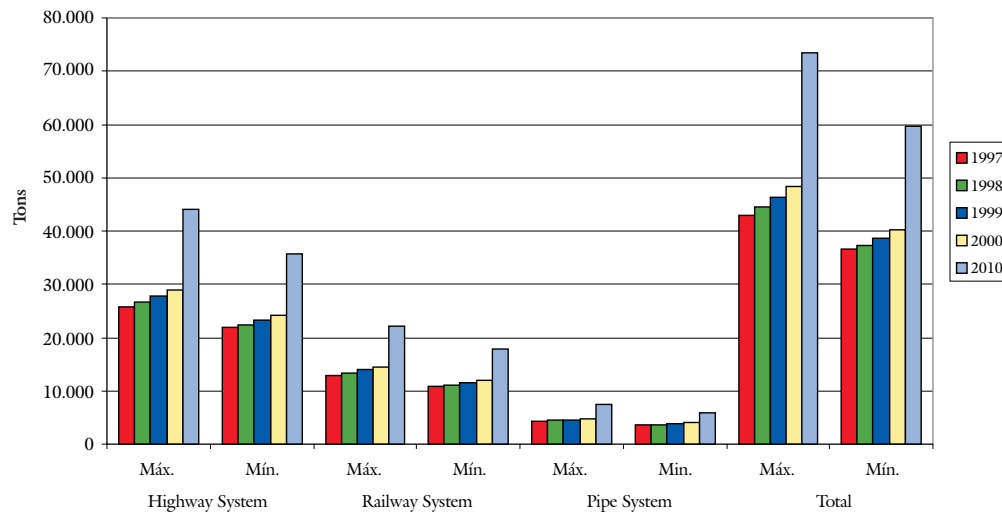
Finally, it is left to analyze the hypothesis that the economy of São Paulo would grow at a rate correspondent to the increase of the electric power consumption in the State. It is expected that such rate improves in a way comparable to the PIB growing expectations. To admit that the São Paulo economy comes to be equals to the Brazilian average (conservative estimates of 4% per year) shall be the most likely hypothesis of work to the period in question.

In such a way, to determine a growth range to the cargo moved in the Port of Santos for the period up to 2010, it can be taken the highest limit as that of the projections sum for each kind of navigation, and the lowest growth limit shall be correspondent to the one obtained in Graph VII, concerning the increase of electric power consumption, that is, 2% per year up to 1998, and 4% per year, to the levels established for 5 and 10 years.

Therefore, it may be admitted that the total increase of moved cargo in the Port of Santos should be placed in 1000t, among the following limits, in accordance with the ratios of the systems above indicated:

**Graph VIII**

**Moved Cargo per Transport Means**



Furthermore, note that SacNews, a publication of CODESP Customer Assistance Service, noticed that the cargo movement in 1997 might exceed 38 million tons, once, in accordance with the publication, the “accrued movement of the latest twelve months (October/96 to September 97) already amounts 38.6 million tons, superseding in 9.18% the registered in the period between Oct/95 and Sep/96 (35.4 million tons)”. However, such value is placed in the estimated interval to the total movement of cargo.

Other important information noticed at Sac News is the construction of a tunnel between the margins of the Port of Santos estuary, which shall eliminate a trajectory of 75 km to the cargo transportation in Baixada Santista, through Cubatão.



# Regulatory Aspects

## **Applicable law**

The Government of the State of São Paulo decided to attribute, by means of the Departamento de Estradas de Rodagem - DER/SP [São Paulo Highway Department], to the private initiative, the exploitation, against concession, of the Highway System constituted by ANCHIETA - IMIGRANTES SYSTEM - SAI, pursuant to Decrees number 41,371 of November 28<sup>th</sup>, 1996, and number 42,321 of October 7<sup>th</sup>, 1997.

## **Term of Highway Concession Agreement**

The Attachment 1 of this document fully provides for the concession agreement above mentioned.



# Entrepreneur Group

## C.R. Almeida Group

### *History*

In 1958, Cecilio do Rego de Almeida establishes the Engenharia e Construções C.R. ALMEIDA Ltda. [Engineering and Constructions Company, C.R. ALMEIDA Ltd.], which objective was to invest in new technologies. Four years later, then as a Corporation, C.R. Almeida consolidates accepting works refused by other companies, and accomplishing them in record time, as, for example, the Estrada de Ferro Central do Paraná [Central do Paraná Railway]. The railway, designed in order to outflow the agricultural production of the North of the State, up to the Port of Paranaguá, had, for several times, its construction postponed for technical difficulties and shortage of funds. In a little more than six years, C.R. Almeida delivered the 331 kilometers of the railway to the public administration, being the unique Brazilian company to fully perform such a deed.

Later on, in the following year, C.R. Almeida was engaged to the construction of “BR-290” [Brazilian Highway-290], the famous “Freeway”, which links Porto Alegre to Osório, in Rio Grande do Sul.

In the first half of the 70’s, C.R. Almeida undertakes the construction of other significant works, especially that of the pipe line at Baía da Ilha Grande Marine Terminal, with more than 130 kilometers of extension in the open Serra do Mar. In 1973, associated to Impregilo S.p.A., of FIAT group, C.R. Almeida wins the public tender for the construction of Usina Hidrelétrica de São Simão [São Simão Hydroelectric Plant], in the very Brasil Central [Brazilian Central Region], with a capacity to generate 2 million and 680 thousand kw.

In the subsequent years, further to the works in the hydroelectric area, C.R. Almeida invests in airport construction technology. By the 80s, C.R. Almeida perform works in Floresta Amazônica [Amazonian Forest] (Ferrovia dos Carajás - Carajás Railway), in Pará, and in São Luiz, Maranhão (iron mines), as well as important sectors of Cuiabá - Porto Velho highway.

A number of urban works are from the same period (the urban trains system in Grande Porto Alegre - “Trensurb”, the Subway in Brasília, the Nova Trabalhadores Avenue in São Paulo, Lauro Müller highway in Santa Catarina.

Since the 90s, the group has participated in public tenders to the administration of telecommunication systems, as well as of power sector, ports, airports and highways, further to sanitation systems.

### *Activities*

C.R. Almeida has more than 7,700 kilometers of highway constructed. In the heavy construction area, the group, through its constructors C.R. Almeida S.A. - Engenharia e Construções, EBEC - Engenharia Brasileira de Construções S.A., C.R. Almeida Mineração S.A., and PRIMAV Construções e Comércio Ltda. - embraces the whole Brazilian territory. Presently manages on highway, subway, port and airport, sanitation and hydroelectric plants works in the States of Rio Grande do Sul, Santa Catarina, Paraná, São Paulo, Rio de Janeiro, Espírito Santo, Ceará, Belém, Goiás, Tocantins, Acre and in the Federal District.

The heavy construction market is of a range of R\$ 6 billion per annum, C.R. Almeida participating in 11.27% of the total, and with an objective of achieving 15% up to the year 2001.

Within the utility concession sector, C.R. ALMEIDA Group already counts with three concession, two of them in highways and one in sanitation, all of them won by PRIMAV Construções e Comércio Ltda.



The highway concessions already obtained are:

- BR-227, highway which links Curitiba to the coast, and which is, at the same time, the highway access to the Port of Paranaguá, the second bigger port of the Country. Such highway is nowadays operated by the Ecovia Caminho do Mar concessionaire, which have already implemented a complete infrastructure modernization, and the installation of new safety equipment.

The toll revenue of this concession is at a range of R\$ 1.2 billion (= 8.4% of the highway concession local market).

- Anchieta - Imigrantes System, the most complex highway system of the Country, interconnecting the metropolitan region of São Paulo to the metropolitan region of Baixada Santista.

The toll revenue of this concession is at a range of R\$ 4.5 billion (= 17.2% of the highway concession local market).

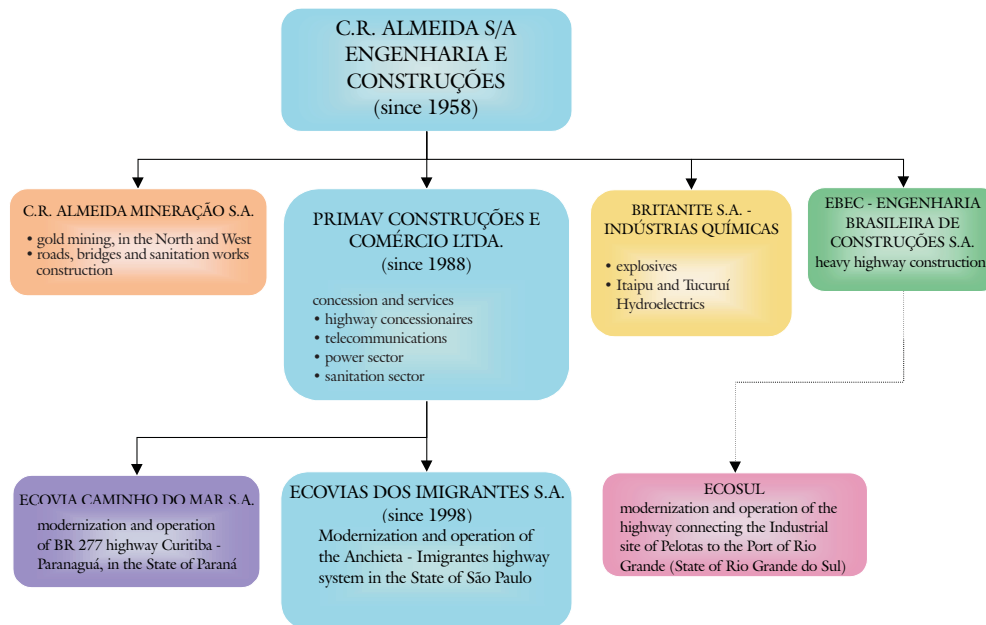
Presently, there is an interest from other economic groups in the stock interest of C.R. Almeida group, concerning highway concession in the State of Rio Grande do Sul.

The State of Minas Gerais has already started the concession process, by means of the publication of 7 Bid Announcements in the total of the 9 expected. Such first stage contemplates agreements to the amount of R\$ 12 billion, and C.R. Almeida group is pre-qualified in 6 ventures. The groups is participating, likewise, in other bids in the State of Santa Catarina, and in within the federal sphere.

The revenue for operational activities of C.R. ALMEIDA group was R\$ 614,407,000.00, in 1997, with an operational gross profit of R\$ 451,516,000.

### Corporate Structure of the Group

The main companies of C.R. ALMEIDA group:





## Autostrada Torino Milano S.p.A.

### Story

The company started in the year of 1928, with totally private initial capital of Lit. 500,000 ( $\pm$  US\$ 280), rapidly increased to Lit. 30,000,000 ( $\pm$  US\$ 17,000.00). It has been organized by a group of private entrepreneurs of the Turin and Milan regions.

On November 30th, 1929, the company executes together with the Italian Government an agreement for the construction and operation of a highway between the cities of Turin and Milan, two of the more important economic centers of the North of Italy.

After 30 months of works and utilization of 2,000 workers, with a total cost of Lit. 110,000,000 (= US\$ 72,500.00), the highway was opened to the traffic on October 25th, 1932. It was a one-way track with double traffic direction. In the first year of operations, 350,000 vehicles passed through the highway and such number has rapidly increased in the following years: 600,000 in 1938 and 3.5 million in 1955.

In 1962, after less than two years of works, the highway was duplicated, thus being the first highway in Italy with three strips in each traffic direction.

In 1992, the construction of the new Rondissone barrier was concluded, where is presently located the highway operating control center, with all the equipment required for the development of the highway's operations.

The company is concluding, in the following months, the agreement with the government to extend the concession until the year 2025.

Autostrada Torino Milano S.p.A. was, for many years, the only highway concessionaire company totally private and listed in the stock exchange, with operative conscience and management plainness features.

ASTM's activities comprise several international enterprises in the highway sector, such as consulting companies in Latin America (Brazil and Argentina) and participation in project financing international bidding (in Greece, England, among others).

Autostrada Torino Milano presently controls, through direct interest, 563 kilometers of Italy's highway network, thus constituting the second highway group of the country and the first private group.

The balance of the year 1997 was closed with a difference between value and production costs of Lit. 45,572,341,247 ( $\pm$  US\$ 25,000,000.00). The companies' balance value with ASTM's direct interest was Lit. 108,086,000,000 ( $\pm$  US\$ 61,000,000.00).

ASTM's capital stock has been increased from Lit. 13,500,000,000 to Lit. 54,000,000,000 ( $\pm$  US\$ 30,600,000.00), after the merger with the company SIWAY S.p.A., occurred in the month of April 1998.

### Description

The highway comprises two roads separated by a central plot, being each one composed of three tracks: low speed, fast speed and a track for overtaking.

#### TECHNICAL DATA:

- extension: 127km
- total width: 26m (3 strips of 3.33m and central plot of 4.00m)
- gantries: 106
- service areas: 10
- 13 tollhouses, 5 free passage exits and 2 blockages with 105 total tracks for toll collection.
- 4 interconnections with other highways

The highway system is of the closed type, that is, it is formed by two extreme barriers, one in Turin and other in Milan, respectively comprising 19 and 24 tracks, with 13 intermediary exit and entrance places.

The highway has variable message panels, located in all entrances along its extension, informing the user on infrastructure traffic conditions and auxiliary services.

## Traffic

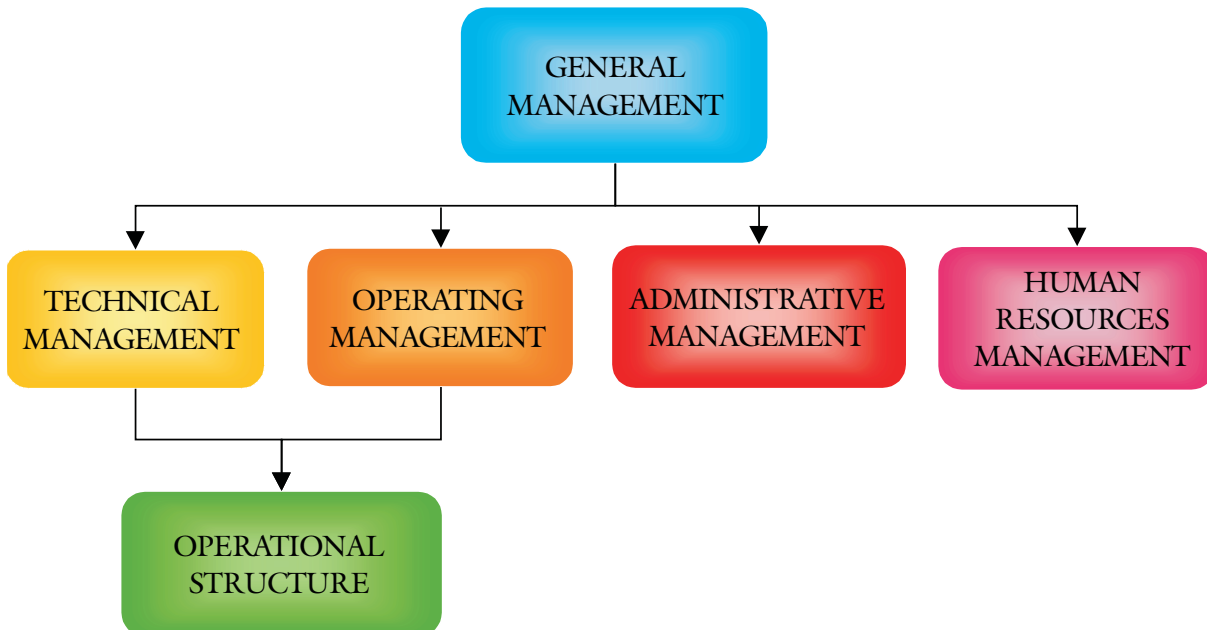
During the last ten years, the Turin-Milano highway traffic volume increased in 29.56% (from 26.1 million vehicles in 1988 to 33.9 million in 1997). In the last three years, the number of vehicles passing through the highway was the following:

- 1995 - 32,389,627 (75.78% passenger vehicles and 24.22% heavy vehicles)
- 1996 - 32,921,034 (74.01% passenger vehicles and 24.06% heavy vehicles)
- 1997 - 33,866,253 (73.75% passenger vehicles and 26.25% heavy vehicles)

The daily average of the vehicles tolled in 1997 was of 92,784 (3.15% more than in 1996), with the higher monthly average in the month of July (102,842 vehicles).

### Organizational Structure

The company has a structure of approximately 430 persons, of which 90 are managers and employees at the head office, in charge of the technical, administrative and operating management. Other 340 employees work as tollkeepers and in external services.







## Impregilo S.p.A.

Founded in 1960, it is the greatest construction company of Italy, specialized in great size infrastructure works: barrages, freeways, railways, metropolitans, ports, besides being the world-wide leader in the construction of hydroelectric barrages.

Its operations in Mercosul are based in Argentina, through its affiliate Iglys S.A., which actively participates in the market since 1968. It is one of the partners in the international consortium holding the concession of Autopistas del Sol, which is the most important road of access to Buenos Aires, presently operating a daily traffic volume of 600,000 vehicles.

Impregilo is a private corporation, which major shareholder is the Fiat Group owning 23.2%. The remaining shareholders are a group of Commercial and Investment Banks owning 16.7%, the Girola Group 12.2%, the Giraglia Group 4.5%. The outstanding shares are 43.4% of the total. Impregilo is listed in the Milan Stock Exchange.

Impregilo S.p.A. total assets amounted to US\$ 3.5 billion on December 31st, 1996 and its net equity amounted to US\$ 517.5 million. Total income in the said year was US\$ 1.9 billion, with a net profit after taxes of US\$ 7.3 million.

Impregilo's revenue is divided among:

- Buildings 38%
- Hydroelectrics 32%
- Transport 30%

The company is being operating in almost all continents. In 1997 there were works in the following locations:

Italy	41%
Europe	11%
Americas	20%
Asia	15%
Africa	13%

# Operational Aspects of Business

## Physical and Operational Features of the Transport System Highways - SAI

### SP-150 - Via Anchieta

The SP-150 highway Via Anchieta, an important component of the System, begins in Great São Paulo, municipality of São Bernardo do Campo in km 9 + 70 m, passes by Cubatão and ends in Santos in km 65 + 600 m.

The main features of such road are the following: North - South tracks with two traffic strips by direction, 55m minimum horizontal range, maximum ramp of 7%, directrix speed of 80km/h in the Baixada Santista (Santos Lowland) and Planalto (Plateau) region and 60km/h in the Serra (Mountains) region. It has marginal tracks set up in an intense traffic urban region, with a 36.10 kilometers extension.

**Table III**

**Anchieta - Imigrantes Transport System  
Main Physical Features**

VIA ANCHIETA			
	Planalto	Serra	Baixada
Extension: (km)	30.0	15.0	10.9
Directrix speed (km/h)	80	40/60	80
No of traffic tracks	4	4	4
No of marginal tracks	4 from km 10 to km 30		2 from km 55 to km 59
	2 from k 30 to km 40		4 from km 59 to km 65
Minimum range (m)	300	40	500
Maximum ramp (%)	6	7	2
No of bridges and viaducts	36	25	15
Total extension of bridges and viaducts (m)	2,007	2,378	3,092
No of intersections	7		8
No of tunnels		5	
Total extension of tunnels (m)		756	

### SP-160 - Rodovia dos Imigrantes

SAP's most important road, the Rodovia dos Imigrantes begins in the Planalto, in km 11+460m, in the municipality of São Paulo, crosses Diadema and São Bernardo do Campo; it has an extension of 30 kilometers, having two tracks and four strips within this region. In the Serra's section, it crosses the municipalities of São Bernardo do Campo and São Vicente, in an extension of 16 kilometers, in a one-way track, crossing the municipalities of Cubatão, São Vicente and Praia Grande and having the extension of 12 kilometers.

**Table IV**

<b>RODOVIA DOS IMIGRANTES (Ascending Track)</b>			
	<b>Planalto</b>	<b>Serra</b>	<b>Baixada</b>
Extension: (km)	30.0	16.0	12.0
Dominion Track (m)	120		
No of traffic tracks	8	3	6
Maximum ramp (%)	3	5	3
Minimum horizontal range (m)	1,5		1,5
Minimum vertical range (m)	10		10
Safety Speed (km/h)	120	80	120
No of bridges and viaducts	26	82	12
Total extension of bridges and viaducts (m)	6,148	20,075	1,2
No of tunnels		39	
Total extension of tunnels (m)		6,058	
No of intersections			

### SP-055 - Rodovia Cônego Domênico Rangoni (SP-248/SP-055)

The sector comprised from km 0+000 (km 248+050 of BR-101) to km 8+500m (85+500 of SP-055) has an extension of 8.50 kilometers, maximum ramp of 3% and double track with two strips in each direction.

Other features of such highway are presented in the following table:

**Table V**

<b>RODOVIA CÔNEGO DOMÊNICO RANGONI</b>	
	<b>Baixada</b>
Extension: (km)	31.0
Directrix speed (km/h)	60/80
No of traffic tracks	4
Maximum ramp (%)	7
Minimum horizontal range (m)	180
No of bridges and viaducts	20
Total extension of bridges and viaducts (m)	8,308
Total extension of the tunnel (m)	939
No of intersections:	1

**SP-055 - Rodovia Cônego Domênico Rangoni and Padre Manuel da Nóbrega (BR-101 and SP-055)**

The sector of SP-055 comprised between km 248+050 (km 77+000 of SP-055 Rodovia Cônego Domênico Rangoni) and km 292+200 (km 76+050 of SP-055 Rodovia Padre Manuel da Nóbrega), crosses the municipalities of Santos, Cubatão and Praia Grande, in an extension of 12 kilometers, having a project speed of 80km/h, maximum ramp of 6% and minimum range of 167 metros, with two tracks and double strip for each direction.

Other features of such highway are presented in the following table:

**Table VI**

<b>RODOVIA PADRE MANOEL DA NÓBREGA</b>	
	<b>Baixada</b>
Extension: (km)	21.6
Directrix speed (km/h)	80/60
No of traffic tracks	4
Maximum ramp (%)	3
Minimum horizontal range (m)	180
No of bridges and viaducts	7
Total extension of bridges and viaducts (m)	2,413
No of intersections:	1

**Planalto Interconnection (SP-041/150)**

Anchieta and Imigrantes highways interconnect one another in the Planalto and in the municipality of São Bernardo do Campo, forming the main binary of the System. With extension of 8 kilometers in double tracks, it begins in km 40+739m in the Rodovia dos Imigrantes, ending in km 40+023 of Via Anchieta. Its main features are: project speed of 80km/h, maximum ramp of 2% and horizontal curve minimum range of 1,200m.

**Baixada Interconnection (SP-059/150)**

Beginning in km 58+958 of Via Anchieta and ending in km 61+900 of Rodovia dos Imigrantes, with extension of 1.80 kilometers, the Baixada Interconnection forms the other binary of connection among the highways. It is located in the municipality of Cubatão and it has more simple geometrical features, that is: minimum horizontal range of 175m, project speed of 80 km/h and maximum ramp with 2% inclination.

**Operational infrastructure**

The Anchieta - Imigrantes System comprises an operational infrastructure to effect the collection in tollhouses, to render assistance services to the user, such as first aid attendance, mechanical help, tow-car service, traffic inspection, emergency telephone service and information to the user.

**Weighing Gates**

The SAI System has in operation weighing gates for the weighing control of commercial vehicles. The traffic of excessive loaded commercial vehicles reduces the pavement duration and the safety of the user, besides increasing the number of interventions and the maintenance/ pavement conservation cost.

Equipment for control and weighing of commercial vehicles is implemented in strategic points of the highways and constitutes of fixed, selective fixed and movable precision balances. The operation of the balances is made through static or dynamic charge, depending on the type of equipment installed and of the objectives required and/or needed for control.

The location and operational features of the weighing control system are presented in the following table:

**Table VII**

WEIGHING GATES						
HIGHWAYS	LOCATION	KM	DIRECTION	TYPE	NO OF VEHICLES WEIGHED / YEAR	% OF VEHICLES ASSESSED
SP150-Via Anchieta	R.Grande	29 + 707	S.Paulo-Littoral	Static	370,862	3.1
SP150-Via Anchieta	Cubatão	54 + 000	Littoral-S.Paulo	Static	259,023	11
SP160-Rod. Imigrantes	S. Bernardo	28 + 200	S.Paulo- Littoral	Static	309,047	9.9
SP160-Rod. Imigrantes	Cubatão	56 + 800	Littoral- S.Paulo	Static	232,355	12
SAI System	Random			Movable (2)	1,561	4.3

**System of Attendance to the User (SAU)**

The system of assistance to the user comprises services and accessories placed at the users' disposition, in order they might be attended free of charge or expenses. The services which are at the drivers' disposition are the following:

- Mechanical help service - SOS
- Tow-car
- First aid services - Ambulance
- Traffic inspection service
- Emergency telephone

In the following table, the location of the SAU Posts in the SAI system highways is indicated:

**Table VIII**

TABLE OF LOCATION OF SAU POSTS			
SAI HIGHWAYS	SAU	LOCATION KM	TRACK
SP-055 Rodovia Cónego Domênico Rangoni	SAU-B	250+464/(74+590)	WEST
SP-055 Rodovia Padre Manoel da Nóbrega	SAU-B	279+950/(63+580)	EAST
SP-150 Via Anchieta	SAU-B	12+500	NORTH
SP-150 Via Anchieta	SAU-B	29+707	SOUTH
SP-150 Via Anchieta	SAU-A	40+600	SOUTH
SP-150 Via Anchieta	SAU-B	56+740	NORTH
SP-160 Rodovia dos Imigrantes	SAU-B	15+917	SOUTH
SP-160 Rodovia dos Imigrantes	SAU-C	58+200	SOUTH
SP-160 Rodovia dos Imigrante	SAU-B	56+500	NORTH
SP-160 Rodovia dos Imigrantes	SAU-C	60+500	SOUTH

SAU A = Complete with dressing room, vehicle shelter and pantry buildings.

SAU B = Only vehicle shelter buildings, using support and Toll or Balance.

SAU C = No building of its own.

### **Tollhouses**

The SAI System has implemented tollhouses for the collection of tariffs from the users and for vehicles traffic control. The collection is utilized for operational activities for the users and highways improvement.

The tolling collection operation is currently manual and the equipment has been updated, being automated.

Tollhouses are also utilized for transmitting operational information to the users in the highways, such as, visibility, accidents and deviations.

Another utilization is the data collection as to the quality, type and quantity of vehicles passing though the highways. Such data are transmitted to the Operational Control Center (COC), where such data are stored for use in studies and traffic operations planning.

The following tables present tollhouses operational features:

**Table IX**

TOLLHOUSES					
HIGHWAYS	PLACE	KM	Nº OF CABINS	TYPE	DIRECTION OF COLLECTION
SP - 150 - Via Anchieta	R. Grande	31 + 106	13	Track	São Paulo - B. Santista
SP - 160 - Rod. Imigrantes	Piratininga	32 + 381	16	Track	São Paulo - B. Santista
SP - 160 - Rod. Imigrantes	Diadema	15 + 917	6	Blockage	São Paulo - Diadema
SP - 160 - Rod. Imigrantes	Batistini	25 + 579	2	Blockage	São Paulo -S.Bernardo
SP - 160 - Rod. Imigrantes	Eldorado	20 + 100		Blockage	
SP - 055 - Rod. Con. D. Rang.	Santos	250 + 464	11	Track	Guarujá - Cubatão
SP - 050 - Rod. P.M. da Nóbrega	S. Vicente	279 + 950	11	Track	P. Grande - Guarujá



**Table X**

TOLLED TRAFFIC DEMAND				
HIGHWAYS	PLACE	KM	ANNUAL VOLUME	VDM
SP - 150 - Via Anchieta	R. Grande	31 + 106	4,381,702	12,005
SP - 160 - Rod. Imigrantes	Piratininga	32 + 381	7,000,017	19,178
SP - 160 - Rod. Imigrantes	Diadema	15 + 917	7,295,802	19,998
SP - 160 - Rod. Imigrantes	Batistini	25 + 579	1,097,555	3,007
SP - 160 - Rod. Imigrantes	Eldorado	20 + 100		
SP - 055 - Rod. Con. D. Rang.	Santos	250 + 464	3,034,744	8,314
SP - 050 - Rod. P. M. da Nóbrega	S. Vicente	279 + 950	2,626,440	7,196

Source: DERSA/1996

## Traffic Studies and Anchieta-Imigrantes Highway System - SAI/SP Capability

Traffic studies and the Anchieta-Imigrantes Highway System capability have been developed with the purpose of supporting the technical proposal for the bidding of SAI's concession, as well as supporting the company's decision process as to the commercial proposal, since the future traffic projection in the system shall result in revenue estimates and investment scheduling.

Therefore, in this report are presented:

- the historical evolution of the traffic in the roads which comprise the system,
- criteria and results of the future traffic projection, seasonal variations and peaks.

### **Identification of Homogeneous Sectors**

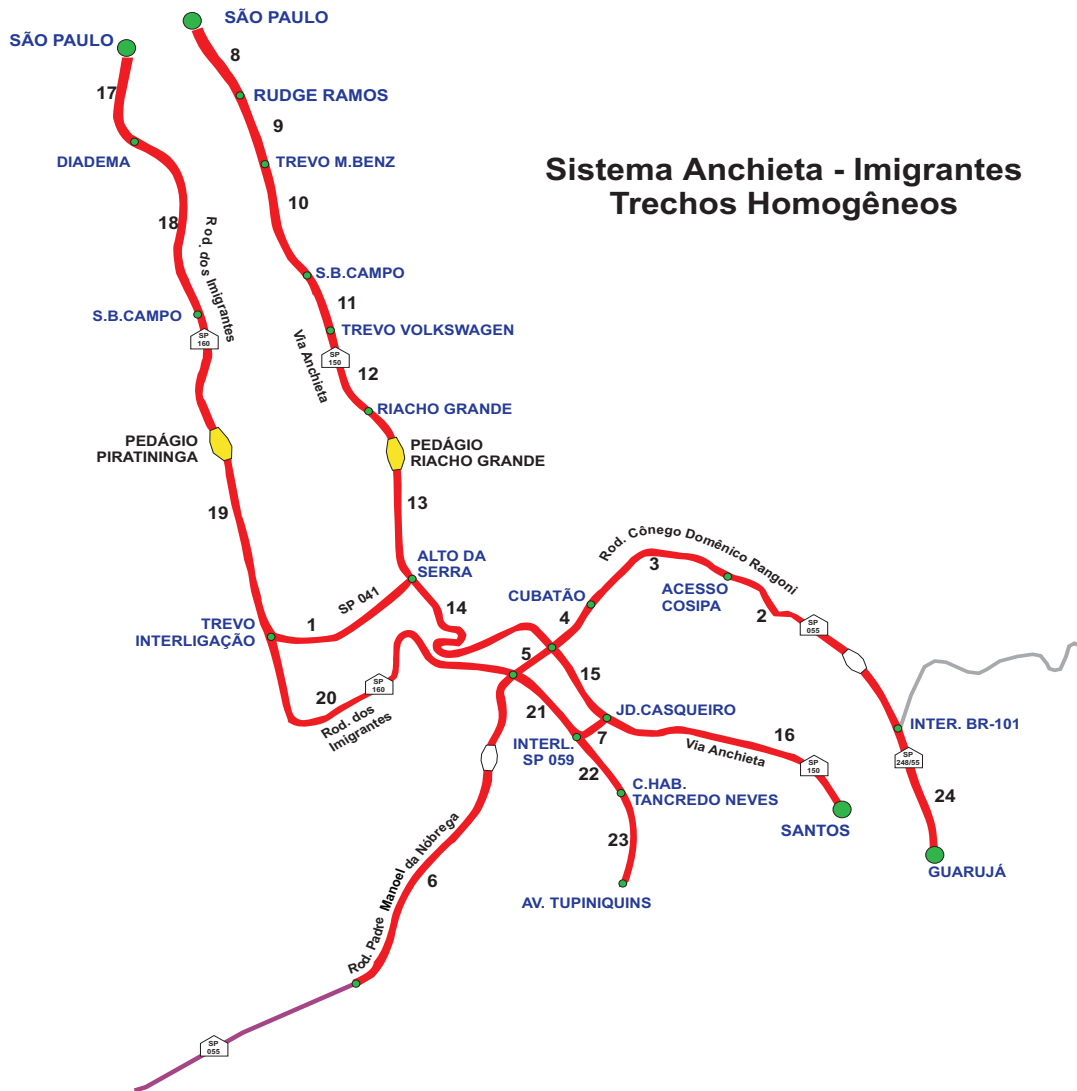
One of the important initial duties in traffic studies consists of the identification of homogeneous traffic sectors, as from the knowledge of physical features of the analyzed roads, urban nucleuses representing attraction poles/traffic generation, intersections with other highways causing significant volume variations.

