Country Report
Islamic Republic of Pakistan
For
Economic And Social Commission For Asia & the Pacific (ESCAP)

NTRC: 246

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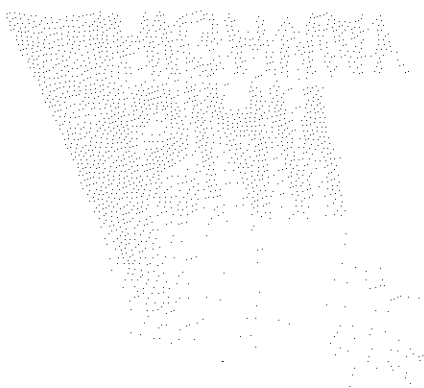

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1. General

The Islamic Republic of Pakistan occupies a strategic location on the North West edge of South Asia. Covering an area of 796,095 square kilometers, between 23° – 42' and 36° - 55' North latitudes and 60°52' and 75°23' East longitudes. Pakistan at a strategic location in South Asia shares its South Western border with Iran, Northern border with Afghanistan and China and Eastern border with India. Arabian sea lies in South. This ideal location has merited Pakistan as most attractive for transit route to the land locked Central Asian countries. One can see from the map at **Figure – 1,** the mighty river Indus, bisects the country naturally which transcends from the snowy mountain ranges up in the North crosses the rich productive planes and ending into the Arabian Sea.

Pakistan comprises four provinces, namely; Punjab, Sindh, North West Frontier Province (NWFP) and Baluchistan. Provinces are divided into Districts other than these there are Federally Administered Tribal Areas (FATA) divided into Agencies and Federal Capital of Islamabad. Detail are as follows:

Table - 1 Administrative Districts & Agencies

Province	Districts
Punjab	34
Sindh	21
NWFP	24
Baluchistan	26
Total	105
FATA	
Agencies	7
Tribal Areas	6
Capital Area	1
Total	14

The last population census was conducted in 1998 and in that the population of the country was 131.5 million. Based on the 1998 census the population of the country as on First July 2001 is estimated as 140.5 million. Details are as follows:

Table - 2 Population Distribution

Province	Current Population (million)
Punjab	78.0
Sindh	32.0
NWFP	19.2
Baluchistan	7.0
FATA	3.4
Capital Area	0.9
Total	140.5

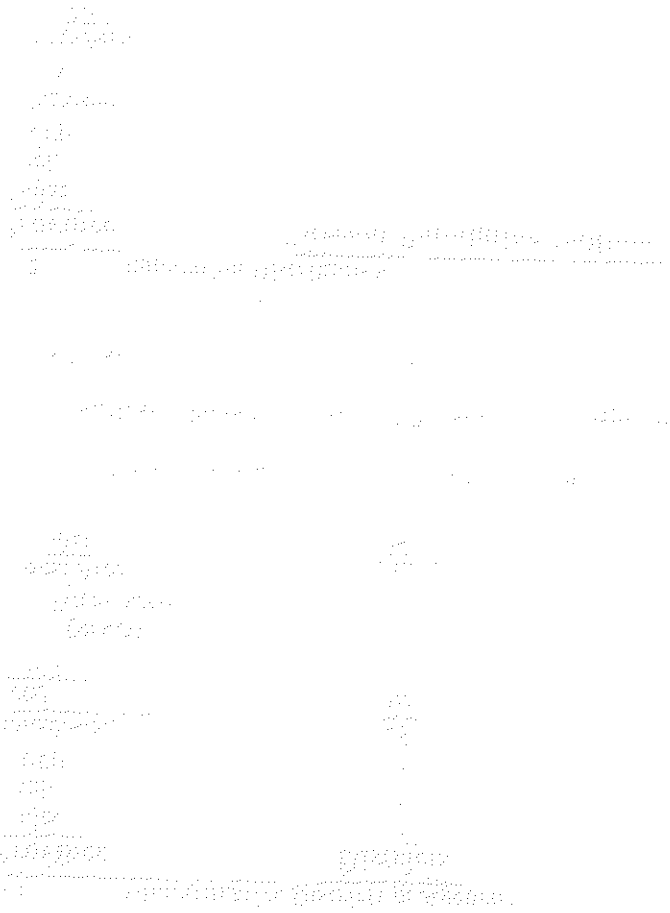
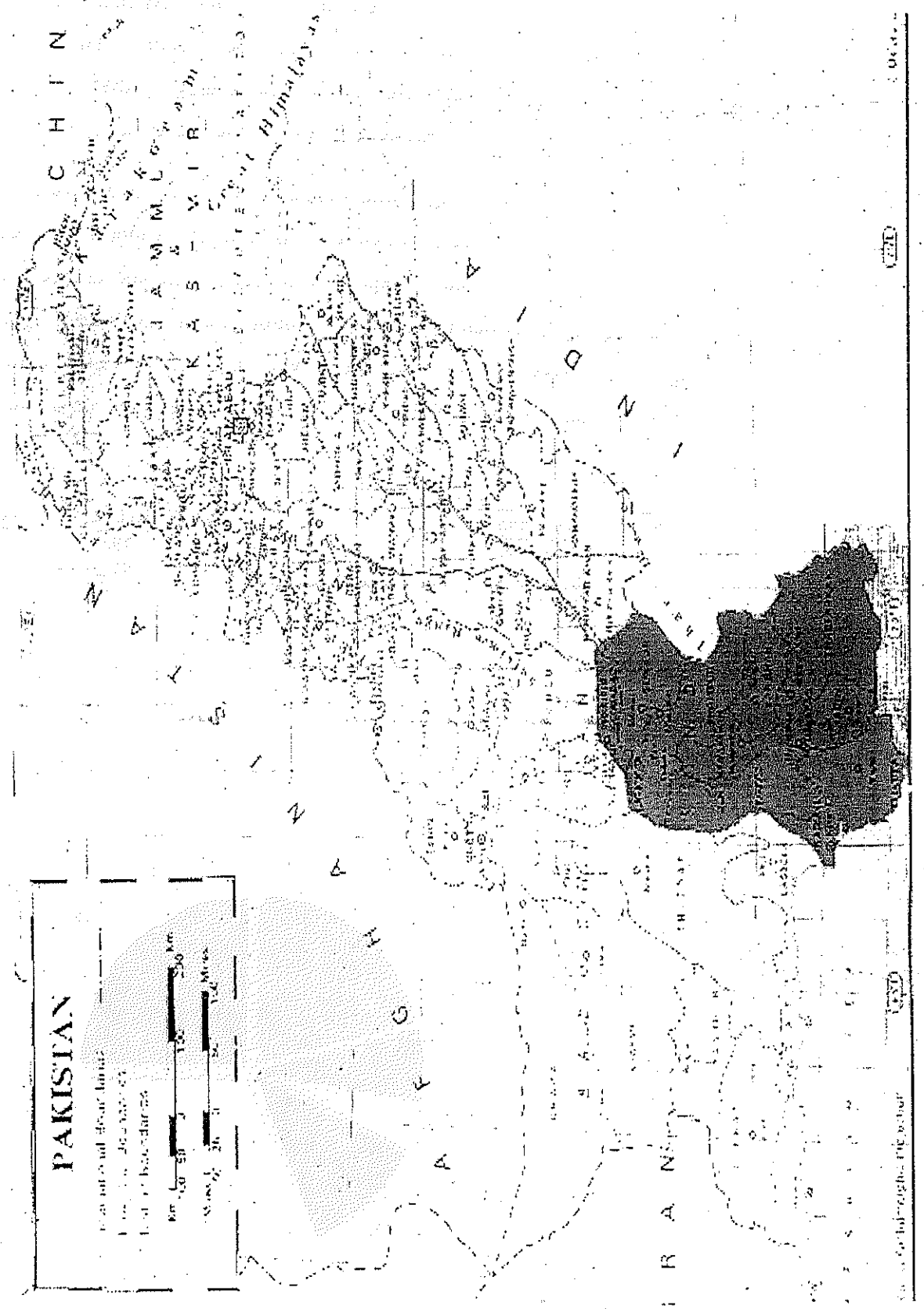


Figure – 1



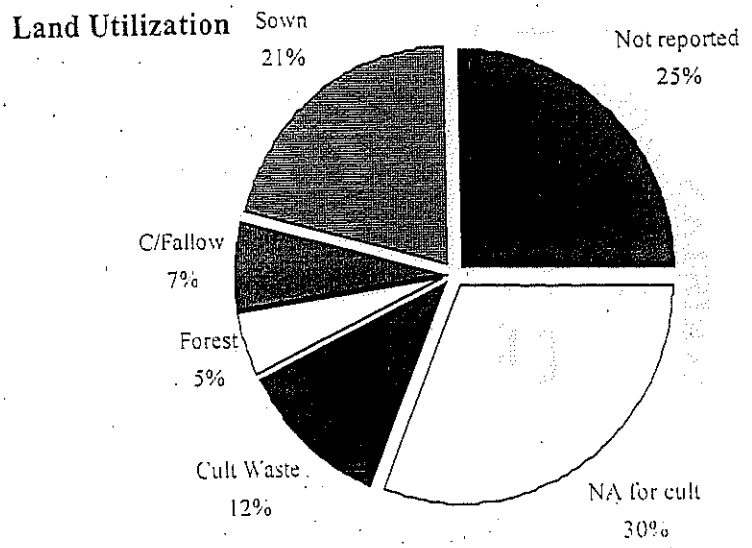
Pakistan is among the low-income countries with per capita income of Rs.24528 ($429)[1] and Gross Domestic Product of $ 60.73 billion[2]. The GDP has increased over the last decade (1990-91 to 1999-00) at the rate of 3.8 per cent per annum[3]. The country's population is around 140 million. Over the same period, the average growth rate per annum for the population was 2.7%, whereas, the per capita GDP increased just by 1 per cent per annum.

Pakistan is a country, where agriculture shares almost 26% of the value in Gross Domestic Product (GDP). It provides employment to 47 percent of the labour force and two third of the population living in rural areas is dependent on agriculture and related activities. Our main export earnings are provided by agriculture (cotton, cotton textiles, rice, etc.). Our industry is also agriculture based (textile, sugar, etc.). More than half the area of the country is either hilly or desert and is not available for cultivation. 28 percent of the area is cultivated as follows:

Table – 3 Land Utilization

S.No	Description	Million Hectares	Percent of total
1	Total Area	79.61	100
2	Reported Area	59.28	74.5
3	Forest Area	3.61	4.5
4	Not available for cultivation	24.5	30.8
5	Cultivable Waste	9.29	11.7
7	Current Fallow	5.43	6.8
8	Net sown	16.45	20.7
9	Area sown more than once	6.41	8.1
10	Total cropped area	22.86	28.7

Source: Economic Survey, Statistical Supplement, Table -2



[1] Economic Survey, Statistical Supplement, 2000-01, Table 1.5
[2] Converted at the rate indicated by per capita income.
[3] Average of growth rates from 1990-91 to 1999-00

ECONOMIC STRUCTURE

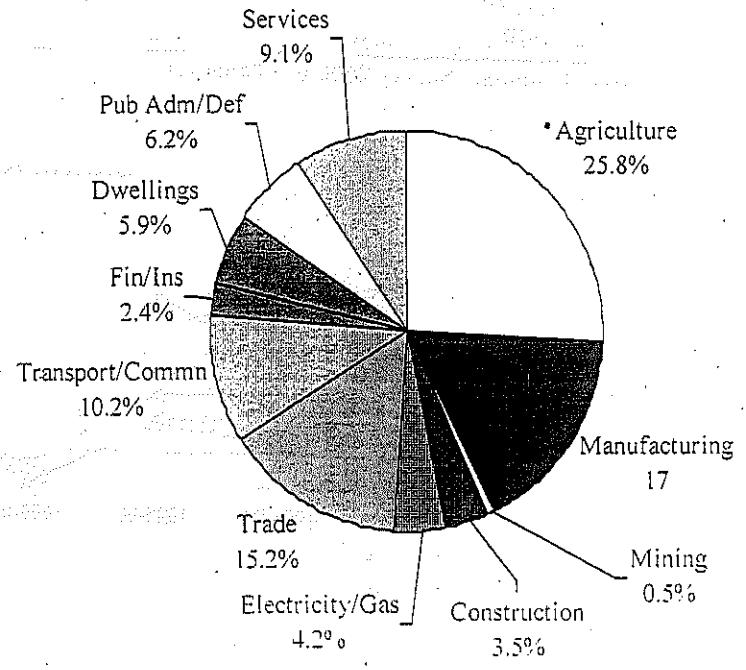
Gross Domestic Product (GDP)

Pakistan's gross domestic product during 2000-2001 was Rs. 3,472 billion in current prices. It provided per capita income of Rs. 24,528 or US $ 429. Agriculture remains to be the dominant sector of the economy contributing about 26 percent of value added. Industry (manufacturing) follows with 17 percent of value added, trade 15 percent, transport 10 percent; the sectoral distribution during the last 5 years is given below.

