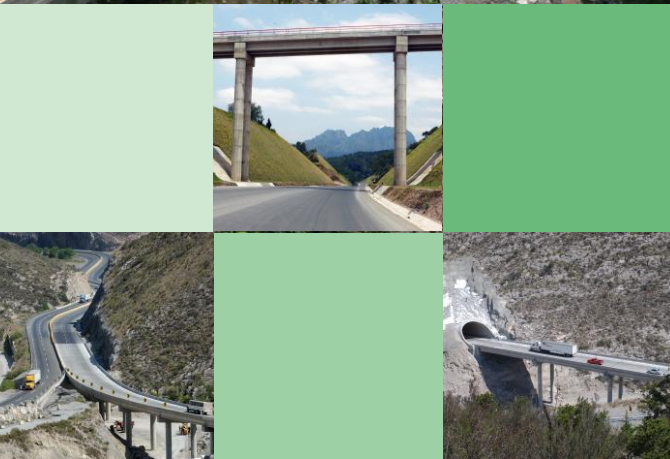


**SCT**



# Highway Sector in Mexico

**2009**



# NATIONAL HIGHWAY NETWORK

SECRETARIAT OF  
COMMUNICATIONS  
AND TRANSPORT

# Situation of Mexico and the transport

## The importance of infrastructure

At present, the countries in the world are giving high priority to the modernization of its infrastructure, enabling them to achieve greater participation in the global economy.

For this purpose, for Mexico it is necessary to raise the coverage, quality and competitiveness of its infrastructure, allowing you to become one of the main platforms of the world and take advantage of our geographical position and international treaties.

The Secretariat of Communications and Transport (SCT) is responsible for developing the communications and transport infrastructure as well as the public services associated with the purpose to make them accessible to all Mexicans and to help improve their quality of life.

For which will exploit the latest technologies and technological advances available to give added value to the various economic, financial and

social development in a balanced and sustained.



## General Characteristics of Mexico

### → Orography



The presence of larges chains of mountains make communication difficult cross, so that construction costs for roads between the highlands and the coast rising to prohibitive levels.

### → Land comunication



The communication of the country in a north-south have better roads and better facilities of transport that occurs in the east-west.

### → Traffic in large cities



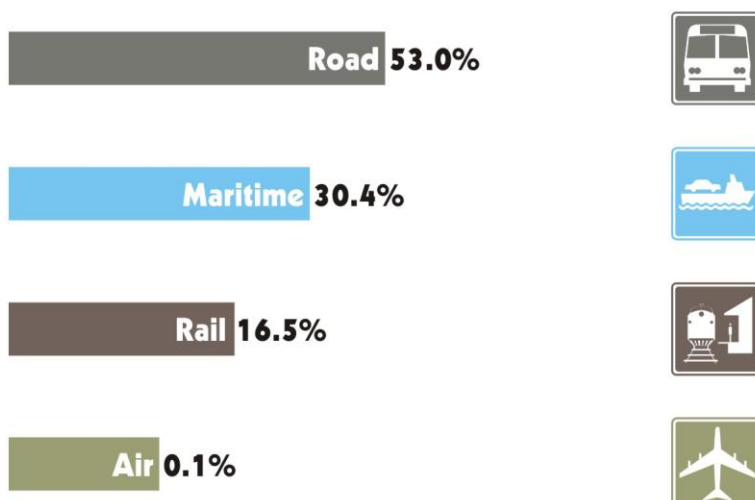
The lack of urban roads and the rapid growth of population in large cities, causing problems of congestion and capacity at peak demand under federal access.