In the SAI, due to the complexity of the system, the sectors set forth in the Notice to Bid have been adopted. Remark, however, that for the sectors having marginal roads, it is the intention to present the traffic of each track (central, marginal North and marginal south) separately, even if they are presented in the Notice to Bid in an aggregate form.

Thus, it is presented below, the SAI's croquis with the identification of the sectors for which historical series of the traffic have been assessed and respective projections have been effected.

It is still worth emphasizing the location of the Riacho Grande and Piratininga tollhouses, identified in the croquis, demonstrating Via Anchieta and Imigrantes' traffic, respectively, and for which a future volume estimate has also been effected.

NUMERO	TRECHOS	RODOVIA
1	Imigrantes - Anchieta	SP 041 (Interligação Planalto)
2	Acesso Guarujá - Acesso Cosipa	SP 055 (Rod. Con. D. Rangoni)
3	Acesso Cosipa - Cubatão	SP 055 (Rod. Con. D. Rangoni)
4	Cubatão - Anchieta	SP 055 (Rod. Con. D. Rangoni)
5	Anchieta - Imigrantes	SP 055 (Rod. Con. D. Rangoni)
6	Imigrantes - Pedro Taques	SP 055 (Rod. Pde.Manoel da Nóbrega)
7	Imigrantes - Anchieta	SP 059 (Interligação Baixada)
8	São Paulo - Rudge Ramos	SP 150 (Via Anchieta)
9	Rudge Ramos - Trevo Mercedes Benz	SP 150 (Via Anchieta)
10	Trevo Mercedes Benz - São Bernardo do Campo	SP 150 (Via Anchieta)
11	S.Bernardo do Campo - Trevo Volkswagen	SP 150 (Via Anchieta)
12	Trevo Volkswagen - Riacho Grande	SP 150 (Via Anchieta)
13	Riacho Grande - Alto da Serra	SP 150 (Via Anchieta)
14	Alto da Serra - Cubatão	SP 150 (Via Anchieta)
15	Cubatão Jardim Casqueiro	SP 150 (Via Anchieta)
16	Jardim Casqueiro - Santos	SP 150 (Via Anchieta)
17	São Paulo - Diadema	SP 160 (Rodovia dos Imigrantes)
18	Diadema - S.Bernardo do Campo	SP 160 (Rodovia dos Imigrantes)
19	S.Bernardo do Campo - Interligação Planalto	SP 160 (Rodovia dos Imigrantes)
20	Interligação Planalto - SP 055	SP 160 (Rodovia dos Imigrantes)
21	SP 055 - SP 059	SP 160 (Rodovia dos Imigrantes)
22	SP 059 - Conj. Hab. Tancredo Neves	SP 160 (Rodovia dos Imigrantes)
23	C.Hab. Tancredo Neves - Av. Tupiniquins	SP 160 (Rodovia dos Imigrantes)
24	Acesso Guarujá	SP 248 (Rod. Con. D. Rangoni)





### **Historical Evolution of the Traffic**

Information assessed from DERSA and DER/SP statistical bulletins allowed the composition of historical series of the traffic, knowledge of seasonal factors and weekly and hourly variations.

Following, historical series have been organized for the Riacho Grande and Piratininga tollhouses, demonstrating the evolution of the daily total traffic tolled, unidirectional in the tolling collection direction, in the Anchieta and Imigrantes roads, besides the traffic observed in the blockage tolls in Via Imigrantes - Diadema, Batistini and Eldorado accesses.

Also, series for the remaining sectors identified in previous croquis have also been organized, containing bi-directional VMD in double track sectors and unidirectional for one-way track sectors, as well as in marginal roads which also have one-way direction.

The need to analyze marginal roads traffic, individually, is emphasized in the cases of sectors having central track and marginal road. It is important to remind that, due to highway infrastructure problems which are being aggravated for several years, in some sectors the traffic is concentrated in marginal roads, since the central track is not operating.

A statistic treatment of the historical consolidated series has, then, been carried out, for PASSENGER and COMMERCIAL vehicles categories, with the purpose of establishing parameters for future traffic projections presented in the following chapter.

Following, data assessed regarding the Riacho Grande and Piratininga tollhouses is presented, demonstrating the annual traffic evolution, traffic distribution in PASSENGER and COMMERCIAL categories from 2E to 6E and monthly variation.

**Table XI**

**Collection Gate - Riacho Grande Tollgate/ South Track  
Annual Traffic Evolution by category**  
(in thousand vehicles tolled per year)

<b>Year</b>	<b>Passenger</b>	<b>Commercial</b>	<b>Total</b>
1978	2,760	1,011	3,771
1979	2,832	904	3,736
1980	2,594	903	3,497
1981	2,486	778	3,264
1982	2,422	684	3,106
1983	2,272	682	2,954
1984	2,248	739	2,987
1985	2,419	768	3,187
1986	2,711	802	3,513
1987	2,601	853	3,454
1988	2,509	900	3,409
1989	2,861	908	3,769
1990	2,951	842	3,793
1991	3,072	857	3,929
1992	3,153	865	4,018
1993	3,259	921	4,180
1994	3,393	988	4,381
1995	4,109	1,128	5,237
1996	4,607	1,153	5,760



**Table XII**

**Collection Gate - Piratininga Tollgate/ South Track**  
**Annual Traffic Evolution by category**  
(in thousand vehicles tolled per year)

Year	Passenger	Commercial	Total
1978	3109	492	3601
1979	3641	689	4330
1980	3415	781	4196
1981	3504	733	4237
1982	3682	699	4381
1983	3741	742	4483
1984	3756	807	4563
1985	3909	797	4706
1986	4640	895	5535
1987	4812	975	5787
1988	4644	921	5565
1989	5180	939	6119
1990	5296	709	6005
1991	5420	891	6311
1992	5567	909	6476
1993	5846	921	6767
1994	6046	953	6999
1995	6356	1027	7383
1996	6696	1065	7761

## Traffic Estimate for the SAI

### *Criteria for Future Traffic Determination*

Once analyzed the historical traffic evolution, in each tollgate and in homogeneous sectors, the following criteria are applied for future VMD projection:

- I. statistic treatment of the series, for definition of traffic growth trends, through linear and exponential regressions, obtaining the correspondent equations, for PASSENGER and COMMERCIAL vehicles, validating those presenting  $R^2 > 0.75$ ; logarithmic regressions have not been applied.
- II. application of valid equations, according to previous criterion, for VMD projection in growth trends in several scenarios;
- III. also, application of historical traffic indexes, for periods near to 5, 10 and 15 years (1980-1996, 1985-1996, 1990-1996), obtained in the series, for comparative effect, including growth indexes contained in the Notice to Bid;
- IV. obtaining of the average (*average 1*) and standard deviation between VMD projected in different trends and indexes, validating the curves maintained between the limits [VMD  $\pm$  standard deviation];
- V. obtaining of the new average (*average 2*) among the valid curves; determination of growth indexes (i% per annum) for the concession period among various results for comparative effect;

Remark that high growth indexes curves reflecting an overoptimistic scenario have been expurgated (which is the case of the projection based in exponential curves). Such approach is due to the historical experience of economic oscillations deriving from local politics alterations.

Besides, it is known that there are highways in the State of São Paulo planned to be constructed and explored and there are others, still, in process of privatization. Therefore, there will be new alternatives for connections between the South and North of the State and with the south of the State of Rio, what, for its turn, shall also be attractive, due to the Port of Sepetiba privatization/amplification, in Rio de Janeiro. We have also to consider the RFSA and FEPASA railway systems privatization.

Therefore, a more realistic scenario is sought for traffic estimate with more feasible growth indexes.

- VI. finally, the VMD recommended results from the adjustment of the projection given by *average 2*, determination of the respective growth index for the concession period and application of such index to the last volume observed in the historical series;
- VII. the minimum and maximum limits for variation of the future traffic recommended maintain the correlation factors between the average VMD and VMD  $\pm$  standard deviation;
- VIII. for the sectors where it was not possible to obtain growth trends curves, due to the non-existence of counting and/or inconsistency of the historical series, growth indexes for PASSENGER and COMMERCIAL vehicles of the nearer sector with similar road features, have been applied;
- IX. VMD distribution for categories 1 (Passenger and Transport Vans), 2 (Commercial 2E), 3 (Commercial 3E), 4 (Commercial 4E), 5 (Commercial 5E), 6 (Commercial 6E), 7 (Passenger and Semi-Tow Transport Van) and 8 (Passenger and Tow Transport Van) is obtained as from the percentage observed in data assessed in the Riacho Grande (Via Anchieta) and Piratininga (Via Imigrantes) tollhouses, for the years 1994 to 1996 and, also comparing with the distribution of other systems used in the State of São Paulo (example SAB).

VMD PASSENGER has been separated into categories 1, 7 and 8 and VMD COMMERCIAL has been separated into categories 2 to 6.

*Determination of Future Traffic in the Riacho Grande and Piratininga Tollhouses*

The traffic projection work in the Riacho Grande and Piratininga tollhouses considered, at first, the consolidated historical series and respective growth trends curves. Afterwards, according to statistical criteria, it reached the recommended values and the maximum and minimum limits.

Finally, as from the VMD recommended for PASSENGER and COMMERCIAL vehicles, the future traffic for the categories of vehicles desired is established.

The Table below presents the consolidated final result of the projections which shall be used as basis for ECOVIAS' projected income calculation.<sup>1</sup>

**Table XIII**

**Consolidated Projection of Tolled Traffic Volume**

YEAR	TRAFFIC VOLUME			
	SP - 150 (Anchieta)	SP - 160 (Imigrantes)	SP - 55	TOTAL
01	6,220,695	17,879,525	7,741,650	31,841,870
02	6,414,875	18,417,900	7,983,098	32,815,873
03	6,614,530	18,975,255	8,232,758	33,822,543
04	6,820,755	19,546,115	8,489,535	34,856,405
05	7,032,820	20,134,860	8,754,708	35,922,388
06	7,252,550	20,742,220	9,027,910	37,022,680
07	7,478,850	21,368,925	9,309,325	38,157,100
08	7,712,085	22,012,420	9,600,048	39,324,553
09	7,952,985	22,678,545	9,899,713	40,531,243
10	8,200,455	23,364,380	10,208,320	41,773,155
11	8,455,955	24,071,020	10,526,783	43,053,758
12	8,720,215	24,798,830	10,855,830	44,374,875
13	8,991,775	25,549,635	11,194,003	45,735,413
14	9,272,460	26,323,800	11,543,855	47,140,115
15	9,562,635	27,119,135	11,903,745	48,585,515
16	9,860,840	27,941,845	12,275,498	50,078,183
17	10,168,170	28,788,280	12,658,748	51,615,198
18	10,485,355	29,660,995	13,053,860	53,200,210
19	10,812,395	30,560,355	13,460,835	54,833,585
20	11,150,385	31,488,915	13,881,315	56,520,615
TOTAL	169,180,785	481,422,955	210,601,533	861,205,273

Source: Proposal presented to DER for bidding of Concession

<sup>1</sup> more details on such projections and their criteria can be obtained at ECOVIAS.

*Determination of Future traffic in the Blockage Tollhouses of Diadema, Batistini and Eldorado*

A future traffic projection for the Via Imigrantes blockage tollhouses has also been effected.

As it can be seen below, it was not possible to compose a consistent historical series and the respective trend curves with the existing data.

Thus, the indexes obtained in the Piratininga tollhouse and the same VMDmax and VMDmin factors for PASSENGER and COMMERCIAL vehicles have been applied, for projection of future traffic, as from the VMD observed in 1995.

**Table XIV**

**Road: SP160**  
(Rodovia dos Imigrantes)

**DIADEMA TOLLGATE**  
(Blockage)

YEAR	VEHICLE CATEGORIES							
	1	2	3	4	5	6	7	8
1998	4,840,630	284,335	189,800	113,150	281,780	37,595	430,335	107,675
1999	4,993,930	290,175	193,815	115,705	287,620	38,325	443,840	110,960
2000	5,151,975	296,380	198,195	118,260	293,825	39,420	458,075	114,610
2001	5,314,765	302,585	202,210	120,450	300,030	40,150	472,310	118,260
2002	5,482,665	309,155	206,590	123,005	306,235	40,880	487,275	121,910
2003	5,656,405	315,725	210,970	125,925	312,805	41,975	502,605	125,560
2004	5,835,255	322,295	215,350	128,480	319,375	42,705	518,665	129,575
2005	6,019,580	329,230	220,095	131,035	326,310	43,435	535,090	133,590
2006	6,210,110	336,165	224,475	133,955	333,245	44,530	551,880	137,970
2007	6,406,480	343,465	229,220	136,875	340,180	45,625	569,400	142,350
2008	6,609,055	350,765	234,330	139,795	347,480	46,355	587,650	146,730
2009	6,818,200	358,065	239,075	142,715	354,780	47,450	605,900	151,475
2010	7,033,550	365,730	244,185	145,635	362,445	48,545	625,245	156,220
2011	7,256,200	373,395	249,295	148,920	370,110	49,275	644,955	161,330
2012	7,485,420	381,425	254,770	151,840	377,775	50,370	665,395	166,440
2013	7,722,305	389,455	260,245	155,125	385,805	51,465	686,565	171,550
2014	7,966,490	397,485	265,720	158,410	394,200	52,560	708,100	177,025
2015	8,218,340	406,245	271,195	161,695	402,595	53,655	730,365	182,500
2016	8,478,220	414,640	277,035	165,345	410,990	54,750	753,725	188,340
2017	8,746,495	423,400	282,875	168,630	419,750	56,210	777,450	194,545

**Table XV**

**Road: SP160**  
(Rodovia dos Imigrantes)

**BATISTINI TOLLGATE**  
(Blockage)

YEAR	VEHICLE CATEGORY							
	1	2	3	4	5	6	7	8
1998	582,175	62,780	41,975	24,820	62,050	8,395	51,830	12,775
1999	600,425	63,875	42,705	25,550	63,510	8,395	53,290	13,505
2000	619,405	65,335	43,800	25,915	64,605	8,760	55,115	13,870
2001	639,115	66,795	44,530	26,645	66,065	8,760	56,940	14,235
2002	659,190	68,255	45,625	27,010	67,525	9,125	58,765	14,600
2003	679,995	69,715	46,355	27,740	68,985	9,125	60,590	14,965
2004	701,530	71,175	47,450	28,470	70,445	9,490	62,415	15,695
2005	723,795	72,635	48,545	28,835	71,905	9,490	64,240	16,060
2006	746,790	74,095	49,640	29,565	73,365	9,855	66,430	16,425
2007	770,515	75,555	50,370	30,295	74,825	9,855	68,620	17,155
2008	794,605	77,380	51,465	30,660	76,650	10,220	70,810	17,520
2009	819,790	78,840	52,560	31,390	78,110	10,585	73,000	18,250
2010	845,705	80,665	53,655	32,120	79,935	10,585	75,190	18,615
2011	872,715	82,125	55,115	32,850	81,395	10,950	77,380	19,345
2012	900,090	83,950	56,210	33,580	83,220	10,950	79,935	20,075
2013	928,560	85,775	57,305	34,310	85,045	11,315	82,490	20,805
2014	958,125	87,600	58,400	35,040	86,870	11,680	85,045	21,170
2015	988,420	89,425	59,860	35,770	88,695	11,680	87,965	21,900
2016	1,019,445	91,250	60,955	36,500	90,520	12,045	90,520	22,630
2017	1,051,930	93,440	62,415	37,230	92,345	12,410	93,440	23,360

**Table XVI**

**Road: SP160**  
(Rodovia dos Imigrantes)

**ELDORADO TOLLGATE**  
(Blockage)

YEAR	VEHICLE CATEGORY							
	1	2	3	4	5	6	7	8
1998	1,934,500	112,785	75,555	44,895	112,055	14,965	171,915	43,070
1999	1,995,820	115,340	77,015	45,990	114,245	15,330	177,390	44,530
2000	2,058,965	117,895	78,840	47,085	116,800	15,695	182,865	45,625
2001	2,123,935	120,450	80,300	47,815	119,355	16,060	188,705	47,085
2002	2,191,095	123,005	82,125	48,910	121,910	16,425	194,910	48,545
2003	2,260,445	125,560	83,950	50,005	124,465	16,425	200,750	50,370
2004	2,331,985	128,115	85,410	51,100	127,020	16,790	207,320	51,830
2005	2,405,715	130,670	87,235	52,195	129,575	17,155	213,890	53,290
2006	2,481,635	133,590	89,060	53,290	132,495	17,520	220,460	55,115
2007	2,560,110	136,510	91,250	54,385	135,050	17,885	227,760	56,940
2008	2,641,140	139,430	93,075	55,480	137,970	18,615	234,695	58,765
2009	2,724,725	142,350	94,900	56,575	140,890	18,980	242,360	60,590
2010	2,810,865	145,270	97,090	58,035	144,175	19,345	250,025	62,415
2011	2,899,925	148,555	99,280	59,130	147,095	19,710	257,690	64,605
2012	2,991,540	151,475	101,105	60,225	150,015	20,075	266,085	66,430
2013	3,086,075	154,760	103,295	61,685	153,300	20,440	274,480	68,620
2014	3,183,895	158,045	105,485	62,780	156,585	20,805	282,875	70,810
2015	3,284,270	161,330	107,675	64,240	159,870	21,535	292,000	73,000
2016	3,388,295	164,615	110,230	65,700	163,155	21,900	301,125	75,190
2017	3,495,605	168,265	112,420	67,160	166,805	22,265	310,615	77,745

*Determination of the Future Traffic of the Santos and São Vicente Tollhouses*

For determining the projected volumes for the Santos and São Vicente tollhouses, the historical series of sectors 2 and 6, respectively, have been adopted, since those are located in the said sectors.

A statistic treatment of sector 6 has been carried out, presenting a more consistent series, thus obtaining the growth indexes and volumes projected for the São Vicente tollhouse.

Following, the same growth indexes of Passenger and Commercial vehicles founded for sector 6 have been applied to the last value observed in sector 2 series, thus obtaining the volumes projected for the Santos tollhouse.

**Determination of Future Traffic in Homogenous Sectors**

*Historical Evolution of the Traffic*

In this item, the results of traffic projection for homogenous sectors identified in the croquis presented in item 2.2.1. are presented.

However, we would like to make some considerations:

- I. the traffic presented is bi-directional in most of the sectors, except for the marginal roads of Via Anchieta, in the sectors of the Via Imigrantes between the two Interconnections (Planalto e Baixada), and in the sectors where are located the Riacho Grande and Piratininga tollhouses; the indication is made in the tables of each sector;
- II. we would like to repeat that, it was not possible to compose a consistent series and trends for all sectors, resulting in the adoption of indexes for PASSENGER and COMMERCIAL vehicles of the correspondent sector of the road. Thus, for sectors from 2 to 5 and 24, the indexes of sector 6 have been adopted; for sectors of Via Anchieta (8 to 16) the indexes of sector 13 have been adopted; for sectors of Via Imigrantes (17 to 23) the indexes of sector 19 have been adopted and for sector 7, the indexes of sector 1;
- III. remark that the Riacho Grande and Piratininga tollhouses are located in sectors 13 and 19, respectively; also, the Santos and São Vicente tollhouses are located in sectors 2 and 6;
- IV. therefore, in this item, for the sectors where consistent series have been composed, the charts containing the statistic treatment for PASSENGER and COMMERCIAL vehicles and consequent projected volumes, are repeated;
- V. it is worth emphasizing the intense growth presented in specific times in some sectors, due to traffic induced by physical and transport infrastructure problems (for example, transference of traffic from the central track to marginal roads) and also, intensification of metropolitan and urban areas occupation. Naturally, high growth indexes have not been considered in the final determination of the recommended VMD, since this would cause distortions, as previously commented.
- VI. for percentage distribution in the categories of passenger and commercial from 2E to 6E, the same factors of item 2.2.3.2 have been utilized.

The practical result of such projections feeds the studies to establish parameters for the cost, maintenance and reinvestments of the company. The spreadsheets with data for all sectors are available for consultation and are not herein presented so as to give more objectivity to this work.

### **Environment**

This region has by characteristic the Atlantic Forest. As from 1965, several federal and state decrees protect such region: forest code, fountainhead protection; soil use zoning; “Serra do Mar” recording as historic site; ecological reserves, state parks of the State of São Paulo and quality of waters.

In the meeting held on 12/08/1989, CONSEMA approved the descending track project as regards environmental impact.

The recent state law of the Baixada Santista metropolitan area considers the project as a priority.

The construction of a road has several consequences:

- 1) Separation of natural feeding chains caused by cuts and embankments;
- 2) Indirect interruptions causing unbalances such as: cuts causing lowering of the ground water or embankment causing augmentation of the ground water;
- 3) Impediment of animal migration due to cuts and embankments;
- 4) Track overrunning;
- 5) Flora alterations caused by changes in animal movement, since they are the species disseminators.





These consequences, in a common work, can be minimized, but not totally resolved. In the specific case of the Imigrantes track in the “Serra do Mar”, such problems are practically non-existent, since the particular characteristic of viaducts and tunnels project modifies very little the natural ground.

In relation to the environment, the selection of executive methods was fundamental. The project itself is already too favorable in giving privilege to tunnels and viaducts and considering the former service road as a support to the construction works of the descending track. With this, small grade modifications of such road, shall only be necessary in the neighborhood of the entrance of the tunnels. Other problems, such as cuts and embankments causing sliding or volumes of material falling from the hillside and covering vegetation, have been avoided. The fountainheads have been preserved by using the same places of crossing in streams and rivers.

A drainage system and a routing of the waters avoid erosions and sliding. The vegetation is totally recomposed.

As to the execution of viaducts, the major problem is the access to the locations of execution of the big tubes and other structures as from the service road. Such problem has been solved, leaving the service road in ramps having rails laid on sleepers and following the relief inclination. Such procedure only requires tree cuts and clearing of a narrow land strip, which after the completion of the works, shall be recomposed.

Supported by the rails, a small car shall move pulled by a tow. At the side of such line, a stair shall be used for personnel displacement.

Work conditions, specially in respect to infrastructure execution, are hard. Workers shall be subjected to rain, mist, land inclined up to 40° and the material and equipment transportation shall be normally made by hand. Therefore, the man safety and well-being shall have an special attention.

Individual protection equipment shall be furnished: training programs, leisure programs in the camping sites, good meals, good lodging, comfortable transportation, rest, medical care and worthy wages.

On the other side, conscientiousness programs shall be ministered aiming the environment protection:

- Garbage: gather in an appropriate place in order to be collected by the garbage truck; specially the recipients used for meals.
- Use of bathrooms: even in the service sites, the construction and use of bathrooms shall be mandatory in order not to pollute the fountainheads.
- Waste: wood, steel and concrete scraps shall be stored and removed to an approved disposal area, outside the Serra region.
- Hunting and fishing: it shall be definitely forbidden.
- Noise: the equipment shall be selected, giving preference to those issuing a low noise index.
- Smoke: the equipment shall be revised so as to be kept regulated and causing a minimum pollution index.
- Dust: Pipe trucks shall maintain the tracks always moisten.
- Valley silting up: measures should be taken in order that materials are not thrown into the basins causing the silting up of rivers.
- Disposal areas and lending: these problems shall not occur, taking into consideration that such areas are approved outside the Serra region.
- Erosion: in all critical points, a treatment has been provided by the project.



## Investments

### ***SP-160 - Imigrantes - Descending Track km 41 and km 59***

The construction of the Rodovia dos Imigrantes' second track (descending) constitutes the main enlargement work of the system.

The main services are:

Construction of tunnels, viaducts and earthworks sectors.

The work is composed by three sectors:

Planalto, Serra and Baixada, in an extension of 18 kilometers.

It begins in the Planalto, next to the intersection of the Imigrantes/Anchieta interconnection, in kilometer 41, and ends in the Baixada, in kilometer 59, next to the intersection with SP 170, Rodovia Manoel da Nóbrega.

The quantity, in metros, of the services is practically equal, if we consider the three sectors, but if we consider the sector of the stake 147 + 10 until 707 + 10, the predominance of tunnels and viaducts over earthwork is great. The distance of connection among them is minimal.

The works of the descending track are necessary due to the volume of traffic and to provide confidence and availability to the system, once the Anchieta has been subjected to several geotechnical and maintenance problems resulting from the years of use of the Highway, worsened by the surpassed features of its project.

The authorization given by CONSEMA to cross the Serra do Mar, connecting the Planalto to the Baixada, through the Atlantic Forest, is a major responsibility for Engineering, because of the challenges imposed by nature and environment respect.

The actual project has been guided so as to avoid parietal or cortical cuts and big cuts. The service road executed at the time of the ascending track construction shall be used now, thoroughly, thus avoiding sliding problems, contentions, forest destruction and other environmental aggression, as well significantly reducing the implementation term of the work.

The attached spreadsheet shows the positioning of the works along the sector.



**Table XVIII**

**Spreadsheet of Enlargement Works Localization**

	BEGINNING	END	LENGTH (metros)	KM
Intersection Planalto				40 + 739
Beginning of the Sector				41 + 000
Track				
End of Planalto - Beginning of Serra		11 + 00.0	2219.0	
Track	11 + 00.0	138 + 05.0	2545.0	
VD 1 A	138 + 05.0	145 + 00.0	135.0	
Track	145 + 00.0	147 + 10.0	50.0	
VD - 01	147 + 10.0	222 + 00.0	1490.0	
Track	222 + 00.0	222 + 06.8	6.8	
Gallery (Executed)	222 + 06.8	228 + 00.0	113.2	
Track	228 + 00.0	228 + 05.0	5.0	
VD - 02	228 + 05.0	230 + 00.0	35.0	
Track	230 + 00.0	230 + 10.0	10.0	
TD - 01	230 + 10.0	312 + 12.0	1642.0	
Track	312 + 12.0	312 + 15.0	3.0	
VD - 03	312 + 15.0	318 + 10.0	115.0	
Track	318 + 10.0	318 + 15.0	5.0	
TD - 02	318 + 15.0	389 + 02.0	1407.0	
Track	389 + 02.0	390 + 00.0	18.0	
VD - 04	390 + 00.0	395 + 15.0	115.0	
Track	395 + 15.0	400 + 08.0	93.0	
TD - 03	400 + 08.0	470 + 00.0	1392.0	
VD - 05	470 + 00.0	474 + 10.0	90.0	
Track	474 + 10.0	474 + 14.0	4.0	
TD - 04	474 + 14.0	489 + 15.0	301.0	
Track	489 + 15.0	490 + 10.0	15.0	
VD - 06	490 + 10.0	512 + 10.0	440.0	
TD - 05	512 + 10.0	553 + 18.0	828.0	
Track	553 + 18.0	554 + 10.0	12.0	
VD - 07	554 + 10.0	590 + 00.0	710.0	
Track	590 + 00.0	598 + 15.0	175.0	
VD - 08	598 + 15.0	609 + 00.0	205.0	
Track	609 + 00.0	610 + 15.0	35.0	
VD - 09	610 + 15.0	627 + 15.0	340.0	
Track	627 + 15.0	632 + 15.0	100.0	
VD - 10	632 + 15.0	652 + 00.0	385.0	
Track	652 + 00.0	657 + 15.0	115.0	
VD - 11	657 + 15.0	707 + 10.0	995.0	
Track	707 + 10.0	726 + 05.0	375.0	
VD - 12	726 + 05.0	786 + 08.0	1203.0	
Track	786 + 08.0	792 + 07.0	273.0	59 + 000

WORK	TOTAL
Track	6058.8
Tunnel	5570.0
Viaduct	6258.0
Gallery	113.2



The SP 160 - Rodovia dos Imigrantes Descending Track executive project shall be prepared by ECOVIAS and constantly followed up by DER and the technical agent.

The project shall be followed up by ECOVIAS together with DER since the beginning of the works until its conclusion.

The instructions and standards of the project shall be those defined by DER and they shall be in accordance with the new ABNT's techniques in force. All the works shall only be initiated when the respective projects are approved and the correspondent Environmental Licence released.

The preparation of the Rodovia dos Imigrantes Descending Track project and other works shall be supported by the elements obtained and catalogued in the period of studies of the executive project and construction of the Via dos Imigrantes Ascending Track, as well as by data and studies updating and prospects to be made.

### **Further Enlargements and Improvements**

#### *Basic Concept*

The improvements provided have the purpose of raising the quality of services, as to the comfort and safety of the user, as well as to provide a better quality of attendance, for the exercise of operational functions.

ECOVIAS shall carry out feasibility and dimensioning studies, studies and projects, pursuant to the requirements of the environmental licensing, work planning and execution, equipment and operational systems assembly and start-up trials, whenever necessary.

The operational performance annual studies shall be carried out together with DER and, according to them, investments shall be programmed in order to guarantee the compliance with service levels established by the Notice to Bid.

#### *Adaptation Criteria of the Transport System Capacity*

The evaluation of the Highway System's future conditions of operation, composing Lot 22, mainly regarding the traffic, allows the identification of the pertinence of interventions provided for in the Notice to Bid, as well as the need of complementing the estimated works, so as to meet the operational conditions required during the period to which the Concession refers, whether ECOVIAS' or DER's responsibility.

As from the review of the actual conditions of the highway sectors, and taking into consideration the expansion trends verified regarding the region where the highways are located, growth indexes which are most feasible for the different categories of vehicles, in each highway sector considered, have been established.

In possession of such indexes, the volume of vehicles estimated in each sector has been established, allowing the calculation of future service levels, taking into consideration the improvements provided for in the Notice to Bid, which shall establish an increase in the said Highway System capacity. As from the evaluations of future operational conditions, the need of complementing the estimated improvements within the scenario provided for the Concession period, has been identified.

The necessary improvements identified shall be executed according to instructions defined in the Notice to Bid, its attachments, and answers to the questions formulated in the terms of item 6.2 of the Notice to Bid.

#### *Traffic Projection*

As observed in the traffic studies, the region shall maintain a moderate growth trend, as regards the population or the economic development. In this review, no determinant element of alterations in socio-economic scenario of the area directly covered by Concession, has been identified. Therefore, conservative growth indexes have been considered for the Highway System as a whole.



### *Service Levels*

As it is widely known, the SAI has been saturated for many years, presenting, mainly in the Serra do Mar sector, an offer of capacity widely inferior to the present demand, due to the tourism seasonal traffic. Such saturation is also verified in the area of influence of the São Paulo and Baixada Santista metropolitan areas, because of the interference of the urban traffic of such localities on the traffic in the roads of the System.

Through projections of future vehicle volumes, for each one of the 24 homogenous sectors considered in our studies, we could verify the probable needs of capacity increase in the whole System. The analysis of the service levels obtained confirms the urgent need of adaptation between traffic offer and demand in various homogenous intervals of the SAI, as well as new adaptation along the concession period, even taking into consideration the enlargements scheduled in the Notice to Bid.

However, in respect to items 2.2 of attachment 7, 49.1.XIII of attachment 12, and the question/answer n° 45 of “Answers to the questions formulated in the terms of item 6.2 of the Notice to Bid”, in this proposal we present a dimensioning and we indicate the need of amplification, specifically for sectors numbered 1, 13 and 19. For these intervals, the investments necessary for the amplification required for compliance with the Notice to Bid, have been scheduled and included in our cash flow projections.

The needs of adjusting offer to demand of the remaining sectors (except for 1, 13 and 19) have not been set forth in the methodology proposal, nor provided for in cash flow, because of provision established in the Notice to Bid’s items and answers mentioned in previous paragraph.

### *Capacity Increases to Be Carried Out*

Besides the system’s Enlargements and Improvements provided for in the Notice to Bid, the implementation of additional strips of traffic has been scheduled for sectors n°s 1, 13 and 19. The investment of such additional strips implementation also comprises adaptation costs of art works and crossing points, resulting from the need of alteration of geometrical features of the sectors.

## **Minimum Improvements, Descriptions, Standards and Specifications**

### *Tollhouses - Adaptation and Modernization*

#### Civil works estimated services

Presently, there are the following tollhouses in the Anchieta-Imigrantes System:

- SP - 160 - Rodovia dos Imigrantes:
  - In km 15+917 - South Track (Diadema) - blockage
  - In km 20+100 - South Track (Eldorado) - blockage
  - In km 25+579 - South Track (Batistini) - blockage
  - In km 32+381 - South Track (Piratininga)
- SP - 150 Rodovia Anchieta
  - In km 31+106 - South Track (Riacho Grande)
- SP - 055 - Cônego Domênico Rangoni
  - In km 74+586 - West Track (Santos)
- SP - 055 - Rodovia Padre Manoel da Nóbrega
  - In km 63+800- East Track (São Vicente)

ECOVIAS should implement and modernize in up to 6 months the automatic and semi-automatic collection strips of the existent tollhouses.



Besides this modernization, an enlargement of the below mentioned tollhouses is estimated:

- SP - 160 - Rodovia dos Imigrantes:
  - In km 15+917 - South Track (Diadema) - blockage
  - In km 20+100 - South Track (Eldorado) - blockage
  - In km 25+579 - South Track (Batistini) - blockage
  - In km 32+381 - South Track (Piratininga)
- SP - 150 - Rodovia Anchieta
  - In km 31+106 - South Track (Riacho Grande)

The tollhouses installations are, in general, in good order.