Table - 4 **Sect oral Distribution of GDP (percent)**

S.No.	Sector	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
1	Agriculture	24.9	26.1	25.7	25.9	25.6	25.9
2	Manufacturing	17.3	16.8	16.5	17.1	17.3	16.8
3	Mining & Quarrying	0.5	0.5	0.5	0.5	0.5	0.5
4	Construction	4.0	3.9	3.8	3.7	3.4	3.5
5	Electricity & Gas distribution	4.0	4.2	4.0	4.2	4.2	4.3
6	Wholesale & Retail Trade	16.3	16.2	16.1	15.4	15.2	14.9
7	Transport, Storage and Communications	10.2	9.6	9.8	10.2	10.2	10.1
8	Finance and Insurance	2.5	2.7	2.9	2.2	2.4	2.5
9	Ownership of Dwelling	5.6	5.5	5.7	5.8	5.9	6.0
10	Public Admn. & Defence	6.4	6.2	6.2	6.2	6.2	6.3
11	Services	8.2	8.2	8.6	8.9	9.1	9.3

Sectoral Distribution of GDP (3 Year Avg)



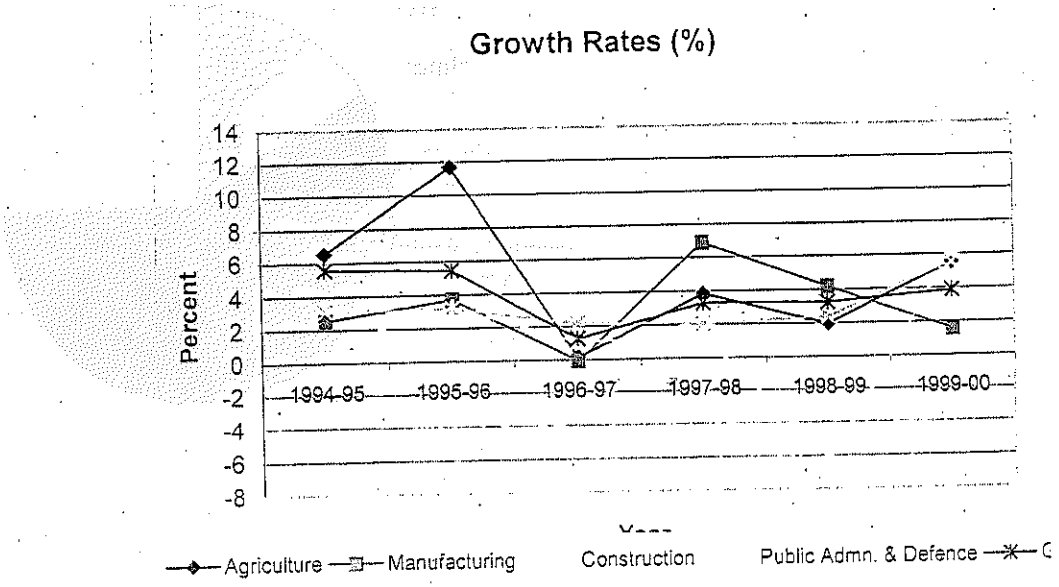
Growth Rate

The increase in GDP in constant prices of 1980-81 during the last 5 years was 3.6 percent per annum. However, taking account factor of incomes from abroad, which is negative, the growth rate is reduced to 3.4 percent per annum. The population increase over the same period being 2.4 percent, per capita income has increased at the rate of 1 percent per annum only. However, taking a different (dollar based) measure, per capita income has decreased from $ 508 in 1994-95 to $ 446 in 1999-00 i.e. 2.6 percent per annum decrease.

Table – 5 GDP/GNP Real Growth Rates (Percent)

S.No	Sector	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
1	Agriculture	6.57	11.72	0.12	3.82	1.95	5.54
2	Manufacturing	2.54	3.73	- 0.07	6.93	4.18	1.57
3	Mining & Quarrying	-4.3	7.07	1.87	- 9.7	3.64	7.67
4	Construction	1.01	3.25	1.09	1.26	- 6.25	6.24
5	Electricity & Gas distribution	16.83	10.14	-2.91	8.96	3.47	7.84
6	Wholesale & Retail Trade	4.64	6.07	0.72	- 1.13	2.14	2.50
7	Transport, Storage and Communications	4.14	0.84	3.76	7.21	3.08	3.90
8	Finance and Insurance	6.31	13.83	11.49	-23.95	15.04	6.87
9	Ownership of Dwelling	5.28	5.28	5.28	5.28	5.28	5.28
10	Public Adm. & Defence	3.13	3.17	2.21	2.03	2.40	5.56
11	Services	6.53	6.53	6.53	6.53	6.53	6.53
12	GDP (factor cost)	5.06	6.6	1.7	3.49	3.15	4.46
13	Net factor income from abroad	205.61	- 146.04	- 135.02	- 21.46	6.62	- 74.61
14	GNP (factor cost)	5.58	5.46	1.27	3.31	3.24	3.87

Source: Economic Survey 2000-01, Table 1.4



1.1 Introduction on Roads in Pakistan

At the time of independence, there were 50,367 kilometres of roads in the country of which 9,809 kilometres were paved and 40,558 kilometres were unpaved. Pakistan had a poor start in the matter of road network. Up to the seventies the growth in the road density was almost negligible. Afterwards concerted efforts were made for the improvement of road network of the country. Presently, Pakistan has a road network of 249,959 kilometres of which 138,726 (55%) kilometres are paved and 111,233 (45%) kilometres are un-paved, that resulted a road density of 0.32 km/sq.km for the country in year 2001. Today Pakistan's road network is constituted of low volume formed tracks to multi-lane high speed Motorways, with a fair condition for traffic movements.

1.1.1 Status and Condition of the Road Network

1.1.1.1 Major Road network in Pakistan

Administrative Classification:

Based on the administration systems responsible for repairing and maintenance, improvement, construction and planning of the road network including bridges and structures, the roads are divided into:

i) **National Highways:**

At Federal level, Ministry of Communications is the authority responsible for roads called National Highways. Within the MOC, the National Highway Board was established in 1978 by re-organising the Indus Super Highway Board and converted into National Highway Authority in 1991. Now it is the agency responsible for the planning, construction and maintenance of the National Highways in the country. At present the National Highways system consists of 17 numbered routes with a total length of 8845 kilometres.

ii) **Provincial Roads:**

Communications and Works Department of provincial Governments are responsible for the provincial roads. Chief Engineers for Highways and Bridges of provinces look after Communications and Works Departments (C&WD). The Highway Department of C&WD is responsible for construction and maintenance of provincial roads and the department is divided into provincial highway circles headed by a Superintending Engineer. These circles are again divided into

highway Divisions headed by an Executive Engineer. The highway divisions are further sub-divided into sub-division headed by Sub-divisional Officer. The total length of provincial roads is 101,100 kilometres.

With the recent devolution of powers plan, District Governments have been given more responsibilities. Like other departments, provincial Highway departments have also been shaded by reducing their jurisdiction on number of provincial roads, some of which have now been transferred to districts as District roads.

iii) **District Roads:**

District and municipality roads as mostly called community (neighbourhood) roads or rural roads are maintained and constructed by local governments. The total length of this type of roads in the country is 140,114 kilometres before the devolution of powers plan. However, the calculation of new length of district roads is under process due to transfer of provincial roads to the districts governments.

1.1.1.2 Length of roads by road classification, number of lanes, surface type/condition

For data collection and international comparison purposes Road network in the country is mainly divided in two types of roads i.e. High (paved surface) and Low (un-paved). Historical data of road length in the country based on above classification is presented in the following table:-

Table – 6 **Length of Roads**

Year	High Type	Low Type	Total
1947-48	9809	40558	50367
1949-50	10829	43220	54049
1954-55	14889	46449	61338
1959-60	16489	47004	63493
1964-65	20220	51019	71239
1969-70	24253	47900	72153
1974-75	28222	50408	78630
1979-80	35890	58283	94173
1984-85	52120	66351	118471
1989-90	81981	80364	162345
1994-95	111307	96338	207645
1999-00	138200	110140	248340
2000-01	138726	111233	249959

Source: 1947-65: Economic Survey, Statistical supplement 1991-2 (Table 6.1)
1966-95: Economic Survey, Statistical Supplement 1999-00 (Table 13.1)
2000-01 Economic Survey, 2000-01 (Table 13.1)

Out of the 138,726 kilometers of High type roads, 8,845 kilometers are National Highways. The remaining of High type roads are under the Provincial Highway Departments, District & Municipal Councils and Cantonment boards. Distribution of High and Low types of roads, prior to the devolution plan is detailed below:-

	National	Provincial	*District	Total
High Type	8845	74500	55381	138726
Low Type	-	26500	84733	111233
Total:	**8845**	**101000**	**140114**	**249959**

Road density (km/square km.) is a parameter used internationally for the assessment of the development of any country. Following table presents an analysis of the road density in the country as well as its four provinces.

Table – 7 Road Density in the Country

Custodian	Road Length (km)				
	Punjab	Sindh	NWFP	Baluchistan	Pakistan
National Highways	2166	1268	2287	3123	8845
Provincial Roads *	40537	22688	14621	23152	101000
District Council*	41141	26669	14781	20779	103370
Municipal corporations	10632	21750	1077	1286	34745
Cantonment Board	938	578	346	138	1999
Total Length	95414	72953	33112	48478	249959
Area sq km	206250	140914	104741	347190	796095
Density km/sq km	**0.46**	**0.52**	**0.32**	**0.14**	**0.31**

* Data pertains to their jurisdiction prior to the devolution of power plan being implemented.

Today roads are the most important and preferred mode of transportation in the country. They share about 87% and 88% of the country's domestic passenger and freight traffic respectively. The vehicle population is in excess of 3.5 million vehicles, growing at a rate of 7% per annum.

National Highways

The NHA several years ago allocated reference numbers to their network to facilitate identification/reference in records and facilitate computer processing. The referencing system for the National Highways has been based on the **North-South** orientation of the country. National Highways running in **North-South** direction are designated by an odd number with alphabet "**N**" stands for National Highway. for example **N-5** or **N-55**. Similarly, Highways

running in **East-West** direction are designated by an even number with alphabet "N" for example **N-70, N-40** etc. The National Highways are consisted of 8845-kilometer route length and some 9500 two-lane equivalent roads. Details of the routes controlled by NHA are as under, while, **Figure – 2** shows these routes on map: -

Table –8 Route Length of National Highways & Motorways

S.No	Designation of National Highway	Route	Length (Km)
1	N-5	Karachi-**Thatta**-Moro-Multan -Lahore-R.Pindi-Peshawar-Torkham Highway	1819
2	N-10	Liari-Gawadar-Gabd	653
3	N-15	Mansehra – Naran – Jalkhad - Chilas	240
4	N-25	Karachi-Khuzdar-Quetta-Chaman Highway	813
5	N-35	Hassanabdal-Gilgit-Khungrab Highway	806
6	N-40	Lakhpass-Dalbandin-Nokundi-Taftan Highway	610
7	N-45	Nowshera – Dir - Chitral	309
8	N-50	Quetta-Muslim Bagh-Zhob-D.I.Khan Highway	531
9	N-55	Kotri-Shikarpur-D.G.Khan-D.I.Khan - Peshawar	1264
10	N-65	Sukkur-Sibi-Quetta Highway	385
11	N-70	Qila Saifullah – Rakhni – D.G.Khan - Multan	447
12	N-75	Islamabad – Satra Mile – Lower Topa – Kohala	90
13	S-1	Karakurum Highway (KKH) - Skardu	167
14	M-1	Peshawar – Islamabad Motorway	155
15	M-2	Lahore-Islamabad Motorway including 32-km Links and Lahore By-pass	367
16	M-3	Pindi Bhattian – Faisalabad Motorway	53
17	M-9	Karachi Hyderabad Motorway	136
		Total	**8845**

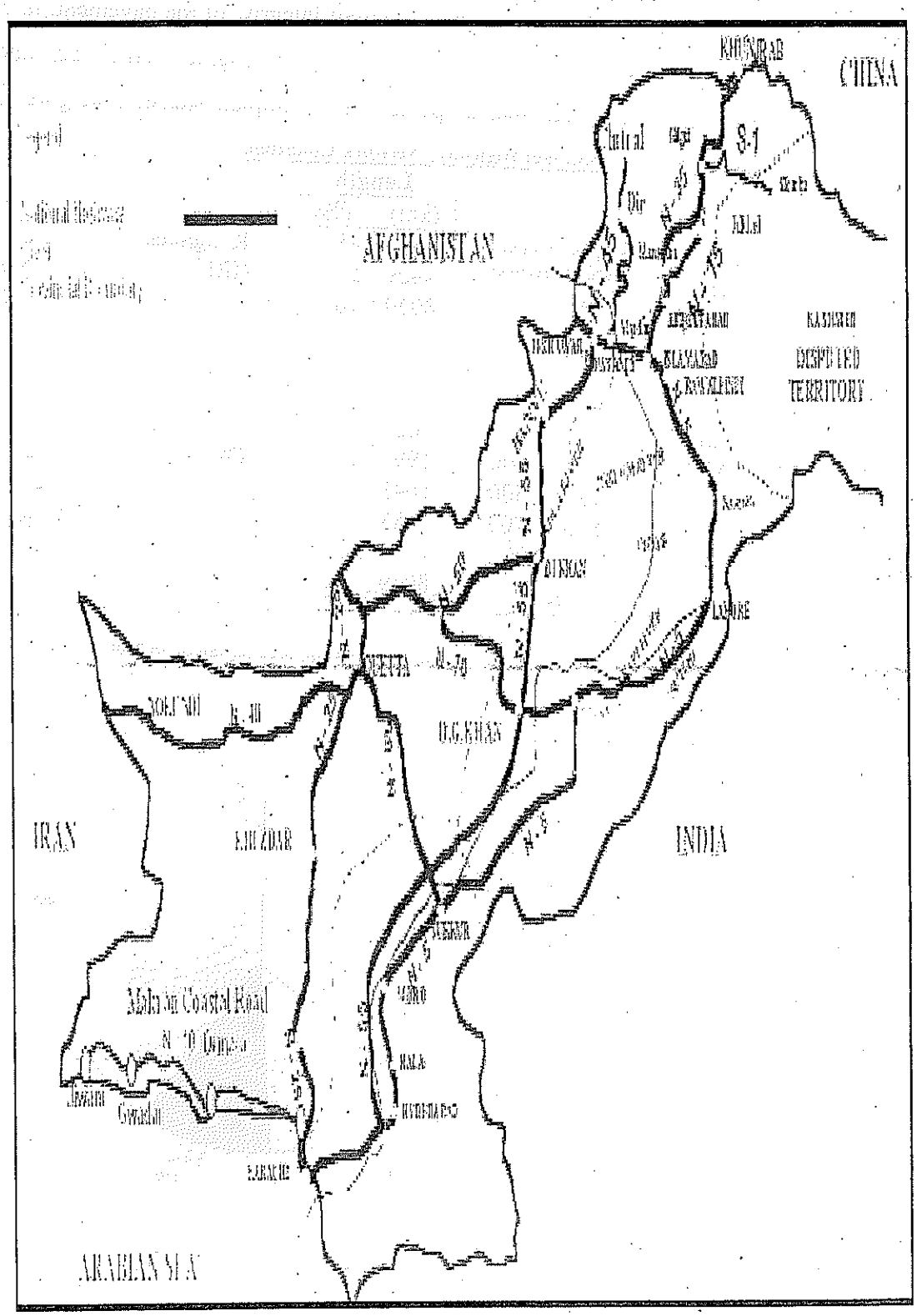
S = Strategic Road
M = Motorways

The main North-South link is designated, as *N-5* with 1819-kilometer length. The route starts from the financial hub of the country called Karachi. It then passes through some major cities of Sindh. At the place called Sidiqabad it enters into Punjab. After crossing main cities of Punjab it enters into NWFP and ends at Pak-Afghan border at Torkham. N-5 is the lifeline of Pakistan. Under the improvement programme of this traditional link, dualization of road and rehabilitation of the existing pavement is being carried out.