- ⇒ Area: 1'964,375 km<sup>2</sup>
- ⇒ Population: 107'550,697 inhabitants
- ⇒ Population density: 54.7 inhabitants/km<sup>2</sup>
- ⇒ GDP: 14,980,000 millions of pesos
- ⇒ GDP per cápita: 139,283 pesos/inhabitant

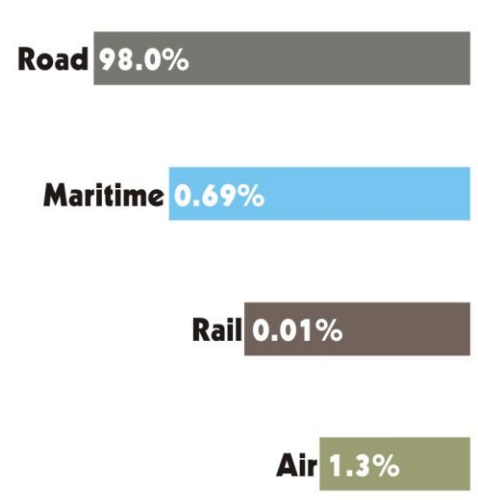
- ⇒ National Park Vehicular: 22 millions of vehicles
- ⇒ Number of Vehicles/1000 inhabitants: 167
- ⇒ Federal Road Network: 48,319 km
- ⇒ Regional Network: 72,179 km
- ⇒ Rural Network: 236,447 km

For Mexico, the national highway network is the backbone of the transport system, by land, particularly on the roads, moving 53% of the national weight and 98% of passengers who move through the length and breadth of the country. For transport mobilized nearly 479 million tons and 3,170 million of passengers every year.

National movement  
of weight by mode of transport



Mobilization of passengers  
by mode of transport



# The road network in Mexico

Roads are the key transport system in Mexico, so it is important to preserve the heritage of Mexico 's Roads.

At present, Mexico has a major road system is classified as follows:



- ⇒ Federal Network
- ⇒ Regional Network and
- ⇒ Rural Network

The federal road network is in charge of the Secretariat of Communications and Transport (SCT),

while the Regional network of roads are the responsibility of state governments.

Rural and state roads, and Low-Volume Roads are also improved by the states, however, the SCT is involved in the establishment and administration of the Temporary Employment Program.

The National Highway Network covers an area of 356,945 kilometers, of which 48,319 km. belong to the federal network, 72,179 km. to regional network of state jurisdiction and 236,447 rural network.

The federal network is divided into basic and secondary.

In the basic network are located 14 corridors with a trunk length total of

19,245 kilometers, along which most traffic is traveling road.

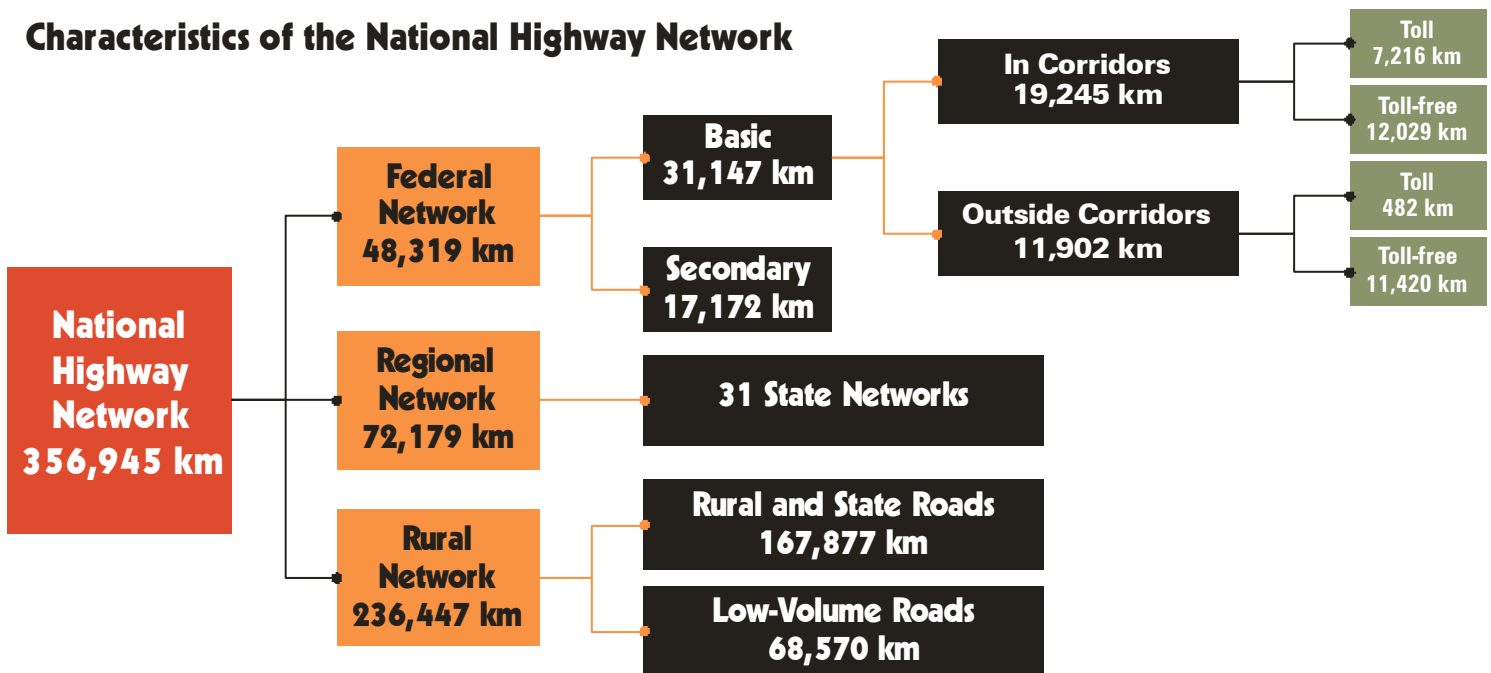
Also at the federal basic network operating 7,216 kilometers of highway toll.