ECOVIAS shall implement a modern and efficient collection system in the tollhouses.

This system shall be composed of, at least, one or two semi-automatic collection strips, one automatic collection strip, besides the estimate of a modern manual collection system in the remaining strips.

#### ***Other Investments***

As can be observed in detail in the tables below, the remaining investments provided refer to Pavement (Recovering with Asphalt/Restoration), Pavement Drainage, Special Art Works, Safety and Signaling Devices (Recovering with Asphalt/Restoration and Special Conservation), Others.

**Table XVIII**

**Financial Time Schedule of Enlargements**

DESCRIPTION	DESCRIPTION
<b>1. MAIN ENLARGEMENT (SP-160 DESCENDING TRACK)</b>	<b>525,295,336.73</b>
1.1 Executive Project	20,203,666.80
1.2 Construction	505,091,669.93
<b>2. OTHER ENLARGEMENT WORKS/IMPROVEMENTS</b>	<b>164,621,143.28</b>
<b>2.1 Marginal/Additional Strips</b>	<b>94,527,335.93</b>
2.1.1 Marginal North between km 18 and 29 of SP-150	30,561,769.61
2.1.2 Additional Strip with Parking Curb between km 59 (after VD12) Km 62 of SP-160	4,221,948.01
2.1.3 Fast Speed Strips / Low Speed Strips	231,219.36
2.1.4 Additional Strips Anchieta SP-150	15,284,893.25
2.1.5 Additional Strips Imigrantes SP-160	32,926,109.36
2.1.6 Additional Strips Interconnection Planalto - SP 041	11,301,396.34
<b>2.2 Installations</b>	<b>20,877,902.54</b>
2.2.1 MOBILE WEIGHING GATE - 2 UN. SP-150 Km 12+700 S and 12+500 S	1,558,407.93
2.2.2 MOBILE WEIGHING GATE - 3 UN. SP-160 Km 14+800 (South and North tracks) and Km 65 North track	1,862,356.55
2.2.3 MOBILE WEIGHING GATE - 2 UN. SP-055 PMN- Km 287.65 East/West Tracks	1,268,237.70
2.2.4 FIXED WEIGHING GATE -Km 248.05 - SP-055 - CDR - West Track	2,569,732.96
2.2.5 FIXED WEIGHING GATE -Km 264.55 - SP-055 - CDR - East Track	2,269,118.06
2.2.6 FIXED WEIGHING GATE ADAPTATION - KM 54 - SP-150 North track	1,308,836.45
2.2.7 PGF - KM 30 - SP-150 - SOUTH TRACK (M.PMRv+M.S.+M.I.V.+M.ICMS)	2,258,653.52
2.2.8 PGF - KM 28 - SP-160 - SOUTH TRACK (M.PMRv+M.S.+M.I.V.+M.ICMS)	1,002,628.69
2.2.9 PGF - KM 54 - SP-150 -NORTH TRACK (M.PMRv+M.S.+M.I.V.+M.ICMS)	2,425,021.47
2.2.10 PGF -KM 56+500 - SP-150 - NORTH TRACK (M.PMRv+M.S.+M.I.V.+M.ICMS)	1,159,861.23
2.2.11 SAU SUPPORT POST KM 56+740 SP-150 - NORTH TRACK	58,082.00
2.2.12 PMRv - KM 64 - SP-150	337,736.32
2.2.13 PMRv - KM 15 - SP-160 - SOUTH TRACK	220,883.99
2.2.14 SAU SUPPORT POST KM 15 SP-160 - SOUTH TRACK	58,082.00
2.2.15 SAU KM 62 - SP-160 - NORTH TRACK	419,512.12
2.2.16 SAU KM 44+700 - SP-160 - NORTH TRACK	103,359.66
2.2.17 SAU KM 28 - SP-160 - SOUTH TRACK	103,359.66
2.2.18 SAU KM 40 + 600 - SP-150 - SOUTH TRACK	53,073.75
2.2.19 SAU KM 30 - SP-150 - SOUTH TRACK	103,359.66
2.2.20 SAU KM 19+700 - SP-150 - NORTH TRACK	258,232.48
2.2.21 SAU KM 254+550 - SP-055 CDR- EAST TRACK	450,365.51
2.2.22 SAU KM 279+600 - SP-055 PMN- WEST TRACK	262,652.88
2.2.23 Diadema TOLLHOUSE Km (15+ 917)- IMIGRANTES - SP-160	127,034.88
2.2.24 Eldorado TOLLHOUSE Km (20+ 100)- IMIGRANTES - SP-160	53,183.76
2.2.25 Batistini TOLLHOUSE Km (25+ 579)- IMIGRANTES - SP-160	39,615.61
2.2.26 Piratininga TOLLHOUSE Km (32+ 381)- IMIGRANTES - SP-160	218,738.46
2.2.27 Riacho Grande TOLLHOUSE Km (31+ 106)-ANCHIETA- SP-160	327,775.25
<b>2.3 Gantries</b>	<b>2,704,323.67</b>
2.3.1 km 47.25 of SP-150 (substitution)	171,032.00
2.3.2 km 50.10 of SP-150 (substitution)	161,121.28
2.3.3 km 50.30 of SP-150 (substitution)	170,848.30
2.3.4 km 52.37 of SP-150 (substitution)	191,894.97
2.3.5 km 52.50 of SP-150 (substitution)	191,264.85
2.3.6 km 57.00 of SP-150 (substitution)	367,826.59
2.3.7 km 64.00 of SP-150 (construction)	466,613.86
2.3.8 km 67.50 of SP-160 (substitution)	287,225.91
2.3.9 km 67.90 of SP-160 (substitution)	268,907.68
2.3.10 km 270.85 of SP-055 (construction)	427,588.63
<b>2.4 Intersection Devices</b>	<b>32,769,019.15</b>
2.4.1 Complementation of intersection in km 248.05 - BR-101/SP-055 - C.D.R.	6,870,000.00
2.4.2 Adaptation of intersection and marginals of km 273.10 (Humaitá) on SP-055 -P.M.N.	2,643,681.51
2.4.3 Adaptation of intersection and marginals of km 277.10 (Jd. Rio Branco) on SP-055 -P.M.N.	3,060,466.49
2.4.4 Adaptation of intersection and marginals of km 280.60 (Pq. das Bandeiras) on SP-055 -P.M.N.	3,803,349.99
2.4.5 Adaptation (elimination of level crossing) of intersection of km 3.00 of SP-248/055 - C.D.R.	8,243,148.68
2.4.6 Adaptation of intersection in km 30 of SP-150	2,480,688.67
2.4.7 Adaptation of intersection in km 59 of SP-150 (access to resting area 8)	133,469.39
2.4.8 Improvements in intersection of km 60 of SP-150	860,996.85
2.4.9 Complementation of intersection of km 41 of SP-160	4,132,140.00
2.4.10 Complementation of intersection of km 20.6 of SP-160	541,077.57

**Table XVIII**

**Financial Time Schedule of Enlargements**

DESCRIPTION		DESCRIPTION
<b>2.5</b>	<b>Others</b>	<b>13,742,561.99</b>
2.5.1	Ventilation system of the Quilombo Tunnel in SP-055 - C.D.R.	327,600.00
2.5.2	Contention of hillside and track in km 264 of SP-055 - C.D.R.	121,156.74
2.5.3	Construction of Bridges over the Ribeirão dos Couros in SP-150	1,150,000.00
2.5.4	Construction of Viaduct in R.Ruyce Ferraz Alvim, Diadema, over SP-160	2,187,000.00
2.5.5	Infrastructure for 52 points for random installation of speed controllers	900,900.00
2.5.6	Data Transmission System (Included in the Telecommunications System of the Item Equipment, Vehicles and Control Systems)	-
2.5.7	System of Communication with the User	900,900.00
2.5.8	System of Traffic Sensoring	11,739.00
2.5.9	Special Mist Signaling	52,526.25
2.5.10	Variable Message Pannels	61,740.00
2.5.11	Bases of CODE Conservation and Enlargement	1,520,000.00
2.5.12	Electric Systems of the Enlargements	6,509,000.00



**Table XIX**

**Financial Time Schedule of Conservation /**

**Special Maintenance and Other Recuperation / Complementation**

DESCRIPTION	TOTAL
<b>SPECIAL CONSERVATION</b>	<b>156,104,822.98</b>
<b>1. Pavement (Asphalt Recovering/Restoring)</b>	<b>84,620,611.56</b>
1.1 Recovering of South Marginal - Planalto - Via Anchieta SP - 150 km 10.5 to 23	2,593,740.84
1.2 Recovering of South Marginal - Baixada - Via Anchieta SP - 150 km 60 to 65	1,037,661.96
1.3 Recovering of North Marginal - Planalto - Via Anchieta SP - 150 km 10.5 to 18	1,546,204.84
1.4 Recovering of North Marginal - Planalto - Via Anchieta SP - 150 km 18 to 29	1,911,517.08
1.5 Recovering of pavement km 10 / 40 of Via Anchieta SP- 150	12,450,126.96
1.6 Recovering km 40 / 54 of Via Anchieta SP -150	8,986,520.40
1.7 Recovering km 54 / 65 Via Anchieta SP - 150	4,564,986.00
1.8 Recovering of pavement km 11.5 / 30 of Imigrantes SP - 160	9,122,205.05
1.9 Recovering of pavement km 30 / 40 of Imigrantes SP-160, including intercession	6,771,121.68
1.10 Recovering / Restoring of Descending / ascending track, km 40 / 64 of Imigrantes SP-160	2,040,146.13
1.11 Recovering km 60 / 70 of Imigrantes SP-160	4,979,929.68
1.12 Restoring of the rigid pavement of the Planalto interconnection SP-041	385,838.88
1.13 Recovering of Baixada Interconnection SP - 059	542,872.92
1.14 Recovering km 270 / 240 in the SP-055 (km 54.45/85.5)	12,815,751.36
1.15 Recovering of Marginal km 268 (April 9th) to km 263 (Vila Paris) of SP-055	940,614.00
1.16 Recovering Anchieta / S curve / SP - 055 (P.M.N.)	8,419,179.78
1.17 Recovering of Anchieta Additional Strips SP - 150	1,545,248.00
1.18 Recovering of Imigrantes Additional Strips SP - 160	3,286,014.00
1.19 Restoring of Planalto Interconnection Additional Strips	680,932.00
<b>2. Pavement Drain</b>	<b>1,441,542.30</b>
2.1 Special conservation of pavement drains	1,441,542.30
<b>3. Special Art Works</b>	<b>22,074,637.87</b>
3.1 Substitution of guard rails Via Anchieta SP - 150	109,963.14
3.2 Restoring of R. Pequeno and Canal Schmidt of Via Anchieta SP - 150	207,603.00
3.3 Restoring of VA-1, VA-3, VD-5A and VA-6 of Via Anchieta SP - 150	135,247.55
3.4 Restoring of bridge km 53 and Viaduct 31 de Março of Via Anchieta SP - 150	66,699.63
3.5 Traffic placement of bridge Ribeirão dos Couros km 13 of SP - 150	949,791.06
3.6 Recovering of Barreiro and Rio Laranjeiras bridge of Imigrantes Highway - SP - 160	6,271,895.00
3.7 Beginning of works in Cónego Doménico Rangoni Highway SP-055	4,003.76
3.8 Restoring of metal bridge of Bertioga channel km 247 SP-055	2,034,651.02
3.9 Restoring R. Onças, Quilombo, Jurubatuba SP - 055	1,987,815.35
3.10 Reconstruction of the old bridge in the Bertioga channel km 247 of SP-055	5,722,150.00
3.11 Restoring of Ribeirão Branco and Fepasa Viaduct bridges - O.M.N.	16,977.67
3.12 Recuperation of concrete gantries	433,574.59
3.13 Substitution of expansion junctures	494,680.80
3.14 Recuperation of the bridge on Diana River - SP - 055 - C.D.R.	317,868.60
3.15 Recuperation of the Bridge over Santo Amaro River - SP - 055 - C.D.R.	28,274.40
3.16 Recuperation of support 7 of VA - 19 - SP - 160 - Imigrantes	3,052,350.00
3.17 Recuperation of bridge over Casqueiro River - SP - 150 - Anchieta	241,065.30
<b>4. Safety Devices</b>	<b>2,562,393.06</b>
4.1 Safety Devices - SP - 160 (including recuperation of railway gate km 73)	1,035,727.40
4.2 Safety Devices - SP - 150	1,092,783.25
4.3 Safety Devices - SP - 055 C.D.R. Highway	228,082.59
4.4 Safety Devices - SP - 055 Pe. M. da N. Highway	52,185.50
4.5 Safety Devices - SP - 041 - Planalto Interconnection	109,808.32
4.6 Safety Devices - SP - 059 - Baixada Interconnection	43,806.00

**Table XIX**

**Financial Time Schedule of Conservation /**

**Special Maintenance and Other Recuperation / Complementation**

DESCRIPTION	TOTAL
<b>5. Signaling (Recovering/Restoring and Special Conservation)</b>	<b>26,398,451.94</b>
5.1 Signaling of South Marginal - Planalto - Via Anchieta - SP - 150 km 10.5 to 23	1,277,414.60
5.2 Signaling of South Marginal - Baixada - Via Anchieta - SP - 150 km 60 to 65	237,337.70
5.3 Signaling of North Marginal - Planalto - Via Anchieta - SP - 150 km 10.5 to 18	361,693.20
5.4 Signaling of North Marginal - Planalto - Via Anchieta - SP - 150 km 18 to 29	289,091.40
5.5 Signaling of pavement km 10 / 40 of Via Anchieta - SP - 150	1,729,412.20
5.6 Signaling km 40 / 54 of Via Anchieta - SP - 150	3,366,490.40
5.7 Signaling km 54 / 65 - Via Anchieta - SP - 150	765,858.40
5.8 Signaling of pavement km 11.5 / 30 of Imigrantes SP - 160	929,420.60
5.9 Signaling of pavement km 30 / 40 of Imigrantes - SP - 160, including intercession km 40	436,926.20
5.10 Signaling of descending / ascending track, km 40 / 64 of Imigrantes - SP - 160	7,199,153.20
5.11 Signaling km 60 / 70 of Imigrantes - SP - 160	1,025,275.40
5.12 Signaling of Restoring of rigid pavement of Planalto interconnection SP - 041	681,543.00
5.13 Signaling of Baixada Interconnection - SP - 59	116,121.60
5.14 Signaling km 270/240 in SP - 055 (km 54.45/85.5)	2,590,017.80
5.15 Signaling Marginal km 268 (April 9th) to km 263 (Vila Paris) of SP - 055	250,708.00
5.16 Signaling of Recovering Anchieta / S curve / SP - 055	2,371,619.00
5.17 Appropriation/Complementation of the existing Horizontal Signaling	241,065.30
5.18 Vertical and Aerial Signaling	292,736.66
5.19 Signaling of Additional Strips - Anchieta - SP - 150	402,382.04
5.20 Signaling of Additional Strips - Imigrantes - SP - 160	924,046.60
5.21 Signaling of Additional Strips - Planalto Interconnection - SP - 041	910,138.64
<b>6. Others</b>	<b>19,007,186.25</b>
6.1 Re-appropriation of the draining system between km 267 and km 262 of Cónego Doménico Rangoni Highway	12,310.44
6.2 Recovering of intercessions	2,738,137.50
6.3 Reformation of geometric design of curve in the km 10, south track - Via Anchieta - SP - 150	34,146.31
6.4 Restoring of the service road of SP - 160	11,979,782.00
6.5 Recuperation of Tunnel Windy Systems including the monitoring devices	1,719,200.00
6.6 Tunnels Instrumentation	514,280.00
6.7 Appropriation of scenery plan	400,000.00
6.8 Recuperation of the existing electric system	1,609,330.00



**Table XX**

**Summary of Investments**

<b>1. MAIN ENLARGEMENT (SP 160 - 2nd TRACK)</b>	<b>525,295.34</b>
1.1 Executive Project	20,203.67
1.2 Construction	505,091.67
<b>2. OTHER ENLARGEMENTS AND IMPROVEMENTS</b>	<b>164,621.14</b>
2.1 Marginals / Additional Strips	94,527.34
2.2 Facilities	20,877.90
2.3 Gantries	2,704.32
2.4 Junction Devices	32,769.02
2.5 Others	13,742.56
<b>3. EQUIPMENT, VEHICLES AND CONTROLLING SYSTEM</b>	<b>94,346.43</b>
3.1 Vehicles for Administration / Management	4,721.79
3.2 Operational Vehicles	12,291.56
3.3 Collection Control System	23,790.40
3.4 Inspection Control System	16,846.40
3.5 Telecommunications System	14,805.60
3.6 Traffic Monitoring System	17,408.44
3.7 Administration Equipment	2,282.24
3.8 Others	2,200.00
<b>4. EXPROPRIATIONS</b>	<b>7,848.00</b>
<b>5. SPECIAL CONSERVATION</b>	<b>156,104.82</b>
5.1 Pavement (Recovering)	84,620.61
5.2 Pavement Drain	1,441.54
5.3 Special Art Works	22,074.64
5.4 Safety Devices	2,562.39
5.5 Signaling	26,398.45
5.6 Others	19,007.19
<b>6. SURROGATED AGREEMENTS</b>	
<b>7. INDEMNITIES</b>	<b>5,000.00</b>
<b>TOTAL ( 1 + 2 + 3 + 4 + 5 + 6 + 7 )</b>	<b>953,915.73</b>

Values in R\$ thousand

## Expropriation

According to the studies carried out for implementation and re-adaptation of the enlargement services and improvements in the Anchieta-Imigrantes System, except for the implementation works of the Rodovia dos Imigrantes, SP-160 South Track, it is necessary to expropriate a total estimated area of 143,100 m<sup>2</sup>.

These areas are related with the following services:

- North Marginal of Via Anchieta - SP-150, in the municipality of São Bernardo do Campo, between km 18 and 29;
- Adaptation of the km 30 intersection (Riacho Grande intersection), in Via Anchieta - SP-150, also in the municipality of São Bernardo do Campo;
- Implementation of marginal roads and intersections in the Rodovia Padre Manoel da Nóbrega - SP-055, between km 280 and 287, in the municipality of São Vicente.
- Implementation of additional strips in the Rodovia Anchieta (km 29+500m at km 40+000m), in the Rodovia dos Imigrantes (km 25+854m to km 40+739m) and Interconnection Planalto Anchieta - Imigrantes.

### *Execution*

The execution of the expropriations shall be developed through the following measures:

- Integration, through technical cooperation, of the private sector with the public sector DER, as regards the planning and execution of the services to be performed;
- Accurate identification of the areas to be expropriated and preparation of registry;
- Proposal of expropriations and/or indemnization alternatives;
- In the case of areas occupied by population, assure the full knowledge of the proposal presented, whenever is deemed necessary;
- Evaluation and monitoring of the expropriation, through a permanent assistance to the population therein involved.

### *Alternatives of expropriation*

- Real estate properties in Regular Situation

It refers to real estate properties having deeds registered in the Real Property Registry Office, an administrator title and others.

The expropriation shall be effected through the real properties appraisal and indemnization, through agreement, or through judicial actions, in case an agreement is not possible.

In the cases of ownership titles duly evidenced, the assets shall be indemnified, so as to avoid usucaption actions which might create hindrances to the execution of services.

- Real Estate Properties in Irregular Situation

For those having no documents evidencing the ownership of the real property.

An indemnization for betterment constructed shall be proposed, through appraisal and payment of the value of the area constructed and of other rights.

In case the area occupied is a public owned area, a direct understanding with the relevant authorities shall be established. In case of private area, the owner shall be identified, in order to receive the correspondent indemnization.

### *Execution Phases*

The ECOVIAS shall promote the execution of the expropriations through specific teams and its legal department, together with the DER's inspection team, and the work groups of the competent department of the pertinent public entities involved.



- Interinstitutional previous contact: it shall be held jointly with DER's legal, social and technical sectors, the ECOVIAS and the General Attorney's Office of the State of São Paulo, in order to ensure that organized actions are established and each one's responsibility in the real estate expropriations is defined;
- Planning: defining the policies and plans for the implementation of expropriations;
- Registry: registry data collection and assessment of the real estate to be expropriated and vested rights;
- Execution of definitive and/or temporary expropriations and/or indemnizations;
- Legal and social assistance of the teams involved in the process (technical teams, social service, legal engineering and legal department);
- Review and evaluation of all phases of expropriation and consolidation of the results obtained.

#### *Legal and clerical procedures*

In order to establish the start of the real estate expropriation process which shall affect the implementation of works required for the Anchieta-Imigrantes System enlargement and improvements, actions from the Executive and Judiciary Power of the Government of the State of São Paulo shall be required.

DER - Highways Department shall take the necessary legal-administrative measures in order that the real estate expropriations be considered as expropriation by Public Interest Declaration.

In the expropriation decrees, the areas should be identified with total accurateness.

After the State and/or DER's decrees, appraisal spreadsheets of the real estate should be created, individually analysing and establishing values within a major and minor variation, having as reference the basic value.

With these spreadsheets, the ECOVIAS shall take the administrative and budget measures so as to make agreements feasible, through expropriations, betterment indemnization, through settlement or exchange or, still, other rights, in order to release the areas for works.

In the event agreements are not obtained, the ECOVIAS shall file the respective expropriation action, asking for a temporary writ of ejection order, through deposit of the appraised value by the concessionaire or the price fixed by previous judicial expert.

After the execution of the agreements or at the end of expropriations, the areas shall be registered in the real estate property registry offices in the name of the State of São Paulo.

Table of areas to be expropriated.

#### **SP-055 - RODOVIA Pe. MANOEL DA NÓBREGA**

Adaptation of intersection and marginal roads of Jardim Humaitá	55,200 m <sup>2</sup>
Adaptation of intersection and marginal roads of Jardim Rio Branco	11,000 m <sup>2</sup>
Adaptation of intersection and marginal roads of Pq. das Bandeiras	10,000 m <sup>2</sup>

#### **SP-150 VIA ANCHIETA**

Implementation of the North Marginal	42,200 m <sup>2</sup>
Adaptation of intersection of km 30	12,500 m <sup>2</sup>

#### **SP-150 / SP-160 / SP-041 - ADDITIONAL STRIPS**

Additional Strips	12,200 m <sup>2</sup>
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# Financial Projections

## Toll Revenues

As from the traffic projections described in chapter X above, we arrived at the operating income estimates of the following table.

The tolling structure to be collected in the tollgates has been defined by the granting power, referred to in July 1997 and defines eight categories of vehicles, from automobiles to six-axle trucks, with tariffs proportional to the number of axles of the vehicle.

The readjustment of toll tariffs as well as of the payment value for the granting, shall be made annually, based in the IGPM - General Market Price Index.

**Table XXI**

**Toll Tariffs - Actual Situation**  
(R\$ for 2-axle vehicles)

Highway	Tollhouse	Toll Tariff
Anchieta	Riacho Grande	4.2
Imigrantes	Piratininga	4.2
Imigrantes	Diadema	0.4
Imigrantes	Eldorado	0.8
Imigrantes	Batistini	1.4
SP 55 - Domênico Rangoni	Santos	4.2
SP 55 - Pe. Manoel da Nóbrega	São Vicente	4.2

After the inauguration of the Imigrantes new descending track, in 2003, the toll tariffs shall have the following value:

**Table XXII**

**Toll Tariffs - Situation in June/98**  
(R\$ for 2-axle vehicles)

Highway	Tollhouse	Toll Tariff
Anchieta	Riacho Grande	6.2
Imigrantes	Piratininga	6.2
Imigrantes	Diadema	0.4
Imigrantes	Eldorado	0.8
Imigrantes	Batistini	1.4
SP 55 - Domênico Rangoni	Santos	2.8
SP 55 - Pe. Manoel da Nóbrega	São Vicente	1.6

**Table XXIII**

**Consolidated Projection of Toll Volume and Income**

YEAR	TRAFFIC VOLUME				INCOME			
	SP-150	SP-160	SP-55	TOTAL	SP-150	SP-160	SP-55	TOTAL
01	6,220,695	17,879,525	7,741,650	31,841,870	41,867.76	56,702.39	54,894.45	153,464.60
02	6,414,875	18,417,900	7,983,098	32,815,873	43,130.96	58,288.06	56,614.85	158,033.87
03	6,614,530	18,975,255	8,232,758	33,822,543	44,429.41	59,935.84	58,403.86	162,769.11
04	6,820,755	19,546,115	8,489,535	34,856,405	45,764.66	61,612.64	60,232.35	167,609.65
05	7,032,820	20,134,860	8,754,708	35,922,388	47,135.15	63,327.40	62,126.35	172,588.90
06	7,252,550	20,742,220	9,027,910	37,022,680	71,683.93	91,532.84	34,670.90	197,887.67
07	7,478,850	21,368,925	9,309,325	38,157,100	73,849.62	94,112.12	35,756.50	203,718.24
08	7,712,085	22,012,420	9,600,048	39,324,553	76,076.40	96,750.46	36,880.51	209,707.37
09	7,952,985	22,678,545	9,899,713	40,531,243	78,374.49	99,482.22	38,041.83	215,898.54
10	8,200,455	23,364,380	10,208,320	41,773,155	80,728.00	102,290.76	39,235.71	222,254.47
11	8,455,955	24,071,020	10,526,783	43,053,758	83,156.19	105,172.08	40,468.74	228,797.01
12	8,720,215	24,798,830	10,855,830	44,374,875	85,673.78	108,141.52	41,742.02	235,557.32
13	8,991,775	25,549,635	11,194,003	45,735,413	88,247.96	111,202.01	43,052.64	242,502.61
14	9,272,460	26,323,800	11,543,855	47,140,115	90,913.77	114,350.38	44,408.90	249,673.05
15	9,562,635	27,119,135	11,903,745	48,585,515	93,670.09	117,573.00	45,802.84	257,045.93
16	9,860,840	27,941,845	12,275,498	50,078,183	96,495.46	120,903.70	47,246.19	264,645.35
17	10,168,170	28,788,280	12,658,748	51,615,198	99,392.08	124,331.06	48,731.46	272,454.60
18	10,485,355	29,660,995	13,053,860	53,200,210	102,395.09	127,857.88	50,263.38	280,516.35
19	10,812,395	30,560,355	13,460,835	54,833,585	105,482.96	131,482.76	51,841.03	288,806.75
20	11,150,385	31,488,915	13,881,315	56,520,615	108,674.92	135,220.37	53,474.50	297,369.79
TOTAL	169,180,785	481,422,955	210,601,533	861,205,273	1,557,142.68	1,980,269.49	943,889.01	4,481,301.18

(values in R\$ thousand)

## Other Incomes

### **Income from billboards**

Resulting from temporary authorization, for billboards in places adjacent to the roads of the System.

### **Income from accesses**

Resulting from temporary authorization, for exploration of third party activities, established in properties along the side of the roads under the Concessionaire's jurisdiction.



#### ***Income from leasing***

Resulting from utilization by third parties, of the Concessionaire dominion strip, through agreement.

#### ***Income from distribution***

Resulting from distribution in the tollhouses, of several materials (leaflets, free samples), for the road's users.

#### ***Income from hazardous cargoes***

Resulting from operational support by the Concessionaire, through escorting during the cargo transit on the roads of the system.

#### ***Income from vehicles and animals arrested***

Resulting from the utilization of the Concessionaire's yard for purposes of keeping vehicles and animals arrested for irregular transit in the roads of the System.

#### ***Personnel/Management***

It refers to all human resources utilized to perform the several services rendered: administration and management of the company, personnel working at Traffic and SAU (Support Service to the User), own personnel for routine conservation, personnel working at the tollhouses and at inspection gates.

#### ***Routine Conservation***

The routine conservation of a highway is defined as the set of services which are performed in a highway in traffic, according to pre-established standards or levels, with the purpose of maintaining the constructive elements of the highway as near as possible, technical and economically, the original conditions in which they have been constructed or reconstructed, with the object of preserving the investments, thus ensuring the traffic safety, the user's comfort, besides maintaining the rational and economic flow of the vehicles.

In this item of routine conservation is utilized the term "conservation", normally for the highway elements connected with civil engineering and the term "maintenance", for electrical and electronic equipment.

The services to be performed during the Routine Conservation and Maintenance of the Highways of the Anchieta/Imigrantes Highway System shall comprise the following physical elements:

- Pavement;
- Dominion Strip;
- Drainage;
- Highway Safety;
- Signaling;
- Structures;
- Buildings and Yards;
- Control and Automation System;
- Telecommunications;
- Illumination;
- Electrification;





### **Consumption**

It refers to all material resources utilized to perform the various services rendered: administration and management of the company, material necessary to manage Traffic and SAU (Support Service to the User), material and inputs utilized in routine conservation (which have not been subcontracted according to letter d) above), inputs utilized in tollhouses and in inspection gates.

### **Transportation**

It comprises the operational costs of vehicles utilized to perform all contracted services.

### **Miscellaneous**

Third party services (counselling, auditing, security, etc.), rents and allowances for the highway police.

### **Insurance**

#### *Insured*

PRIMAV CONSTRUÇÕES E COMÉRCIO LTDA.

#### *Insurance*

All Risks Insurance for material damages covering the loss, destruction or partial or total damage of the assets which are included in the Concession and its consequences, contemplating all coverages requested in Clause 31, of the Draft of the Concession Agreement (Attachment 12) of the Notice to Bid n° 015/CIC/97.

Engineering Risks Coverage, pursuant to the General Conditions of the Engineering Risks Insurance and Special Conditions of the Civil Works in Construction and Installation / Assembly Modality.

The amount of this coverage for material damages shall be based in reposition costs, with an estimated limit of R\$ 3,000,000.00 (three million Reais) and eventual deductibles which shall not exceed R\$ 300,000.00 (three hundred thousand Reais) annually.

Patrimonial Risks Coverage, pursuant to General, Special and Specific Conditions of the Operational Risks Insurance.

The amount of this coverage for material damages shall be based in reposition costs, with an estimated limit of R\$ 3,000,000.00 (three million Reais) and eventual deductibles which shall not exceed R\$ 300,000.00 (three hundred thousand reais).

Loss of Income Coverage, pursuant to the General and Special Conditions of the Loss of Profit Insurance, guaranteeing the losses of income deriving from Risks Covered by Patrimonial Risks.

The loss of income coverage comprises the financial consequence of eventual delays in the starting up of the “Main Enlargements” or of the partial or total interruption of the “Highway System”, as long as such delay or interruption results from losses, destruction or damages covered by material damages insurance. They may be comprised in an Indemnity period of one (01) year, with the coverage limit in the value of R\$ 3,000,000.00 (three million Reais) in the first year and an estimate deductible of five (05) days.

Comprehensive General Liability and Vehicle Insurance Coverage, based in occurrence, covering ECOVIAS, the GRANTING POWER and the CONTRACTING PARTY, as well as their managers, employees, contracted persons, substitutes or delegates, for the amounts for which they may be liable for material, personal and moral damages, indemnizations, legal costs and any other charges related to personal, moral or material damages deriving from the activities covered by Concession.



Comprehensive General Liability Coverage - Operations, pursuant to the general conditions of the Comprehensive General Liability Insurance and Special Conditions of the Modality Operations, contingent employer and vehicles.

The coverage limit for operations, actions connected with the employer and actions resulting from the use of vehicles, owned, contracted and contingent, may be of R\$ 9,000,000.00 (nine million Reais) for each claim and the deductible can not exceed R\$ 900,000.00 (nine hundred thousand Reais) annually.

Comprehensive General and Crossed Liability Coverage

The coverage limit for comprehensive general and crossed liability shall be of R\$ 9,000,000.00 (nine million Reais) for each claim and the deductible shall not exceed R\$ 900,000.00 (nine hundred thousand reais) annually.