In July 2000, work started on the first phase of construction of the 650 km long Makran Coastal Highway (N-10). The road will connect Karachi with Gabd on the border of Iran.

The first phase of 247 km, passing through mountainous region between Liari and Ormara is started with the cost of US $ 77 million and will be completed in three years.

Figure – 2



CONDITION OF NATIONAL HIGHWAY NETWORK

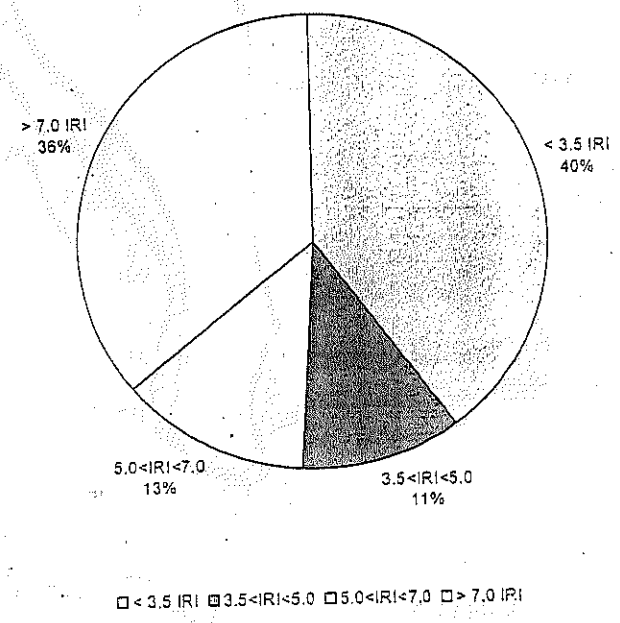
A recent study[4] mentioned that the current state of the National Highways network of the country is in bad condition in terms of roughness (IRI), indicating the riding quality and crack area, which measures the structural integrity of the pavement. In 2000 it was measured that 49 % of the network had poor to very poor roughness (IRI > 5.0) and 11% of the network had crack area greater than 25 percent. The complete statistics are given in following tables.

Table – 9 National Highways Network Condition

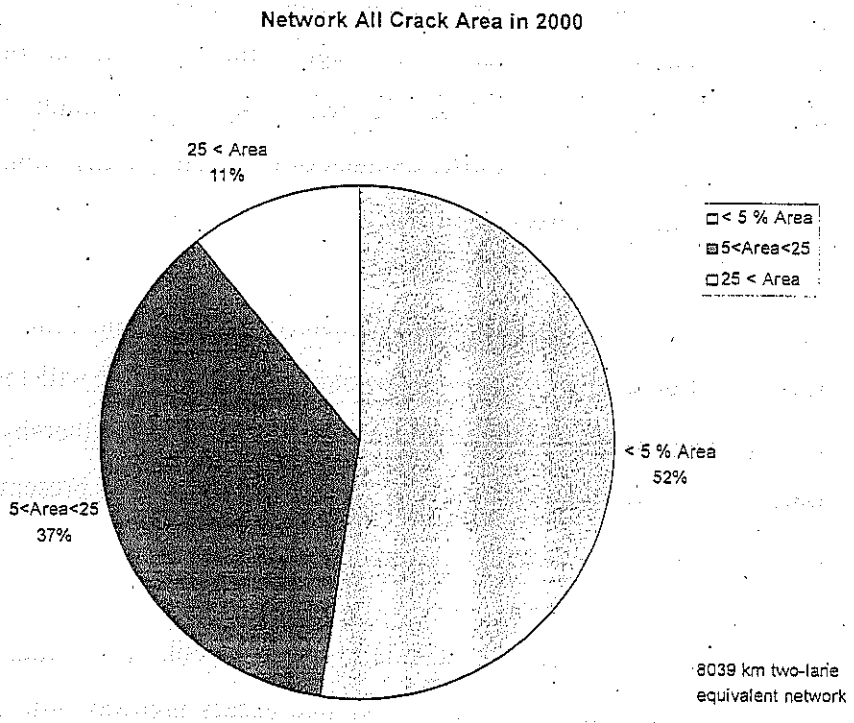
		Length	
		(km)	(%)
Surface Type	Asphalt Concrete	3630	45
	Surface Treatment	4409	55
	Total	8039	100
Traffic (ADT)	< 1000	1620	20
	1000 – 3000	1997	25
	3000 – 5000	1643	21
	5000 – 7000	1483	18
	> 7000	1296	16
	Total	8039	100

		Length	
		(km)	(%)
Roughness (IRI)	< 3.5	3211	40
	3.5 – 5.0	899	11
	5.0 – 7.0	1046	13
	> 7.0	2883	36
	Total	8039	
Crack Area (%)	< 5	4207	52
	5 – 25	2958	37
	> 25	874	11
	Total	8039	

Network Roughness Condition in 2000



[4] Strategic Economic Analysis of National Highway Network by M/s Finnroad in 2001



Other information related to the National Highway Network is annexed at Table-1 Appendix-A.

The study also analysed the National Highways network in order to define future road maintenance needs to prepare a six-year (2001-2006) road maintenance program. The analysis was done using Strategic Analysis Module of the new Highway Development and Maintenance Tools, HDM-IV, version 1.2.

The study concluded that National Highway Network of Pakistan is in bad condition by road user comfort standards and in fair condition by structural integrity of the network pavement. In order to eliminate the maintenance backlog and to preserve the existing network from further deterioration an amount of **Rupees 7.7 billion** per year is needed yielding a program with Net Present Value of 458 billion rupees. Even to maintain the network with current condition 2001 (Average network roughness of 6.24 IRI), five billion rupees per year is needed.

PAKISTAN MOTORWAY PROJECT

With the emergence of the Central Asian Republics in late eighties an enormous trade potential has been envisaged in the region, this could not be reaped with the present road network in the country. The idea of Motorways in the country was developed to meet the existing as well as future traffic demand of the country and to link the country's seaports with the land locked countries of Central Asia.

Pakistan Motorway Project will ultimately provide north-south link in the country joining Karachi, Multan, Faisalabad, Islamabad and Peshawar. It will join another highway passing through Dera Bugti, Khuzdar and terminating at Gwadar thereby establishing a vital link of Baluchistan with the other parts of the country. Figure –3 presents the alignment of Pakistan Motorway project.

Conforming to international standards (like Autobahn in Germany and Motorway in U.K), it will be at least four-lane divided, limited access highway with structures designed for six-lanes and speed of 120 km/hr. It will provide a completely uninterrupted flow of traffic allowing access and exit only at the ramps designed for this purpose. The facility will also have service areas at appropriate distances.

Peshawar – Islamabad Motorway (M –1)

This is first section of the Pakistan Motorway called Peshawar – Islamabad Motorway (M-1), which is approximately 155 kms long, and it is being constructed. The road has 6-lanes structures, however, presently paved for four lanes. Four interchanges at places Burhan, Swabi, Rashkai and Charsadda are proposed. Cost of the project is approximately US $ 533 million.

Islamabad – Lahore Motorway (M – 2)

The second section of Pakistan Motorway is 335 kms long and is a 6-lanes divided carriageway controlled access, toll facility. The section was completed in November 1997. M/s Daewoo Corporation of South Korea constructed the project. Cost of the project is almost one billion US $. Figure – 4, shows the route alignment of Islamabad – Lahore (M – 2) Motorway.

Figure –3

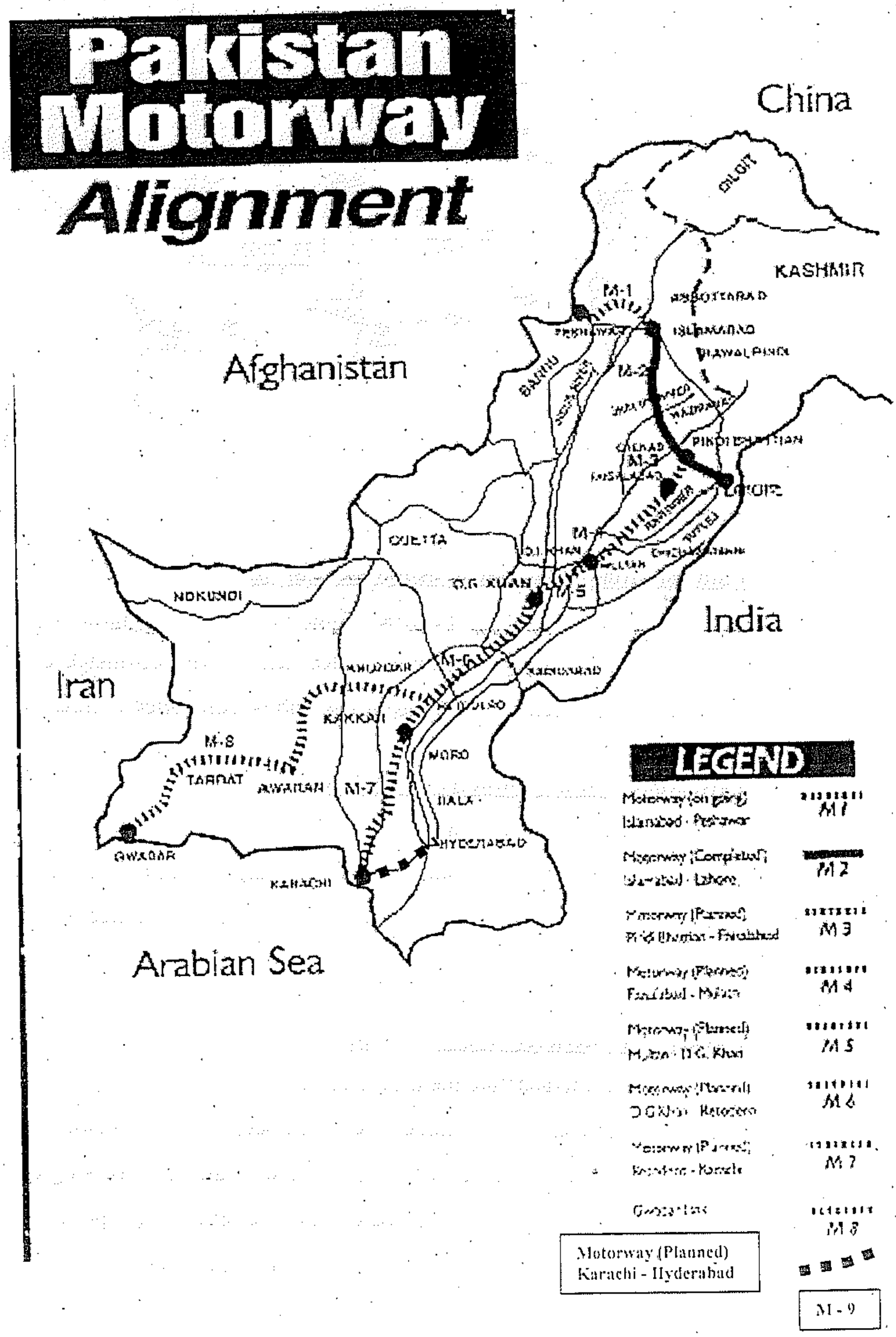
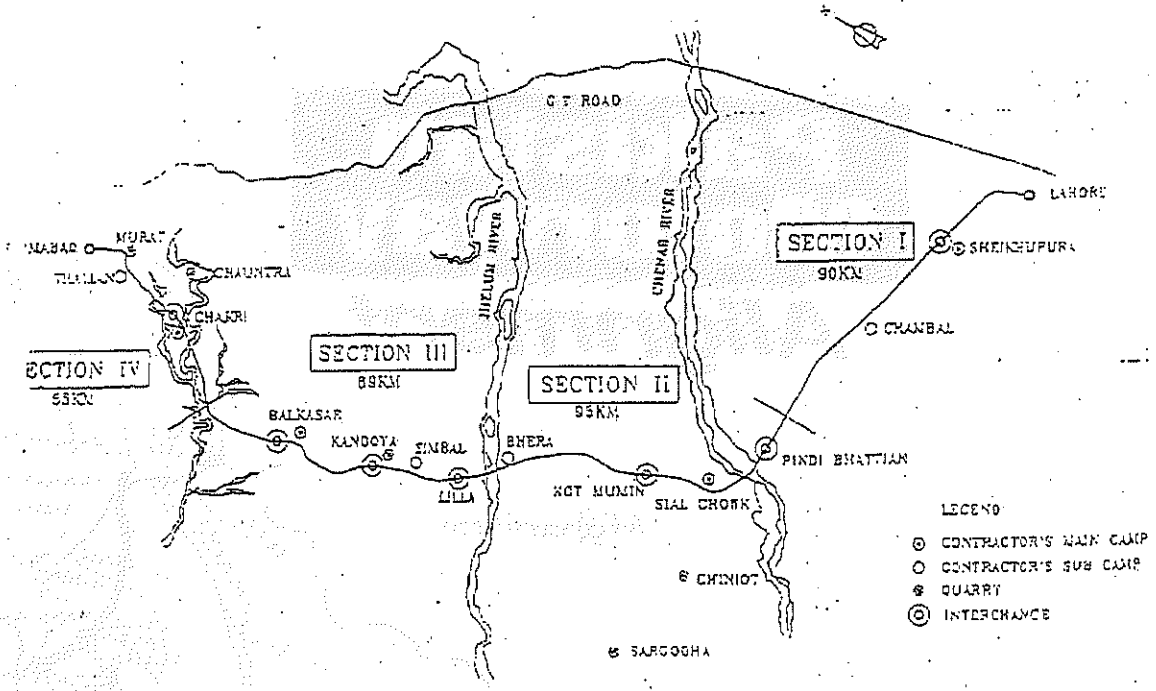

Pakistan Motorway Alignment
China
KASHMIR
Afghanistan
India
Iran
Arabian Sea
M-1
M-2
M-3
M-4
M-5
M-6
M-7
M-8
QUETTA
NOKUNDI
D.G. KHAN
TARBAT
AWARAN
KAKKAR
MORO
HALA
HYDERABAD
KARACHI
GWADAR
BANNU
LEGEND
M 1
M 2
M 3
M 4
M 5
M 6
M 7
M 8
Motorway (Planned)
Karachi - Hyderabad
M - 9

Figure – 4 Route Alignment of Islamabad – Lahore Motorway (M – 2)



Pindi Bhattian – Faisalabad Motorway (M- 3)

This is third section of the Pakistan Motorway, which is approximately 53 kms long. The section is 4 lanes access controlled, tolled facility with estimated cost of 75 million US $. The work on the section is in progress and will be completed in three years period.