This toll network, is awarded to private sector, state governments or financial institutions .

For its length, this network is one of the most largest in the world, only behind that of France and slightly higher than Italy.

It corresponds to the federal secondary network, it consists of 17,172 kilometers, which cover different regions of the country.

## Characteristics of the National Highway Network



## Investment in Roads

The Mexican road network needs investment in construction, maintenance, modernization and expansion of roads, to meet federal highways, low-volume roads, rural roads and highway toll.

The amounts of investment in Mexico, are relatively low in infrastructure, as they are about 2% of Gross Domestic Product (GDP), compared with Chile, which invests more than doubled, while China spends 9% of GDP.

In the world the main and almost only source of funds to finance investments in roads are:

- ⇒ The general budget of the State, applied at different territorial levels,
- ⇒ Rates are charged on highway toll and A surcharge applies to the fuel as a charge to road users.

The investment resources needed to build new roads, expand the capacity of existing ones, keep in good physical condition the section and extend its service coverage throughout the

country, exceeding by far those of fiscal resources available in annual federal budgets.

This has forced the SCT has made systematic efforts to design and identify new sources of investment and increase the amounts available for new highway projects that demand the country.

# Public-Private Partnerships

## Expansion of road network

The SCT designed three models of public-private partnership consisting primarily of attracting private investment to the development of new road infrastructure and the modernization of existing roads free of toll. The three models are:

- ☑ Concessions,
- ☑ Asset utilization, and
- ☑ Public-private partnership

The first is a concession model to build, operate, maintain and operate toll road.

The second model is a integrated packages of high specifications existing freeways and highways to build and share; the third model is a public-private partnership to upgrade existing roads to toll-free.

## Through these models the SCT seek:

- ☑ Increasing the amount of investment in roads with private participation.
- ☑ Raising the quality of service provided to users.
- ☑ Increase efficiency and productivity of public services.
- ☑ Advance the development of road infrastructure, mainly roads toll-free.
- ☑ Open new spaces for participation by the private sector.
- ☑ Achieve a more efficient distribution and management of the risks of highway projects.