**Table XXIV**

**Insurance Calculation Memory**

DESCRIPTION	YEAR									
	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10
<b>ANNUAL RISK VALUES</b>										
Engineering Risks	90,650	96,337	121,215	238,376	200,774	23,473	17,256	9,212	10,597	8,996
Patrimonial Risks	460,000	550,650	646,987	768,203	1,006,578	1,207,353	1,230,825	1,248,081	1,257,293	1,267,890
Loss Of Income	12,700	12,789	13,169	13,564	13,967	14,382	16,491	16,977	17,476	17,992
Comprehensive General Liability	161,905	166,726	171,721	176,828	182,081	208,771	214,923	221,241	227,773	234,478
<b>ANNUAL PREMIUM</b>										
Engineering Risks	1,359.75	1,445.06	1,818.23	3,575.64	3,011.61	352.09	258.84	138.17	158.95	134.94
Patrimonial Risks	460.00	550.65	646.99	768.20	1,006.58	1,207.35	1,230.83	1,248.08	1,257.29	1,267.89
Loss Of Income	38.10	38.37	39.51	40.69	41.90	43.15	49.47	50.93	52.43	53.97
Comprehensive General Liability	728.57	750.27	772.75	795.73	819.37	939.47	967.15	995.59	1,024.98	1,055.15
<b>TOTAL</b>	<b>2,586.42</b>	<b>2,784.34</b>	<b>3,277.47</b>	<b>5,180.26</b>	<b>4,879.46</b>	<b>2,542.06</b>	<b>2,506.29</b>	<b>2,432.77</b>	<b>2,493.65</b>	<b>2,511.96</b>

DESCRIPTION	YEAR									
	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
<b>ANNUAL RISK VALUES</b>										
Engineering Risks	8,381	9,901	39,084	3,469	4,658	6,627	23,740	10,211	4,094	26,165
Patrimonial Risks	1,276,885	1,285,266	1,295,167	1,334,251	1,337,720	1,342,378	1,349,005	1,372,746	1,382,957	1,387,051
Loss Of Income	18,521	19,066	19,630	20,209	20,806	21,420	22,054	22,705	23,376	24,067
Comprehensive General Liability	241,381	248,513	255,840	263,405	271,183	279,201	287,440	295,945	304,691	313,725
<b>ANNUAL PREMIUM</b>										
Engineering Risks	125.71	148.52	586.25	52.03	69.87	99.41	356.11	153.17	61.41	392.47
Patrimonial Risks	1,276.89	1,285.27	1,295.17	1,334.25	1,337.72	1,342.38	1,349.01	1,372.75	1,382.96	1,387.05
Loss Of Income	55.56	57.20	58.89	60.63	62.42	64.26	66.16	68.11	70.13	72.20
Comprehensive General Liability	1,086.21	1,118.31	1,151.28	1,185.32	1,220.33	1,256.40	1,293.48	1,331.75	1,371.11	1,411.76
<b>TOTAL</b>	<b>2,544.37</b>	<b>2,609.29</b>	<b>3,091.59</b>	<b>2,632.23</b>	<b>2,690.34</b>	<b>2,762.45</b>	<b>3,064.75</b>	<b>2,925.78</b>	<b>2,885.61</b>	<b>3,263.49</b>



## Guarantees

The Guaranty Insurance Policy has as an objective:

- Guaranty in the accomplishment of operational and maintenance functions and of the payment of the variable monthly value correspondent to 3.0% of the CONTRACTING VALUE, representing a value of R\$ 135,000,000.00 for the first issue;
- Guaranty of the timely and correct accomplishment of the contractual obligations regarding the amplification function by the bidder, in the value of 1.5% of the Contracting, representing a value of R\$ 67,500,000.00 for the first issue;
- Guaranty of the timely and correct accomplishment by the bidder of the obligations related to the payment of the concession charge, correspondent to 3/20 of the fixed value, limited to 1.5% of the contract value.

## Concession Rights

The Concession Agreement provides in its Chapter XX:

ECOVIAS shall pay to the CONTRACTING PARTY for the granting of public services of exploration of the HIGHWAY SYSTEM, the following price:

1. A value correspondent to 3% of the gross income effectively obtained by ECOVIAS in the month previous to the payment, except for the financial income, throughout the CONCESSION term, and
2. The fixed value of R\$ 87,000,000.00, to be paid in the following manner:
  - a) 12 equal and consecutive monthly installments, each one corresponding to 0.92334% of the value set forth in this item, the first to be due in the last business day of the month of the execution of this AGREEMENT;
  - b) 228 equal and consecutive monthly installments, each one corresponding to 0.39% of the value set forth in this item, the first to be due in the last business day of the 13th month after the execution of this AGREEMENT.

The Concession Agreement also provides that:

- The installments provided in sub-section II shall be readjusted by the same formula and in the same dates in which the readjustment is effectively applied to the Toll Tariff,
- ECOVIAS may effect the payments provided in sub-section II, paragraph “b”, utilizing securities issued by Companhia Paulista de Administração de Ativos - CPA, until the limit of 30% of each installment.

**Table XXV**

**Guaranty Calculation Memory**

DESCRIPTION	YEAR									
	Year 01	Year 02	Year 03	Year 04	Year 05	Year 06	Year 07	Year 08	Year 09	Year 10
Guaranty Of Accomplishment Of Operational And Conservation Functions And Of Payment Of The Variable Monthly Value (3% Of The Contracting Value)	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04
Guaranty Of Accomplishment Of The Enlargement Functions (1.5% Of The Contracting Value, Limited To 10% Of The Investment Value)	67,219.52	67,219.52	67,219.52	64,501.30	40,663.73	20,586.30	18,239.04	16,513.45	15,592.29	14,532.62
Guaranty Of Payment Of The Fixed Value, Item 12.2.. (3/20 Of The Fixed Value, Limited To 1.5% Of The Contracting Value).	13,050.00	11,604.06	10,993.32	10,382.58	9,771.84	9,161.10	8,550.36	7,939.62	7,328.88	6,718.14
<b>TOTAL</b>	<b>214,708.55</b>	<b>213,262.61</b>	<b>212,651.87</b>	<b>209,322.92</b>	<b>184,874.61</b>	<b>164,186.44</b>	<b>161,228.43</b>	<b>158,892.11</b>	<b>157,360.21</b>	<b>155,689.79</b>
<b>GUARANTY PREMIUM</b>	<b>2,576.50</b>	<b>2,559.15</b>	<b>2,551.82</b>	<b>2,511.87</b>	<b>2,218.50</b>	<b>1,970.24</b>	<b>1,934.74</b>	<b>1,906.71</b>	<b>1,888.32</b>	<b>1,868.28</b>

DESCRIPTION	YEAR									
	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Guaranty Of Accomplishment Of Operational And Conservation Functions And Of Payment Of The Variable Monthly Value (3% Of The Contracting Value)	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04	134,439.04
Guaranty Of Accomplishment Of The Enlargement Functions (1.5% Of The Contracting Value, Limited To 10% Of The Investment Value)	13,633.03	12,794.97	11,804.84	7,896.48	7,549.61	7,083.78	6,421.06	4,047.02	3,025.89	2,616.48
Guaranty Of Payment Of The Fixed Value, Item 12.2.. (3/20 Of The Fixed Value, Limited To 1.5% Of The Contracting Value).	6,107.40	5,496.66	4,885.92	4,275.18	3,664.44	3,053.70	2,442.96	1,832.22	1,221.48	610.74
<b>TOTAL</b>	<b>154,179.46</b>	<b>152,730.66</b>	<b>151,129.80</b>	<b>146,610.70</b>	<b>145,653.09</b>	<b>144,576.52</b>	<b>143,303.06</b>	<b>140,318.28</b>	<b>138,686.40</b>	<b>137,666.25</b>
<b>GUARANTY PREMIUM</b>	<b>1,850.15</b>	<b>1,832.77</b>	<b>1,813.56</b>	<b>1,759.33</b>	<b>1,747.84</b>	<b>1,734.92</b>	<b>1,719.64</b>	<b>1,683.82</b>	<b>1,664.24</b>	<b>1,652.00</b>

## Taxes and Contributions

### *Taxes and Contributions on Income*

The taxes and contributions on income which have been considered by PRIMAV are the Social Contribution for the Financing of Social Security (COFINS) and the Social Integration Program (PIS). Pursuant to legislation in force, such taxation has been calculated based, respectively, in a rate of 2% (two percent) and 0.65% (zero point sixty five percent), incident on the income indicated in item 1 of Tables 5B and 6B - Income Statement, presented in items 7 and 8.

According to the legislation in force, PRIMAV has considered the Services Tax (ISS) cost as being zero, due to the fact that its incidence on the toll income is subject to provision of a Complementary law.

The CPMF has been calculated based in 0.2% (zero point two percent) on payments to be effected, during the term of duration of such contribution, that is until February 1999.



### Taxes and Contributions on Net Income

The taxes and contributions on net income have been calculated pursuant to legislation in force in 1998.

The Income Tax (IR) has been calculated by the “Taxable Income Criterion”, considering the rate of 15% (fifteen percent) on Net Profit Before Income Tax. On this same calculation basis, a rate of 10% (ten percent) has been applied as Additional Income Tax, on the value exceeding R\$ 240,000.00 (two hundred and forty thousand Reais).

The Social Contribution has been calculated based in the rate of 8% (eight percent) on the Net Profit Before Income Tax.

**Table XXVI**

### Operating Expenses

	YEAR	
	YEAR 01	YEAR 02
<b>1 - PERSONNEL/MANAGERS ( 1.1 ... + 1.5 )</b>	<b>31,530.24</b>	<b>31,456.56</b>
1.1 - Administration / Management	12,437.27	13,040.19
1.2 - Operation (Traffic and SAU)	7,073.60	7,073.60
1.3 - Routine Conservation (Own Personnel)	2,440.98	2,466.20
1.4 - Tollhouses	8,659.76	7,957.93
1.5 - Inspection Gates	918.63	918.63
<b>2 - ROUTINE CONSERVATION ( 2.1 ... + 2.3 )</b>	<b>16,616.12</b>	<b>7,458.40</b>
2.1 - Vehicles/equipment		
2.2 - Material		
2.3 - Contracted services	16,616.12	7,458.40
<b>3 - CONSUMPTION ( 3.1 ... + 3.4 )</b>	<b>2,706.22</b>	<b>2,678.13</b>
3.1 - Administration / Management	499.99	516.86
3.2 - Operation (Traffic and SAU)	1,223.74	1,223.74
3.3 - Tollhouses	893.33	848.38
3.4 - Inspection Gates	89.16	89.16
<b>4 - TRANSPORTATION ( 4.1 ... + 4.2 )</b>	<b>2,563.98</b>	<b>2,585.37</b>
4.1 - Vehicles for Administration and Management	687.20	708.59
4.2 - Vehicles for Operational Services	1,876.78	1,876.78
<b>5 - MISCELLANEOUS ( 5.1 ... + 5.3 )</b>	<b>7,592.19</b>	<b>7,438.32</b>
5.1 - Third party services	6,560.19	6,406.32
5.2 - Rent	432.00	432.00
5.3 - Highway Police Allowance	600.00	600.00
<b>6- DEPRECIATION /AMORTIZATION ( 6.1 ... + 6.2 )</b>	<b>250.00</b>	<b>5,811.11</b>
6.1 - Real Estate	0.00	3,382.40
6.2 - Chattel	250.00	2,428.71
<b>7 - TAXATION ( 7.1 ... + 7.4 )</b>	<b>4,672.04</b>	<b>4,465.88</b>
7.1 - I.S.S.	0.00	0.00
7.2 - COFINS	3,222.76	3,318.71
7.3 - P.I.S. - P A S E P	1,047.40	1,078.58
7.4 - CPMF	401.88	68.58
<b>TOTAL ( 1 + 2 + 3 + 4 + 5 + 6 + 7 )</b>	<b>65,930.79</b>	<b>61,893.76</b>

**Table XXVII**

**Cash Flow**

HISTORIC	YEAR		
	YEAR 01	YEAR 02	YEAR 03
<b>1. INFLOW</b> (1.1)	<b>161,905.15</b>	<b>166,725.73</b>	<b>171,721.41</b>
<b>1.1. INCOME</b> (1.1.1.+ ... + 1.1.4)	<b>161,905.15</b>	<b>166,725.73</b>	<b>171,721.41</b>
1.1.1. Toll revenues (Transp. Qd 2A)	153,464.60	158,033.87	162,769.11
1.1.2. Other operating expenses (Tr. item 1, Qd. 3A)	7,673.23	7,901.69	8,138.46
1.1.3. Non-Operation expenses (Tr. item 2, Qd 3A)			
1.1.4. Financial Income (Transp. Qd 2B)	767.32	790.17	813.85
<b>2. DISBURSEMENTS</b> (2.1.+ ... + 2.4)	<b>201,134.87</b>	<b>196,633.94</b>	<b>221,866.51</b>
<b>2.1. OPERATING</b> (2.1.1.+ ... + 2.1.8)	<b>70,843.72</b>	<b>61,426.15</b>	<b>61,043.48</b>
2.1.1. Personnel / Managers (Transp. Qd 5A)	31,530.24	31,456.56	31,715.36
2.1.2. Routine Conservation (Transp. Qd 5A)	16,616.12	7,458.40	7,513.02
2.1.3. Consumption (Transp. Qd 5A)	2,706.22	2,678.13	2,708.66
2.1.4. Transportation (Transp. Qd 5A)	2,563.98	2,585.37	2,585.37
2.1.5. Miscellaneous (Transp. Qd 5A)	7,592.19	7,438.32	6,162.73
2.1.6. taxation on Income (Transp. Qd 5A)	4,672.04	4,465.88	4,529.05
2.1.7. Insurance (Transp. Qd 5B)	2,586.42	2,784.34	3,277.47
2.1.8. Guarantees (Transp. Qd 5B)	2,576.50	2,559.15	2,551.82
<b>2.2. INVESTMENTS / FIXED ASSETS</b> (2.2.1.+ ... + 2.2.7)	<b>90,649.97</b>	<b>96,337.32</b>	<b>121,215.44</b>
2.2.1. Main Enlargements (Transp. Qd 6A)	11,617.11	52,529.53	105,059.07
2.2.2. Other Enlargement Works / Improvements (Transp. Qd 6A)	17,674.98	17,849.43	3,668.81
2.2.3. Equipment, Vehicles and Control System (Transp. Qd 6A)	31,903.21	3,827.96	2,204.00
2.2.4. Expropriations (Transp. Qd 6A)		5,455.00	340.00
2.2.5. Special Conservation (Transp. Qd 6A)	24,454.68	16,675.39	9,943.57
2.2.6. Surrogated Agreements (Transp. Qd 6A)			
2.2.7. Indemnization (Transp. Qd 6A)	5,000.00		
<b>2.3. CONCESSION RIGHT</b> (2.3.1.+ ... + 2.3.2)	<b>14,473.74</b>	<b>9,049.67</b>	<b>9,198.83</b>
2.3.1. Variable Value of Concession (Transp. Qd 5B)	4,834.13	4,978.07	5,127.23
2.3.2. Fixed value of Concession (Transp. Qd 4B)	9,639.61	4,071.60	4,071.60
<b>2.4. DISBURSEMENTS ON PROFIT</b> (2.4.1. + 2.4.2)	<b>25,167.44</b>	<b>29,820.81</b>	<b>30,408.77</b>
2.4.1. Social Contribution (Tr. item 10, Qd 5B)	6,107.02	7,235.10	7,377.64
2.4.2. Income Tax (Tr. item 12, Qd 5B)	19,060.42	22,585.70	23,031.13
<b>3. CASH BALANCE</b> (1 - 2)	<b>-39,229.72</b>	<b>-29,908.21</b>	<b>-50,145.10</b>
<b>4. Annual T.I.R. (Internal Return Tax) of the Project</b>	<b>20.60 %</b>		

**Table XXVIII**

**Income Statement - Without Financing**

HISTORIC	YEAR		
	YEAR 01	YEAR 02	YEAR 03
<b>1 - GROSS INCOME</b> (1.1)	161,137.83	165,935.56	170,907.57
1.1 - Operating (1.1.1 + 1.1.2)	161,137.83	165,935.56	170,907.57
1.1.1 - Toll Revenues (Transp. Qd.2A)	153,464.60	158,033.87	162,769.11
1.1.2 - Other Operating Income (Tr. item 1, Qd. 3A)	7,673.23	7,901.69	8,138.46
<b>2 - DEDUCTIONS FROM INCOME</b> (2.1.)	4,672.04	4,465.88	4,529.05
2.1 - Taxation on Income (2.1.1.+ ... + 2.1.4)	4,672.04	4,465.88	4,529.05
2.1.1 - I.S.S. (Transp. Qd. 5A)	0.00	0.00	0.00
2.1.2 - Cofins (Transp. Qd. 5A)	3,222.76	3,318.71	3,418.15
2.1.3 - Pis / Pasep (Transp. Qd. 5A)	1,047.40	1,078.58	1,110.90
2.1.4 - CPMF	401.88	68.58	0.00
<b>3 - NET INCOME</b> (1 - 2)	156,465.79	161,469.69	166,378.52
<b>4 - EXPENSES</b> (4.1)	80,895.42	71,821.05	74,971.85
4.1 - Operating (4.1.1 + ... + 4.1.10)	80,895.42	71,821.05	74,971.85
4.1.1 - Personnel and Managers (Transp. Qd. 5A)	31,530.24	31,456.56	31,715.36
4.1.2 - Routine Conservation (Transp. Qd. 5A)	16,616.12	7,458.40	7,513.02
4.1.3 - Consumption (Transp. Qd. 5A)	2,706.22	2,678.13	2,708.66
4.1.4 - Transportation (Transp. Qd. 5A)	2,563.98	2,585.37	2,585.37
4.1.5 - Miscellaneous (Transp. Qd. 5A)	7,592.19	7,438.32	6,162.73
4.1.6 - Depreciation / Amortization (Transp. Qd. 5A)	250.00	5,811.11	9,258.60
4.1.7 - Insurance	2,586.42	2,784.34	3,277.47
4.1.8 - Guarantees	2,576.50	2,559.15	2,551.82
4.1.9 - Variable Installment of Concession (3% of Income)	4,834.13	4,978.07	5,127.23
4.1.10 - Fixed Installment of Concession	9,639.61	4,071.60	4,071.60
<b>5 - OPERATING GROSS INCOME</b> (3 - 4)	75,570.37	89,648.64	91,406.66
<b>6 - FINANCIAL INCOME</b> (6.1)	767.32	790.17	813.85
6.1 - Income (Transp. Qd. 2B)	767.32	790.17	813.85
<b>7 - OPERATING INCOME</b> (5 + 6)	76,337.69	90,438.81	92,220.51
<b>8 - NON-OPERATING INCOME</b> (Tr. item 2, Qd. 3A)	0.00	0.00	0.00
<b>9 - INCOME BEFORE SOCIAL CONTRIBUTION</b> (7 + 8)	76,337.69	90,438.81	92,220.51
<b>10 - SOCIAL CONTRIBUTION</b> (Legislation in force)	6,107.02	7,235.10	7,377.64
<b>11 - INCOME BEFORE INCOME TAX</b> (9 - 10)	70,230.68	83,203.70	84,842.87
<b>12 - INCOME TAX</b> (Legislation in force)	19,060.42	22,585.70	23,031.13
<b>13 - INCOME OF THE YEAR</b> (11 - 12)	51,170.26	60,618.00	61,811.74



# Attachment A

## Concession Agreement

### AGREEMENT FOR HIGHWAY CONCESSION

#### ANCHIETA-IMIGRANTES HIGHWAYS SYSTEM - SAI

#### NOTICE OF CALL FOR TENDER DER NO 15/CIC/97

On May 27, 1998, São Paulo, at DER – Departamento de Estradas de Rodagem (Highways Department), appear the parties, namely, on the one hand, DEPARTAMENTO DE ESTRADAS DE RODAGEM - DER/SP (Highways Department - DER/SP), hereinafter referred to as Contracting Party, a state autonomous agency with head offices in the municipality of São Paulo, State of São Paulo, Av. do Estado, 777, herein represented by its Superintendent, Engineer Sérgio Augusto de Arruda Camargo; and, on the other hand, PRIMAV CONSTRUÇÕES E COMÉRCIO LTDA., with head offices Rua Teófilo Otoni, 63 – 3th floor, Rio de Janeiro, State of São Paulo, enrolled with General Corporate Taxpayer Roll CGC/MF No 81.110.124/0001-21, hereinafter referred to as Concessionaire, represented by its Attorney Mr. Marcelino Rafart de Seras, Brazilian, married, engineer, identity card No 373,267 – SSP/PR and individual taxpayer roll CPF/MF No. 428,355,429-49, pursuant to the power of attorney set forth in the Bylaws of the Contractor, in the form of the documents filed with the Contracting Party.

#### WHEREAS:

The Government of the State of São Paulo decided to award, through the Contracting Party, to a private enterprise, the exploitation, through concession, of the Highway System consisting of the Anchieta-Imigrantes Highways System - SAI, hereinafter referred to as Highway System pursuant to Decree No 41,371 of November 28, 1996, and No. 42,321 of October 7, 1997.

As a consequence of this decision, the Contracting Party, in the condition of sectorial entity in charge of the execution, duly authorized through Decree No. 41,370 of November 28, 1996, above referred, and Resolution from the Secretary of Transports No 02 of January 30, 1997, as amended by Resolution ST-27 of October 10, 1997, took part in the call for tender, in the modality of international public call for tender, governed by Federal Laws No. 8,987 of February 13, 1995, No. 9,074 of July 7, 1995, No. 8,666 of June 21, 1993, with a wording given by Law No. 8,883 of June 8, 1994, and No. 6,404 of December 15, 1976, and by the State Laws No. 7,835 of May 8, 1992, No. 9,361 of July 5, 1996 and No. 6,544 of November 22, 1989, and through Decree No. 41,371 of November 28, 1996, and No. 42,321 of October 7, 1997, and through Note of Call for Tender DER No 15/CIC/97.

The Concessionaire is a company to which the object of the Call for Tender was awarded according to decision by the Examining Committee of the Call for Tender, approved by DER Superintendent, published in the Official Gazette of the State on April 1, 1998.

The present Concession Agreement was granted by them, which will be governed by the following clauses and terms.





## **CHAPTER I**

### **GENERAL**

#### **CLAUSE 1 - DEFINITIONS**

1.1. In this Agreement and in its Schedules, always in capital letters, and except if the context clearly requests a different meaning, the terms indicated below will have the following meaning:

- I. **TECHNICAL AGENT:** entity that inspects the performance of the services subject of the Concession;
- II. **MAIN ENLARGEMENT:** doubling of highway SP-160, from Km 41 to Km 58 (interchange of highway SP-055), installation of VD12 at the highway SP-160 and implementation of the fourth lane from the Km 59 (after the VD12) up to Km 62 of the SP-160, pursuant to Schedule 7 of the Notice;
- III. **CONCESSION:** delegation of public service for the exploitation of the Highway System;
- IV. **CONTRACTOR:** the separate company to which the Tender was awarded;
- V. **AGREEMENT:** the concession agreement for the exploitation of the Highway System;
- VI. **BUILDER;** a company or companies contracted by the Concessionaire to perform the services that are part of the Functions of Conservation and the Functions of Enlargement;
- VII. **DERSA;** Dersa - Desenvolvimento Rodoviário S.A.;
- VIII. **FUNCTIONS OF ENLARGEMENT:** the services subject of Article 5, Section III of the Concession Regulation;
- IX. **FUNCTIONS OF CONSERVATION:** the services subject of Article 5, Section II of the Concession Regulation;
- X. **OPERATING FUNCTIONS:** the services subject of Article 5, Section I, of the Concession Regulation;
- XI. **FINANCING INSTITUTIONS:** the financing institutions that will supply the Concessionaire with financial funds necessary to develop the Concession;
- XII. **CALL FOR TENDER:** the process of selection to choose the Company or Consortium of Companies for the purpose of awarding the Concession, pursuant to the Notice of Call for Tender **15/CIC/97**;
- XIII. **PARTIES:** the Contracting Party and the Concessionaire;
- XIV. **Conceding Authority:** the State of São Paulo;
- XV. **FINANCIAL PROSPECTS:** the set of economic-financial information contained in the Envelopes of the Financial Bid which is part of the Bid;
- XVI. **DESIGNER:** company or companies contracted to prepare the projects necessary to the development of the services corresponding to Conservation Functions and Enlargement Functions;
- XVII. **BID:** set of informations and documents submitted by the Bidder, author of the Bid, which was the basis for the awarding of the Tender, as well as the informations and explanations given later concerning it;
- XVIII. **CONCESSION REGULATION:** the concession regulation concerning the Highway System Exploitation Public Services consisting of Anchieta-Imigrantes Highway System - SAI, instituted by Decree No 41.371, of November 28, 1996 and No 42.321, of October 7, 1997.
- XIX. **SECRETARY OF TRANSPORTS:** the Secretary of State of Transports of the State of São Paulo;
- XX. **SUITABLE SERVICE:** characteristics of the services to be rendered by the Concessionaire, as defined in Article 6 of the Federal Law No 8,987 of February 13, 1995;



- XXI. **COMPLEMENTARY SERVICES:** the services considered convenient but not essential to keep the Suitable Service in all the Highway System, to be rendered by Third Parties and not the Concessionaire;
- XXII. **DELEGATED SERVICES:** services to be rendered by the Concessionaire, which include those corresponding to Operating Functions, Conservation Functions and Enlargement Functions;
- XXIII. **NON-DELEGATED SERVICES:** services which are of exclusive competence of the Public Authority, which are not included in the subject of the Concession;
- XXIV. **EXISTING SYSTEM:** the current set of lanes of the Highway System, their respective strips of domain and buildings, facilities and equipment contained therein, pursuant to the Regulation of the Concession and the Notice of Call for Tender;
- XXV. **HIGHWAY SYSTEM:** the set consisting in the current condition by the Existing System and, in the future, including the enlargements resulting of the services corresponding to the enlargement functions, including those to be performed by the Conceding Authority, pursuant to the Notice of Call for Tender.
- XXVI. **CONTRACT AMOUNT:** R\$ 4,481,301,180.00 (four billion, four hundred and eighty one million, three hundred and one thousand, one hundred and eighty of realize), adjusted according to the same formula and on the same dates in which the adjustment of the Toll Tariff is made effective;
- XXVII. **VALUE OF THE INVESTMENT:** R\$ 953,215,730.00 (nine hundred and fifty three million, two hundred and fifteen thousand, seven hundred and thirty of realize), adjusted by the same formula and on the same dates in which the adjustment of the Toll Tariff is made effective.

## **CLAUSE 2 - SCHEDULES**

- 2.1. The documents listed in this Clause are part of this AGREEMENT for all the legal and contractual purposes.
  - a) Schedule I: Notice of Call for Tender No 15/CIC/97, including the explanations given to the concerned Parties
  - b) Schedule II: Qualification Documentation;
  - c) Schedule III: Bid (Execution methodology and Financial Bid)
  - d) Schedule IV: Explanations given concerning the Bid;
  - e) Schedule V: Concessionaire Shareholders;
  - f) Schedule VI: Bylaws of the Concessionaire;
  - g) Schedule VII: Composition of the Management Organisms of the Concessionaire;
  - h) Schedule VIII: Commitment to Pay-in the Stock Capital;
  - i) Schedule IX: Financing Documents;
  - j) Schedule X: Draft of the Agreement for Conservation;
  - k) Schedule XI: Draft of the Agreement for Project;
  - l) Schedule XII: Draft of the Agreement for Construction;
  - m) Schedule XIII: Guaranties;
  - n) Schedule XIV: Insurance Policies;
  - o) Schedule XV: Table of Fines (Schedule 11 of the Call for Tender);
  - p) Schedule XVI: Tariff Structure (Schedule 4 of the Notice of the Call for Tender);
  - q) Schedule XVII: Toll Coupons.



- 2.2. The headings of Chapters and Clauses of the Agreement and their Schedules are not part of them for the purposes of their application, and are included only for easy reference.

### **CLAUSE 3 - APPLICABLE LAW**

- 3.1. The Concession will be governed by Article 175 of the Constitution, by Federal Laws No. 8,987 of February 13, 1995, No. 9,074 of July 7, 1995, No. 8,666 of July 21, 1993, with wording updated by Law No. 8,883 of June 08, 1994, by State Law No. 7,835 of May 8, 1992, and No. 9,361 of July 5, 1996, by the Concession Regulation and other applicable regulation norms.

### **CLAUSE 4 - CONSTRUCTION**

- 4.1. For the construction, integration or application of any provision of the Agreement, the contractual clauses and, then, the provisions in the Schedules which are considered an integral part thereof, according to clause 2, which are more significant in the subject matter, will be considered in the first place.
- 4.1.1. If in the Executive Projects submitted by the Concessionaire and approved by the Contracting Party, there are inconsistencies between the individual parts, which can not be solved through the general rules of construction, the following will apply:
- 4.1.1.1. The drawn parts will prevail over the others concerning location, specifications, characteristics of services and specifications concerning their different elements;
  - 4.1.1.2. Concerning the nature and the constructive methods for the works, the conditions of the Basic Project as contained in the Notice of the Call for Tender will prevail;
  - 4.1.1.3. For the remaining aspects, whatever is contained in the descriptive and written memo of the remaining parts of the Basic Project will prevail.

## **CHAPTER II**

### **SUBJECT OF THE CONCESSION**

#### **CLAUSE 5 - SUBJECT OF THE CONCESSION**

- 5.1. The Concession will have as purpose the exploitation of the Highway System, which will include, according to this Agreement:
- I. performance, management and supervision of the Delegated Services;
  - II. support in the performance of the Non-Delegated Services;
  - III. management and supervision of the Complementary Services.
- 5.2. The transfer, in any way, of the concession will only be performed with the prior and express authorization of the Contracting Party and approved by the Conceding Authority.
- 5.3. The performance of the services and the exploitation of the Highway System will comply with the provisions of the Concession Regulation, norms, standards and procedures set forth in the Notice of the Call for Tender (Schedule I) and in the Bid (Schedule III).

#### **CLAUSE 6 - KIND OF CONCESSION**

- 6.1. The Concession is of a public service preceded by the performance of public work and will be exploited on a toll collection basis and other services provided to the users, pursuant to terms set forth in Chapter XI hereof.



### **CHAPTER III**

#### **TERM OF THE CONCESSION**

##### **CLAUSE 7 - TERM OF THE CONCESSION**

- 7.1. The Concession term is of two hundred and forty (240) months, counted from the date of transfer of the control of the Existing System.
- 7.2. Changes in the term of the Concession will be admitted to restore the economic-financial balance of the Agreement, in the cases provided for in Clause 26.

### **CHAPTER IV**

#### **ASSETS OF THE CONCESSION**

##### **CLAUSE 8 - ASSETS WHICH ARE PART OF THE CONCESSION**

- 8.1. Are part of the Concession:
  - I. All equipment, machines, devices, fixtures and, in general, all other assets linked to the exploitation and maintenance of the Existing System, which are transferred to the Concessionaire, according to lists contained in the Record of Delivery; and
  - II. The assets acquired by the Concessionaire, throughout the term of the Concession, which are used in the exploitation of the Highway System.
- 8.2. The Concessionaire may only dispose of assets which are part of the Concession, which are not affected as a result of the special utilization destination by the users, if they are immediately replaced by others under identical or superior operating conditions to those of the ones replaced.
  - 8.2.1. Any disposal or acquisition of assets, which the Concessionaire intends to perform, in the last five (5) years of the Concession, will be previously and expressly authorized by the Contracting Party.
    - 8.2.1.1. The Contracting Party will issue a statement, in writing, within a maximum term of fifteen (15) days, concerning the request by the Concessionaire, and the latter must in its request clearly express, concerning the assets to be acquired, if the amortization will not take place fully within the term of the Concession, which is the treatment that is to be given to the non-amortized balance.

##### **CLAUSE 9 - ASSETS OF PUBLIC DOMAIN**

- 9.1. The assets of the Highway System, including the real estate acquired by the Concessionaire, in any way, to perform the services corresponding to Enlargement Functions, and which are intended as a result of their special utilization destination by users, since they are assets out of trade, may not, under any pretext, be assigned, disposed or encumbered, nor leased or given in comodatum or, in any form, be allowed their occupation, seizure, encumbrance or any other action of the same nature, except in the case of movable assets and equipment when offered as surety for the financing of their acquisition.



## **CHAPTER V**

### **CONCESSIONAIRE**

#### **CLAUSE 10 - BYLAWS**

- 10.1. The bylaws of the CONCESSIONAIRE are those in SCHEDULE VI and its specific and exclusive corporate object during all the term of the CONCESSION will be the exploitation of the HIGHWAY SYSTEM.
- 10.1.1. Any change of the corporate bylaws will depend from the prior and express authorization of the CONTRACTING PARTY.

#### **CLAUSE 11 - SHAREHOLDERS**

- 11.1. The transfer of the concession or the corporate control of the concessionaire without the prior consent of the CONTRACTING PARTY will entail the forfeiture of the concession.