Faisalabad – Multan Motorway (M – 4)

This section of motorway is about 243 kilometer long. Two major cities of province Punjab will be connected via this Motorway link. The facility will be four lane divided highway with 6-lane structures. The facility will be access controlled and tolled. Estimated cost of the project is about US$ 500 million.

Karachi – Hyderabad Motorway (M-9)

Karachi and Hyderabad are the most populated cities of Sindh province. Major industries are also located in these cities. Karachi being the seaport city of Pakistan plays major role in the country's economy. Presently four lanes divided highway is serving the traffic. As the traffic between these two cities has crossed the limits of 80,000 pcu per day, there is a requirement to upgrade the facility. Under the improvement programme 2-lanes will be added to the existing 4-lane divided highway of 136 km length. The highway will be converted to access

controlled tolled facility by constructing grade separated interchanges at various locations. Cost of improvement for 136 km long section will be Rs.8000 million.

Provincial Road Network

The provincial road network is developed and maintained by the Communications and Works Department (CWD) of each province. The provincial road network under the CWDs in all four provinces has diversity in many dimensions. Roads range from connections between high-density populations centers (District headquarters) having high volumes of traffic and those serving minor settlements in remote areas with very low traffic volumes. However, shortage of maintenance funds and the quality and efficiency of operations has led to severe deficiencies in the road transportation system at provincial level. For provincial road network funding for maintenance is much below the optimum level.

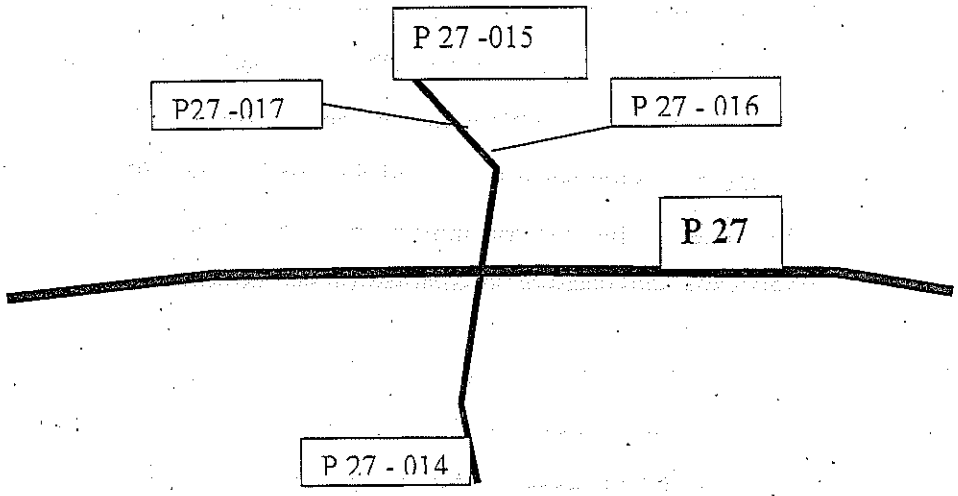
Observing the need to revamp the existing provincial road system The "**Road Management Project**"[5] was carried out during (1996-2000) with the assistance of Asian Development Bank and World Bank. Under the project the **Pakistan Provincial Road Management System (PPRMS)** has been introduced into all the four provinces of the country with the aim to (1) *establish a unified road management system that would be operated by the CWDs, to improve the road maintenance operations (ii) to demonstrate the efficiency gains from privatized maintenance operations to introduce more efficient quality control procedures for the provincial road network.*

The **Pakistan Provincial Road Management System** developed a referencing system for provincial roads that divides their network in three functional classes based on the average daily traffic (ADT). Inter district roads with daily traffic volumes exceeding 500 vehicles per day have been designated as ***Provincial Highways*** denoted by letter ***'H'***. Roads linking two provincial highways or serving sub divisional (tehsil) level towns and traffic volumes in the range of 500 vehicles per day have been termed as ***Secondary Roads*** and allocated the letter 'S'. All others, either from farm to market or link road having traffic volumes below 100 vehicles per day have been called ***Access Roads*** denoted by letter **'A'**. The ***Provincial Highways*** in each province were then numbered in sequence with two digit number and a letter (e.g P27). Here letter **'P'** represent for Province ***Punjab***, similarly 'S' stands for *Sindh*.

[5] Final Report "Road Management Project" by M/o Environment, Local Government &Rural Development, Islamabad: July 2000

'F' termed for the NWFP, and 'B' stands for *Baluchistan*. All others, *Secondary* and *Access roads*, are then numbered according to the nearest provincial highway, with an additional three digit number (e.g **P27 – 014**) and a dash. Similarly, *S11 – 011* will depict a road in Province of Sindh emerging from provincial highway number *S11*.

Classification System of Provincial Roads



For the referencing system, there is no distinction between Secondary and Access roads. Although the provincial Highways are relatively fixed, it is anticipated that there may be changes in the future, upgrading Access roads to Secondary roads as local development takes place. This way each road in the administrative control of provincial highway departments was identified with a discrete referencing number and recorded in the Road database along with its name commonly used by the local populace. **Table – II to Table – V** annexed at Appendix-A presents the summary of district wise road lengths in each province administered by the provincial road department prior to the devolution of power plan.

Pakistan Provincial Road Management System

The **PPRMS** (Pakistan Provincial Road Management System) is a Road Database and Works Programming (Economic Analysis Module) system together with utilities such as Data Extraction and Parameter Set. HDM-VOC 1.0 of the World Bank is used for estimation of vehicle operating costs and HDM-Manager for preparation of road deterioration models. The system has been used by provincial CWDs for last three years. The main output of the system is a sorted list of candidate road links for road maintenance and rehabilitation

programs, for one to five years, annually ranked by economic indicators and/or road condition.

The core of the PPRMS is the set of decision rules, which were used to select maintenance treatments for each kilometer of road. The following road condition variables can be used in decision making: cracking, rutting, deflection, roughness and potholes. The threshold values used in selection and are user defined, and they can be depended on traffic volume, road type and road class. The Consultants estimated the default set of decision rules. Average province wise unit cost for different types of maintenance treatments worked out on the basis of NHA Composite Schedule of Rates (CSR) have been used for preliminary analysis of the provincial road network. The benefit of road maintenance are expressed as Payback Period (PP) of the investment as follows:

PP = Cost of treatment / First year VOC savings

Where
Cost of treatment = cost of selected maintenance treatment
First year VOC savings = decrease in vehicle operating costs after treatment

The table below summarizes the work plan for provincial roads on the basis of Rupees 30 billion per year strategy in terms of different maintenance treatments.

Table - 10

WORKS FOR SCENARIO: 30 BILLION RUPEES PER YEAR				
Maintenance Treatments	**Works in Years 1-5**		**Works per Year**	
	Kilometer	**Rs. Million**	**Kilometer**	**Rs. Million**
DST 25 mm	12879	4024	2579	805
Overlay 5 cm	23949	35199	4790	7040
Overlay 7.5 cm	1201	2478	240	495
Treat Gravel Roads	20152	24182	4031	4836
Reconstruction 30 Stab+ 5ac	2303	8021	460	1604
Reconstruction 30 gr+15ac	5409	18765	1081	3753
Reconstruction 15gr + 5ac	30286	57170	6057	11434
Total	96179	149839	19283	29967
Functional operations	36828	39223	7366	7844
Structural operations	59351	110616	11870	22123
Total	96179	149839	19238	29967
Asphalt Concrete roads	3860	6226	772	1245
Surface Treated roads	72167	119423	14435	23886
Gravel Roads	20152	24185	4031	4836
Total	96179	149839	19238	29967

The final analysis for the provincial road network available at the end of the program produced the following report:

For an unconstraint budget scenario Rs. 150 billion will be needed with 30 billion per year for five years. With the intervention criteria used as road roughness will be in between 4 and 6 IRI. And this level is forecast to be sustainable in the future, if the annual budget is about 7.3 billion Rupees per year on average for over 20 years period.

Above mentioned analysis could easily be examined against the current expenditure of Rs. 1.5 billion per year that has been occurring on the maintenance of provincial road network. It is therefore creating a huge maintenance backlog on the provincial network and it is urgently needed that reasonable amount should be invested to preserve this network.

Districts / Municipal Councils & Cantonment Roads

The roads administered by the District / Municipal Councils and Cantonment Board contribute major share in the total road length of the country. However, sufficient information about their condition has not been available. Tables below show the province wise distribution of roads administered by the District Councils and Municipal Co-corporations prior to devolution of power plan.

Table – 11 District Councils Road

Province	Road Type		Total (km)
	Low (km)	High (km)	
Punjab	27153	13987	41141
Sindh	24803	1866	26669
NWFP	13451	1330	14781
Baluchistan	20571	208	20779
Total	85978	17392	103370

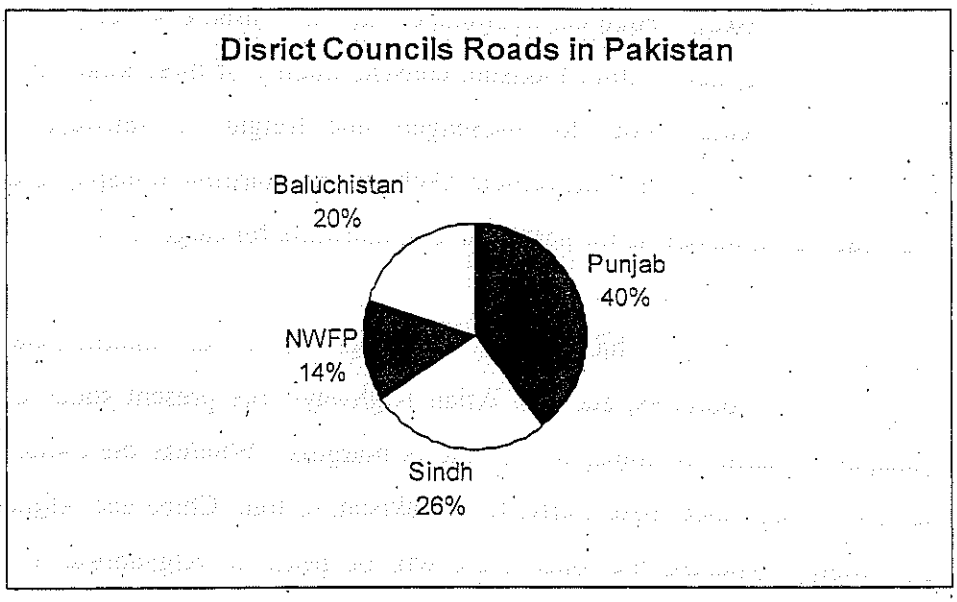
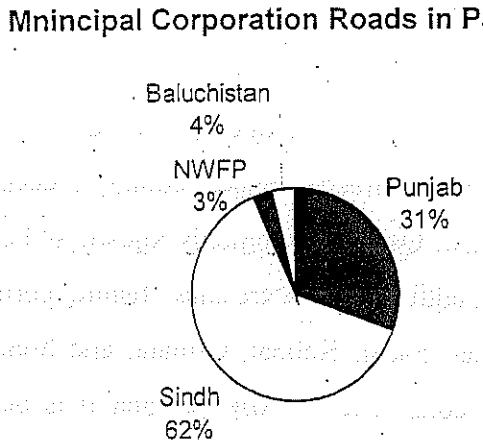


Table – 12 Municipal Road

Province	Road Type		Total (km)
	Low (km)	High (km)	
Punjab	1595	9037	10632
Sindh	1087	20663	21750
NWFP	345	732	1077
Baluchistan	566	720	1286
Total	**3593**	**31152**	**34745**



1.1.1.3 Major road connections to railways, inland waterways, seaports

The transport system within Pakistan consists mainly of three kinds of transport modes for inter-city movement both for passengers and freight; i.e railways, roads and airlines. Presently for international movement, both air and maritime transport play a significant role, especially air transport is for passenger and maritime for cargo.

Though road transport has also an important role as the international linkages between neighborhood countries, such as Asian Highways, the present status of international land transport in terms of transport volume is marginal. Whereas the Lahore – New Delhi bus service is suspended, road traffic from Pakistan to Iran, China and Afghanistan is operating. It is highly expected that once there will be peace in Afghanistan the international land transport in terms of transport volume would be increased tremendously in the coming years to meet the traffic demand of land locked (CAS) countries.