## Current situation

The models of public-private partnership for the development road of Mexico (Concessions, Asset Utilization and Public-Private Partnership), implemented since 2003 by the Secretariat of Communications and Transport has proved to be viable and of great interest for business leaders of major national and international experience and capabilities, including private investors and commercial banks.

| MODEL                         | PROJECTS  | AMOUNT (mop)  | LENGTH (km)  |
|-------------------------------|-----------|---------------|--------------|
| ➔ Concessions                 | 17        | 27,814        | 1,219        |
| ➔ Public-Private Partnerships | 6         | 28,289        | 442          |
| <b>TOTAL</b>                  | <b>23</b> | <b>56,103</b> | <b>1,733</b> |

|                     | PROJECTS | PAYMENT TO FEDERAL GOVERNMENT (mdp) | LENGTH (km) |
|---------------------|----------|-------------------------------------|-------------|
| ➔ Asset Utilization | 4        | 44,051                              | 558         |
| <b>TOTAL</b>        | <b>1</b> | <b>44,051</b>                       | <b>558</b>  |

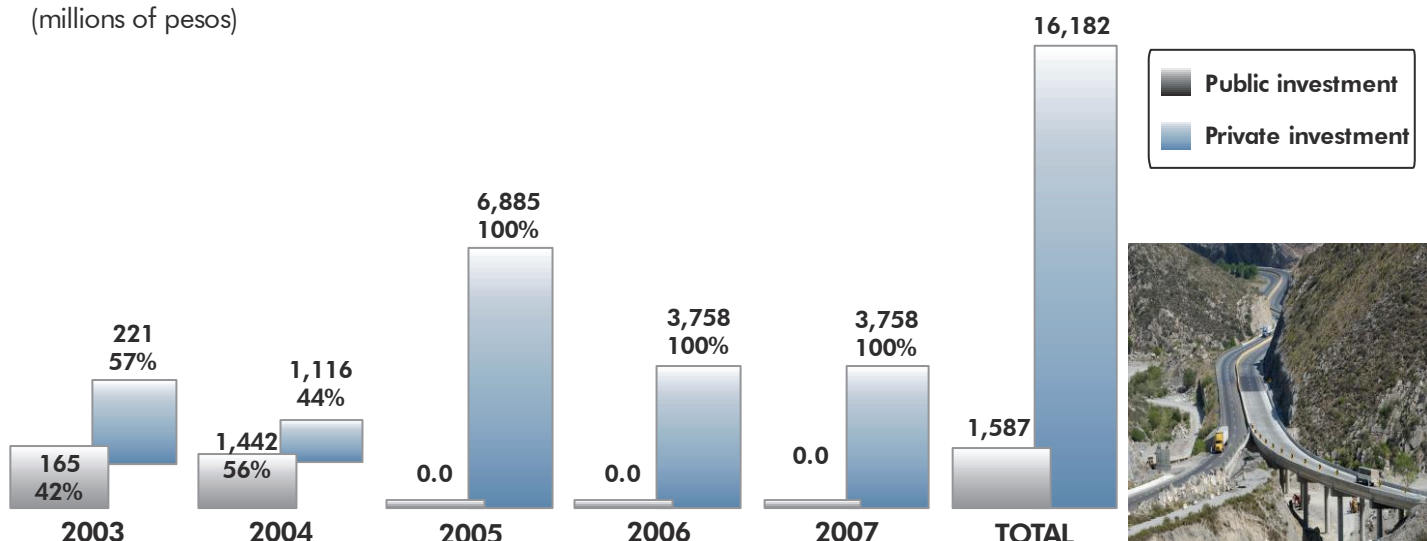
Were awarded a total of twenty three projects. These projects under construction, modernization and/or widening, representing 1,773 km with an investment of 56,103 millions of pesos.

In Assets Utilization was awarded the first package, which is 558 kilometers and a payment to Federal Government of 44,051 millions of pesos.

The investment of public and private sectors, involved in the development of the national road infrastructure, in recent years has increased significantly and allows to predict that it will continue to grow.

## PUBLIC AND PRIVATE INVESTMENT

(millions of pesos)



# National Infrastructure Program 2007-2012

## Communications and Transport Sector

The National Infrastructure Program 2007-2012 and the Sector Program establish the actions of SCT in terms of road infrastructure, focusing on having a modern and efficient road network. Performing important work of upgrading and construction of highways, which will continue to be priority projects and the launch of new works.

These programs allow define a sector strategy to follow, which is on four main points that will allow the SCT to achieve the proposed targets for the period specified.