#### **CLAUSE 12 - STOCK CAPITAL**

- 12.1. The subscribed stock capital of the CONCESSIONAIRE is of R\$ 173,351,120.00 (one hundred and seventy three million, three hundred and fifty one thousand, one hundred and twenty of realize), and it must be paid in pursuant to the terms of the Commitment for the Payment of the Stock Capital, entered amongst the shareholders which is in SCHEDULE VIII.
- 12.1.1. Up to the date of Control Transfer of the Highway System, the Contractor must pay, in cash, at least ten per cent (10%) of the Concessionaire's subscribed capital.
- 12.1.2. The balance of the stock capital to be paid in, of R\$ 156,014,120.00 (one hundred and fifty six million, fourteen thousand, one hundred and twenty of realize), will be adjusted on an annual basis, according to the same formula and the same dates in which the adjustment of the Toll Tariff will be made effective and the paid in stock capital in no case will be below 10 % (ten per cent) of the total investment performed and it will be made in the subsequent year, as assessed on December 31 of each year.
- 12.1.3. In case the subscribed capital is below the amount referred in the above item, it will be increased as set forth in the Commitment for the Payment of the Stock Capital (SCHEDULE VIII).
- 12.2. The CONCESSIONAIRE undertakes to keep the CONTRACTING PARTY permanently informed on the compliance by the shareholders of the Commitment for the Payment of the Stock Capital.
- 12.3. The CONCESSIONAIRE may not perform the reduction of its stock capital or acquire its own shares, during all the term of the CONCESSION without the prior and express authorization by the CONTRACTING PARTY.
- 12.4. THE CONCESSIONAIRE only will perform the distribution of dividends to its shareholders or the profit sharing payments to its managers, based on the results assessed in the fiscal year following the one in which the total operation of the PRINCIPAL ENLARGEMENTS becomes effective, which have a term of execution as set forth in SCHEDULE I.
- 12.4.1. For the purposes of the bylaws of the CONCESSIONAIRE to be incorporated, it is required that the forecast of the dividend distribution limit to its shareholders does not exceed 1% (one per cent) of the income of the subscribed and paid in capital, starting from the second fiscal year and until the total operation of the PRINCIPAL ENLARGEMENTS becomes effective pursuant to Law No 9,467/97, which changes Law 6,404/76.



### **CLAUSE 13 - INFORMATION TO BE GIVEN**

- 13.1. During all the term of the Concession and notwithstanding other obligations to provide information set forth herein or in the applicable law, the CONCESSIONAIRE undertakes to:
- I. Give immediately acknowledge all and any case that may harm or prevent the punctual and timely compliance of the obligations arising hereof and that may constitute a cause of intervention of the CONCESSIONAIRE, of forfeiture of the CONCESSION or termination of the AGREEMENT.
  - II. Submit until August 31 of each year an audited report of its accounting status, including, among others, the balance sheets and the statement of income corresponding to the six months period ended on June 30.
  - III. Submit until March 31 of each year the financial statements concerning the fiscal year ended on December 31 of the prior year, including amongst others, the Report from the Management, the Annual Balance Sheets, the Statement of Income, the Statement of Cash Flows, the Notes to the Financial Statements, the Report from the Independent Auditors and from the Audit Committee, in case it is permanent or if started in the respective fiscal year.
  - IV. To give immediate knowledge of all and any situation that corresponds to facts that change in a significant manner the normal development of the services or the exploitation, submitting, in writing, and within a required minimum term, a detailed report on these facts, including, if applicable, contribution of specialized entities, independent from the Concessionaire, with the actions taken or ongoing to overcome or solve the facts referred.
  - V. Submit on a monthly basis a report with detailed information of traffic and accident statistics, prepared according and within the models defined by the Contracting Party.
  - VI. Submit, ninety (90) days after the closure of each civil six months period, updated information on the Financial Prospectus of the Concession, considering the actual results obtained since the start of the Concession up to the prior six months period and the prospective results up to the end of the Concession term, using the same models and criteria applied to prepare the Financial Prospects which are part of the Bid.
  - VII. Submit, within a term set forth by the Contracting Party, other additional or complementary information, which the latter reasonably and formerly requests from the Concessionaire and which do not entail an additional material burden for the Concessionaire.
- 13.2. The Concessionaire will comply with the Accounting Plan, which the Conceding Authority may define for the concessions granted within the Highway Concession Programme of the State of São Paulo.
- 13.2.1. This Accounting Plan may only be changed by the parties through mutual agreement.

### **CLAUSE 14 - LICENCES AND TAX SYSTEM**

- 14.1. It is the sole and exclusive responsibility of the Concessionaire to obtain, in a timely manner, all licences and authorizations which are necessary to exercise all activities subject of the Concession, in particular concerning the protection of the environment, except for the provisions in item 18.1.1 of the Notice of the Call for Tender.
- 14.1.1. The Concessionaire will be exclusively responsible for taking, in a timely fashion, all actions required by the competent entities, pursuant to the law in force, for the concession of the required licences for the full exercise of its activities, and will bear the corresponding expenses.
- 14.2. The Concessionaire will submit to the Contracting Party, in the periods determined by the latter, a report on the environmental impact resulting from the performance of the Delegated Services and Complementary Services, as well as the actions taken for its elimination or minimization.



## **CHAPTER VI**

### **FINANCING**

#### **CLAUSE 15 - OBTAINING OF FINANCING**

- 15.1. The Concessionaire is solely and exclusively responsible for obtaining the financing necessary to the normal development of the services encompassed by the Concession, in order to comply, fully and timely, with all obligations undertaken herein.
  - 15.1.1. To obtain said financial funds, additional to the stock capital, and necessary for the normal development of the activities encompassed by the Concession, the Concessionaire entered on May 20<sup>th</sup>, 1998, the Financing Agreements of the bridge-loan, through opening of a current account limit with Banco Schahin Cury S.A. and has a firm commitment for loans and/or placement of long-term securities with Banco Schahin Cury S.. and Induzuez Capital D.T.V.M. S.A., which are included in Schedule IX.
    - 15.1.1.1. On the occasion of the Control Transfer, the rights and liabilities of the agreements referred to in clause 15.1.1 will be subrogated to the Concessionaire.
  - 15.1.2. The Concessionaire may not claim any provision, clause or condition of the Financing Agreements, or any delay in the disbursement of funds, to be exempted in whole or in part of the obligations undertaken herein, and the terms of this Agreement are fully known by the Financing Institutions.
- 15.2. The Concessionaire may offer as guarantee, in the financing agreements, the rights arising from the Concession, provided they do not jeopardize the operation and the continuity of the services.
  - 15.2.1. The shares corresponding to the Concessionaire control may be given as guarantee of financing, or as countersecurity of operations, linked to the compliance with obligations arising hereof and provided the Contracting Party has authorized them.

## **CHAPTER VII**

### **EXPROPRIATIONS**

#### **CLAUSE 16 - OBLIGATIONS OF THE CONCESSIONAIRE**

- 16.1. The expropriations and the institution of administrative easements, which are necessary to perform the services included in the Enlargement Functions, except those ongoing on the date of presentation of the bid, will be performed by the Concessionaire and borne by it under its responsibility, in compliance with the applicable legal provisions.
- 16.2. In order to comply with its obligations concerning the expropriation or institution of administrative easements, the Concessionaire must:
  - I. submit in a timely fashion to the Contracting Party all the elements and documents which are necessary to declare of public utility the units of real estate to be expropriated or on which will be instituted the administrative easements, pursuant to the applicable laws;
  - II. conduct the expropriation proceedings or those of institution of administrative easements, bearing all costs related to them, including those concerning the acquisition of the real estate, the payment of indemnities or any other compensations arising from the expropriation or the institution of easements or from any other related burden or encumbrances, including any possible temporary use of the real estate unit or the relocation of goods or people, as well as the expenses with court costs, lawyer and expert fees.



- III. perform, on its own account, in the presence of the Contracting Party's representative, who will draw up the corresponding record, the delimitation of lands which are an integral part of the services included in the Enlargement Functions, including the survey of the corresponding cadaster plan, identifying the land which is part of the Concession and the remaining areas.
- 16.2.1. The delimitation and the respective cadaster plan, as set forth in Section III, must be concluded before performing the inspection which is necessary for the authorization to put into operation the Principal Enlargements, and the Concessionaire will be liable for the permanent updating of this cadaster as necessary.
- 16.3. The Concessionaire will submit on a monthly basis to the Contracting Party a report on the progress of the expropriation proceedings and those of the institution of administrative easements, as well as the negotiations which are ongoing for the purpose of acquiring the real estate through direct negotiation.

#### **CLAUSE 17 - STATEMENT OF PUBLIC UTILITY**

- 17.1. The Contracting Party will be responsible for all actions necessary to the declaration of public utility, by the Conceding Authority, of the real estate units to be expropriated to perform the subject of the Concession, including those for temporary use or subject of easements.
  - 17.1.1. The Parties, by mutual agreement, will set forth a work schedule, establishing the terms for obtaining the statement of public utility of the real estate units, to expropriate or to institute easements, and the elements necessary that must be supplied by the Concessionaire, under the conditions set forth in the applicable law and consistently with the terms determined to perform the services included in the Enlargement of Functions.
- 17.2. The Contracting Party will survey and conduct, through the Concessionaire, the expropriation proceedings or those for the institution of easements and may provide the support that the latter may request for the suitable development of the respective proceedings, notwithstanding the responsibilities of the Concessionaire.

### **CHAPTER VIII**

#### **PROJECTS**

#### **CLAUSE 18 - PREPARATION OF PROJECTS**

- 18.1. The Concessionaire is responsible for preparing and maintaining the projects updated, in compliance with the conditions and specifications contained in the Notice of the Call for Tender and in the Bid.
  - 18.1.1. In order to comply with the obligations undertaken in this Clause, an agreement will be executed with the Designer to carry out the projects, the draft of which is Schedule XI.
  - 18.1.2. The replacement, in full or in part, of the DESIGNER by any other specialized company or companies or through the utilization of the personnel of the CONCESSIONAIRE or of the BUILDER themselves will be subject of prior and express notice to the CONTRACTING PARTY and elements of information will be submitted concerning the capacity of the new appointed designer or of the professionals which are part of the technical staff of the CONCESSIONAIRE or of the BUILDER to perform those activities.
- 18.2. The CONCESSIONAIRE will submit to the CONTRACTING PARTY within the terms set forth in the BID and compatible with the dates set forth in the Notice of the Call for Tender, the projects, duly supported, when applicable, with studies and opinions from independent consultants and with the additions by the competent authorities.
  - 18.2.1. The CONTRACTING PARTY according to the programme established together with the CONCESSIONAIRE will follow up on a permanent basis the preparation of projects and studies in order to minimize the time terms for approval.





- 18.3. The projects will be considered as approved: after thirty (30) days from their presentation in the case of services concerning the enlargement and fifteen (15) days in the case of services concerning the special conservation if within these terms the CONTRACTING PARTY has not requested any change in them. The request by the CONTRACTING PARTY of explanations or corrections in the projects submitted will have as consequence the restart of the term for their approval.
- 18.4. The approval by the CONTRACTING PARTY of the projects or surveys submitted by the CONCESSIONAIRE will not entail any liability for the CONTRACTING PARTY and will not exempt, in whole or in part, the CONCESSIONAIRE from the obligations arising hereof or from legal or regulation provisions applicable and any defects of the project or of the quality of the services performed will remain its responsibility.
- 18.5. The CONCESSIONAIRE may not oppose against the CONTRACTING PARTY any exceptions or means of defence to exempt itself, in whole or in part, from the contractual obligations based on facts which result from contractual relations set forth with the DESIGNER.

## **CHAPTER IX**

### **ENLARGEMENT FUNCTIONS SERVICES**

#### **CLAUSE 19 - MAIN ENLARGEMENTS**

- 19.1. The Concessionaire is responsible for the implementation of the Principal Enlargement, according to executive projects to be prepared under its responsibility and approved by the Contracting Party.
- 19.2. The CONCESSIONAIRE will have the exclusive responsibility for preparing the studies and projects concerning these services, as well as for obtaining in a timely fashion all required licences, including those related to the protection of the environment, except for the provisions in item 18.1.I of the Notice of the Call for Tender.

#### **CLAUSE 20 - OTHER SERVICES**

- 20.1. Besides the implementation of the Principal Enlargement, the Concessionaire undertakes to perform the services included in the Enlargement Functions described in the Tender Notice, within the terms and under the conditions set forth in the Bid.
  - 20.1.1. Except for the Principal Enlargement and the services defined as responsibility of the Concessionaire in Schedule 7 of the Notice of the Call for Tender (Schedule I), the performance of the services of enlargement, in the cases resulting from the need of adjustment of the supply to demand, which requires the implementation of new lanes or tracks, will not be the responsibility of the Concessionaire:
    - a) in the Serra do Mar stretch;
    - b) in the Baixada Santista stretch; and
    - c) when affected by city interference.
- 20.2. The Concessionaire will be exclusively responsible for preparing studies and projects concerning the services referred to in clause 20.1, as well as for obtaining of all required licences, in particular those related to the environmental protection.

#### **CLAUSE 21 - QUALITY OF THE CONSTRUCTION**

- 21.1. The CONCESSIONAIRE warrants to the CONTRACTING PARTY the quality of the projects and the performance and maintenance of the services under its responsibility and will be liable for their duration in full utilization and operation conditions during all the term of the CONCESSION.



- 21.2. The CONCESSIONAIRE will be liable towards the CONTRACTING PARTY and towards third parties for any damages that may arise and for loss of profits resulting from any defects or omissions in the projects, the execution of the services and their maintenance and said liability will be covered by insurance pursuant of Clause 33.

## **CHAPTER X**

### **ENLARGEMENT UNDER THE RESPONSIBILITY OF THE CONCEDED AUTHORITY**

#### **CLAUSE 22 - SERVICES OF ENLARGEMENT UNDER THE RESPONSIBILITY OF THE CONCEDED AUTHORITY**

- 22.1. The Conceding Authority will be responsible for preparing studies and projects, for the expropriations and the institution of administrative easements, for obtaining the required licences, in particular the environmental ones, and the performance and supervision of the services of enlargement set forth in item 2.5 of Schedule 7 of the Notice of the Call for Tender (Schedule I).
- 22.2. The maximum term to perform the services described in item 2.5 of Schedule 7 of the Notice of the Call for Tender (Schedule I) is of 60 months, counting from the date of the Highway System Control Transfer.
- 22.3. The Concessionaire may request from the Contracting Party that the responsibility set forth in item 22.1 be transferred to it in whole or in part.

## **CHAPTER XI**

### **EXPLOITATION OF THE HIGHWAY SYSTEM**

#### **CLAUSE 23 - CONTROL TRANSFER**

- 23.1. The EXISTENT SYSTEM will be transferred to the CONCESSIONAIRE within thirty (30) days counted from this date, through the execution of the DEED OF DELIVERY, and from that date on and until the extinction of the CONCESSION, the CONCESSIONAIRE will be exclusively responsible for providing the SUITABLE SERVICE through the execution of the DELEGATED SERVICES, COMPLEMENTARY SERVICES and support to NON-DELEGATED SERVICES and will be responsible for collecting the toll and for the services rendered to the users according to the terms hereto.
- 23.2. The existing facilities and equipment, used for the operation and maintenance of the EXISTING SYSTEM and listed in the DEED OF DELIVERY, will be transferred to the CONCESSIONAIRE together with the TRANSFER OF CONTROL.
- 23.2.1. Any change in the system of toll collection and in the dimension or locations of the respective toll booths may only be performed with the approval by the CONTRACTING PARTY.

#### **CLAUSE 24 - PRINCIPAL ENLARGEMENTS**

- 24.1. The Concessionaire must, after the conclusion of the works, which are indispensable for the commissioning of each segment of the Principal Enlargements, request from the Contracting Party to perform the respective inspection which will be performed jointly by the Contracting Party and by the Concessionaire through specially appointed representative, within at most ten (10) days and based on it the authorization for the commissioning of the Principal Enlargements for the purposes of item 12.4 will be formalized.
- 24.1.1. The Concessionaire may request the anticipation of the commissioning of parts of the Principal Enlargement, whether with toll collection or not, and for this purpose it must submit previously the respective studies to be approved by the Contracting Party.



- 24.1.2. The CONCESSIONAIRE must request from the Conceding Authority through the CONTRACTING PARTY, the authorization for the effective start of the operation of segments of the PRINCIPAL ENLARGEMENTS.
- 24.1.3. The application by the CONCESSIONAIRE requesting the inspection referred to in this Clause must be made with a minimum prior notice of 20 (twenty) days of the date intended for the commissioning.
- 24.1.4. Are considered as indispensable services for the commissioning of the PRINCIPAL ENLARGEMENTS, the effective conclusion of the structures, paving, horizontal and vertical signalization, lighting, sealing, installation of safety equipment, the obtaining of the Operation Licence, according to the environmental laws, drainage and noise protection systems, as well as other activities which entail the permanence of equipment to perform works or services on the lanes or on the shoulders.
- 24.2. The CONCESSIONAIRE will install the toll collection services, when applicable, on the PRINCIPAL ENLARGEMENTS as set forth in the Notice of Call for Tender, its Schedules and Basic Projects, which will include further the administrative services and the facilities for the personnel, which must be equipped with suitable, safe and comfortable means as stated in the BID.
- 24.3. The authorization to put into operation the PRINCIPAL ENLARGEMENTS does not entail any responsibility from the CONTRACTING PARTY concerning their safety and quality status, and will not exempt or diminish the liability of the CONCESSIONAIRE for the compliance with obligations arising from the CONCESSION and herefrom.
- 24.4. Within a maximum term of 6 (six) months counting from the date of the Record of Inspection, the CONCESSIONAIRE will supply the CONTRACTING PARTY with 2 (two) written and drawn definitive a complete counterparts of the parts, concerning the services performed, in a material that allows for their reproduction and with computerized support.

#### **CLAUSE 25 - CONCESSION RISKS**

- 25.1. The CONCESSIONAIRE takes full responsibility for all risks inherent to the exploitation of the HIGHWAY SYSTEM, except only those which are expressly stated herein as not being its responsibility.
- 25.2. Changes of revenues resulting from changes of traffic demand concerning what has been forecasted in the Business Plan submitted in the BID will not be considered for the purposes of economic-financial balance, and it will be considered as an exclusive risk of the CONCESSIONAIRE to assess correctly any possible impact on the exploitation of the HIGHWAY SYSTEM arising from the future evolution of the demand.
  - 25.2.1. The CONCESSIONAIRE will bear in particular the risks of traffic reduction as regards the forecasts considered in the BID, except in the cases in which this reduction results from unilateral action by the CONTRACTING PARTY or the CONCEDING AUTHORITY, which have an impact on the economic-financial balance of the AGREEMENT.
  - 25.2.2. THE CONCESSIONAIRE will be fully responsible for the risks of the accessory revenues prospects.
- 25.3. Variations of cost resulting from obligations taken by the Concessionaire concerning what is foreseen in the Business Plan submitted in the bid will not be considered for the purpose of economic-financial balance, and the correct evaluation will be considered an exclusive risk of the Concessionaire.

#### **CLAUSE 26 - ECONOMIC-FINANCIAL BALANCE**

- 26.1. The Parties will be entitled to restore the economic-financial balance of the Agreement, when it is effected, in the following cases:

- I. Unilateral change imposed by the Contracting Party or by the Conceding Authority to the conditions of the Agreement provided that, as a direct result from this change, the Concessionaire has a significant change of costs or of revenue, for more or for less.
  - II. Events of force majeure, as set forth in Clause 51.
  - III. Exceptional events, which cause significant changes in the financial and exchange markets, and which entail substantial changes in the assumptions adopted to prepare the Financial Prospects, for more or for less.
  - IV. Legal changes of specific character, which have a significant and direct impact on the revenues or on the costs of the services applicable to the activities encompassed by the Concession, for more or for less.
- 26.2. Whenever there is a right to restore the economic-financial balance of the Agreement, this restoration will be implemented taking as base the effects of the facts that were its cause, as they were considered in the Financial Prospects.
- 26.3. Whenever it is necessary to restore the economic-financial balance of the Agreement, because of facts as defined in item 26.1, this restoration may take place, in case there is no agreement between the Parties, in the form that is chosen by the Contracting Party, and approved by the Conceding Authority, through the following modalities:
- I. Extension or reduction of the Concession term;
  - II. Extraordinary review of the toll tariff;
  - III. A combination of the above modalities.
- 26.4. The restoration of the economic-financial balance of the Agreement, performed pursuant to the terms hereof, will be, as regards the fact that was its cause, unique, complete and final for all the Concession term.
- 26.5. The Concessionaire, in order to request the restoration of the economic-financial balance of the Agreement, must submit to the Contracting Party a well-founded request, justifying that any fact that may characterize this lack of balance, did occur.
- 26.6. Whenever there is a restoration of the economic-financial balance of the Agreement, the Financial Prospects will be adjusted to reflect the situation after this restoration.

## **CHAPTER XII**

### **EXPLOITATION REVENUES**

#### **CLAUSE 27 - TOLL COLLECTION**

- 27.1. The Concessionaire will have the right and the duty to collect toll in the Highway System.
- 27.1.1. The Concessionaire may only stop collecting toll with the prior and express authorization of the Contracting Party, except in the cases of obvious urgency duly justified by the Concessionaire.
  - 27.1.2. The classes of vehicles for the purpose of toll tariff application are those of Schedule XVI.
  - 27.1.3. The Toll Tariffs to be actually charged from the users of the Highway System are those contained in Schedule XVI.

#### **CLAUSE 28 - ADJUSTMENT OF TOLL TARIFF**

- 28.1. The value of the Kilometer Tariff Base will be adjusted on an annual basis, notwithstanding the possibility of reducing this term, according to section III of 3<sup>rd</sup> and 5<sup>th</sup> paragraphs, article 28, together with 1<sup>st</sup> paragraph, article 70, Law No. 9,069 of June 29, 1995, or extending said term, as a result of a law that comes to be enacted later, according to the criteria, formula and dates mentioned in Schedule XVI.



- 28.1.1. The base calculation value will be the one which actually resulted from applying the adjustment formula in the prior period.
- 28.2. The Toll Tariff resulting from the adjusted Kilometer Tariff Base will be calculated again according to the provision in Schedule XVI.
  - 28.2.1. The Toll Tariffs, which result from the application of the adjustment, will be collected from the Highway System users, and calculated with two decimals.
- 28.3. The Concessionaire must notify the Contracting Party up to twenty (20) days before the date foreseen for the adjustment, the new Toll Tariffs that, as a result of applying the criteria, procedures, formula and dates defined in Schedule XVI, it intends to apply in the following period.
  - 28.3.1. The new Toll Tariffs will be considered as homologated by the Conceding Authority fifteen (15) days after the notice set forth in the prior item.
  - 28.3.2. After the publication of the authorization issued by the Conceding Authority, the Concessionaire may automatically apply the first adjustment of toll tariff, fully complying with the authorization act.
- 28.4. Changes in the Kilometer Tariff Base resulting from the commissioning of enlargement must be requested by the Concessionaire with a forty (40) day prior notice.

#### **CLAUSE 29 - TOLL PAYMENT FORM**

- 29.1. The toll payment forms will include the systems set forth in the Schedules of the Notice of the Call for Tender or others that may come to be developed by the Concessionaire, according to the Bid.
  - 29.1.1. Any change in the form of toll payment, concerning those stated in the Bid, will depend on the prior and express approval by the Contracting Party.

#### **CLAUSE 30 - EXEMPTIONS FROM PAYMENT**

- 30.1. No toll payment exemptions may be granted, except in the cases expressly referred to in the below items.
- 30.2. Will be exempted from toll payment the vehicles:
  - a) which are part of the Contracting Party or its Technical Agent;
  - b) which are property of the Highway armed police force;
  - c) public emergency services, such as the Fire Brigade and ambulances, when in service;
  - d) the military forces, when on instruction or manoeuvre; and
  - e) officials, provided they have been accredited, jointly, by the Contracting Party and by the Concessionaire.
- 30.3. The vehicles referred to in item 30.2 hereof, except those indicated in letters “b”, “c” and “d”, must be equipped with the respective evidence of exemption issued by the Concessionaire.

#### **CLAUSE 31 - ACCESSORY REVENUE SOURCES**

- 31.1. Besides the toll tariffs, the Concessionaire may further be remunerated by the following accessory revenue sources:
  - I. Revenue resulting from financial investments;
  - II. Collection of services provided to the users, except those foreseen in Article 5, section I, letter “d”, of the Concession Regulation;
  - III. Collection for advertising;



- IV. Indemnities and cash penalties set forth in the agreements entered between the Concessionaire and third parties;
  - V. Collection for implementation and maintenance of accesses;
  - VI. Collection for the use of the public domain strip, including by other concessionaires of public service, which is allowed by the law in force.
- 31.2. The collection amounts of the services set forth in section II, V and VI must be approved by the Contracting Party and will be adjusted according to the same formula and on the same dates in which the adjustment is actually applied to the Toll Tariff.
- 31.3. The review of accesses existing or foreseen in the BID or the implementation of new ones may only be performed with the authorization of the CONTRACTING PARTY and provided they are approved by the CONCESSIONING AUTHORITY.

### **CHAPTER XIII**

#### **SURETIES AND INSURANCE**

##### **CLAUSE 32 - SURETIES**

- 32.1. The full and timely compliance with the obligations undertaken by the CONCESSIONAIRE as regards the CONTRACTING PARTY will be guaranteed within the terms for the amounts and under the conditions mentioned in SCHEDULE XIII on a cumulative basis through:
- a) Surety of performance of operating and conservation functions;
  - b) Surety of performance of enlargement functions; and
  - c) Surety of payment of fixed amount referred to in section II, item 47.1.
- 32.1.1. The surety referred to in letter “a”, item 32.1 will be retained until the execution of the Definitive Return Record of the HIGHWAY SYSTEM and will be used to cover:
- a) the payment of the variable monthly amount set forth in item 47.1, section I;
  - b) the payment of fines applied to the Concessionaire concerning the operating functions and the conservation functions;
  - c) the payment of fines set forth in item 46.1; and
  - d) the compensation for costs and expenses incurred by the CONTRACTING PARTY to put the HIGHWAY SYSTEM under the conditions defined in Schedule 10 of the NOTICE OF THE CALL FOR TENDER - RETURN CONDITIONS.
- 32.1.1.1. In the case of utilization of the insurance-surety there will be no retention and the last policy, the effectiveness of which will be extended until the date of expiration of the CONCESSION, must foresee coverage up to the issue of the Definitive Return Record in compliance with the provisions in clause 32.4.
- 32.1.2. The surety referred to in letter “b”, item 32.1. will be released proportionally as the enlargement functions is complied with and will serve to cover the payment of fines that are applied to the CONCESSIONAIRE concerning the enlargement functions.
- 32.1.2.1. In the case of utilization of insurance-surety, the policies must foresee an amount of coverage proportional to the enlargement functions to be performed by the CONCESSIONAIRE up to the end of the CONCESSION.



- 32.1.3. The surety referred to in letter “c”, item 32.1 will be released proportionally as the fixed amount is paid.
- 32.1.3.1. In the case of utilization of the insurance-surety, the policies must foresee an amount of coverage proportional to the fixed amount to be paid by the CONCESSIONAIRE for the remaining term of the CONCESSION.
- 32.2. Whenever the Value of the Agreement is adjusted, pursuant to provisions in item 1.1, section XXVI, the Concessionaire must complete the guarantees within five (5) days, counting from the effectiveness of the adjustment, in order to maintain unchanged the agreed proportion, pursuant to the terms of the agreement.
- 32.2.1. In the case of performance bond, the Concessionaire must provide the complementation of the amount of the policy within at most thirty (30) days or submit any other complementary modality of guarantee.
- 32.3. If the amount of fines set forth and/or the coverage of default in the payment of the fixed amount and the payment of variable amount exceeds the amount of the guarantee given, besides its loss, the Concessionaire will be answerable for the difference between the replacement of the full value of the guarantee given within forty-eight (48) hours of the respective notice, under penalty of court collection.
- 32.4. In the case of utilization of performance bond, if the insurance company does not renew the effective policy, the Concessionaire must submit, to be approved by the Contracting Party, another guarantee for an amount and under conditions equivalent to those existing before the expiration of the policy, regardless of notice.
- 32.4.1. The noncompliance with the condition set forth in this subitem will imply the default of the Concessionaire.
- 32.5. In case the modality of insurance-surety is used the policy must:
- to comply with what is specified in clause 32.1.1;
  - have attached a letter of acceptance of the operation by IRB - Brasil Resseguros S.A., or have attached its express authorization to the insurance company to contract the reinsurance directly abroad as well as the reinsurance with the international reinsurance companies;
  - it must be effective for twelve (12) months with the clause of renewal up to the extinction of the CONCESSIONAIRE obligations linked to the reassessment of risk, provided there is a formal consent of the insurance company to extend their term;
  - contain an express provision of obligation by the insurance company to inform the CONTRACTING PARTY and the CONCESSIONAIRE up to sixty (60) days before the final term of effectiveness if the policy will be or not renewed;
  - set forth that, in the case of non renewal of the policy, the final term of effectiveness will be automatically extended for one hundred and twenty (120) days more; and
  - set forth that the nonexistence of the notice set forth in letter “d” of this subitem will entail the automatic renewal of the policy for an equal period and under the same conditions of the original policy.
- 32.5.1. The performance bond policies initially submitted must be adapted to what is set forth in this clause within at most one hundred and eighty (180) days.
- 32.6. Besides the sureties in favour of the CONTRACTING PARTY, the CONCESSIONAIRE undertakes to maintain fully in force the sureties given in favour of the CONCESSIONAIRE, when demanded by it, by the companies contracted to perform the services included within the CONSERVATION FUNCTIONS and the ENLARGEMENT FUNCTIONS, including the CONTRACTING PARTY as beneficiary pursuant to SCHEDULE XIII.
- 32.6.1. The CONCESSIONAIRE must inform the CONTRACTING PARTY, in case it makes an option to demand a surety set forth herein, on the terms, conditions and other material data of this surety.

32.7. The reduction of the surety or its extinction may only be performed with the prior and express authorization by the CONTRACTING PARTY., pursuant to the item 32.4.

### CLAUSE 33 - INSURANCE

33.1. The CONCESSIONAIRE must maintain effective the insurance coverage(s), as mentioned in SCHEDULE XIV, which are necessary to guarantee an effective and comprehensive coverage of risks inherent to the development of all activities encompassed by the CONCESSION pursuant to the terms hereof.

33.1.1. The CONTRACTING PARTY must be co-insured in the insurance policies contracted by the CONCESSIONAIRE which will contain further an express clause of waiver by the Insurance Company to any exercise of subrogation in the rights it has or may come to have against the CONTRACTING PARTY.

33.1.2. The CONCESSIONAIRE must mention in the insurance policies the obligation of the Insurance Company to inform in writing with a minimum prior notice of ten (10) days to the CONCESSIONAIRE and to the CONTRACTING PARTY any facts that may entail the cancellation, in whole or in part, of the contracted insurance, the reduction of their coverage, the increase of deductibles, or reduction of insured amounts.

33.1.3. In case of noncompliance by the CONCESSIONAIRE of the obligation to keep fully effective the foreseen insurance coverages, the CONTRACTING PARTY may contract and directly pay the respective premiums, and the respective costs will be bore by the CONCESSIONAIRE.

33.1.4. The CONCESSIONAIRE must supply, within a term not exceeding thirty (30) days from the start of each year of the CONCESSION, a certificate issued by the insurance company(ies) confirming that all contracted coverage is fully in force and that the respective due premiums are paid.

33.1.5. The obligation to maintain effective the insurance coverage is subject of this clause, starts on the date of Transfer of Control of the EXISTING SYSTEM to the CONCESSIONAIRE and ends with the execution of the Definitive Return Record of the HIGHWAY SYSTEM.

33.1.6. The amount of insurance coverage contracted by the CONCESSIONAIRE will be adjusted according to the same formula and on the same dates in which the Toll Tariff adjustment is actually applied.

33.1.7. The CONCESSIONAIRE may, subject to the prior and express authorization by the CONTRACTING PARTY, change coverages and deductibles as well as any other conditions of the contracted policies, to adapt them to the several stages of development of the activities subject of the CONCESSION.

33.2. In order to comply with the provisions herein, the CONCESSIONAIRE, besides the insurance coverage that can be demanded according to the applicable law, will keep in force, directly, the insurance policies foreseen in the following items.

33.2.1. Insurance of the kind “All risks” for material damages covering the loss, destruction or damage in or of all the assets which are part of the CONCESSION, and this insurance must cover what is normally included according to international standards for undertakings of this nature, in the following modalities:

- I. All construction risks
- II. Designer
- III. Work machinery and equipment
- IV. Damages to property
- V. Damage of machines; and
- VI. Loss of revenues.