The road network in the country is well connected with the railways. The main national highway route N-5 runs almost parallel to the main railway route connecting Northern areas of the country with Southern parts. However, due to continuous deterioration of Railway system in the country it is facing sever competition from road transport.

Inland water transport is non-existent in the country, although potential for the same exists. The river Indus and its three tributaries (Jhelum, Chenab and Ravi) flow over the whole length of the country from north to south. However, none of the rivers or canals has been used for navigation.

The main road network is also well connected with the two seaports of the country. National routes ***N-5, N-55 and N-25*** directly connect country's deep sea-ports, namely, Karachi Port and Port Muhammed Bin Qasim (commonly known as Port Qasim or QasimPort) to other parts of the country. In addition, there are small fishing ports along 1100-kilometer coastline, namely, Jiwani, Gwadar, Pasni, Kalmat, Ormara, and Sonmiani in Baluchistan. Recently a deep seaport is being constructed at ***Gwadar*** and it is being connected through ***National Highway N-10 (Coastal Highway)*** to other parts of the country.

1.1.1.4 Type of bottlenecks constraints or capacity analysis on the road network:

In 1994-95 selected road network (19000 km) consisting National and Main Provincial Highways was analysed for highway assignment under the study titled " ***National Transport Plan in The Islamic Republic Of Pakistan***" conducted by NTRC and JICA.

Under the above study the assignment of vehicle Origin Destination trips on the highway network was conducted using computer software called SYSTEM-2, a regional information system developed by M/s JHK & Associates of USA. The country was divided in 51 zones for Vehicles Origin Destination Survey. Vehicle types included in the survey were Motorcycle, Car, Wagon, Bus and Truck. Roadside interview methodology was adopted for getting information at each survey point for twenty-four hours.

Figure – 5 show the zones adopted for OD survey and Figure – 6 show the Node / Link Number used for Road Inventory Data.

Figure – 5 Zone Structure for OD Survey

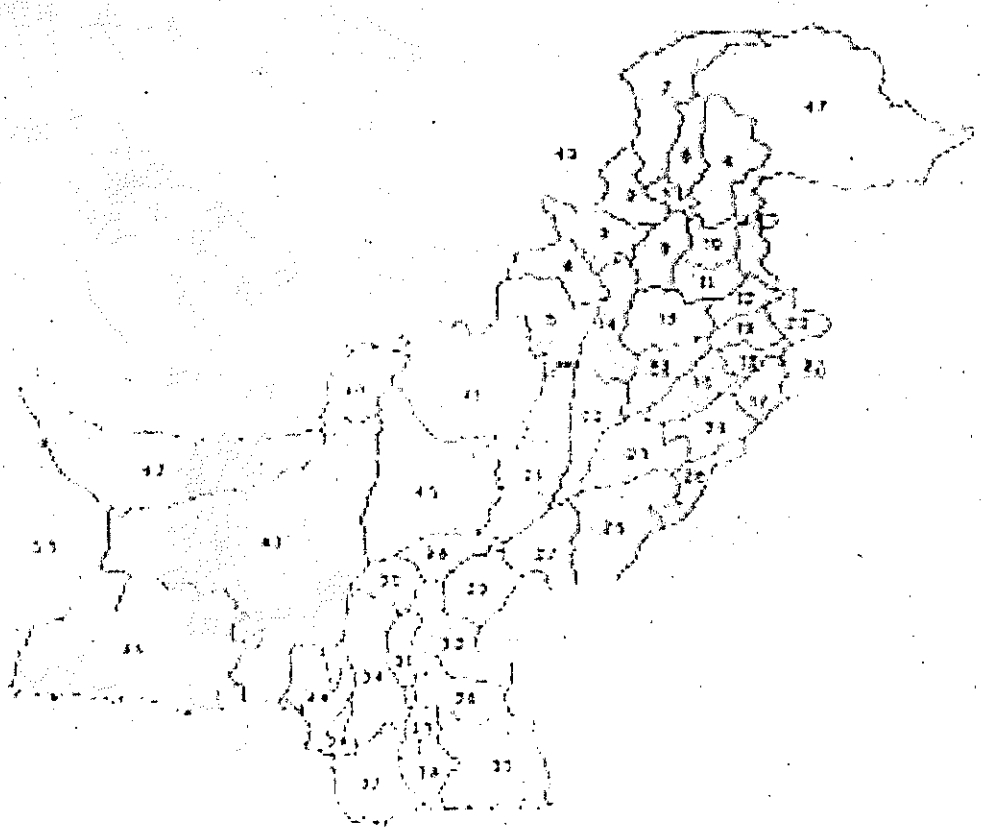
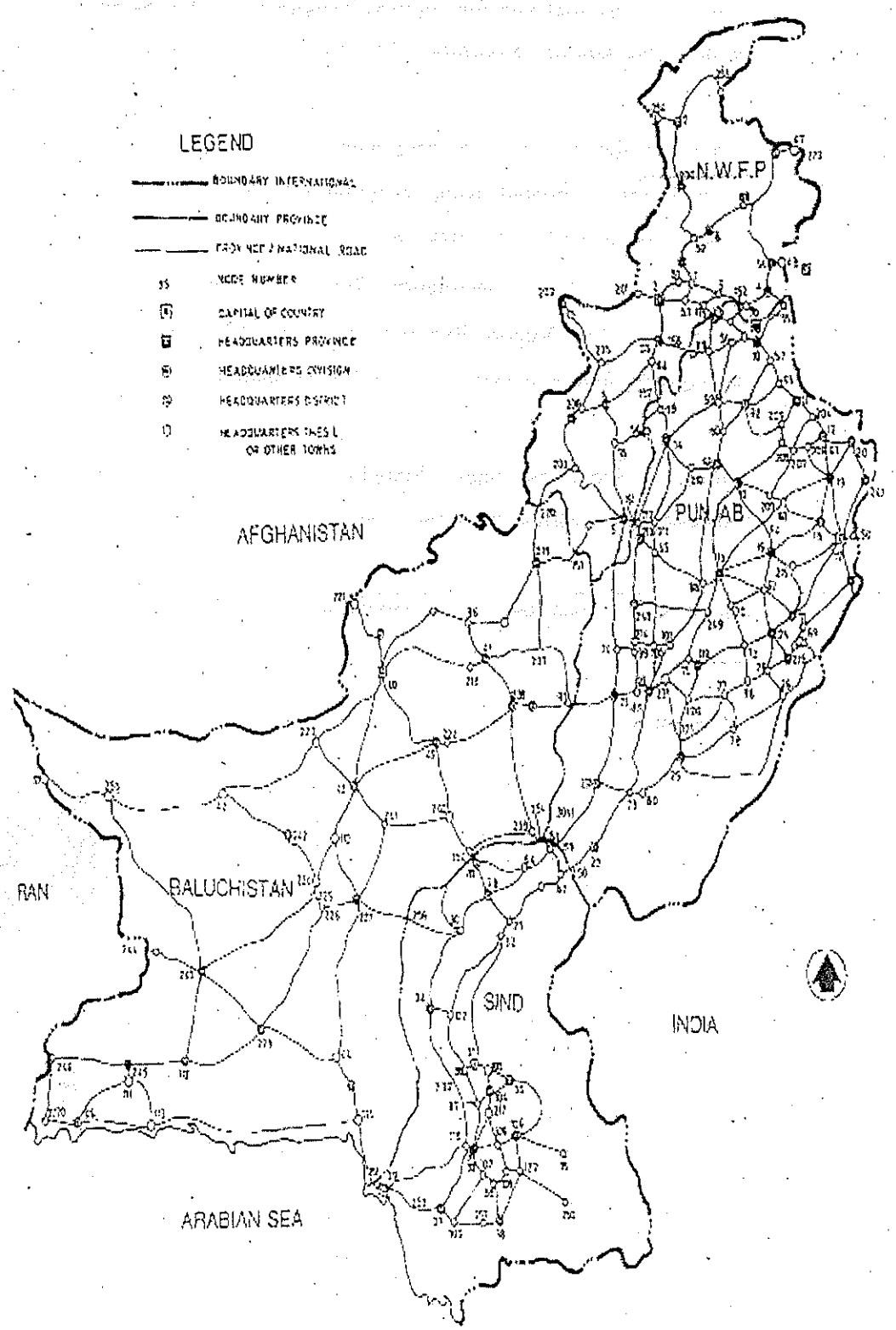


Figure –6 Node / Link Number to Use For Road Inventory Data



Outcome of the highway assignment in the form of Summary Trips for the year 1993, 1998 and 2006 are presented in Table – 13.

Table – 13 **Summary of Trips, 1993, 1998, and 2006**

		Trips / day		
Vehicles		1993	1998	2006
	Motor Cycle	6350	8083	11241
	Car	51676	72275	112357
	Wagon	24701	34635	56655
	Bus	22389	29254	42002
	Truck	53736	64088	86343
	Total	160845	210333	310604
PCU				
	Motor Cycle	2096	2667	3710
	Car	51676	72275	112357
	Wagon	37052	51953	84982
	Bus	67167	87762	126006
	Truck	171955	205082	276298
	Total	332946	419739	603353

Table – 14 presents the Summary of assignment of traffic 1993, 1998 and 2006 on the existing network of 1993. These results demonstrate changes in road lengths classified by V/C ratio from 1993 to 1998 and 2006. The class 1.25~ is an example where congested sections increase in the future. From the assigned result in each link, sections having a volume/capacity ratio larger than 1.00 in 1998 can be identified as the projects for the improvement.

Table – 14 **Summary of Traffic Assignment on the 1993 Network (V/C Ratio Length) on doing nothing basis**

	Route Length (km) in 1993				Route Length (km) in 1998				Route Length (km) in 2006			
V/C	Province	National Highways		Total	Province	National Highways		Total	Province	National Highways		Total
		N-5	Other			N-5	Other			N-5	Other	
~0.25	8936	206	2188	11330	6888	142	183	8713	8298	187	1848	10333
~0.50	1253	302	1539	3094	2336	64	754	3153	1693	239	1666	3597
~0.75	1025	169	477	1670	768	220	1213	2201	930	242	508	1679
~1.00	349	511	0	860	645	166	349	1159	454	308	182	944
~1.25	234	420	406	1060	423	76	26	525	401	578	304	982
1.25~	366	273	326	965	1105	1212	911	3229	389	327	728	1444
Total	12163	1876	4936	18979	12165	1880	3436	18980	12165	1876	4936	18979

On the basis of above analysis the study proposed following two candidate projects groups for recommendation.

a) For the Short term (8th Five-Year Plan i.e. 1993-98)

i) Committed projects

These were the projects for which Government of Pakistan had already allocated the funds through local and foreign lending and the study was not in a position to change those projects. They were

- **Dualization of N-5 Highway**
- **Motorway between Lahore- Islamabad**
- **Lahore By-pass**
- **N-55 Highway improvement**
- **N-25 Highway Improvement**

ii) Recommended projects

After the traffic assignment on the network 1998 including the committed projects, it was found there were some sections having V/C ratio > 1.00. Those sections were considered to be improved and recommended as the candidate projects of widening/improvement subject to economic assessment. They were mostly composed of provincial highways.

- **Widening of Sanjawi – Loralai (Baluchistan Provincial Highway)**
- **Iimprovement of Queeta-Sanjawi road (Baluchistan Provincial Highway)**
- **Improvement of Chauk Munda – Muzafargarh road (Punjab Provincial Highway)**
- **Improvement of Chauk Munda – Mianwali road (Punjab Provincial Highway)**
- **Improvement of R.pindi – Chakwal road (Punjab Provincial Highway)**

b) For the mid term period (1999-2006)

The committed projects to be completed in this mid-term period are:

- **N-5 Dualization for remaining sections**
- **Kohat Tunnel**
- **N-55 Improvement of remaining sections**
- **Sukkur By-pass**

Assuming the 1998 network was improved with committed and recommended projects in the short term period, there comes the second group of committed projects for the medium term as described above. However, it was found in computer simulation that there were some sections on which traffic exceeded the capacity, being V/C > 1.00, since the traffic was forecasted to grow at approximately 5% per annum in the whole country from 1994 to 2006. Those sections with V/C > 1.00 are subject for widening and improvement in the medium term period as recommended projects and they are mentioned below:-

- Improvement/Widening of Hyderabad – Mirpurkhas road (Sindh Provincial Highway)
- Improvement/Widening Umerkot – Mirpurkhas road (Sindh Provincial Highway)
- Improvement/Widening Jaranwala – Okara road (Punjab Provincial Highway)
- Improvement/Widening Khushab – Sargodha road (Punjab Provincial Highway)
- Improvement/Widening Jaranwala – Faisalabad road (Punjab Provincial Hihway)
- Improvement/Widening Gujranwala – Sialkot road (Punjab Provincial Highway)

Those candidate projects grouped into two implementation periods were assessed of the preliminary economic viability. The Economic Internal Rate of Return (EIRR) was estimated for the recommended projects. They are widening works of existing low capacity section. Conditions of economic evaluation were:-

- Economic project cost at 80% of financial cost
- Assuming 5 years for implementation
- Annual maintenance cost every year and a resurfacing cost at the 6th year
- Ten years for operation benefit
- Benefit is estimated by savings in VOC because of improvement
- A rate of 12% is used for capital cost (discount rate)

EIRR of those improvements was between 30 to 36% for the short and mid term periods. The position of the road network after the implementation of these projects would be as follows shown in Table – 15. There were recommended projects on the provincial highways. They were assessed worthy to be implemented because of growing traffic demand. However, funding and execution of those projects was not within the reach of federal government. They are dependent on provincial governments and road departments which have much more financial constraints even than the federal government.

Table – 15 Summary of Traffic Assignment on the 1993 Network (V/C Ratio Length) after execution of candidate projects.