### Strategies

- 1 To complete the modernization of the highway corridors that link the country's major cities, ports borders and tourist destinations with high specification roads.
- 2 To develop inter-regional highway to improve the communication and connectivity of the road network.
- 3 To give priority to the construction of bypasses and access roads to facilitate the continuity of traffic flows in the road network.
- 4 To improve the physical condition of the road system and to reduce its accident rate.

#### Northwest Region

In this region, which includes the states of Baja California, Baja California Sur, Sonora and Sinaloa, will be implemented 23 projects comprising a total length of 2,144 km and an estimated investment of 30,963 millions of pesos.

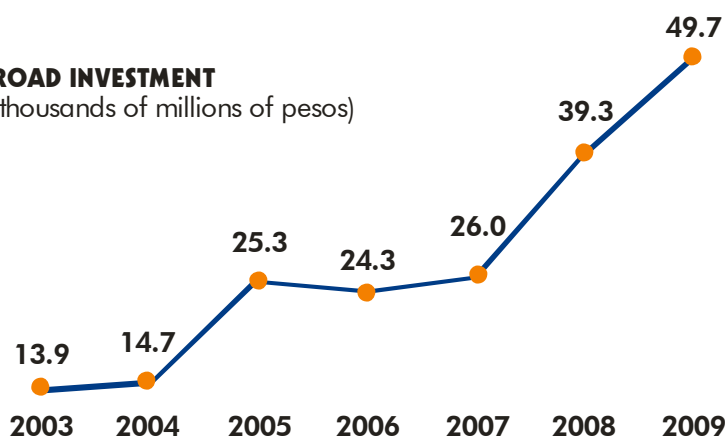
#### Center-West Region

In this region, which includes the states of Nayarit, Jalisco, Colima, Michoacán, Zacatecas, Aguascalientes, Guanajuato and San Luis Potosí, will be implemented 51 projects comprising a total length of 3,544 km and an estimated investment of 57,000 millions of pesos.



#### ROAD INVESTMENT

(thousands of millions of pesos)



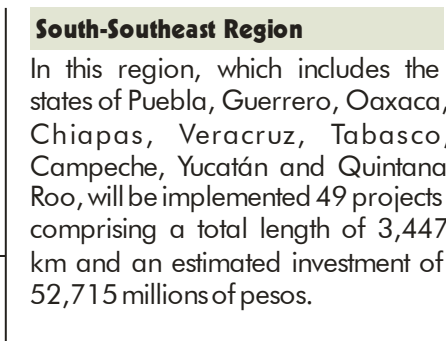
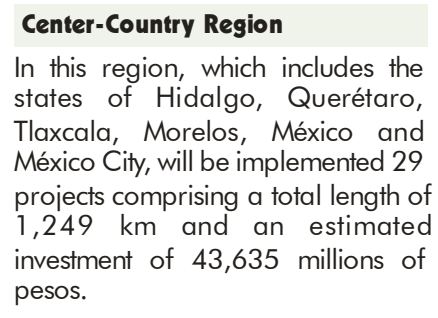
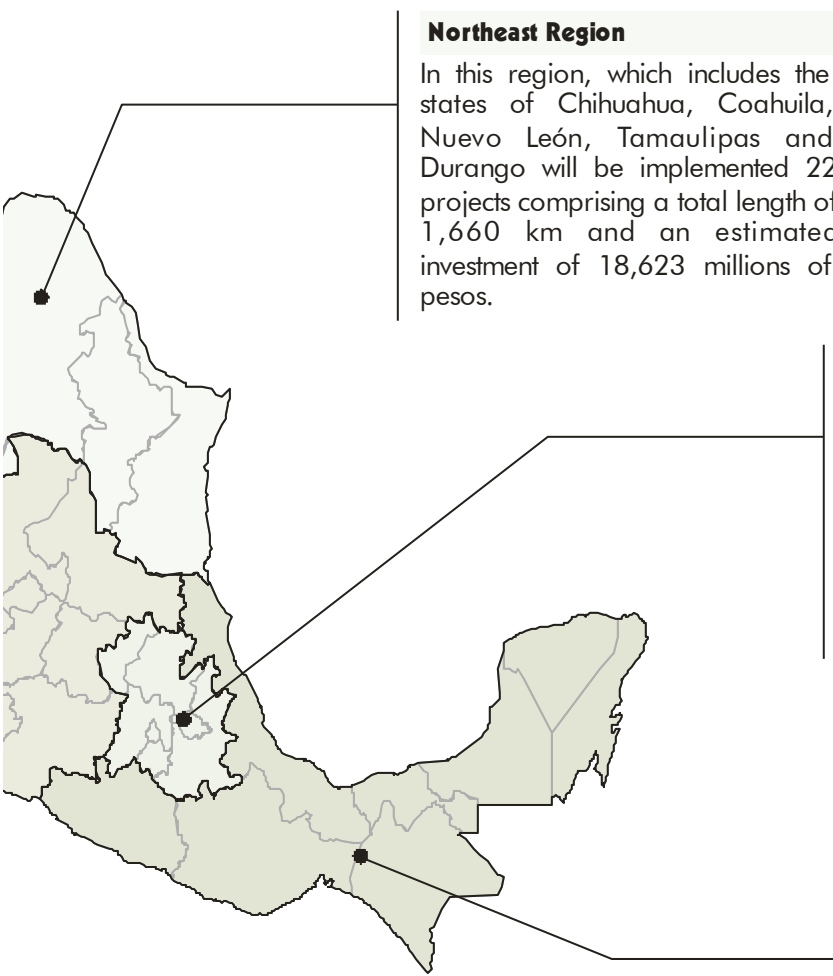
Investments in roads on its various programs (construction, modernization, maintenance, rural roads and a temporary employment program), have experienced remarkable growth, it suffices to cite for the year 2009 approved budget is 26.5% more than in 2008. What we will provide resources for a total of more than 49 thousands millions of pesos.