- 33.2.1.1. The coverage contracted for material damages must be based on the replacement costs with a minimum limit of R\$ 20,000,000.00 (twenty million of realize), and any deductible may not exceed a cumulative amount of R\$ 2,000,000.00 (two million realize) per year.
- 33.2.1.2. The coverage for loss of revenues must encompass the financial consequences of any possible delays to put into operation the PRINCIPAL ENLARGEMENTS or the interruption of the partial or total exploitation of the HIGHWAY SYSTEM, whenever this delay or interruption results from losses, destructions or damages covered by the material damage insurance.
- 33.2.1.3. The limit value of the coverage for revenue losses must be in each year, at least, equivalent to the average toll monthly revenue of the first six months of the prior year, and in the first year the minimum limit will be of R\$ 12,700.000.00 (twelve million and seven hundred of realize).
- 33.2.1.4. Any indemnity due as result of losses covered by the insurance foreseen herein must be subject of communication to the CONTRACTING PARTY 15 (fifteen) days prior to the payment and this condition must always be explicitly stated in the corresponding police.
- 33.2.1.5. The CONCESSIONAIRE must register in the notice referred to in the above item the amount due, as well as the causes that originated the indemnity and the date in which they took place.
- 33.2.1.6. The insurance policies contracted by the CONCESSIONAIRE foreseen in this item must contain expressly a clause of automatic replacement of the amounts insured.
- 33.2.2. Civil liability, general and vehicles insurance based on an event basis covering the CONCESSIONAIRE and the CONTRACTING PARTY, as well as the officers, employees, servants, contracted parties, delegates or representatives for the amount for which they may be liable as a result of damages, indemnities, court costs and any other charges related with the death or lesion of individuals or damages to property, resulting from the activities encompassed by the CONCESSION.
- 33.2.2.1. The insurance coverage limit for civil liability (including coverage for operations, coverage for actions related to employees and coverage for actions resulting from the use of vehicles of the company, or those contracted and contingents) will not be below R\$ 20,000,000.00 (twenty million of realize) for each loss and any possible deductibles may not exceed R\$ 2,000,000.00 (two million of realize) accumulated in one year, encompassing all material damages and personnel damages.

## **CHAPTER XIV**

### **SUPERVISION OF THE CONCESSION**

#### **CLAUSE 34 - SUPERVISION**

- 34.1. The authority to supervise the compliance with the obligations of the CONCESSIONAIRE will be directly exercised by the CONTRACTING PARTY or by its TECHNICAL AGENT complying with procedures set forth by the Technical Committee.
- 34.2. The CONCESSIONAIRE undertakes to make available to the CONTRACTING PARTY and its TECHNICAL AGENT starting from the transfer of control of the EXISTENT SYSTEM, suitable facilities for the operation of the supervision, according to terms contained in the BID.
- 34.3. The CONCESSIONAIRE will enable the CONTRACTING PARTY, or any other entity accredited by the latter, free access to all the HIGHWAY SYSTEM, to all books and documents concerning the CONCESSIONAIRE, as well as books, records and documents related to the activities encompassed by the CONCESSION, including statistics and administrative records, and will provide concerning them within the term that is set forth, all the explanations that are formally requested from it.



- 34.3.1. The information subject hereof must be available in computerized data basis and the CONCESSIONAIRE will allow the CONTRACTING PARTY an unrestricted access to them on real time.
- 34.4. The CONTRACTING PARTY, directly or through its accredited representatives, may perform in the presence of representatives of the CONCESSIONAIRE, or request that the latter performs on its own account, under a schedule that will be established by mutual agreement by the PARTIES, tests or assays that allow to evaluate properly the conditions for the operation and the characteristics of the equipment, systems and facilities.
- 34.5. The determinations which the CONTRACTING PARTY or the TECHNICAL AGENT may come to do, within the scope of their supervision authority will be immediately accepted by the CONCESSIONAIRE, notwithstanding its right to any applicable appeal under the terms hereof.
- 34.6. The CONCESSIONAIRE undertakes to submit on a quarterly basis to the CONTRACTING PARTY the updated time schedule of its activities related with the performance of services belonging to the CONSERVATION FUNCTIONS and ENLARGEMENT FUNCTIONS.
- 34.7. Any deviation between the progress of the services and the time schedule in force will be subject of detailed explanations and, in case of delays, of presentation of actions that are been taken in order to overcome them.
- 34.8. The supervision of the CONCESSION, encompassing all the activities of the CONCESSIONAIRE, during all the term of the CONCESSION, will be performed by the CONTRACTING PARTY or its TECHNICAL AGENT, and will be followed up pursuant to the terms and Regulations of the CONCESSION, by the Follow up and Supervision Committee on an opinion basis, which will be formed by representatives in equal number of the Congress, the Executive and the users.

#### **CLAUSE 35 - NON COMPLIANCE WITH DECISIONS**

- 35.1. If the CONCESSIONAIRE does not comply with the decisions of the CONTRACTING PARTY or its TECHNICAL AGENT with their authority of supervision, the latter will be entitled to take directly or through their bodies, all actions necessary to correct the situation, and the CONCESSIONAIRE will bear with all the incurred costs.
- 35.1.1. The CONTRACTING PARTY may use the guaranties to cover the costs incurred as a result of the application hereof, notwithstanding the right of the CONCESSIONAIRE to submit any admissible appeal pursuant to the applicable law.

### **CHAPTER XV**

#### **LIABILITY TOWARDS THE THIRD PARTIES**

##### **CLAUSE 36 - GENERAL LIABILITY**

- 36.1. The CONCESSIONAIRE will be answerable pursuant to the applicable law for any damages, caused to third parties, by itself or by its officers, employees, delegates or providers of services or any other individual or legal entity affiliated to it, in the exercise of the activities encompassed by the CONCESSION, and the CONTRACTING PARTY will not take any kind of liability of this nature.

##### **CLAUSE 37 - AGREEMENTS WITH THIRD PARTIES**

- 37.1. Notwithstanding its responsibilities, the CONCESSIONAIRE must perform the services corresponding to the functions of special conservation and enlargement, obligatorily through third parties, for its own account and risk.



- 37.2. The CONCESSIONAIRE must obligatorily inform the contracting of third parties to provide services concerning the development of the activities that are inherent, accessory, and complementary to the services subject of the CONCESSION, as well as the preparation of projects, maintenance, conservation and construction, or the modification of agreements foreseen in the BID.
- 37.2.1. The fact that the agreement has been known by the CONTRACTING PARTY may not be alleged by the CONCESSIONAIRE to exempt itself from compliance in full or in part with its obligations arising hereof, or to justify any delay or change in the cost and investment contained in the BID.
- 37.3. The agreements for the provision of services between the CONCESSIONAIRE and third parties will be governed by private law norms, and no relation of any kind will be set forth between third parties and the CONTRACTING PARTY.

## **CHAPTER XVI**

### **EXTINCTION OF THE CONCESSION**

#### **CLAUSE 38 - CAUSES OF EXTINCTION**

- 38.1. The Concession will be extinguished by:
- a) expiration of the contractual term;
  - b) taking over;
  - c) forfeiture;
  - d) termination; and
  - e) bankruptcy or extinction of the Concessionaire.
- 38.2. Once the Concession is extinguished, the services will be immediately taken by the Contracting Party, which will occupy the facilities and use all the assets of the Concession, which will revert to the Contracting Party, under the terms set forth herein.

#### **CLAUSE 39 - EXPIRATION OF THE CONTRACTUAL TERM**

- 39.1. The Concession is extinguished when the term of its duration has lapsed, according to the provisions in items 7.1 and 7.2, and, therefore, end the contractual relations between the Parties, except those expressly set forth herein.
- 39.2. When the expiration of the contractual term has occurred, the Concessionaire will be fully and exclusively responsible for terminating any agreements of which it is a party, and the Contracting Party will not take any liability concerning them.

#### **CLAUSE 40 - TAKING OVER**

- 40.1. The Contracting Party, when authorized by the Conceding Authority, may, at any time, terminate the Concession whenever reasons of public interest justify it, with a prior notice to the Concessionaire as determined by the Conceding Authority, which may not be below ninety (90) days.
- 40.2. In case of taking over, the Concessionaire will be entitled to an indemnity paid in anticipation, pursuant to the laws in force, in particular article 37, Law 8,987/95, combined with articles 78, section XII, and 79, 2<sup>nd</sup> paragraph, Law 8,666/93.

#### **CLAUSE 41 - FORFEITURE**

- 41.1. The forfeiture of the Concession may be declared when the Concessionaire has, in whole or in part, not performed its contractual obligations, in particular when:
- I. the services are being rendered unsuitably or defectively, taking as base the norms, criteria, indicators and parameters which define the quality of the services, pursuant to this Agreement;
  - II. the Concessionaire does not comply with the contractual clauses or legal or regulation provisions concerning the Concession.
  - III. when there is a deviation of the Concessionaire from its corporate object;
  - IV. when there is any change in the stock control of the Concessionaire or the encumbrance of its shares, without the prior and express approval by the Contracting Party;
  - V. the Concessionaire stops the services or contributes for that action, except in the cases of force majeure;
  - VI. when toll collection occurs in amounts different from those fixed herein;
  - VII. when there is a repeated opposition to the exercise of supervision, noncompliance with the decisions of the Contracting Party or systematic noncompliance with the operating norms, and the other penalties foreseen herein turn out to be ineffective;
  - VIII. the Concessionaire loses the economic-financial, technical or operating conditions to maintain a Suitable Service;
  - IX. the Concessionaire does not comply with the penalties set forth due to infringements, under the established terms;
  - X. the Concessionaire does not comply with any injunction by the Contracting Party to regularize the services rendered;
  - XI. the Concessionaire is convicted in a final judgment for tax evasion, including social contributions;
  - XII. in case the provisions of clause 32.4 occur.
- 41.2. The Contracting Party, in the case of any the facts above listed, will notify the Concessionaire to correct the appointed faults and infringements, and will determine the respective terms.
- 41.3. If the Concessionaire, within the term that was fixed by the Contracting Party, does not correct the indicated faults and infringements, the Contracting Party will bring the competent administrative proceeding to formalize the default of the Concessionaire.
- 41.4. Once the default is proven, in the administrative proceeding, the Contracting Party will propose to the Conceding Authority the statement, through decree, of the Concession forfeiture, regardless of any payment of a prior indemnity, as assessed under the administrative proceeding, already discounted the value of fines and damages caused by the Concessionaire, for which will be applied the sureties set forth in item 32.1.
- 41.5. Once the forfeiture is declared, the Conceding Authority will not be subject to any liability concerning charges, encumbrances, liabilities or commitments with third parties or with employees of the Concessionaire.

#### **CLAUSE 42 - TERMINATION**

- 42.1. This Agreement may be terminated upon decision by the Concessionaire, in the case of noncompliance by the Contracting Party of its obligations, through lawsuits brought specially for that purpose.
- 42.1.1. The services rendered by the Concessionaire may not be interrupted or stopped until the judicial decision, determining the termination of the Agreement, becomes final.



## CHAPTER XVII

### INTERVENTION

#### CLAUSE 43 - INTERVENTION

- 43.1. In case of noncompliance by the Concessionaire with the obligations arising hereof, which in the opinion of the Contracting Party, at its exclusive discretion, do not justify the forfeiture of the Concession, within the terms of Clause 41, the Contracting Party may propose to the Conceding Authority to decree the intervention to take under its responsibility the performance of the services relevant to the Concession.
- 43.2. Among the situations that may entail the intervention, the following are included:
- I. Cessation or interruption, in whole or in part, of the services corresponding to the Operating Functions or the Conservation Functions;
  - II. Serious deficiencies in the organization of the Concessionaire or in the normal development of the activities encompassed by the Concession;
  - III. Situations that put in risk the safety of people or assets; and
  - IV. Delays in implementing the Principal Enlargements, that put in risk the compliance with the term set forth for commissioning and which are not solved according to the procedures set forth herein.
- 43.3. In case any situation that may entail the intervention in the Concession occurs, the Contracting Party must notify the Concessionaire, so that within the term that is fixed for it, it can solve the indicated irregularities.
- 43.3.1. Once the fixed term has lapsed and the Concessionaire has not solved the irregularities or has not taken actions that, at the discretion of the Contracting Party, show the effective intention of solving them, the Contracting Party may propose to the Conceding Authority that it decrees the intervention.
- 43.4. Once the intervention has been decreed, the Contracting Party, within thirty (30) days, will bring forward an administrative proceeding, that must be completed within a maximum term of one hundred and eighty (180) days, to verify the causes that determine the intervention and assess the respective liabilities, while assuring to the Concessionaire abroad right of defence.
- 43.5. Once the intervention has ceased, in case the Concession is not extinguished, the services will once again be the responsibility of the Concessionaire.
- 43.6. The Concessionaire undertakes to make available the Highway System to the Contracting party immediately after the intervention is decreed.
- 43.6.1. Revenues obtained during the period of intervention, in particular those resulting from toll collection, will be used to cover charges resulting from the development of activities corresponding to the DELEGATED SERVICES and support to NON-DELEGATED SERVICES necessary to reestablish the normal operation of the HIGHWAY SYSTEM, the payment of charges with insurance and sureties, charges resulting from financing and the compensation for the administration costs.
- 43.6.2. Any remaining balance from this exploitation, after the intervention, will be given to the CONCESSIONAIRE, unless the CONCESSION is extinguished, and in this case the specific provisions will apply.
- 43.6.3. In case the revenues are not enough to cover the expenses belonging to the development of the CONCESSION the CONTRACTING PARTY may resort to the sureties set forth in item 32.1. to cover them fully.



## **CHAPTER XVIII**

### **REVERSION OF ASSETS**

#### **CLAUSE 44 - REVERSION OF ASSETS**

- 44.1. Once the CONCESSION is extinguished, all reversible assets, rights and privileges linked to the exploitation of the HIGHWAY SYSTEM, which were transferred to the CONCESSIONAIRE or which were implemented by it within the scope of the CONCESSION, will return to the CONTRACTING PARTY.
- 44.2. The reversion will be free of charge and automatic with the assets in perfect operating, utilization and maintenance conditions and free of any charges or burdens.
- 44.3. In case the reversion of assets does not take place under the conditions set forth herein, the CONCESSIONAIRE will indemnify the CONTRACTING PARTY and the indemnification will be calculated according to the applicable laws.
- 44.4. The CONCESSIONAIRE will be entitled to an indemnity corresponding to the non-amortized balance of the assets the acquisition of which, duly authorized by the CONTRACTING PARTY, took place during the last five (05) years of the CONCESSION term, provided it was made to guarantee the continuity and the updated condition of the services encompassed by the CONCESSION.
- 44.5. Once the CONCESSION is extinguished, the CONTRACTING PARTY will perform an inspection of the assets to be reverted, in which a representative of the CONCESSIONAIRE will take part, intended to verify the state of conservation and maintenance of the assets and, within a term of fifteen (15) days, a PROVISORY RECORD OF RETURN OF THE HIGHWAY SYSTEM will be drawn up.
  - 44.5.1. The DEFINITIVE RECORD OF RETURN OF THE HIGHWAY SYSTEM will be executed within a maximum term of ninety (90) days after the PROVISORY RECORD OF RETURN OF THE HIGHWAY SYSTEM has been drawn up, provided the conditions for that are met.
- 44.6. After the extinction of the CONCESSION, no payment may be made to the shareholders of the CONCESSIONAIRE, nor the dissolution or distribution of the assets of the CONCESSIONAIRE, before the CONTRACTING PARTY, through the DEFINITIVE RECORD OF RETURN OF THE HIGHWAY SYSTEM, has certified that the assets reverted are in the situation set forth in item 44.2., or without having fully assured the payment of the amounts due to the CONTRACTING PARTY as indemnification or for any other purpose.

## **CHAPTER XIX**

### **SANCTIONS AND PENALTIES**

#### **CLAUSE 45 - LATE PAYMENT FINES**

- 45.1. Delays in the compliance with terms, time schedules of physical performance of services subject of the CONCESSION in any of their phases, as well as physical time schedules that are adjusted within the development of this AGREEMENT, including those related with the redoing of services that were performed defectively, or the delay in complying with directives, norms, specifications, regulations, indexes and parameters fixed by CONTRACTING PARTY to perform the services will entail the application of the fines specified in SCHEDULE XV.
  - 45.1.1. The application of the fines set forth herein will not prevent that the intervention be decreed or the forfeiture of the CONCESSION be declared, or further that other sanctions set forth herein or in the applicable law be applied.
  - 45.1.2. The fines will be applied through administrative proceeding starting with the summons, issued by Supervision to the CONCESSIONAIRE, assuring to it its prior defence within five (05) business days.



- 45.1.3. The amounts of fines of SCHEDULE XV will be adjusted according to the same formula and on the same dates in which the adjustment is actually applied to the Toll Tariff.
- 45.1.4. All physical performance time schedule delays, referred to in item 45.1, will not be imputable to the Concessionaire, when there is a noncompliance of the work schedule set forth in subitem 17.1.1, which results from delays in the statement of public utility by the Conceding Authority, the provisory writ of entry by the Judiciary or caused by environmental objections to the works, except if resulting from action or omission which are provenly the responsibility of the Concessionaire.
- 45.1.5. The Concessionaire will not be subject to fine, concerning the services corresponding to Operating Functions, provided the extraordinary operating schemes have been implemented, including those of special operations, mentioned in letter “P”, section I, article 5 of the Concession Regulation, if they have been approved by the Contracting Party and implemented and performed efficiently.

#### **CLAUSE 46 - PENALTIES FOR NONPERFORMANCE**

- 46.1. For the total or partial nonperformance of the obligations set forth in the AGREEMENT, the CONTRACTING PARTY may, while guaranteeing the prior defence:
  - I. Apply to the CONCESSIONAIRE the following sanctions:
    - a) warning;
    - b) fine of up to 10% (ten percent) of the toll revenue amount, calculated based on the average of the last six (06) months, multiplied by the number of months remaining for the CONCESSION, in the case of total nonperformance; and
    - c) fine of up to 10% (ten percent) of the toll revenue amount, calculated based on the average of the last six (06) months, multiplied by the number of months in which the CONCESSIONAIRE is in default, for the case of partial nonperformance, or the fine set forth in SCHEDULE XV, for the cases specified therein.
  - II. declare the forfeiture of the CONCESSION.
    - 46.1.1. The forfeiture of the CONCESSION may be declared notwithstanding the application of the sanctions set forth in section I of the above item.
    - 46.1.2. The fines set forth in letter “b” and “c” of section I of the above item, in compliance with the limits set forth, will be applied by the CONTRACTING PARTY according to the seriousness of the infringement made.
    - 46.1.3. For the purposes of the provision in the above subitem the action by the Superintendent of the CONTRACTING PARTY, to be issued within at most sixty (60) days from the Control Transfer, with ranking in the types of infringement, according to their seriousness, and determining the respective fine amounts must be complied with, and its application may be delegated to the Technical Agent.
- 46.2. The procedure for the application of the warning and fine penalties start with the preparation of the respective record by Supervision.
  - 46.2.1. Once the record has been drawn up, the CONCESSIONAIRE will be summoned within a term of ten (10) business days and will have a term of five (05) business days for its defence, with suspension effect.
  - 46.2.2. The CONCESSIONAIRE will have a term of fifteen (15) days to pay the fine counted from the final decision from the Transportation Department.
  - 46.2.3. The fine will be paid at the Finance Department of the CONTRACTING PARTY, Av. do Estado 777, 3<sup>rd</sup> floor, room 311, São Paulo, Capital.
  - 46.2.4. Once the defence has been submitted, the record will be forwarded by Supervision to the Superintendent of the CONTRACTING PARTY, with the accompanying evidence, for his/her decision.

- 46.2.5. A voluntary appeal may be brought against the penalty applied within a term of five (05) business days, counted from the summons, to the competent authority.
- 46.2.5.1. In case of bank surety or insurance-surety the CONTRACTING PARTY will maintain the paying agent informed on the penalties that may be applied to the CONCESSIONAIRE.
- 46.3. The amounts of the fines will be adjusted according to the same formula and on the same dates in which the adjustment is actually applied to the Toll Tariff up to the date of the actual payment.
- 46.4. In case the CONCESSIONAIRE does not perform the payment of the applied fine, within the established term, after final decision the CONTRACTING PARTY will use the sureties provided pursuant to the terms hereof.
- 46.5. The application of penalties set forth herein and their compliance will not effect in any way the application of other sanctions set forth in the law.
- 46.6. The cash amounts resulting from the application of fines will revert to the CONTRACTING PARTY.

## **CHAPTER XX**

### **DELEGATION PRICE**

#### **CLAUSE 47 - PUBLIC SERVICE DELEGATION PRICE**

- 47.1. The Concessionaire will pay to the Contracting Party for the delegation of the public service concerning the exploitation of the Highway System the following price:
- I. An amount corresponding to three per cent (3%) of the gross revenue actually obtained by the Concessionaire in the month prior to the payment, excepting the financial revenue, during all the Concession term; and
  - II. A fixed amount of eighty-seven million Realize (R\$87,000,000.00), to be paid in the following form:
    - a) twelve (12) monthly, equal and consecutive installments, each corresponding to nine hundred and twenty-three thousand three hundred and thirty-four millionth of one per cent (0.923334%) of the amount stipulated herein, the first of which will be due in the last business day of the month this Agreement is executed;
    - b) two hundred and twenty-eight (228) monthly, equal and consecutive installments, each corresponding to thirty-nine hundredth of one per cent (0.39%) of the amount set forth in this item, the first of which will be due on the last business day of the thirteenth (13<sup>th</sup>) month of the execution of this Agreement.
- 47.1.1. The amounts set forth in section I will be due from the first month of the Concession and will always be paid up to the last business day of the next month.
- 47.1.2. The installments foreseen in section II will be adjusted according to the same formula and on the same dates in which the adjustment is actually applied to the Toll Tariff and its payment is object of the sureties provided for according to Schedule XIII.
- 47.1.3. The Concessionaire may perform the payments foreseen in section II, letter “b” of this item using securities issued by Companhia Paulista de Administração de Ativos - CPA, up to the limit of thirty per cent (30%) of each installment.
- 47.1.4. The payments referred to in sections I and II hereof (clause 47.1) apply to the provisions in item 4.3 of Schedule XVII.





## **CHAPTER XXI**

### **RIGHTS AND OBLIGATIONS OF USERS**

#### **CLAUSE 48 - RIGHTS AND OBLIGATIONS**

- 48.1. Notwithstanding the provisions in the applicable laws, the rights and obligations of the Highway System users are:
- I. to receive Suitable Services, as compensation for the payment of the toll, except in the cases of applicable exemptions;
  - II. to receive from the Contracting Party and from the Concessionaire information for the defence of individual or collective interests and for the correct use of the Highway System;
  - III. to notify the Contracting Party and the Concessionaire of irregularities of which they may have become aware, concerning the execution of the Delegated Services, Complementary Services and support to the Non-delegated Services;
  - IV. to contribute for the Highway System to remain in good conditions;
  - V. to comply with the Norms of the National Traffic Code, the traffic regulations of the Contracting Party and to contribute for the safety of individuals and vehicles.
- 48.2. The Concessionaire undertakes to keep, during all the Concession term, in its organizational structure, at least at a level immediately below the organisms of its Administration, an area to care exclusively of relations with users of the Highway System, which will be headed by a person that meets the required conditions to exercise the activities normally performed by an ombudsman.

## **CHAPTER XXII**

### **OBLIGATIONS OF THE PARTIES**

#### **CLAUSE 49 - OBLIGATIONS OF THE CONTRACTING PARTY**

- 49.1. The Contracting Party, notwithstanding other obligations set forth in this Agreement or in the applicable law, undertakes, in a general form, to:
- I. to execute the Record of Delivery of the Existing System, at the moment of the Transfer of Control and the Provisory and Definitive Records of the Return of the Highway System;
  - II. to be responsible, exclusively and directly, for all payments and indemnifications and any possible liens or pledges, resulting from actions or facts prior to the Transfer of Control.
  - III. to approve, provided it has been authorized by the Conceding Authority, the requests from the Concessionaire concerning the construction, reformulation or removal of accesses to the Highway System;
  - IV. to provide support to the required dealings with the Municipal Administrations, concerning the construction, reformulation or removal of accesses;
  - V. to give support to the required dealings, with other Public Service Concessionaires, whenever the performance of the services of their responsibility, within the strip of domain, interferes with the Concession activities;
  - VI. to give support to the required dealings with the competent organisms, in the issues concerning environmental protection;
  - VII. to review and approve, if applicable, the projects of services to be implemented or modified, as well as the respective opinions and reports issued by independent companies;

- VIII. to supervise, directly or through the Technical Agent, the performance of the Delegated Services, the Complementary Services and the support to Non-delegated Services, including the reception and assessment of complaints from users;
- IX. to submit to the approval of the Secretary of Transports the adjustment of Toll Tariffs and of prices for the services collected from users, according to the criteria set forth herein, pursuant to clause 28;
- X. to perform annual and obligatory audits in the accounts and records of the Concessionaire, by itself or through third parties.

#### **CLAUSE 50 - OBLIGATIONS OF THE CONCESSIONAIRE**

50.1. The Concessionaire, notwithstanding other obligations set forth herein or in the applicable laws, undertakes, in a general form, to:

- I. provide Suitable Service;
- II. perform the Delegated Services;
- III. support the performance of Non-delegated Services;
- IV. not to transfer, under any form, the rights of exploitation of the Highway System, without the prior and express authorization of the Contracting Party;
- V. ensure free access, at any time, of the persons charged, by the Contracting Party or by the Technical Agent, or by Supervision, to its facilities and to the places where activities related to the object of the Concession, are being developed;
- VI. provide all information that is requested by the Contracting Party, within the terms and in the periods determined by it;
- VII. obtain the licences and take all actions related to the environmental protection; notwithstanding the provisions in item 18.1.1 of the notice of the Call for Tender;
- VIII. take care for the integrity of the assets which are part of the Concession and for the remaining areas, taking all actions necessary, including those that refer to the domain strip and its access;
- IX. to notify all companies contracted to provide services related to the purpose of the Concession, the provisions hereof, the applicable norms for the development of the activities for which they were contracted, and provisions concerning the rights of users, the contracted personnel and the environmental protection;
- X. publish annual financial statements;
- XI. give support to the regular operation of the Follow-up and Supervision Committee;
- XII. repair all and any damages caused in communication ways, water pipes, sewages, electricity, gas, telecommunication networks and their respective equipment, and in any assets from third parties, resulting from the performance of services under its responsibility.
- XIII. promote the enlargement necessary to maintain the levels of traffic service as defined in the Note of the Call for Tender and its Schedules.

#### **CLAUSE 51 - FORCE MAJEURE**

51.1. All events which are unforeseeable and beyond the control of the Parties, and which have a direct impact on the development of the Concession activities are considered as cases of force majeure, with the consequences set forth herein.



- 51.2. Notwithstanding the provisions in the following item, any event of force majeure will have as effect to dispense the Parties from any liability for the noncompliance with the obligations arising hereof, which were effected by the occurrence of an event of force majeure, strictly as far as the punctual and timely compliance of the obligation has been prevented as a result of the event of this nature.
- 51.2.1. An event will not be considered, for the purposes of restoring the economic-financial balance of the Agreement, as an event of force majeure if, at the time it occurs, it corresponds to a risk that could be ensured, in Brazil or abroad, up to a limit of the amounts of the policies commercially acceptable, regardless of the fact of the Concessionaire having or not contracted them.
- 51.2.1.1. The provisions in item 51.2.1 will not be applied at the Serra do Mar stretches:
- a) provided that, at the discretion of the Technical Committee, the Concessionaire has taken all preventive and corrective actions, in due time, in order to avoid or correct the consequences of the event; and
  - b) in compliance with the limits set forth for insurance and guarantees set forth in the Agreement.
- 51.3. The Party that has the compliance with its obligations effected by events of force majeure must immediately notify the other Party of said event which it considers as an event of force majeure, pursuant to the terms hereof.
- 51.4. In any event of force majeure, the consequences of which are not covered by insurance, the Parties will agree concerning a restoration of the economic-financial balance of the Agreement or the extinction of the Concession and, in case no agreement is reached, a conciliation procedure can be applied.
- 51.4.1. Once the Concession extinction has occurred, pursuant to the provisions hereof, the valid rules and procedures for the extinction of the Concession through the expiration of the contractual term will apply.

## **CHAPTER XXIII**

### **SOLUTION OF DISPUTES**

#### **CLAUSE 52 - TECHNICAL DISPUTES**

- 52.1. To solve any possible disputes of technical nature, thirty (30) days following the execution of the Agreement, and through act by the Secretary of Transports, a Technical Committee will be organized, which will consist of three (3) effective members and three (3) substitute members who will replace the effective members in their absences or impediments.
- 52.1.1. The Technical Committee will be competent to issue well-founded reports on the issues submitted to it by the Contracting Party or by the Concessionaire, concerning disputes that may arise related to the technical aspects of the services corresponding to Operating Functions, Conservation Functions and Enlargement Functions.
- 52.1.2. The members of the Technical Committee will be appointed in the following form:
- I. An effective member, and the respective substitute, by the Contracting Party;
  - II. An effective member, and the respective substitute, by the Concessionaire;
  - III. An effective member, who will be the Chairman of the Commission, and the respective substitute, by the Secretary of Transports.
- 52.1.2.1. The effective member and the respective substitute, appointed by the Secretary of Transports, must be independent and renowned professionals.

- 52.1.3. The procedure to solve disputes will start through the notice by the Party that requests the statement of the Technical Committee, to the other Party, of its request, and supplying a copy of all elements submitted.
- 52.1.4. Within a term of fifteen (15) days, counting from the reception of the notice referred to in the above item, the answering Party will submit its allegations concerning the issue that was brought forward, sending to the other Party a copy of all elements submitted.
- 52.1.5. The opinion of the Technical Committee will be issued within a maximum term of thirty (30) days, counting from the date of reception by the Committee of the allegations submitted by the answering Party, if any other term has not been established by the Parties, by mutual agreement, and accepted by the Technical Committee.
- 52.1.6. The opinions of the Technical Committee will be considered as approved if they have the favourable vote of at least two (2) of its members.
- 52.1.7. The expenses from the operation of the Technical Committee and the fees of its Chairman, and the respective substitute, will be shared pro rata between the Parties.
- 52.1.8. The presentation of any issue to the Technical Committee will not dispense the Concessionaire from giving full compliance to its contractual obligations and the decisions of the Contracting Party, including those issued after the presentation of the issue, will not allow any interruption in the development of the activities related to the Concession.
- 52.1.9. If any of the PARTIES does not accept the opinion approved by the Technical Committee it may within a term of 15 (fifteen) days accounting from the date of the reception of the respective notice, request to the other party that the issue be brought to the Conciliation Committee.

#### **CLAUSE 53 - CONTRACTUAL DISPUTES**

- 53.1. Besides the issues submitted to the Technical Committee, whose opinion is not accepted by one of the PARTIES, the PARTIES may agree to settle any other disputes that may arise concerning the application or construction of the provisions hereof, through a Conciliation Committee.
- 53.2. The Conciliation Committee will consist of 3 (three) members, and each of the PARTIES will appoint one member and the third will be chosen by mutual agreement by the other two members appointed by the PARTIES, with said choice to be made on a professional of proven expertise in administrative law.
  - 53.2.1. The Conciliation Committee will be considered as organized on the date in which the third member has accepted the choice and notifies this acceptance to the PARTIES.
  - 53.2.2. The Conciliation Committee may be assisted by technicians it considers convenient to convene.
- 53.3. The Conciliation Committee may take its decisions according to the established law and will make any statement within at most 6 (six) months.

### **CHAPTER XXIV**

#### **MISCELLANEOUS**

#### **CLAUSE 54 - COMMUNICATIONS**

- 54.1. Communications between the PARTIES will be performed in writing and sent:
  - a) by hand, provided they are evidenced through record;
  - b) through fax, provided its reception is evidenced;
  - c) by registered mail, with return receipt requested.



54.2. The following addresses and fax numbers are considered for the purposes of sending of the communications pursuant to this Clause:

- a) CONTRACTING PARTY: Av. do Estado, 777 - CEP 01107-000 - Fax 011-2273576
- b) Contractor: PRIMAV Construções e Comércio Ltda. - Rua Teófilo Ottoni, 63 - 3<sup>rd</sup> floor, Rio de Janeiro.

54.3. Any of the PARTIES may modify its address and fax numbers through simple notice to other PARTY.

#### **CLAUSE 55 - TIME TERMS**

55.1. The terms set forth in days herein refer to calendar days, unless there is an express mention to business days.

#### **CLAUSE 56 - EXERCISE OF RIGHTS**

56.1. The non-exercise or the late or partial exercise of any right of any of the PARTIES arising hereof will not imply the waiver to its right and will not prevent any further exercise nor will it constitute a novation of the respective obligation.

#### **CLAUSE 57 - PARTIAL INVALIDITY**

57.1. If any of the provisions hereof were declared null or invalid, this statement will not effect the validity of other contractual provisions which will remain in full force.

#### **CLAUSE 58 - CHANGE OF THE CONCESSIONAIRE**

58.1. Within a term of 30 (thirty) days after the execution of this AGREEMENT, the Contractor must change its bylaws or articles of incorporation or may organize its own subsidiary in order to take the form of a corporation maintaining the same previously existing share control.

58.2. In case of non compliance with the obligations referred to in item 56.1., within the term set forth therein, the agreement will be terminated and the CONCESSIONAIRE will be subject to a fine corresponding to 1% (one per cent) of the estimated contracted value.

#### **CLAUSE 59 - COURT JURISDICTION**

59.1. The Court jurisdiction of the capital of the State of São Paulo is the competent one to settle any issue arising hereof.

IN WITNESS WHEREOF, the PARTIES execute the present AGREEMENT in 3 (three) counterparts:

By Departamento de Estradas de Rodagem - DER/SP:

(*sgd.*) (*illegible*) - Eng. Sérgio Augusto de Arruda Camargo  
DER Superintendent



By PRIMAV Construções e Comércio Ltda.:

(sgd) Marcelino Rafart de Seras  
Attorney.