	Route Length (km) in 1993				Route Length (km) in 1998				Route Length (km) in 2006			
V/C	Province	National Highways		Total	Province	National Highways		Total	Province	National Highways		Total
		N-5	Other			N-5	Other			N-5	Other	
~0.25	8936	206	2188	11330	8822	351	2264	11772	7500	389	2357	10582
~0.50	1253	302	1539	3094	1852	1133	2041	5026	2897	577	1125	4599
~0.75	1025	169	477	1670	1092	338	405	1835	1044	696	907	2647
~1.00	349	511	0	860	643	129	220	991	1269	266	302	1837
~1.25	234	420	406	1060								
1.25~	366	273	326	965								
Total	12163	1876	4936	18979	12409	1946	4930	19624	12710	1923	4691	19665

1.2 International Road Linkage to Neighboring Countries

1.2.1 Number of border crossing points to each neighboring country

Land routes connect Pakistan with its neighboring countries namely, Afghanistan, Iran, China and India. Figure – 7 shows the location of border crossing points of Pakistan at Asian Highway Network Map. Following table provides the information related to border crossing points of Pakistan with its neighboring countries:-

Table – 16

From	To	Numbers of border crossing
Pakistan	China	One
	India	One
	Afghanistan	Two
	Iran	One

1.2.2 Location of border crossing points

Table - 17

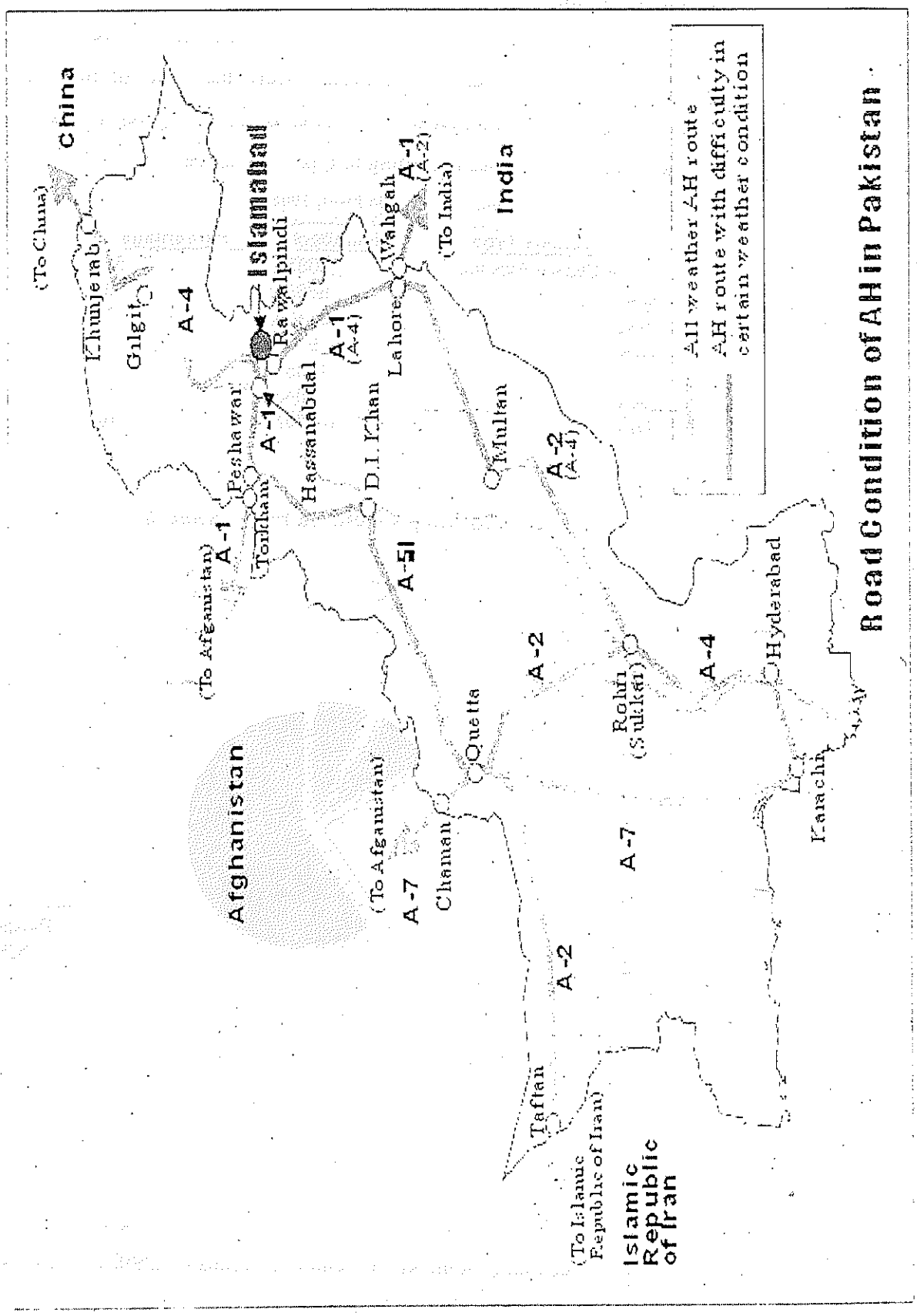
From	To	Location points of border crossing
Pakistan	China	Khunjerab
	India	Wahgah
	Afghanistan	1. Torkham 2. Chaman
	Iran	Taftan

1.2.3 Condition of road linkage leading to border crossing points

Table - 18

Border crossing	Road Number	AH Number	Link Details			No. of Lanes	Surface Type/Con
			From	To	Section Length (km)		
Pakistan China	N-35	A-4 (1)	Passu	Khunjrab	123	2	PM/Fair
Pakistan India	P23-005	A-1 (1)	Lahore	Wahgah	22	2	PM/Fair
Pakistan Afghanistan	N-5 N-25	A-1 (11) A-7 (1)	Peshawar Kuchlok	Torkham Chaman	56 104	2 2	AC/Fair AC/Fair
Pakistan Iran	N-40	A-2 (19)	Nukundi	Taftan	168	2	PM/Fair

Figure – 7


Road Condition of AH in Pakistan
All weather AH route
AH route with difficulty in certain weather condition
China
(To China)
Khunjerab
Gilgit
A-4
Islamabad
Rawalpindi
A-1
(A-4)
Lahore
Wahgah
A-1
(A-2)
(To India)
India
Peshawar
A-1
Hassanabdal
D.I. Khan
Multan
A-2
(A-4)
(To Afghanistan)
A-1
Torkham
A-51
Afghanistan
(To Afghanistan)
A-7
Chaman
Quetta
A-2
Rohri
(Sukkur)
A-4
Hyderabad
A-7
Karachi
A-2
Taftan
(To Islamic Republic of Iran)
Islamic Republic of Iran

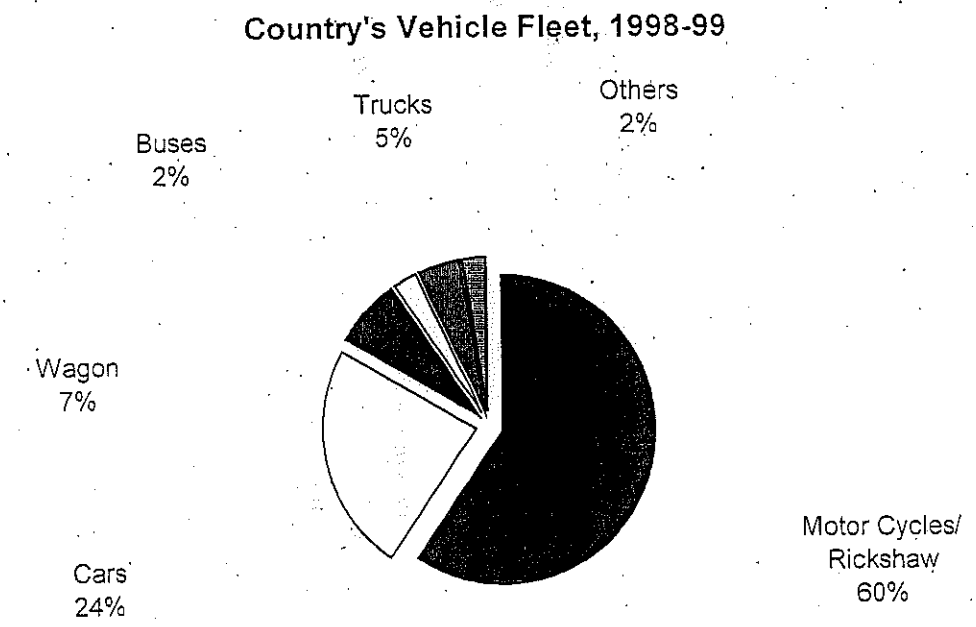
1.3 National Road Traffic

Vehicles on Roads

In Pakistan, vehicles paying taxes annually are considered as "vehicles on roads". There are more than 3.7 million vehicles[6] on road. More than half of them are motor-cycles and rickshaws. Historical data related to vehicles on road is given in Table VI of Appendix-A. The distribution of vehicles according to type is given below:-

Table – 19 County's Vehicle Fleet, 1998-99

Vehicle Type	Numbers	Percentage
Motor Cycles/ Rickshaw	2206387	59.3
Cars	888353	23.9
Wagon	274043	7.4
Buses	91910	2.5
Trucks	168845	4.5
Others	88432	2.4
Total	**3717970**	**100**



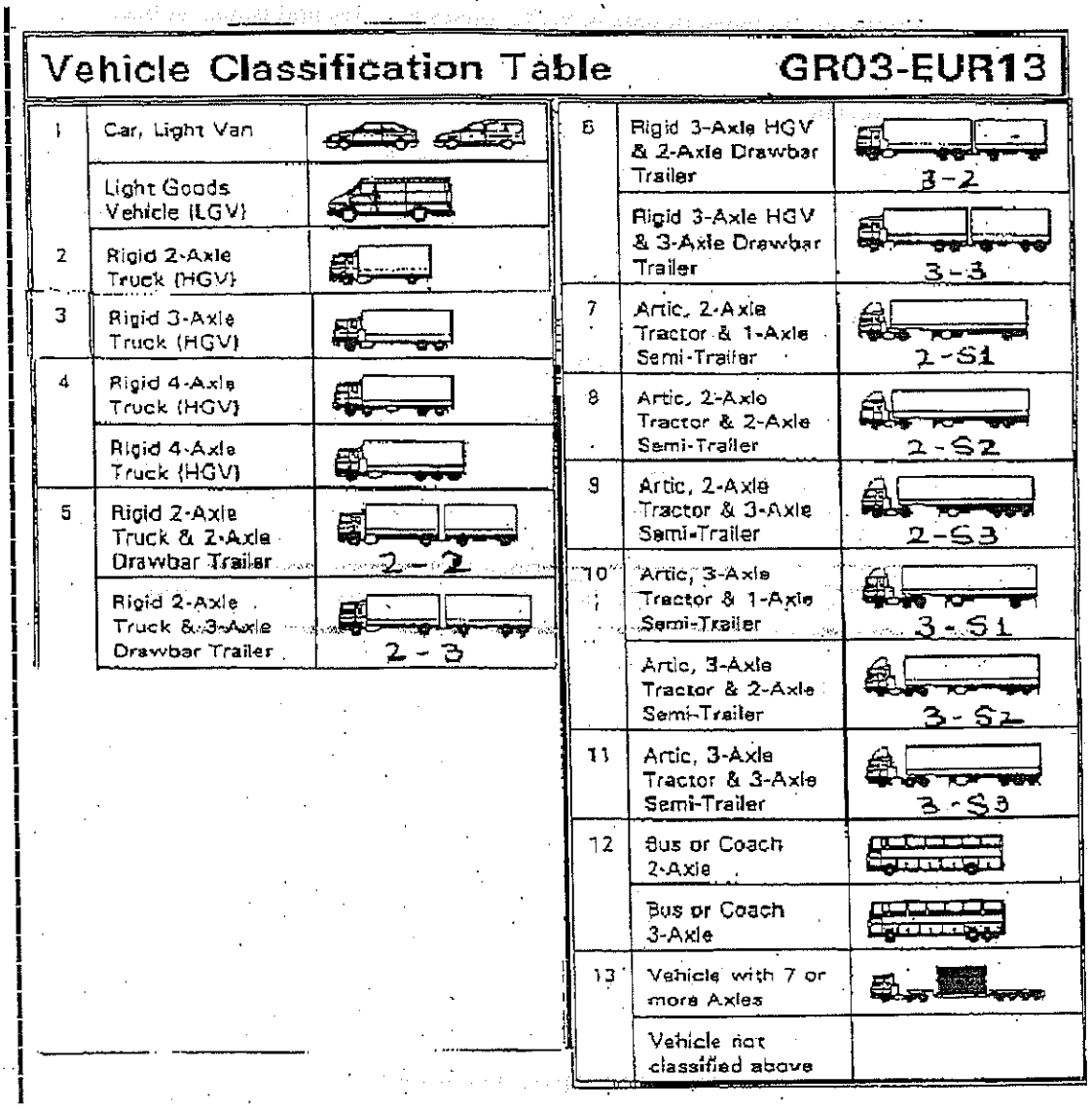
On the basis of regression analysis taken into account the growth in GDP, population, per capita GDP the estimated numbers of vehicle on roads by 2006 would be 4,794,337.

[6] National Transport Research Centre.

1.3.1 Vehicle Classification based on Axle Configuration

Figure - 8 below shows the vehicle classification mostly adopted in the country for traffic counting. The classification sub divides various categories of vehicles i.e. trucks and trailers on the basis of axle configurations.

Figure - 8



1.3.2 Average Daily Traffic (ADT)

Average Daily Traffic data on selected sections of National Highways upto 1996 is available. Twenty-four hours manual traffic counts were conducted on National Highways in order to get information for ADT. Table –VII of Appendix –A presents the information.