The Sector's strategies defined in the National Infrastructure Program 2007-2012 of the Communications and Transportation Sector allowed the three goals, which make known the outcome on specific roads.

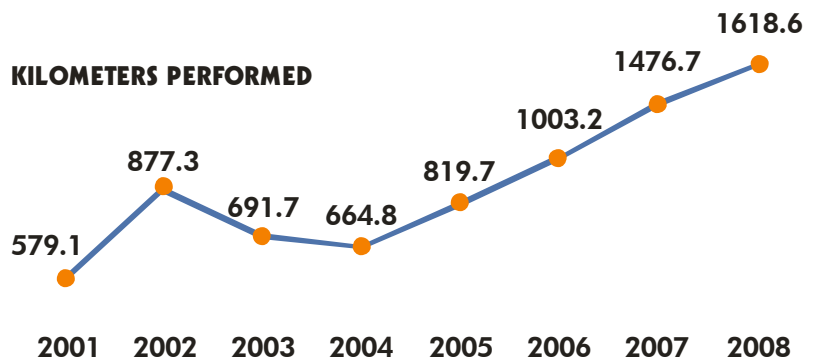
To achieve the targets set, the SCT adopted a regional strategy, seeking to exploit synergies between different projects in each region and ensure better use of resources and implementation of projects under the program established.

**Goals**

- 1** To build or modernize 17 mil 598 kilometers of highways and rural roads, including the completion of 100 strategic road projects.
- 2** To increase from 78% to 90% the length of the federal road network in good operating conditions in compliance with international standards.
- 3** To decrease the accident rate from 0.47 to 0.25 per million vehicles-kilometer.



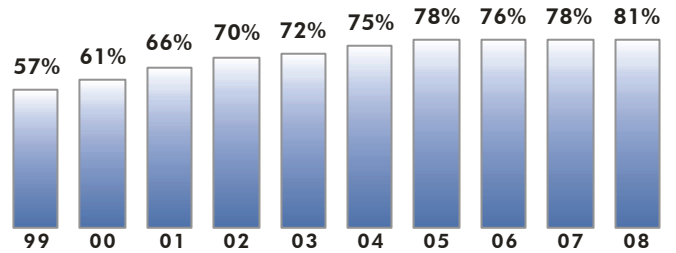
The goals of kilometers in their programs show an increase from 2005, with percentage increases of around 23%. Which allowed to obtain a 2008 goal of 618 thousand kilometers.