Witnesses

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## HIGHWAY CONCESSION AGREEMENT RECORD ANCHIETA-IMIGRANTES SYSTEM – SAI

### NOTICE OF CALL FOR TENDER DER N° 15/CIC/97

#### SCHEDULE XVII – Toll Coupons

##### 1. THE COLLECTION OF TOLL COUPONS

1.1. The Concessionaire must render useless all toll coupons the moment they are received at the toll booth, registering the date of collection of each coupon, the booth number, the toll place and the name of the Concessionaire, according to a model to be disclosed by DER.

1.1.1. The Concessionaire that does not comply with what is set forth herein will be subject to a fine equivalent to one thousand (1,000) basic toll tariffs for each case verified, which corresponds on this date to four thousand and two hundred Reals (R\$4,200.00).

1.1.2. For an infringement made in the period from June 1 to 30, the fine referred to in the item above will be of ten thousand (10,000) basic toll tariffs for each case verified, on this date corresponding to forty-two thousand Reals (R\$42,000.00).

##### 2. THE DELIVERY AND CHECKING OF THE TOLL COUPONS

2.1. The Concessionaire must deliver the coupons collected in the period from 1<sup>st</sup> to 15<sup>th</sup> of each month and in the period from 16<sup>th</sup> up to the last day of the month on the first business day after each period.

2.1.1. The coupons must be delivered at the respective issuing entity (DER or DERSA).

2.2. The coupons must be delivered separated by class and in batches of one hundred (100) units, together with a quantity summary, unit value, subtotal per class and general total of all coupons delivered, in two counterparts, according to a model to be disclosed by DER, in as many sealed envelopes as necessary.

2.2.1. DER or DERSA must acknowledge receipt of the coupon batch in one of the summary counterparts, registering the date and time scheduled to check the coupons, which must take place at most four (4) business days after reception.

2.3. On the scheduled date and time, the Concessionaire must send an authorized representative, who will follow up the checking of coupons, and the nonattendance on the scheduled date and time will imply the acknowledgement by the Concessionaire of the amounts declared by DER or DERSA.

2.3.1. One same representative for more than one Concessionaire will be admitted.

2.4. DER or DERSA will issue a receipt specifying the quantity of coupons per class, unit price, subtotal per class and general total of coupons checked, and will register the respective delivery date.

2.4.1. The tariff to be considered will be that on the date of collection of the coupon.

##### 3. THE PAYMENT

3.1. The Concessionaire will issue a Debt Note against DER, to which will be attached a copy of the receipt issued according to item 2.4.

3.1.1. DER will send to DERSA a copy of the Debt Notes concerning the coupons issued by it on the same date of their reception.

3.2. DER will pay the Debt Notes on the tenth (10<sup>th</sup>) day after the delivery date of the coupons, through a deposit in the current account of the Concessionaire, at Nossa Caixa Nosso Banco, DER branch, and will notify the fact through fax.



#### 4. MISCELLANEOUS

- 4.1. DER and DERSA will inform to the Concessionaire the name, telephone, fax, place and address of those responsible for receiving, checking and issuing the receipts.
- 4.2. The Concessionaire will inform to DER the current account number where the deposit referred to in item 3.2 must be performed and the name, telephone, fax and address of its representative.
- 4.3. The Concessionaire may use the due Debt Notes, referred to in item 3.1, for the payments to DER set forth in the concession agreements.





## **TRANSPORTATION**

Secretary: Michael Paul Zeitlin  
Av. do Estado 777 - Ponte Pequena- Phone PABX 230-1400

### **CABINET OF THE SECRETARY**

#### **RESOLUTION 18, OF 07-30-98**

The Secretary of Transportation, taking into consideration that the Roadway Concessionaires of the State of São Paulo are obliged to accept toll tickets issued by DER - Departamento de Estradas de Rodagem (State Roadway Department) or by DERSA - Desenvolvimento Rodoviário S.A. (Roadway Development, Inc.) as payment of the tariff;

Whereas the necessity of establishing uniform procedures to be adopted by DER and by DERSA to redeem the tickets;

Whereas the DER Agreement 1741 executed between DER and DERSA, decides to order that:

Article 1 DER and DERSA shall receive the tickets collected by the Concessionaires during the period between 10 and 24 of each month and from the period of 25 of one month to 9 of the next month, starting from the first working day subsequent to each period, according to the time schedule defined on item 2.1 of the Enclosure.

Article 2 DER shall promote the redemption of the tickets collected from the Concessionaires at the last working day of the month of delivery to the issuing body.

Article 3 DER and DERSA and the CONCESSIONAIRES shall follow the procedures accompanying the present Resolution.

Article 4 DER shall promote the contractual amendments to the concessions already implemented and to be implemented, with the consent of the Concessionaire.

Article 5 The present Resolution shall become effective on the date of its publication, being all provisions in contrary duly revoked, especially Resolution ST-8 of 04-29-98.

#### **ENCLOSURE I TO RESOLUTION ST 18/98**

##### **1. COLLECTION OF TOLL TICKETS**

1.1. The CONCESSIONAIRE shall mark to prevent new use, all toll tickets upon their receipt at the toll booth, recording the date of collection of each coupon, the number of the booth, the location of the toll booth and name of the Concessionaire, according to the model disclosed by DER.

1.1.1. The CONCESSIONAIRE shall mark to prevent new use all toll tickets through a perforation of the internal left corner and another perforation in the inferior right corner.

1.1.2. The tickets which show any irregularity and do not comply with the provisions of items 1.1 and 1.1.1, shall be excluded from the reimbursement and shall be annulled at the inspection, in the present of an authorized representative of the Concessionaire.

##### **2. DELIVERY AND INSPECTION OF TOLL TICKETS**

2.1. The CONCESSIONAIRE shall deliver the tickets collected during the period between 10 and 24 of each month, and during the period from 25 of one month up to 09 of the following month, starting the first working day subsequent to each period, observing the time schedule to be prepared by DER and DERSA.

- 2.1.1. The tickets collected shall be delivered to the issuing body (DER or DERSA).
    - 2.2. Upon delivery, the tickets collected shall be separated by day, class and bound in lots of 100 units, accompanied by a resume of the quantity, unitary value, sub-total per class and grand total of all tickets delivered, in two counterparts, according to the sample disclosed by DER, in as many sealed envelopes as necessary.
      - 2.2.1. DER or DERSA shall acknowledge receipt of the lot of tickets in one of the counterparts of the resume, recording the date and time scheduled to inspect the tickets, which shall occur maximum 5 working days after receipt, as per the time schedule referred to in item 2.1
    - 2.3. On the date and time scheduled, the CONCESSIONAIRE shall send an authorized representative which shall attend the inspection of the tickets, it so being that the failure to attend shall imply the acceptance by the CONCESSIONAIRE of the amounts stated by DER or DERSA.
      - 2.3.1. There shall be accepted one same representative for more than one CONCESSIONAIRE.
    - 2.4. DER or DERSA shall issue a receipt specifying the quantity of tickets per class, unit value, sub total per class, grand total of the tickets inspected, recording the corresponding date of delivery.
      - 2.4.1. The receipts issued by DERSA shall be sent to DER in up to maximum 06 (six) working days after the delivery of the tickets collected by the Concessionaire, observing the time schedule mentioned on item 2.1.
      - 2.4.2. The tariff to be taken into consideration shall be that of the date of collection of the ticket, irrespectively of the date of delivery to the issuing body.
3. PAYMENT
- 3.1. The CONCESSIONAIRE shall issue a Debit Note against DER, which shall be delivered together with the collected tickets during the periods defined by item 2.1.
    - 3.1.1. DER shall send DERSA copies of the Debit Notes regarding the tickets issued by same, on the same date of their receipt.
  - 3.2. DER shall pay the Debit Note on the last working day of the month of delivery to the issuing body, through deposit into the bank account expressly appointed by the CONCESSIONAIRE, with NOSSA CAIXA, NOSSO BANCO, PAB-DER-SP-Capital branch, notifying the fact by fax.
  - 3.3. The adjustment of any difference found between the amounts stated by the CONCESSIONAIRE and the amounts actually obtained after the inspection by the issuing body, shall be offset during the next period.
    - 3.3.1. An eventual overpayment by DER shall cause the CONCESSIONAIRE to pay a fine equivalent to twice the amount of the overprice.
4. SUNDRY PROVISIONS
- 4.1. DER and DERSA shall inform the CONCESSIONAIRE the name, telephone, fax, location and address of the persons in charge of receiving, inspecting and issuing the receipts.
  - 4.2. The CONCESSIONAIRE may use the past due Debit Notes, referred in item 3.1 to pay DER the fixed amounts provided by their concession agreements.
  - 4.4. The failure, by the CONCESSIONAIRE, of complying with the dates provided by the time schedule mentioned in item 2.1, shall release DER from the payment at the due dates defined by item 3.2.
    - 4.4.1. In this case, the Concessionaire shall deliver the tickets for payment together with the lot collected during the following period, observing the system provided hereby.



# Attachment B

## By-Laws

**FEDERATIVE REPUBLIC OF BRAZIL - STATE OF SÃO PAULO - DISTRICT OF THE CAPITAL**

**13<sup>th</sup> NOTARY'S OFFICE OF THE CAPITAL - DR. PAULO AUGUSTO RODRIGUES CRUZ -**

**APPOINTED NOTARY - BOOK 3164 - Pages 111 - JOINT STOCK CORPORATION INCORPORATION DEED**

KNOW ALL MEN TO WHOM THESE PRESENTS that, on the 23<sup>rd</sup> (twenty-third) of the month of April of the year 1998, in this Capital of São Paulo, at the Notary's Office under my charge, before me, Appointed Notary, appeared as grantor and reciprocally, grantee, **PRIMAV CONSTRUÇÕES E COMÉRCIO LTDA.**, with head office in Rio de Janeiro, Capital, at Rua Teófilo Otoni, 63, 3<sup>o</sup> andar, enrolled with the General Taxpayers' Registry of the Ministry of Finance, under number 81.110.124/0001-21, registered at the Trade Board of Paraná under number 412.0211.784-1, during session held on 01.18.89 and amendments filed under n<sup>o</sup>s 448.258 during session of 12.29.89; 448.335 during session of 12.29.89; 454.163 during session of 04.06.90; 457.843 during session of 05.25.90 and at the Trade Board of Rio de Janeiro under n<sup>o</sup> 33202263620 during session of 07.30.90; 557.549 during session of 02.04.92; 585.124 during session of 10.15.92; 638.559 during session of 11.04.93; 674.721 during session of 07.05.94; 693.055 during session of 10.07.94; 706.945 during session of 12.15.94; 739.191 during session of 06.30.95; 750.981 during session of 09.01.95; 757.050 during session of 10.09.95; 784.539 during session of 04.16.96; 828.628 during session of 01.02.97; 833.006 during session of 01.29.97; 841.367 during session of 03.26.97 and 848.590 during session of 05.19.97, herein represented, in the terms of its acts of association which is filed within these notes in a specific file under n<sup>o</sup> 254/98, by the sole partners which are part of the Company, the undersigned, **C.R. ALMEIDA S/A ENGENHARIA E CONSTRUÇÕES**, a private corporation, with head office and under the jurisdiction of the City of Rio de Janeiro - RJ, at Rua Teófilo Ottoni, n<sup>o</sup> 63, 3<sup>o</sup> andar, enrolled with the CGC/MF under n<sup>o</sup> 33.317.249/0001-84, having its By-laws filed at the Trade Board of the State of Rio de Janeiro, under n<sup>o</sup> 333.000.257-82, during session of 03.02.89, and within these notes in a specific file under n<sup>o</sup> 255/98, herein represented by its President Director, **CECILIO DO REGO ALMEIDA**, Brazilian, married, Civil Engineer, resident and domiciled in the City of Rio de Janeiro - RJ, at Av. Projetada A, n<sup>o</sup> 191, apto. 603, Barra da Tijuca, bearer of the Identity Card RG n<sup>o</sup> 149.158-PR and CPF/MF n<sup>o</sup> 007.035.757-91, herein represented by **GUILHERME BELTRÃO DE ALMEIDA**, Brazilian, married, Engineer and Lawyer, enrolled with OAB-PR under n<sup>o</sup> 15.831 and with the CPF/MF n<sup>o</sup> 553.291.609-87, resident and domiciled at Avenida Vieira Souto, n<sup>o</sup> 258-C, in the City of Rio de Janeiro-RJ, presently passing through this Capital, according to power of attorney drawn up in the 5<sup>th</sup> (fifth) Notary's Office of Curitiba - PR, Book 271-P, Page 200, on 07.11.95, of which one counterpart is filed within these notes in a specific file under n<sup>o</sup> 145/98; **PARTICIPARE - ADMINISTRAÇÃO E PARTICIPAÇÕES LTDA.**, a private corporation, with head office and under jurisdiction of the city of Rio de Janeiro - RJ, at Rua Teófilo Ottoni, n<sup>o</sup> 63, 3<sup>o</sup> andar, enrolled with the CGC/MF under n<sup>o</sup> 80.261.100/0001-00, having its Acts of Association filed at the Trade Board of the State of Rio de Janeiro, under n<sup>o</sup> 33202051967, during session of 07.05.89, and within these notes in a specific file under n<sup>o</sup> 256/98, herein represented by its manager partner, **CECILIO DO REGO ALMEIDA**, above qualified; herein represented by **GUILHERME BELTRÃO DE ALMEIDA**, above qualified, according to power of attorney drawn up in the 5<sup>th</sup> (fifth) Notary's Office of Curitiba - PR, Book 271-P, Page 200, on 07.11.95, mentioned above and already filed within these notes; **HENRIQUE DO REGO ALMEIDA & CIA. LTDA.**, a private corporation, with head office and under jurisdiction of the city of Rio de Janeiro - RJ, at Rua Teófilo Ottoni, n<sup>o</sup> 63, 3<sup>o</sup> andar, enrolled with the CGC/MF under n<sup>o</sup> 77.525.806/0001-28, having its Acts of Association filed at the Trade Board of the State of Rio de Janeiro, under n<sup>o</sup> 33.200.767.884, during session of 11.08.82, and within these notes in a specific



file under n° 257/98, herein represented by its President Director, **HENRIQUE DO REGO ALMEIDA**, Brazilian, married, Economist, resident and domiciled in the City of Rio de Janeiro - RJ, at Rua João Lira, n° 95, apt° 1203, Leblon, presently passing through this Capital, bearer of the Identity Card RG n° 245.178-PR and CPF/MF n° 289.796.727-72 and **PIO XII - PARTICIPAÇÕES SOCIETÁRIAS LTDA.**, a private corporation, with head office and under jurisdiction of the city of Rio de Janeiro - RJ, at Rua Teófilo Ottoni, n° 63, 3° andar, enrolled with the CGC/MF under n° 28.982.148/0001-98, having its Acts of Association filed at the Trade Board of the State of Rio de Janeiro, under n° 332.01127.382, during session of 12.20.84, and within these notes in a specific file under n° 258/98, herein represented by its manager partner **ROSA MARIA BELTRÃO RISCHBIETER**, Brazilian, married, entrepreneur, resident and domiciled in the City of Rio de Janeiro - RJ, at Avenida Vieira Souto, n° 258-C, presently passing through this Capital, bearer of the Identity Card RG n° 275.200-PR and CPF/MF n° 872.405.059-87. The presents are acknowledged as the ones with whom I am dealing with, in accordance with identification documents herein exhibited to me, of which I certify to it. Then, the grantor and reciprocally, grantee's representatives, through the first nominee, have said to me: - **CLAUSE I** - That, it was hereby organized, as it is, in fact, organized, a Joint Stock Incorporation, under the denomination of **CONCESSIONÁRIA ECOVIAS DOS IMIGRANTES S.A.**, having its head office in São Paulo, Capital, at Rua dos Buritis, 128, 4° andar, Jabaquara; - **CLAUSE II** - That the Company, herein organized, is a wholly-owned subsidiary of the grantor, and reciprocally grantee, in the terms of article 251, of Law 6.404, of November 15th, 1976; - **CLAUSE III** - That the capital of the said company shall be R\$ 1,000.00 (one thousand Reais), divided into 1,000 shares, with no par value, hereby subscribed; **CLAUSE V** - That the grantor, and reciprocally grantee has paid up in cash, the totality of the capital subscribed, through deposit effected in the Banco Bradesco S.A., Agência 0101-5, according to deposit receipt and Declaration executed by the representatives of the said Bank, transcribed thereunder; - **CLAUSE VI** - That the Company, herein organized, shall be governed by Law 6.404, of December 15th, 1976, and further applicable legislation and, in special, by the By-laws transcribed as follows, accepted and approved by grantor, and reciprocally grantee: **BY-LAWS - CHAPTER I - DENOMINATION, OBJECT, HEAD OFFICE AND DURATION - Article 1 - CONCESSIONÁRIA ECOVIAS DOS IMIGRANTES S.A.** is a private joint stock corporation, which shall be governed by these By-laws and by the legal provisions thereunto applicable. - **Article 2** - The Company has by object to execute, under the concession regimen, the exploration, in the terms and limits of the Anchieta-Imigrantes Highway System concession agreement, of the following sectors: - I - Rodovia Anchieta (SP-150), between Km 9 + 700m and Km 65 + 600 m; - II - Rodovia dos Imigrantes (SP-160), between Km 11 + 460m and Km 70 + 000m; - III - Interconnection Planalto (SP-041), between Km 0 + 000m and Km 8 + Km 8 + 000m; - IV - Interconnection Baixada (SP-59), between Km 0 + 000m and Km 1 + 800m; - V - Rodovia Cônego Domênico Rangoni (SP-248/55), between Km 0 + 000m and Km 8 + 400m; - VI - Rodovia Cônego Domênico Rangoni (SP-55), between Km 248 + 500m and Km 270 + 600m; and - VII - Rodovia Padre Manoel da Nóbrega (SP-55), between Km 270 + 600m and Km 292 + 200m. - **Sole Paragraph** - The Company is not allowed to perform any acts foreign to the social object thereof, except through express authorization of the "Departamento de Estradas e Rodagens" (Highways Department) - DER/SP. - **Article 3** - The Company has its head office in and is under the jurisdiction of the City of São Paulo, State of São Paulo. - **Sole Paragraph** - According to resolution of the Board of Directors, the Company may create or suppress branches, agencies or offices, in any part of the country or abroad. - **Article 4** - The term of duration of the Company is indefinite. - **CHAPTER II - CAPITAL AND SHARES - Article 5** - The capital stock is R\$ 1,000.00 (one thousand Reais), fully paid-up and divided into 333 (three hundred and thirty three) common shares and 667 (six hundred and sixty seven) preferred shares. The shares shall have no par value. - **Paragraph 1** - Common and preferred shares shall be nominative, the common shares cannot be converted into preferred shares and vice-versa. - **Paragraph 2** - Each preferred share shall have the priority in the distribution of dividends and in capital stock reimbursement, in case of liquidation of the Company. - **Paragraph 3** - Preferred shares shall not be entitled to vote. - **Paragraph 4** - Each common share shall correspond to one vote in General Meeting's resolutions. - **Paragraph 5** - The transference of common shares implying in alteration of the Company's control, shall depend on previous approval of the Departamento de Estradas e Rodagens (Highways Department) - DER/SP. - **Article 6** - The shares shall be represented by certificates. The Company may issue multiple share certificates. - **Sole Paragraph** - Multiple certificates or securities shall be jointly executed by 02 (two) directors. - **CHAPTER III - GENERAL MEETING - Article 7** - The General Meeting shall be held, by call, ordinarily, in the first four months after the corporate year-end closing, for the purposes provided by law and, extraordinarily, whenever corporate interests so requires. **Paragraph 1** - The General Meeting shall be called by the



President Director. - **Paragraph 2** - The General Meeting shall be installed and presided by the President Director and, in his absence or temporary impediment, by a shareholder's representative. The General Meeting Chairman shall invite one of the presents to be the secretary of the works. - **Article 8** - The shareholder may be represented by proxy in the General Meeting, in the form of law, provided that the respective power of attorney is filed at the Company's head office, until 02 (two) days prior to the date in which the General Meeting is to be held. - **CHAPTER IV - MANAGEMENT - Article 9** - The Company shall be managed by a Board of Directors composed of: one President Director, one Finance-Administrative Director, one Technical Director and one Market Relationships Director, who may or may not exercise such position together with other executive attributions. The office of President Director may be exercised together with one or more offices of Director. - **Paragraph 1** - The directors, shareholders or not, shall all be resident in the country, and elected by General Meeting, for a term of office of 02 (two) years, being a reelection allowed. The term of office of directors shall extend until the new elected shall take office. - **Paragraph 2** - The General Meeting shall establish the Board of Directors' overall remuneration, being the President Director in charge of deciding on fee allowances distribution, in the first meeting to be held. - **Paragraph 3** - The Board of Directors' take of office shall be effected through a term of possession drawn up and executed in the Minutes' book of the Meetings of the Board of Directors. - **Paragraph 4** - The directors, during their absences or temporary impediments, shall be substituted among themselves, pursuant to provision established in resolution of the Board of Directors. - **Paragraph 5** - In case of vacancy of any office of the Board of Directors, the temporary substitution shall be effected in the form of previous paragraph, and the alternate shall serve until the election of the definitive alternate by a General Meeting. The definitive alternate shall complete the term of office of the substituted member. - **Article 10** - Besides other attributions provided in these By-laws, as well as any other which may be conferred by General Meeting or by Resolution of the Board of Directors: - I - the President Director shall: - a) represent the Company in court, actively and passively, specially regarding the receipt of initial service of process, and shall perform the acts required for the regular operation of the Company; - b) call and preside the meetings of the Board of Directors; - c) call and preside the General Meeting; - d) manage and control the targets and budgets, annual and pluri-annual programs of the Company; - e) decide on legal, judicial or extrajudicial questions; - f) prepare the accounts and periodical reports of the Company; - g) approve the organization manual of the Company; - h) approve targets, plans and operational tactic programs, and - i) implement management policies and business and human resources administration. - II - the Finance-Administrative Director shall: - a) prepare and implement financial-economical budget for short, medium and large term; - b) manage and control the financial resources execution; - c) develop and execute financial leverage plans at departments and institutions; - d) execute financial negotiations with clients, banking institutions and suppliers; - e) manage and guide the financial controllership activities, and - f) manage general accounting and the equity control of the Company's highway system. - g) manage and guide the administrative and managerial computer activities; - h) manage and guide the activities of contracting works, suppliers and services; - j) manage and guide supply management, storage and the management of material and equipment stock; - k) manage and guide the services of security and surveillance of the patrimony and of the users of the Anchieta-Imigrantes system; - l) manage and guide library, documentation and files services; - m) manage and guide superintendency services, and - n) manage and guide transportation services. - III - the Technical Director shall: - a) manage, guide and control the activities of works, and maintenance and civil conservation; - b) manage and guide the planning and control of works and maintenance and civil conservation; - c) manage and control the inspections of structures, pavements, drainage and buildings; - d) guide and control safety actions in the works and maintenance and civil conservation services, and - e) administrate and manage budgets and costs of works and maintenance and civil conservation services. - f) manage, guide and control operational activities and the maintenance and conservation services of electric systems/illumination and electronics; - g) manage and guide the operational planning and control; - h) guide and control the electric system/illumination maintenance; - i) guide and control electronic systems maintenance; - j) manage and control routine and patrimony guard and traffic support inspections; - k) guide and control track cleaning services; - l) guide and control traffic safety and toll collection actions; - m) evaluate the balance between efficiency and quality of the operational services, and - n) administrate and manage budgets and operational costs. - **Article 11** - The Board of Directors shall meet whenever called by the President Director. The resolutions shall be taken by majority of votes, and the President Director, besides his personal vote, shall be entitled to the casting vote. - **Sole Paragraph** - No resolution shall be taken by the Board of Directors without the President Directors' vote. - **Article 12** - The Board of Directors, besides other powers provided by law and these By-laws, shall: - I - be in charge of the general guidance of the Company's business; II - approve the Internal Regulation of the Company,



attributing the respective functions to the offices of the Company's organizational chart; III - previously approve the agreements to be executed by the Company; - IV - approve the disposal of and the constitution of real encumbrances on rights and assets of the Company's permanent assets, in the cases permitted by the concession agreement; - V - approve loans and/or financing to be taken by the Company, being prohibited those which terms of amortization exceed the final term of the concession agreement; - VI - proceed an examination, at any time, of the books and documents of the Company; request information on agreements executed or to be executed, and any other administrative fact or act which he deems to be of interest; - VII - select and remove independent auditors; - VIII - manage the corporate business, in accordance with the resolutions taken by General Meeting; - IX - approve the issuance of founder shares, debentures or share-convertible securities; - X - approve the issuance and public offer of securities, including Promissory Notes. - **Article 13** - In the acts or agreements of which the Company is a party of, or in the execution of any document for which the Company is liable for, the Company shall be represented by 02 (two) directors jointly, or also by one director jointly with one proxy. - **Article 14** - The Company, represented by two directors, jointly, may constitute a proxy, with the purpose of practising acts and operations expressly provided, established and specified in the respective power of attorney. **Sole Paragraph** - With exception of the powers of attorney granted with "*ad judicium*" clause, all others shall have a definite term of duration, which shall not surpass the corporate year-end in which they have been granted. Exceptionally, the mandate granted in the last quarter of the corporate year-end may have its term of duration validated until the last day of the subsequent corporate year-end. - **CHAPTER V - STATUTORY AUDIT COMMITTEE - Article 15** - The Company shall have a Statutory Audit Committee, with powers and attributions conferred by law, composed of 03 (three) members and alternates in similar number, shareholders or not, resident in the country, elected by General Meeting by request of the shareholder, in the form of law, which operation term shall terminate in the first Extraordinary General Meeting after the establishment thereof. - **Paragraph 2** - The General Meeting electing the Statutory Audit Committee's members shall establish their respective remuneration. - **Paragraph 3** - The effective members of the Statutory Audit Committee shall be substituted, in their absences or impediments, by the alternate members, according to the order of appointment in the General Meeting which shall elect them. - **CHAPTER VI - CORPORATE YEAR-END, BALANCE SHEET AND RESULTS - Article 16** - The corporate year-end shall close on December 31st of each year. - **Article 17** - After the closing of the corporate year-end, the respective balance sheet shall be assessed, in compliance with legal and statutory provisions therein applicable. - **Article 18** - The Company may assess interim balance sheets and, by resolution of the Board of Directors, declare and distribute dividends on the account of profit obtained in these balance sheets, or on the retained profits or revenue reserves accounts. - **Paragraph 1** - Dividends distribution shall be subject to minimum limits established by Law n° 6404/76 and by Law n° 9457/97, whether in respect to the quantity or to the periodicity of the distribution thereof. - **Paragraph 2** - The Company shall only distribute dividends which are exceeding the minimum obligatory dividend or any other corporate benefits, including "*pro labore*" paid to managers provided for in these By-laws, whenever they result of the assessment, at the end of the corporate year-end, of profits deriving from the corporate object, and provided that such dividends or corporate benefits remain after the payment of due obligations resulting from the concession agreement, although the said obligations had been originated in financial year prior to the profit assessment. - **Paragraph 3** - The Company may only effect the distribution of dividends or the payment of income participation to their managers, in the year-end following to the total starting up of the MAIN ENLARGEMENTS. **Paragraph 4** - The minimum limit estimate for dividends distribution to their shareholders may not surpass 1% (one percent) of the income of the paid up and subscribed capital, as from the second year-end, until the total starting up of the MAIN ENLARGEMENTS in the terms of Law n° 6404/76 and Law n° 9457/97. **CHAPTER VII - CORPORATE REORGANIZATION, DISSOLUTION - Article 19** - The "Departamento de Estradas e Rodagens" (Highways Department) - DER/SP shall previously approve any process of merger, association, incorporation or split up of the Company, provided the control conditions established in the Concession Agreements are maintained. - **Article 20** - The Company shall be dissolved in the cases provided by law, and the General Meeting shall establish the mode of liquidation, appointing a liquidator and a Statutory Audit Committee which shall remain in charge during the respective period. - **CHAPTER VIII - MISCELLANEOUS - Article 21** - It is expressly prohibited to use the name of the Company for granting of pledge or guaranty. - **Article 22** - "*Casus omissus*" under these By-laws shall be ruled by the Corporation Law and further applicable legislation. - **CLAUSE VII** - Following, the grantor, and reciprocally grantee, appointed the first Board of Directors, to wit, as President Director, Marcelino Rafart de Seras, Brazilian, married, Civil Engineer, bearer of the Identity Card RG n° 373.267-PR and



CPF/MF n° 428.355.429-49, resident and domiciled, in this Capital, at Rua Professor Artur Ramos, 350 - apto. 401-A, Jardim Paulistano, as Finance-Administrative Director, Hamilton Amadeu, Brazilian, married, Civil Engineer, bearer of the Identity Card RG N° 9.497.760-SSP/SP and CPF/MF n° 039. 875.108-03, resident and domiciled, in this Capital, at Alameda Padre João Manoel, 774 - apto. 71, Cerqueira César, and as Technical Director, Edson Machado, Brazilian, married, Civil Engineer, bearer of the Identity Card RG n° 2.234.101 and CPF/MF n° 032.247.408-68, resident and domiciled, in this Capital, at Rua Eça de Queiróz, 527 - apto. 163 - Paraíso. - **CLAUSE VIII** - And, all legal requirements and provisions being accomplished, for the purpose of **CONCESSIONÁRIA ECOVIAS DOS IMIGRANTES S.A.**'s organization, the grantor, and reciprocally grantee, in the terms of this deed, acknowledges the said company as definitively organized, and the selected and elected directors as definitively elected, for all legal effects, pursuant to **CLAUSE VII** hereof. - This act of association has been seen by José Benedito da Silva Braga Filho, Lawyer. - Thus being said, I certify to it; he asked me to draw up this deed, which was done and being read aloud, he found it in accordance, accepted it, granted and executed it, I certify to it. I, JOSÉ ROBERTO G. DA SILVA, Qualified Writer, wrote it and I declare that C.R. Almeida S/A Engenharia e Construções, Participare Administração e Participações Ltda., Henrique do Rego Almeida & Cia. Ltda., Pio XII Participações Societárias Ltda., have the consolidated acts of association thereof enrolled under n° 0853720 at JUCERJA, n° 0882241 at JUCERJA, n° 0864789 at JUCERJA and n° 817962 at JUCERJA, and represented according to article 8, clause 12<sup>th</sup> clause 10<sup>th</sup> and clause 11<sup>th</sup>, of the respective acts of association thereof, and that PRIMAV Construções e Comércio Ltda., has the last amendments to the acts of association thereof registered under n°s 885273 and 0896229 at JUCERJA, I also declare that, hereby appears Dr. José Benedito da Silva Braga Filho, Brazilian, bachelor, Lawyer, enrolled with OAB/SP under n° 151.495 and with CPF/MF under n° 248.482.888-86, resident and domiciled in this Capital, at Rua Vespasiano de Oliveira, n° 90. I, Paulo Augusto Rodrigues Cruz, Appointed Notary, subscribe it. (signed). GUILHERME BELTRÃO DE ALMEIDA. - GUILHERME BELTRÃO DE ALMEIDA. - HENRIQUE DO REGO ALMEIDA. - ROSA MARIA BELTRÃO RISCBIETER. - JOSÉ BENEDITO DA SILVA BRAGA FILHO. - (THE EMOLUMENTS CORRESPONDENT TO THIS DOCUMENT SHALL BE PAID BY FEE, WITHIN THE LEGAL TERM). NOTHING ELSE, I certify to it. - Transcribed as follows. I, José Roberto Gonçalves da Silva conferred, subscribed and sign it in full and in public. In truth testimony, a) José Roberto Gonçalves da Silva. - JUCESP / REGISTERED: N° 35 300 155 149 - APRIL 29TH, 1998 - SECRETARY OF JUSTICE - TRADE BOARD OF THE STATE OF SÃO PAULO - CERTIFICATE: I certify that this document has been registered under number and date mechanically stamped. Fernando Cesar Dalazoni - General Secretary.