Growth in Average Daily Traffic

A study[7] shows that average daily vehicle traffic on National Highways increased by 18% from 1989 to 1992 as a whole for the total motorized vehicles (5.7% per annum on average; 4.7% for cars, 5.2% for buses and 7.1% for trucks). The growth pattern is different among routes and section as well. Similarly, the total growth in average daily-motorized traffic on provincial highways has increased by 24% for the same period at a rate of 7.4% per annum giving an increase in cars at 9.1%, buses at 1.3% and trucks at 6.2%.

Peak Hour

Peak Hour Volumes appear frequently around 3 – 5 p.m. covering one third stations where survey was conducted in 1990. The peak hour ratio was calculated at 7.5% of the daily volume in 1990.

1.3.3 Vehicle Composition

The overall composition of the average daily traffic observed in two surveys held in 1980 and 1990 is shown in Table – 20. The decrease in the proportion of buses is nearly offset by the increase of wagon/pickup.

Table – 20 Composition of Vehicle By Percent in ADT

Vehicles	1980 Survey (%)	1990 Survey (%)	Difference (%)
Motorcycle	4.4	3.5	-0.9
Car	16.9	20.4	3.5
Wagon/Pickup	10.7	16.8	6.1
Buses	18.8	11.7	-7.1
Trucks	47.0	46.0	-1.0
Others	2.2	1.6	-0.6
Total	100	100	

1.3.4 Major Road Transport Terminals

Bus Terminal

Every large or small city in Pakistan has a bus terminal, managed by local bodies and associations of bus and wagon operators. Large bus companies have their own private terminals as well. Besides, there are wagon and coach terminals for inter city operations. The size of the terminal in a city depends upon the size of the city. Larger cities have often more than one terminal, both for buses and wagons, catering to traffic in different directions.

[7] The Study on National Transport Plan in the Islamic Republic of Pakistan, Final Report 1995

Truck terminals

Most of the major towns have one or more than one truck terminals. These are mostly located close to wholesale markets, godowns of commission agents or at major traffic origin destination points, like Karachi port. Truck terminals are in fact truck stands. Loading and unloading is done at client's premises, except for goods forwarding agencies dealing in less than truckload parcels.

1.3.5 Structure of Bus Services

Buses are the most common means of transport in the country. Bus services are available on all nooks and corners of the country. They operate on fixed routes and are required to have a Route Permit. Such permits are issued liberally by Provincial and Regional Transport authorities, subject to fulfilling of certain conditions about fitness of the vehicle and demand on the route.

There are a great variety of bus services - air-conditioned, non-air conditioned, large and small, etc. Large size buses have a capacity of 52 passengers and smaller size has 42 passengers. Air-conditioned and luxury coaches have less seats. There is a bus to serve every type of passenger, low class services in rural areas and high-class services on main routes.

The regulation of bus services is by means of control over fares. The Provincial governments in consultation with operators fix the fares. The adjustment of quantity is then left to the market forces. If the number of vehicles on a route increases, average load factor will decrease. This will force marginal operators to shift to other routes and other occupations. At places which do not have adequate traffic for a bus service, due to length of route, small population or poor road condition, wagons and pickups operate to and from nearby route or bus terminal. All buses are now in private sector. Till recently Provincial Governments had their bus services on inter-city routes. These have since been closed and their assets auctioned. They served only a fraction of the market.

1.3.6 Traffic Modal Share in Pakistan

The National Transport Plan study analysed the interregional transport system in Pakistan consists mainly of three modes; road, railway and air. In the last decade, overall traffic demand has been steadily increasing in parallel to economic development. Railway, however, has shown a moderate growth, thus losing its share in the national transport market. Domestic passenger and freight movements in the country are briefed in following tables.

Table – 21 Modal Shares in Domestic Passenger Traffic

	Passenger-kms (billion)				Modal Shares (%)			
Year	Road	Railway	Air	Total	Road	Railway	Air	Total
1982-83	79.5	16.5	1.3	97.3	82	17	1	100
1987-88	108.5	18.5	2.1	129.1	84	14	2	100
1992-93	135.0	20.8	2.7	158.5	85	13	2	100
1994-95	146.1	17.5	2.5	166.1	88	11	1	100
1997-98	173.8	18.5	2.0	194.3	89	10	1	100
1999-00	192.9	18.4	1.3	212.5	91	8	1	100
2002-03*	225.2	18.7	1.3	245.2	92	7	1	100

* Projected

Table – 22 Modal Shares in Freights Traffic

	Ton-kms (billion)			Modal Shares (%)		
Year	Road	Railway	Total	Road	Railway	Total
1982-83	21.2	7.5	28.7	74	26	100
1987-88	29.1	8.0	37.1	78	22	100
1992-93	37.0	6.4	43.4	85	15	100
1994-95	75.7	5.6	81.3	93	7	100
1997-98	89.5	4.4	93.9	95	5	100
1999-00	104.1	3.6	107.7	97	3	100
2002-03*	125.3	5.4	130.6	96	4	100

* Projected

1.3.7 Freight Services

The road freight transport is free of any Government regulation or control. The trucks can be registered any where in the country; can operate all over the country. No license or permit is required. The only government regulations are concerning physical fitness of the vehicle and restrictions on axle load. However, there is little enforcement of both these regulations. Trucks can carry any thing they like and charge whatever they can. The free market conditions have resulted in most efficient trucking operations. The utilization of vehicles is highest and freight rates lowest in the world. The rates charged by the truckers vary from time to time and place to place depending upon demand and supply conditions and availability of return load. The charges on return haul may be one third or less of forward journey. There are not great fluctuations in freight, no complaints about availability of vehicles. Single owner operator is the dominant feature.

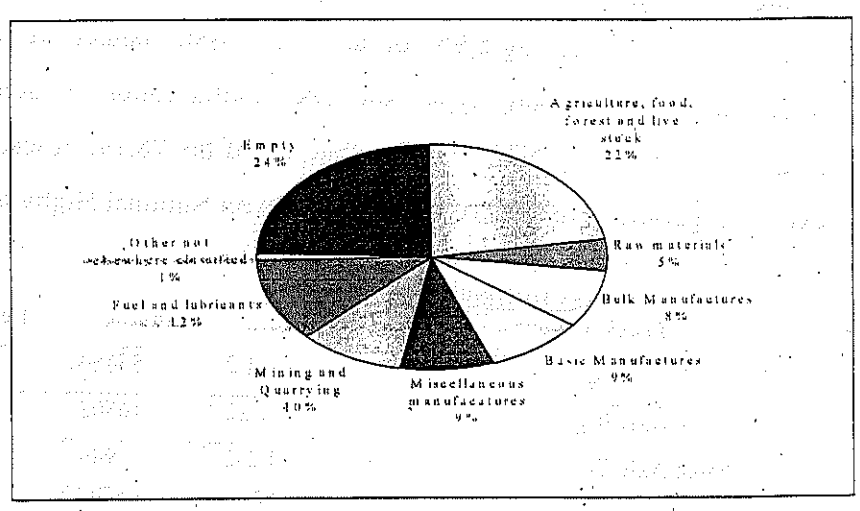
The vehicles are painted, decorated with beautiful scenery, portraits of national heroes and pieces of poetry, which has become a legend. There is also a government organization named National Logistic Cell (NLC), which is engaged in transport service of particular commodities, which are earmarked by government. It transports a large volume of those commodities from ports of Karachi and Qasim to key inland urban centers, and export materials to those ports.

Commodities carried

There is no regular system of reporting of trucking operations in the country. However, a countrywide road traffic origin destination survey indicated the distribution of vehicles according to goods carried as follows:-

Table – 23 Commodities Carried by Road Vehicles

S.No.	Commodity group	% of vehicles
1	Agriculture, food, forest and livestock	22.6
2	Raw materials	4.5
3	Bulk manufactures	8.2
4	Basic manufactures	8.8
5	Miscellaneous manufactures	8.5
6	Mining and Quarrying	9.7
7	Fuel and lubricants	12.1
8	Other not elsewhere classified	0.7
9	Empty	24.8
10	Total	100



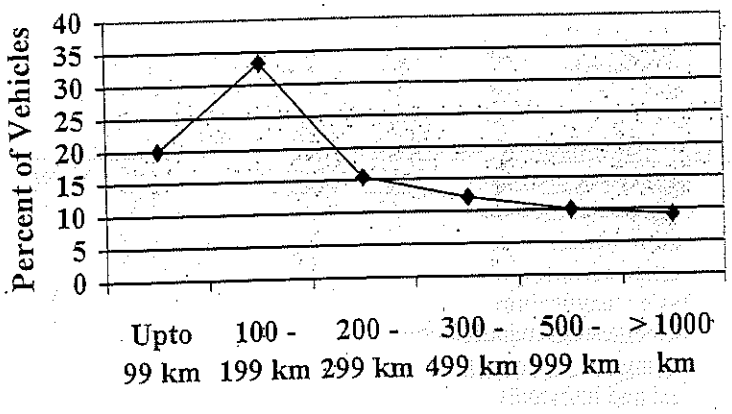
Trip Lengths

The trip length distribution of goods vehicles indicated by the above referred survey was as follows:

Table - 24 Trip Length Distribution of Goods Vehicles

S.No.	Distance range	% of vehicles
1	Up to 99 km	20.1
2	100 - 199 km	33.4
3	200 - 299 km	15.4
4	300 - 499 km	12.1
5	500 - 999 km	9.9
6	> 1000 km	9.1
	Total	100

Trip Length Distribution



Composition of Trucks By Axle Configuration

Nearly 128,440 excluding 6,963 oil and 1,295 water tankers are plying on roads in Pakistan, which have various body types and axle configuration. A study[8] conducted on National Highways in 1995 by NTRC shows that out of the 78,192 trucks counted on 30 stations the axle configuration wise distribution of trucks on National Highways is as follows:

Table – 25 Trucks Distribution by Type

Truck Type	Code	Number	Percentage
Two Axle Rigid	1.2	53864	68
Three Axle Rigid	1.22	16805	22
Three Axle Trailer	1.2-2	944	1
Four Axle	1.2-22	5076	7
More Than Four Axles	1.2-222 & 1.22-222	1503	2
Total		78192	100

Comparing to similar study held in 1982 the 2-Axle trucks contributed some 96% of the total population of trucks in the country, whereas in the year 1994 its share has decreased to 68% due to introduction of multi axles truck trailers.

Under the same study some 4768 trucks of different configurations were weighed at 30 stations on National Highways covering nearly all the country. The objective of the study was to asses the degree of overloading by goods vehicles. Table –26 shows the Average Axle Loads for loaded vehicles by truck type:-

[8] Axle Load Study on National Highways by NTRC in July, 1995

Table – 26 Average Axle Loads By Truck Type

Truck Type	Average Axle Load (Tonne)						
	Front	Rear 1	Rear 2	Rear 3	Rear 4	Rear 5	Gross
2-Axle Single	4.93	11.13					16.06
3-Axle Single	6.74	12.59	12.17				31.51
3-Axle Tandem	6.74	12.37	12.51				31.61
4-Axle Rear Tandem	5.39	11.50	10.90	10.75			38.53
5-Axle Tandem	5.55	9.28	9.28	10.27	10.95		45.33
6-Axle Tandem Tridem	6.43	10.37	10.67	10.49	10.99	10.50	59.45

The same study also analyzed the Axle Load spectra of dual tires rear axles of the loaded trucks. Table below presents the analysis: -

Table – 27 Trucks Rear Axle Load Spectra

Range (tonne)	Frequency	Percentage	Cumulative %	% Above Range Value
0 – 8.16	623	11.82	11.82	88.18
8.16 – 9.99	936	14.57	26.39	73.61
10.00 – 10.99	830	12.92	39.32	60.69
11.00 – 11.99	1115	17.36	56.68	43.33
12.00 – 12.99	1007	15.68	72.36	27.65
13.00 – 13.99	781	12.16	84.52	15.49
14.00 – 14.99	418	6.51	91.03	8.98
15.00 – 19.99	550	8.56	99.06	0.42
20.00 & Above	26	0.40	100.00	0.00

Another study[9] conducted in 1998 concluded that truck factors vary greatly with varying loads, particularly in Pakistan where loading is uncontrolled; they should not be averaged using average loads for each class of trucks. The same study mentioned that the Pavement (Indus Highway Project, **Contract 12-A, Saraigambila-Karack** section) was designed in 1992 with expected traffic in terms of ESALs as 5.81 million for period 1995-2004. However, it has already accommodated some 31.4 million ESALs during period 1995-1998.

It is therefore must that in order to save the pavements in the country from pre-mature failures, vehicle axle and gross weight limits as mentioned in the Government of Pakistan, Ordinance No. XL of 2000 should be implemented strictly.

[9] Supplementary Report to Flexible Pavement Investigation for IHP Contract 12-A

1.4 Major Container Terminals

1.4.1 Location of major terminals

Pakistan has two major seaports, namely, Karachi Sea Port and Port Muhammed Bin Qasim. The Karachi Port is a deep-water natural sea port located at the head of the city. Port Qasim is a newly developed port.