## EVOLUTION OF THE PHYSICAL CONDITION OF THE FEDERAL HIGHWAY NETWORK IN GOOD CONDITIONS

Public funds resources in recent years for maintenance of roads, have enabled the evolution of the physical condition of the network of federal roads.

In 1999 it was only 57% of the total kilometers in good condition to 43% in poor condition now for 2008 kilometers in good or acceptable are the order of 78% and only 22% in poor condition.



## National Corridors

One of the most important components of the federal network is the 14 main corridors, with a total length of 19,245 kilometers, representing about 62% of this network.

The 14 corridors are integrated by roads that connect the major areas of industrial and agricultural production as well as urban centers and tourist attractions of the country.

Each one of them have been named according to their endpoints, and includes some major branches, which together ensure coverage of most of the country.

### PRINCIPAL CORRIDORS OF THE NATIONAL HIGHWAY SYSTEM

#### transversal

- 9. Mazatlán-Matamoros
- 10. Manzanillo-Tampico with branches to Lázaro Cárdenas and Ecuandureo
- 11. Highland
- 12. México-Tuxpám
- 13. Acapulco-Veracruz
- 14. Transisthmic Circuit

The importance of each corridor is based on several indicators (twenty) of operation and competitiveness, which cover aspects related to the geometric characteristics of each section the intensity of use based on their annual

#### longitudinal

- 1. Baja California to cross Peninsular
- 2. México-Nogales with branch to Tijuana
- 3. Querétaro-Ciudad Juárez
- 4. México-Nuevo Laredo with branch to Piedras Negras
- 5. Veracruz-Monterrey with branch to Matamoros
- 6. Puebla-Oaxaca-Ciudad Hidalgo
- 7. México-Puebla-Progreso
- 8. Yucatán Peninsular



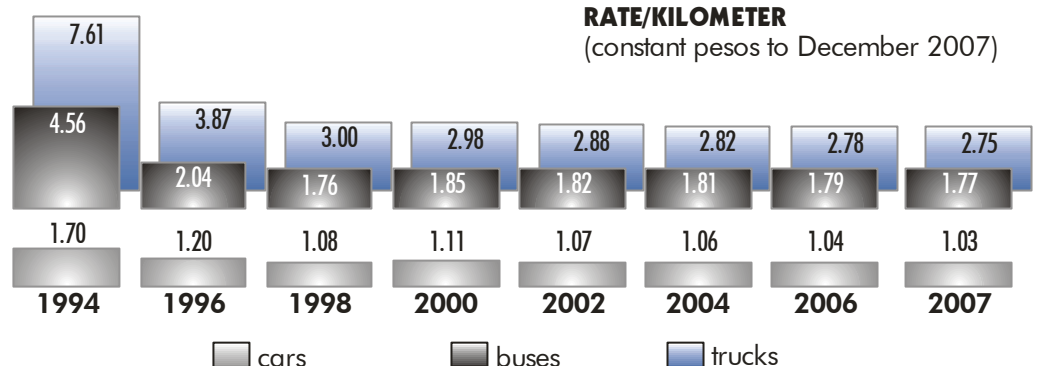
average daily traffic, coverage, status and security, among others.

At the end of 2012 will be updated in all of the 14 main highway corridors.

The main corridors are the road communication routes in the country, serving as the transit through the most weight and passengers.

## Rate in highways toll

The reduction of rate that has occurred over recent years, allowed to intensify the use of highways toll. This policy of maintaining rates at levels averaging \$ 1.06/km for cars, \$ 1.80/km for buses and \$ 2.84/km for trucks. The pricing policy has enabled the established capacities to grow on average 7.7% per year and encourages the expansion of highway system.



**SECRETARIAT OF COMMUNICATIONS AND TRANSPORT**

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GENERAL DIRECTORATE OF ROAD DEVELOPMENT

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