## By-Laws

### MINUTES OF THE EXTRAORDINARY SHAREHOLDERS' GENERAL MEETING

1) DATE AND HOUR: June 1st, 1998, at 10:00 a.m. 2) LOCAL: Corporation's head office, at *Rua dos Buritis, 128, 4º andar, Jabaquara, São Paulo, Capital.* 3) PRESENCES: **PRIMAV CONSTRUÇÕES E COMÉRCIO LTDA.**, legal private entity, with registered offices and jurisdiction in the City of Rio de Janeiro - RJ, at *Rua Teófilo Otoni, nº 63, 3º andar*, enrolled with the General Taxpayers' Register of the Ministry of Finance *CGC/MF* under the number 81.110.124/0001-21, enrolled with the Paraná Board of Trade under the number 412.0211.784-1, in the session held on January 18, 1989 and amendments filled under the numbers 448.258, in session held on December 29, 1989; 448.335 in session held on December 29, 1989; 454.163, in session held on April 06, 1990; 457.843, in session held on May 25, 1990; and with the Rio de Janeiro Board of Trade under the number 33202263620, in session of July 30, 1990; 557.549, in session held on February 04, 1992; 585.124, in session held on October 15, 1992; 638.559, in session held on November 04, 1993; 674.721, in session held on July 05, 1994; 693.055, in session held on October 07, 1994; 706.945, in session held on December 15, 1994; 739.191, in session held on June 30, 1995; 750.981, in session held on September 01, 1995; 757.050, in session held on October 09, 1995; 784.539, in session held on April 16, 1996; 828.628, in session held on January 02, 1997; 833.006, in session held on January 29, 1997; 841.367, in session held on March 26, 1997; 848.590, in session held on May 19, 1997, and 896.229, in session held on February 26, 1998, hereby represented, in the terms of the Articles of Association thereof, by the corporation's sole members, the undersigned **C.R. ALMEIDA S/A - ENGENHARIA E CONSTRUÇÕES**, private legal entity, with registered offices and jurisdiction in the City of Rio de Janeiro - RJ, at *Rua Teófilo Otoni, nº 63, 3º andar*, enrolled with the General Taxpayers' Register of the Ministry of Finance *CGC/MF* under the number 33.317.249/0001-84, with By-laws filled at the Rio de Janeiro Board of Trade under the number 333.000.257-82, in session held on March 02, 1989 and consolidated under the number 853.720, in session held on June 18, 1997, hereby represented by its Chief Executive Officer, Cecílio do Rego Almeida, Brazilian, married, civil engineer, resident and domiciled in the City of Rio de Janeiro, Rio de Janeiro State, at *Av. Projetada A, nº 191, apto. 603, Barra da Tijuca*, bearer of the Identity Card RG number 149.158-PR and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 007.035.757-91, hereby represented by Guilherme Beltrão de Almeida, Brazilian, married, engineer and lawyer, enrolled with the Paraná Section of the Bar Association under the number 15.831 and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 553.291.609-87, resident and domiciled at *Av. Vieira Souto, nº 258-C*, in the City of Rio de Janeiro, Rio de Janeiro State; **PARTICIPARE - ADMINISTRAÇÃO E PARTICIPAÇÕES LTDA.**, private legal entity, with registered offices and jurisdiction in the City of Rio de Janeiro - RJ, at *Rua Teófilo Otoni, nº 63, 3º andar*, enrolled with the General Taxpayers' Register of the Ministry of Finance *CGC/MF* under the number 80.261.100/0001-00, with Articles of Association filled at the Rio de Janeiro Board of Trade under the number 33202051967, in session held on July 05, 1989, hereby represented by Guilherme Beltrão de Almeida, above qualified, accordant the power-of-attorney drew up on July 11, 1995, at the 5th (fifth) Curitiba (*Pr*) Notary's Office, Book 271-P, Page 200, as above mentioned; **HENRIQUE DO REGO ALMEIDA & CIA. LTDA.**, private legal entity, with registered offices and jurisdiction in the City of Rio de Janeiro - RJ, at *Rua Teófilo Otoni, nº 63, 3º andar*, enrolled with the General Taxpayers' Register of the Ministry of Finance *CGC/MF* under the number 77.525.806/0001-28, with Articles of Association filled at the Rio de Janeiro Board of Trade under the number 33.200.767.884, in session held on November 08, 1982, hereby represented by its Chief Executive Officer, Henrique do Rego Almeida, Brazilian, married, economist, resident and domiciled in the City of Rio de Janeiro, Rio de Janeiro State, at *Rua João Lira, nº 95, apto. 1203, Leblon*, bearer of the Identity Card number 245.178-PR and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 289.796.727-72, and **PIO XII-PARTICIPAÇÕES SOCIETÁRIAS LTDA.**, private legal entity, with registered offices and jurisdiction in the City of Rio de Janeiro - RJ, at *Rua Teófilo Otoni, nº 63, 3º andar*, enrolled with the General Taxpayers' Register of the Ministry of Finance *CGC/MF* under the number 28.982.148/0001-98, with Articles of Association filled at the Rio de Janeiro Board of Trade under the number 332.01127.382, in session held on December 20, 1984, hereby represented by its managing partner, Rosa Maria Beltrão Rischbieter, Brazilian, married, economist, resident and domiciled in the City of Rio de Janeiro, Rio de Janeiro State, at *Av. Vieira Souto, nº 258-C*, bearer of the





Identity Card number 275.200-PR and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 872.405.059-87, specially summoned to the Meeting to exercise the right of preference, pursuant to art. 253 of the Law number 6.404/76, and **PEDRO BELTRÃO FRALETTI**, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 1.185.579-2 and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 316.696.549-15, resident and domiciled in the City of Curitiba (*Pr*), at *Av. Sete de Setembro, nº 239, Cristo Rei*, **MARCELINO RAFART DE SERAS**, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 373.267 and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 428.355.429-49, resident and domiciled in the City of São Paulo, at *Rua Professor Artur Ramos, nº 350, apto. 401-A, Jardim Paulistano*, and **GUILHERME BELTRÃO DE ALMEIDA**, Brazilian, married, engineer and lawyer, enrolled with the Paraná Section of the Bar Association under the number 15.831 and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 553.291.609-87, resident and domiciled at *Av. Vieira Souto, nº 258-C*, in the City of Rio de Janeiro (RJ). COMPOSITION OF THE BOARD: Pursuant to art. 7th, paragraph 2nd, of the Corporation's By-laws, the Meeting was presided by the Chief Executive Officer, Mr. IRINEU BERARDI MEIRELES, who invited me, MARCELINO RAFART DE SERAS, to be the Secretary. 5) SUMMONS: All the presents were personally summoned by the Corporation's Chief Executive Officer, pursuant to art. 7th, paragraph 2nd, of the Corporation's By-laws. 6) ORDER OF THE DAY: discuss upon **A)** The alienation of the Corporation's shares, and subsequent Corporation conversion from a full subsidiary to a "closed" corporation [its shares are not negotiated in the stock market]; **B)** the By-laws amendment with reference to the Shareholders' General Meeting; **C)** the By-laws amendment with reference to the Management; **D)** changes in the Executive Board; **E)** adequacy of other By-laws' provisions to the decisions above indicated; **F)** elections of members of the Board of Directors; and **G)** definition of the total fees for the Executive Board and Board of Directors. 7) APPROVALS: All the questions included in the Order of the Day, put to vote by the President, were unanimously approved. Consequently: **A)** PRIMAV CONSTRUÇÕES E COMERCIO LTDA. alienated eight (8) common shares representative of the Concessionaire's capital stock, with the unit value of R\$ 1.00 (one Real), acquired in the following manner, fulfilling the right of preference provisioned in art. 253 of the Law number 6.404/76: I) PARTICIPARE - ADMINISTRAÇÃO E PARTICIPAÇÕES LTDA. acquired four (4) common shares; II) HENRIQUE DO REGO ALMEIDA & CIA. LTDA. acquired two (2) common shares; III) PIO XII-PARTICIPAÇÕES SOCIETÁRIAS LTDA. acquired two (2) common shares. Therefore, the Corporation is converted to a "closed" corporation, with the following capital structure: I) PRIMAV CONSTRUÇÕES E COMÉRCIO LTDA., holder of 57,783,698 (fifty seven million, seven hundred and eighty three thousand and six hundred and ninety eight) common shares, and 115,567,414 (one hundred and fifteen million, five hundred and sixty seven thousand, four hundred and fourteen) preferred shares. II) PARTICIPARE - ADMINISTRAÇÃO E PARTICIPAÇÕES LTDA., holder of four (4) common shares; HENRIQUE DO REGO ALMEIDA & CIA. LTDA., holder of two (2) common shares; III) PIO XII-PARTICIPAÇÕES SOCIETÁRIAS LTDA., holder of two (2) common shares. **B)** The By-laws amendment with respect to the Shareholders' General Meeting was approved. Consequently, arts. 7th and 8th of the By-laws are in force with the following text: "**Article 7th** - The Shareholders' General Meeting shall be held, through summons, ordinarily, within the first four months after the fiscal year closing, for the purposes defined by the Law, and extraordinarily, whenever the corporate interests so require. Paragraph 1st - The Shareholders' General Meeting shall be summoned by the President of the Board, or by a shareholder or a group of shareholders owning, at least, 50% (fifty percent) of the common shares, without prejudice of the other summoning cases provisioned by the Law. Paragraph 2nd - The Shareholders' General Meeting shall be held and presided by the President of the Board. The President of the Shareholders' General Meeting shall invite one of the presents to be the Secretary. Paragraph 3rd - The shareholder may be represented, in the Shareholders' General Meeting, by an attorney-at-law, according to the Law, since the power of attorney thereof be deposited at the Corporation's head office, until two (2) days before the Shareholders' General Meeting to be held. **Article 8th** - The Shareholders' General Meeting's decisions shall be taken by the majority of the attendant shareholders, respected the exceptions provisioned by Law. Sole Paragraph - The following subjects shall depend upon the approval of the shareholders representing the majority of the voting capital: a) creation of new classes of shares; b) issuance of founders shares, debentures or securities convertible to shares; c) issuance or tender offer of securities, including Promissory Notes; d) scission, merger, or incorporation involving the Corporation; e) decisions that involve the signature, amendment, alteration, renewal, extension or termination of any concession agreement, since previously

approved by the *DER/SP*; f) any decision that has been rejected by the Board of Directors, in its area of competence; g) termination and liquidation of the Corporation, or suspension of liquidation; h) decision upon the solicitation of *concordata* [a composition with the creditors], or bankruptcy; i) decision upon the acquisition of Corporation shares". C) The reformation of the Corporation Management was approved. Consequently, arts. 9th, 10th, 11, 12, 13 and 14 of the By-laws become in force with the following text: "**Article 9th** - The Corporation shall be managed by the Board of Directors and by the Directors, which global fees shall be fixed by the Shareholders' General Meeting. **Article 10th** - The Board of Directors shall be composed of three (3) members, shareholders of the Corporation and resident in the Country, elected by the Shareholders' General Meeting, with a mandate of three (3) years, re-elections admitted, and dismissed at any time. Paragraph 1st - In the first meeting after taking office, the Board of Directors shall elect its President among one of the members, by majority of votes. Paragraph 2nd - In the event of a vacancy in the Board, a new member shall be elected by the first subsequent Shareholders' General Meeting, and the President of the Board shall be responsible for exercising the respective functions in a cumulative form, until the elections. Paragraph 3rd - The Board of Directors shall meet at least quarterly, by means of summons from any of its members, in a written form, with five (5) days beforehand, indicating the order of the day, and the meeting will be held and presided by the President of the Board. Paragraph 4th - The members of the Board may be represented in the meetings of the Board of Directors by other member, by means of written authorization, which shall include the indication of the vote of the represented member, being also admitted the votes sent through registered mail, facsimile, or other means of written communication, since received by the President of the Board before the meeting is over. **Article 11** - The Board of Directors shall be responsible for the general guidance of the Corporation's business, and, without prejudice of other attributions provisioned by Law, perform, obligatorily, the following: a) elect, and, at any time, dismiss the directors and re-define its attributions and remuneration, within the limits established by the Shareholders' General Meeting; b) institute the Corporation Internal Regulation, defining the function of each job in the Corporation's organization chart; c) previously authorize all the agreements between the Corporation and any of its shareholders, or companies that are controllers, controlled or associated to its shareholders, considered individually or in conjunction; d) approve the alienation and the constitution of burden over corporation rights and fixed assets, in the cases allowed by the concession agreement; w) authorize the execution of agreements with value 5% (five percent) above the corporate capital; f) authorize any actions or declarations of the Directors before the *Departamento de Estradas de Rodagem de São Paulo* [Department of Public Roads of the São Paulo State] - *DER/SP*, or any other public organ, with respect to amendments to the concession agreement; g) propose capital stock increases to the Shareholders' General Meeting, in accordance with the concession requirements; h) discuss the issuance of subscription bonus and propose the issuance of debentures to the Shareholders' General Meeting; i) authorize with anticipation the borrowings or financing to be taken by the Corporation, in amount above to 10% (ten percent) of the Corporation's capital stock, forbidden those which payment terms go beyond the concession agreement final term; j) discuss the corporate investments and inspect its implementation by the Directors; l) discuss the concession of loans, acceptance of debts or granting of guarantees to favor third parties; m) discuss the performance of expenses or investments in amount not included in business plan, or investments approved by the Board of Directors; discuss upon the Corporation's participation in other companies' capital, when authorized by *DER/SP*; discuss upon the proposition of judicial action, litigation solution, arbitration or other procedure, as well as transaction or agreement of any kind, whenever the subject is directly related to the concession agreement; p) discuss upon operations or business not included in the usual Corporation's activities; q) approve the objective and budget programs, the annual and multi-annual programs; r) submit an extraordinary dividend distribution proposal to the Shareholders' General Meeting, pursuant to art. 18 of these By-laws; s) inspect the Directors' management, examine, at any time, the Corporation's books and documents, ask information about agreements executed or to be executed, and any other acts, as well as to pronounce about the administration report and the Directors' accounts; t) summon the Shareholders' General Meeting, as provisioned in these By-laws, or in the legal cases; u) choose and approve the contract of Corporation's independent auditors; v) discuss upon the opening of branches in any part of the São Paulo State, as well as offices, agencies or representations in any part of the Brazilian territory, or abroad. Sole Paragraph - The Board of Directors' decisions shall be taken by the majority of its members, being the President responsible to decide the tie vote, if necessary. **Article 12** - The Directors are: one (1) Chief Executive Officer, one (1) Administrative-Financial Director, one (1) Managing Director, one (1) Engineering Director, one (1) Director of Operations, and one (1) Director of Market Relations, which may be exercising cumulatively with other executive attributions, all of them shareholders, or not, elected and dismissible at any time by the Board of



Directors. **Article 13** - The **DIRECTORS**'s attributions are: a) implement the Corporations' management, in accordance with the guidance defined by the Shareholders' General Meeting and the Board of Directors, and pursuant to the Law and By-laws provisions; b) make viable the Corporation's activity funding; c) represent the Corporation judicial or extrajudicially, in accordance with the By-laws provisions; d) fulfill and require the fulfillment of the Corporation Internal Regulation; e) observe and care the accomplishment of the concession agreement executed by the Corporation with the Granting Power, through the Contractor; f) perform the activities related to the Corporations' management which do not fit in the specific competence of each Director. Paragraph 1st - The Directors' common decisions shall be taken in a collegiate form by the majority of votes of its members, in a meeting summoned by the Chief Executive Officer, being one of them responsible by his respective area. Paragraph 2nd - The performance of the Directors' decisions shall be individually attributed, within the competencies defined in these By-laws and by the Board of Directors. Paragraph 3rd - The Directors shall exercise their functions independently of presenting pledge. Paragraph 4th - The Directors shall receive the remuneration as globally fixed, which may be individually redefined by the Board of Directors that elected them. Paragraph 1st - It is specially attributed to the **CHIEF EXECUTIVE OFFICER**: a) exercise the Corporation's general business direction; b) maintain permanent coordination between the Directors and the Board of Directors; c) direct and control the Corporation's annual and multi-annual objectives and budgets; d) informed by the legal counselors, directly bound to him, and with the pronouncement of the Board of Directors in the questions which involve subjects of the competence thereof, decide upon the legal questions, judicial or extrajudicial; e) prepare the Corporations' periodical accounts and reports, without prejudice to the Administrative-Financial Director's attributions related to the Corporation's accounting; f) together with the Administrative-Financial Director, promote the acquisition of financing and borrowings before national and international financial institutions, submitting such operations to the Board of Directors' approval; g) adequate the Corporations' organization to its objectives; h) implement the Corporation Internal Regulation, and coordinate the elaboration of an organization manual; i) formulate strategies which assure the fulfillment of the Corporations' objectives; j) represent the Corporation, pursuant to the By-laws, in the execution, agreement for dissolution, waiving, denouncement, or termination of pacts or agreements, together with the Director of the area related to the agreement; k) informed by the quality assistance directly bound to him, inspect the implementation of policies for business managing and administration, operational services, and human resources; l) inspect the performance of the press assistance, directly bound to him; m) inspect the Corporation's environment policy; n) with exclusiveness and separately, receive service of notice; o) be sure that the Corporation keeps adequately insured, by an important insurance company, all the Corporation's assets possible to be insured; p) immediately after receiving, deliver to each member of the Board of Administration one copy of all and any report or correspondence submitted to the Directors by the auditors; q) inspect the Corporation's ombudsman performance, making sure of its efficiency and independence; r) exercise the Directors' collective attributions; s) direct and guide the library, documentation, and file services related to its area. Paragraph 2nd - It is specifically attributed to the **ADMINISTRATIVE-FINANCIAL DIRECTOR**: a) prepare and implement the economic and financial budget for short, medium, and long terms; b) lead and control the financial resource operations; c) develop and execute plans of financial support; d) promote and perform financial negotiations with the customers, financial institutions, banks, suppliers, and other third parties; e) direct and guide the activities of financial controlling; f) direct the general accounting, the fiscal control and the control of the properties of the road granted and the Corporation's; g) implement policies of business management and administration, quality of operational services, and human services; h) prepare and deliver to each member of the Board of Directors, as soon as possible, and, in any case, within thirty (30) days after the end of each quarter of the Corporation's fiscal year: (I) a Corporation Profit and Loss related to such quarter and for the entire period since the beginning of the corresponding fiscal year; (II) Corporation balance sheet as of the end of the respective quarter; (III) statements of income, expense and cash flow, as well as the statement of source and application of funds related to each quarter and to the current fiscal year, until the date of such report; and (IV) estimate of general and operational expenses to be incurred in the immediately subsequent quarter in question; being all the information presented in a detailed and consolidated form, in the event there is a Corporation interest in other companies; i) prepare and deliver to each member of the Board of Directors, until two (2) month after the end of each Corporation's fiscal year: (I) Corporation's statements of profit and loss and source and application of funds, duly audited; and (ii) Corporation's balance sheet related to the fiscal year in question, duly audited; being all the information be presented in a detailed and consolidated form, in the event there is a Corporation interest in other companies; j) direct and guide the activities of administrative and managing processing data; k) direct and guide the

activities of managing human resources; l) direct and guide the management of supplies, storage and management of inventories of materials and equipment; m) direct and guide the safety and watch services for assets of the *Anchieta-Imigrantes* System. n) direct and guide the services of library, documentation and files related to his area; o) direct and guide the cleaning services; p) direct and guide the transportation services; Paragraph 3rd - It is specially attributed to the **MANAGING DIRECTOR**: a) direct, guide and control the activities of trading and marketing related to additional revenues; b) coordinate the activities of the Directors of Engineering and Operations; c) assist the Chief Executive Officer in the direction and control of objectives and budgets, annual and multi-annual Corporation programs; d) substitute the Chief Executive Officer whenever and when, on his absence, be asked to do so, and may have the power to execute agreements together with other Directors responsible by the correspondent areas; e) direct and guide the library, documentation and file services pertinent to his area. Paragraph 4th - It is specially attributed to the **ENGINEERING DIRECTOR**: a) direct, guide and control the planning and performance of the activities of works, maintenance and building conservation; b) direct and control the inspections on structures, pavements, drainage and buildings; d) guide and control actions of safety in the works and in the maintenance and conservation services; e) administer and manage the budgets and cost of works, maintenance and building conservation; f) direct and guide the activities of contracting works, supplies and services; g) direct and guide the services of library, documentation and files pertaining to his area. Paragraph 5th - It is specially attributed to the **DIRECTOR OF OPERATIONS**: a) direct, guide and control the operational activities and the services of maintenance and conservation of the electrical, illumination and electronic systems; c) direct and control routine inspections, property watch, and transit support; e) guide and control the services of road cleaning; f) guide and control actions of traffic safety and toll collection; g) evaluate the balance between efficiency and quality for the operational services; h) administer and manage the operational budgets and costs; i) guide and control the services of assistance to users; j) direct and guide the services of library, documentation and files pertaining to his area. **Article 14** - The Directors' mandate term is of two (2) years, with re-elections permitted. Paragraph 1st - The Directors shall remain in their functions until the successors take office; Paragraph 2nd - The Directors, in their vacancies or temporary impediments, shall be substituted among themselves, in accordance with the Directors' Resolution; Paragraph 3rd - The installation of the Directors shall be done through a term transcribed and signed in the Book of Minutes of the Directors' Meetings. Paragraph 4th - the Corporation's representation, as demandant or demanded, judicial or extrajudicial, shall always be exercised, in conjunction, by two directors, one of them being the Chief Executive Officer. Paragraph 5th - The Corporation may be represented by one single Director or by an attorney-at-law with special powers in the following acts: 1) representation of the Corporation before any federal, state or municipal departments of any direct or indirect public administration entity, including the Federal Institute of Social Security - *INSS*, the Internal Revenue Department, the customs authorities and the Central Bank of Brazil; 2) representation of the Corporation before the Ministry of Labor or unions, for the admission, suspension or dismissal of employees or labor agreements; 3) correspondence of the Corporation, or routine actions that do not cause obligations to it. Paragraph 6th - All and any legal business to which conclusion the Directors are authorized shall be executed by the Chief Executive Officer and the respective area Director to which the agreement is pertinent. Paragraph 7th - The mandate instruments shall always be signed by two Directors, one of them being the Chief Executive Officer, and shall have duration term limited to the 31st of December of the year in which they were appointed, except for those with *ad judicium* objective, which may not have determined term, and shall admit substitution. Paragraph 8th - For the acts subordinated to the Board of Directors' approval, the Corporation's representation shall depend upon the terms of the corresponding meeting minutes. Paragraph 9th - Receiving of service of notice shall be a personal competence of the Chief Executive Officer. Paragraph 10th - It is forbidden to the Directors and attorneys-at-law to compromise the Corporation in operations strange to the business or corporate object. **D)** In view of the Corporation's administration reform performed by this Shareholders' General Meeting, the present Directors put their jobs at the Meeting's disposal. **E)** Alteration of art. 3rd of By-laws was approved, with suppression of its Sole Paragraph. **F)** - PARTICIPARE - ADMINISTRAÇÃO E PARTICIPAÇÕES LTDA, hereby assigns one (1) common share that it holds from the Corporation's capital stock, to PEDRO BELTRÃO FRALETTI, for the term of three (3) years, gratuitously, HENRIQUE DO REGO ALMEIDA & CIA. LTDA., hereby assigns one (1) common shares that it holds from the Corporation's capital stock to MARCELINO RAFART DE SERAS, for the term of three (3) years, gratuitously, and PIO XII - PARTICIPAÇÕES SOCIETÁRIAS LTDA., hereby assigns one (1) common share that it holds from the Corporation's capital stock, to GUILHERME BELTRÃO DE ALMEIDA. Thereupon, by unanimous decision, the following were elected for the Corporation's Board of Directors:



**PEDRO BELTRÃO FRALETTI**, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 1.185.579-2-*SSP/PR* and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 316.696.549-15, resident and domiciled in the City of Curitiba (*Pr*), at *Av. Sete de Setembro, nº 239, Cristo Rei*, **MARCELINO RAFART DE SERAS**, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 373.267-*SSP/PR* and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 428.355.429-49, resident and domiciled in the City of São Paulo, at *Rua Professor Artur Ramos, nº 350, apto. 401-A, Jardim Paulistano*, and **GUILHERME BELTRÃO DE ALMEIDA**, Brazilian, married, engineer and lawyer, enrolled with the Paraná Section of the Bar Association under the number 15.831 and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* under the number 553.291.609-87, resident and domiciled at *Av. Vieira Souto, nº 258-C*, in the City of Rio de Janeiro (RJ). The global remuneration of the Board of Directors for the years 1998, 1999, and 2000 is R\$ 3,600.00 (three thousand, six hundred Reais), amount that shall be divided in equal parts among the members. **G**) The global remuneration of the Directors for the years of 1998, 1999, and 2000 shall be R\$ 1,900,000.00 (one million, nine hundred thousand Reais). 8) All the decisions were taken unanimously. 9) Nothing else to be discussed, and as anybody wanted do use the word, the Extraordinary Shareholders' General Meeting was suspended for the necessary time to draw these minutes up, which, after read and approved, were signed by the presents. São Paulo, June 1st, 1998. Signed: President: Irineu Berardi Meireles; Secretary: Marcelino Rafart de Seras; Shareholders: Marcelino Rafart de Seras; Pedro Beltrão Fraletti; Guilherme Beltrão de Almeida; representing Primav Construções e Comércio Ltda., Marcelino Rafart de Seras; representing CR Almeida S/A Engenharia e Construções, Guilherme Beltrão de Almeida; representing Henrique do Rego Almeida & Cia. Ltda., Henrique do Rego Almeida; representing Pio XII-Participações Societárias Ltda., Rosa Maria Beltrão Rischbieter.

"I hereby certificate that the present is a true copy of the minutes recorded in the Shareholders' General Meeting Book of Minutes, of Concessionária Ecovias dos Imigrantes S.A."

Signed: [illegible signature]

Name: MARCELINO RAFART DE SERAS

Title: Secretary

[It contains the São Paulo Board of Trade's Official Seal, with the number 92.387/98-6].



## MINUTES OF THE BOARD OF DIRECTORS' MEETING

I) DAY, HOUR AND PLACE: June 1st, 1998, at 10:30 a.m., at the Corporation's head office, at *Rua dos Buritis, 128, 4º andar, Jabaquara*. 2) PRESENCES: Present the members PEDRO BELTRÃO FRALETTI, MERCELINO RAFART DE SERAS, and GUILHERME BELTRÃO DE ALMEIDA, members of the Corporation's Board of Directors, pursuant to signatures apposed to the Board of Directors' Meeting Book of Minutes number 1 of the Corporation. 3) PRESIDENT: Mr. PEDRO BELTRÃO FRALETTI, designated as Secretary Mr. MARCELINO RAFART DE SERAS. 4) ORDER OF THE DAY: a) to elect the President of the Board of Directors, b) displace the present Directors and elect the new ones. 5) DECISION: It was elected, unanimously, Mr. PEDRO BELTRÃO FRALETTI as President of the Board of Directors, which shall remain in the function until the present Board administration, or until the election of a substitute by the Board of Directors. II) The following were elected Directors of the Corporation: Irineu Berardi Meireles, Brazilian, married, business administrator, bearer of the Identity Card *RG* number 4.194.000-SSP/SP, and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* number 192.272.218-91, resident and domiciled in this Capital, at *Rua Roberto C. Kerr, 151, apto. 91, Paraíso*, as Chief Executive Officer; João Alberto Gomes Bernaccio, Brazilian, married, business administrator, bearer of the Identity Card *RG* number 5.911.129-SSP/SP, and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* number 859.699.318-53, resident and domiciled in this Capital, at *Rua Baltazar da Veiga, 609, apto. 112*, as Administrative-Financial Director, and as Director of Market Relations; Hamilton Amadeo, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 4.947.760-SSP/SP, and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* number 039.875.108-03, resident and domiciled in the City of Curitiba, at *Rua Gal. Aristides Athayde Junior, 560, Paraná*, as Managing Director; Edson José Machado, Brazilian, married, civil engineer, bearer of the Identity Card *RG* number 2.234.101-SSP/SP, and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* number 032.247.408-68, resident and domiciled in this Capital, at *Rua Eça de Queiróz, 527 - apto. 163, Paraíso*, as Engineering Director; and Valdir Moreira, Brazilian, married, engineer, bearer of the Identity Card *RG* number 3.822.451-SSP/SP, and enrolled with the Individual Taxpayers' Register of the Ministry of Finance *CPF/MF* number 318.184.398-91, resident and domiciled in this Capital, at *Rua Dr. Tomas Alves, 117 - apto. 111, Vila Mariana*, as Director of Operations. 6) CONCLUSION: Nothing else to be discussed, and as anybody wanted do use the word, the Meeting was suspended for the necessary time to draw these minutes up, which, after read and approved, were signed by the presents. São Paulo, June 1st, 1998. Signed: President: Pedro Beltrão Fraletti; Secretary: Marcelino Rafart de Seras; Guilherme Beltrão de Almeida.

"I hereby certificate that the present is a true copy of the minutes recorded in the Board of Directors' Meeting Book of Minutes, of Concessionária Ecovias dos Imigrantes S.A."

Signed: [illegible signature]

Name: MARCELINO RAFART DE SERAS

Title: Secretary

[It contains the São Paulo Board of Trade's Official Seal, with the number 92.388/98-0].

# Attachment C

## Table of Graphs contained in the text

Table I - Graph I

### MOVEMENT OF SHIPS, BY TYPE OF NAVIGATION - 1981 / 1995

TYPE OF NAVIGATION				
PERIOD	Long distance	Cabotage	Others	TOTAL
1981	4,938	2,294		7,232
1982	3,592	2,631		6,223
1983	3,080	2,633		5,713
1984	3,806	2,801	53	6,660
1985	2,961	2,878	7	5,846
1986	2,740	2,541	7	5,288
1987	2,887	2,338	1	5,226
1988	2,940	2,380		5,320
1989	2,808	1,876		4,684
1990	2,474	443		2,917
1991	2,644	448		3,092
1992	3,147	586		3,733
1993	3,118	283		3,401
1994	3,258	345		3,603
1995	2,967	378		3,345

Source: "Anuário Estatístico do Brasil" - FIBGE

**Table II - Graph II**

**CARGO MOVED, BY TYPE OF NAVIGATION - 1981 / 1995**

*In 1000t*

TYPE OF NAVIGATION				
PERIOD	Long distance	Cabotage	Others	TOTAL
1981	15,999	6,596		22,595
1982	15,720	8,107		23,827
1983	15,665	9,485		25,150
1984	19,509	10,338		29,847
1985	10,848	4,583		15,431
1986	9,346	4,891		14,237
1987	9,772	4,851		14,623
1988	18,452	11,727		30,179
1989	18,773	11,581		30,353
1990	18,529	10,319		28,848
1991	18,807	10,290		29,098
1992	20,348	8,073		28,421
1993	23,333	5,778		29,111
1994	26,220	7,901		34,121
1995	27,070	8,041		35,111
1996(*)	27,726	8,613		36,339

Sources: "Anuário Estatístico do Brasil" - FIBGE and "Mensário Estatístico" - CODESP - Oct 97

**Table III - Graph III**

**Relation Cargo / Vessel by type of Navigation**

PERIOD	Long distance	Cabotage
1981	3.24	2.88
1982	4.38	3.08
1983	5.09	3.60
1984	5.13	3.69
1985	3.66	1.59
1986	3.41	1.92
1987	3.38	2.07
1988	6.28	4.93
1989	6.60	5.50
1990	6.60	23.29
1991	7.11	22.97
1992	6.47	13.78
1993	7.48	20.42
1994	8.05	22.90
1995	9.12	21.27



**Table IV - Graph IV**

**POWER CONSUMPTION STATE OF SÃO PAULO**

PERIOD	GWh
1981	47,466
1982	50,131
1983	52,647
1984	59,060
1985	63,210
1986	67,127
1987	67,963
1988	71,423
1989	74,891
1990	70,391
1991	72,632
1992	73,417
1993	76,284
1994	79,252
1995	83,162

**Table V - Graph V**

PERIOD				
	PROJECTION SUM	SEPARATE PROJECTION	CARGO OVER POWER REGRESSION	POWER AVERAGE RATE (***)
1996	(*) 36,339	(*) 36,339	(**) 31,558	35,813
1997	42,828	34,928	32,245	36,529
1998	44,577	35,255	32,931	37,260
1999	46,408	35,568	33,619	38,750
2000	48,326	35,867	34,306	40,300
2010	73,460	38,320	41,174	59,654

(\*)The data from the "Mensário Estatístico" by CODESP were used, as per October / 97.

(\*\*)The movement data of the estimate cargo were used, as per 1996.

(\*\*\*)It is admitted a 2% per annum rate up to 1998, and from (and including) 1999 on, a 4.4% rate per annum.

**Table VI - Graph VI**

1997	33.196
1998	34.880
1999	36.650
2000	38.509
2010	63.166

**Table VII - Graph VII**

1997	9.632
1998	9.697
1999	9.758
2000	9.817
2010	10.294

**Table VII - Graph VIII**

PERIOD	TRANSPORTATION MODE						TOTAL	
	HIGHWAY (60%)		RAILWAY (30%)		DUCT SYSTEM (10%)			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1997	25,696	21,917	12,848	10,958	4,284	3,654	42,828	36,529
1998	26,746	22,356	13,373	11,178	4,458	3,726	44,577	37,260
1999	27,844	23,250	13,922	11,625	4,624	3,875	46,408	38,750
2000	28,995	24,180	14,497	12,090	4,834	4,030	48,326	40,300
2010	44,076	35,792	22,038	17,896	7,346	5,966	73,460	59,654