Karachi Port Facilities

Karachi Port has 30 dry cargo berths, 17 at East Wharf and 13 at West Wharf including 3 liquid cargo-handling berths. Also included a dedicated Container terminal called Karachi International Container Terminal (KICT) at West Wharf. The berths have a length of 4,915 meters of which 2,653 meters are on the East Wharf and 2,262 meters on the West Wharf including 635 meters of Container Terminal. In addition there are 3 oil piers where 75,000 DWT ships can be handled. The storage area at the port comprises of 630,783 square meters as follows:

Table – 28 Storage Area at Karachi Port

S.No.	Description	Area M^2
1	Transit sheds	117,058
2	Marshalling yard	299,886
3	Container yard	213,839
Total		630,783

The number of ships calling at the port and cargo handled is given below:

Table – 29 Traffic Handled at Karachi Port

Description		1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
No. of ship arrivals		1746	1714	1524	1625	1587	1564
Cargo handled 000 tons							
Imports	Dry	6167	6893	5567	6284	6510	7496
	Liquid	12552	11470	11547	12034	11639	12567
	Total	18719	18363	17114	18318	18149	20063
Exports	Dry	3736	3998	3976	3609	3736	4419
	Liquid	1126	1115	1594	2125	1876	1499
	Total	4862	5113	5570	5734	5612	5918
Total	Dry	9903	10891	9543	9893	10246	11915
	Liquid	13678	12585	13141	14159	13515	14066
	Total	23581	23476	22684	24052	23761	25982
Containers TEUs (000)							
	Imports	278	278	259	277	315	338
	Exports	272	278	246	251	300	314
	Total	550	555	505	527	615	652

Source: KPT letter No. S-19/e-123/2001, dated 11 July 2001 and DGP&S letter No. 3(4)/95-Sh-I, dated 23 Oct. 2001

Table – 30

Berth Facilities at Karachi Port

Berth No. *			Length (meter)	Depth (meter)
New	Old			
1	East Wharf	1	153.92	10.4
2	"	2	152.20	10.4
3	"	3	167.44	10.4
4	"	4	149.00	10.4
5	"	5	197.00	11.5
6	"	6	138.64	11.5
7	"	7	132.30	11.5
8	"	8	176.40	11.5
9	"	9	153.98	11.5
10	"	10	139.72	10.4
11	"	11	167.64	10.4
12	"	12	147.52	10.4
13	"	13	167.44	10.4
14	"	14	147.52	10.4
15	"	15	147.52	10.4
16	"	16	167.44	10.4
17	"	17	147.52	10.4
18	Juna Bunder	25	149.00	9.1
19	"	26	164.00	9.1
20	"	27	164.00	9.1
21	"	28	168.00	9.1
22	Barge Wharf	18-A	180.00	7.3
23	"	18-A	180.00	7.3
24	West Wharf	18	167.44	9.8
25	"	19	167.44	10.4
26	"	20	182.88	10.4
27	"	21	190.50	10.4
28	"	22	182.88	10.4
29	"	23	213.35	10.4
30	"	24	152.20	10.4
Total			4914.89	
OIL PIERS				
OP-1		OP-4	321.6	13.40
OP-2		OP-1	196.2	11.30
OP-3		OP-5	300.0	13.70

*Berths have been renumbered with effect from 1-1-1999.

Port Muhammed Bin Qasim

The Port Muhammed Bin Qasim has 279 meter specialized berth for bulk handling of iron ore and coal for the steel mill with 4.5 kilometer conveyor belt connected to steel mill stockyard, and quay area of 1400 meter length, divided into 7 multipurpose berths of 200 meters each. In addition to above, the port has a liquid chemical terminal and storage farm

with handling capacity of 75,000 DWT tankers (operational since 1998) and an oil terminal (FOTCO) which can handle 63,000 DWT tankers and has an annual capacity of 9 million tons. The container terminal, oil and liquid chemical terminals have been developed under BOO scheme.

The storage area consists of 20,000 square meters transit sheds along berths 1-4 with 36,000 square meter open area and 232,000 square meter marshalling yard – 116,000 square meters with berths 1-4 and 116,000 square meters with births 5-7. The number of ships calling at the port has exceeded 600, carrying more than 15 million tons of cargo equally divided into dry and bulk. Details are as follows:

Table - 31 Traffic Handled at Port Qasim (000 tons)

S.No	Item	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
1	Dry							
	a. Imports	5423	5153	5308	7259	5488	5131	3813
	b. Exports	888	561	235	101	257	236	219
	Total	6310	5713	5543	7359	5746	5367	4032
2	Liquid							
	a. Imports	2575	3662	4615	5602	5608	7056	7003
	b. Exports	312	274	456	221	387	335	451
	Total	2887	3936	5071	5823	5994	7391	7454
3	Total (Dry+liquid)							
	a. Imports	7998	8814	9923	12861	11096	12186	10816
	b. Exports	1200	835	691	322	644	572	670
	Total	9197	9649	10614	13183	11740	12758	11486
4	CONTAINER TERMINAL							
	a. Imports (000 TEU)	0	0	0	64	73	70	68
	b. Exports (000 TEU)	0	0	0	68	91	94	90
	c. Total Imp+Exp	0	0	0	133	164	164	158
	d. No. of ships	0	0	0	88	141	146	--
5	Grand total (container+other)							
	Imports	7998	8814	9923	13951	12337	13379	11977
	Exports	1200	835	691	1486	2200	2175	2175
	Total	9197	9649	10614	15438	14537	15553	14173
6	No ships	418	345	381	456	551	590	612

1.4.2 Access by road/rail: The main road network is also well connected with the two seaports of the country. National routes *N-5, N-55 and N-25* directly connect country's deep seaports, namely, Karachi Port and Port Muhammad Bin Qasim (commonly known as Port Qasim) to other parts of the country. Also these ports are well connected via railways.

1.4.3 Containerized Business Volume: Presently, Karachi International Container Terminal and Premier Mercantile Services (Pvt.) Ltd. at Karachi port along-with Qasim International Container Terminal at Port Qasim, handle all gear less container traffic through Pakistani ports. Of these, the first two utilize rail-mounted gantry cranes for ship-to-shore services. PMS on the other hand currently handles containers through two mobile ship-to-

shore cranes. The following table illustrates the trend of containerized traffic in Pakistani ports.

Break up of containerized traffic (000 TEU's)					
	1996-97	1997-98	1998-99	1999-00	2000-01
Total Pakistani Ports	608	667	696	775	823
Port Qasim (QICT)	53	161	169	160	175
Total Karachi Port	555	505	527	615	648

1.4.4 Plan of development for Seaports

- Karachi Port Trust initiated to re-construct its Oil Pier (OP-II) for 75000 DWT tankers with all modern loading and un-loading facilities.
- Karachi Port Trust after a detailed feasibility study planned to deepen the channel depth to 13.5 meter for handling 12-meter draught container vessels at all tides. The work is scheduled to commence from September 2002.
- At East Wharf of Karachi port, berths from 6 to 9 have been dedicated for containerized traffic. A container terminal is being established on BOT basis by M/s Premier Mercantile Services and it shall provide 4 state of the art post-panama gantry cranes with 46 meters outreach and associated equipment at a cost of US$ 65 million for smooth and efficient cargo handling.
- A new deep-waters seaport is being constructed at Gwadar with following features:-
  - Date of commencement (Phase-I) 23rd March 2002
  - Date of completion (Phase-I) 23rd March 2005
  - Cost Phase-I US$ 639 million
  - Cost Phase-II US$ 1,163 million
  - Phase –I Component
    - Three Multi-purpose berths each 200 meter length
    - Handling Capacity: Ships up to 50,000 DWT
    - 5 km approach channel dredged up to 11.5 meter
    - Cargo Handling equipment and support facilities
    - Development of port infrastructure and support facilities

1.5 Asian Highways (AH) Network in Pakistan

The Asian Highway (AH) project was initiated in 1959 by ESCAP to promote the development of international road transport in Asia and to facilitate international trade and tourism. The map at Figure – 9 issued by the United Nations in November 1996, show four International routes designated as ***A-1, A-2, A-4 and A-7*** are passing through Pakistan. Other than these International routes one Sub regional route designated as ***A-51*** is present in Pakistan.

1. Asian Highway (A-1) Total Length = 607 km (in Pakistan)

Asian Highway A-1 joins the South East Asia region to the South West Asia. It's the most important Asian route. In Pakistan this route starts from the border city of Wahgah. Then it passes through famous city of Lahore and in North it follows the National Highway route N-5 and ends at Pak-Afghan border at Torkham. The existing road is a dual carriageway, 4-lanes facility with fair condition except the Torkham – Peshawar section with 2-lanes.

2. Asian Highway (A-2) Total Length = 1828 km (in Pakistan)

Asian Highway A-2 in Pakistan starts from famous historical city of Lahore. The A-2 runs from the major towns of Punjab and Sindh Provinces by following National Highway N-5. From town Rohri in Sindh the route turns towards the third province of Pakistan called Baluchistan following the National Highway N-65. After passing Quetta, capital of Baluchistan it follows National Highways N-25 & N-40, and enters into Iran at border town of Taftan.

3. Asian Highway (A-4) Total Length = 1289 + 1102 (Hassanabdal – Rohri) = 2391 km

Asian Highway route A-4 in Pakistan enters at the place called Khunjerab at Pak-China border. From Khunjerab it follows the National Highway route N-35 also called Karkuram Highway or silk route. Following the city of Abbottabad it takes off N-35 at Hassanabdal. Afterwards in South it follows the Asian Highway route A-1 and A-2. At the town Rohri it follows again route A-4 and ends at the financial hub of Pakistan called Karachi.

4. Asian Highway A-7 Total Length = 816 km

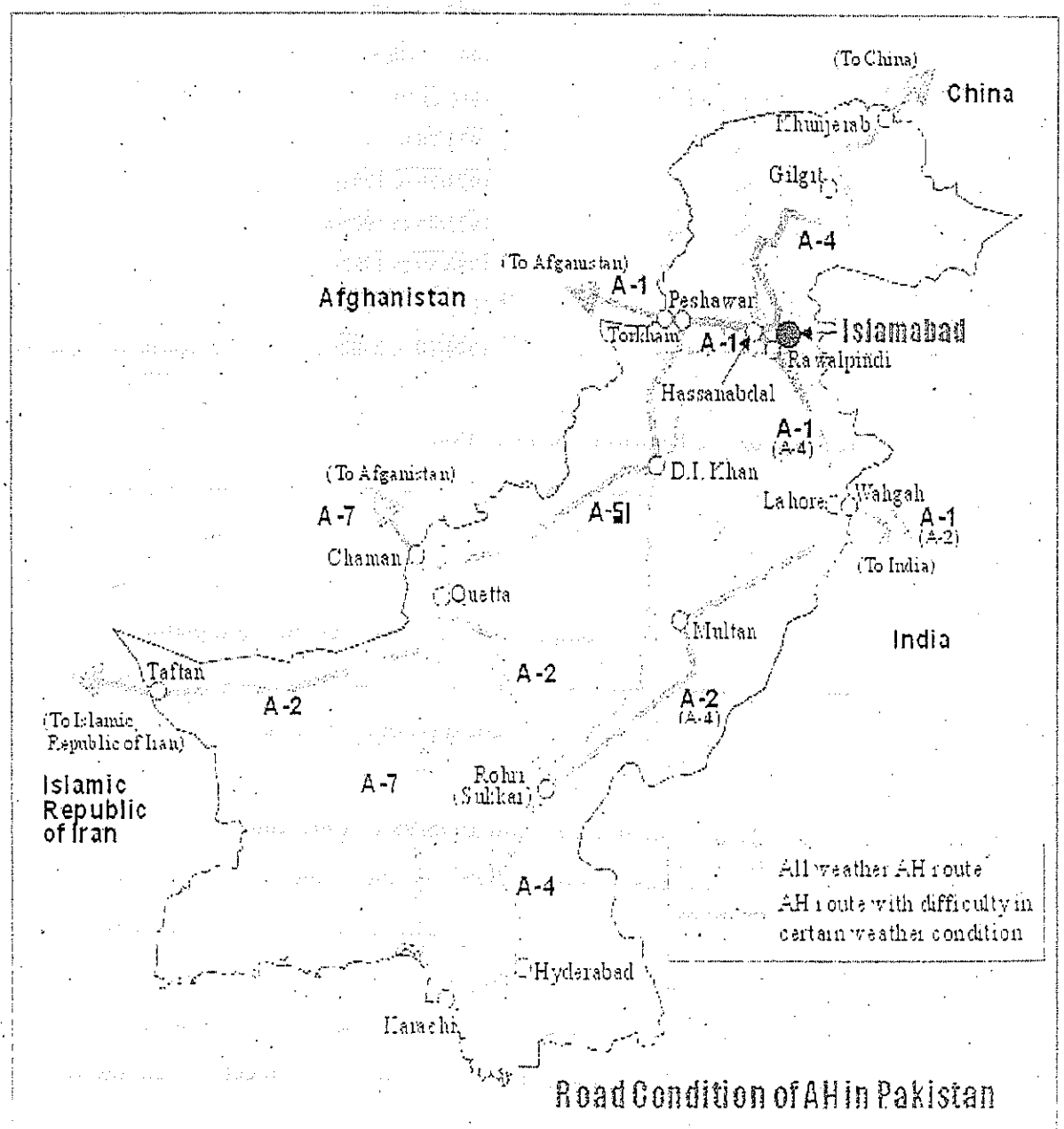
Asian Highway route A-7 in Pakistan enters at the town of Chaman at Pak-Afghan border. From there it follows National Highway route N-25 and passing from different towns of Baluchistan it ends at Karachi.

5. Asian Highway A-51 Total Length = 837 km

Asian Highway route A-51 is Sub-regional route. It starts from the city of Peshawar and following National Highway route N-55 it passes from Kohat, and Bannu to reach Dera Ismail Khan. From D.I.Khan it follows National Highway route N-50 and ends in Kuchlak near Quetta.

The inventory data concerning road sections included in Asian Highways Network in Pakistan has been reviewed and placed at Table – 1 of Appendix - B.

Figure – 9 Asian Highways Crossing Pakistan



1.6 National Development Plans

1.6.1 Policies & Plans related Roads

In Pakistan at federal level economic and social development is steered with the help of medium term (5 years) plans prepared by the Planning Commission. These plans are set in a longer term perspective of 15 years and are operationalised through the instrument of annual plans. Until now nine 5 years plan have been prepared as mentioned in the following table:

Table – 32 Five Year Plans Durations

S.No	Five year Plan Designation	Period	Status
1	First Plan	1955 to 1960	
2	Second Plan	1961 to 1965	
3	Third Plan	1966 to 1970	
4	Fourth	1973/74 to 1977/78	
5	Fifth Plan	1978/79 to 1982/83	
6	Sixth Plan	1983/84 to 1987/88	
7	Seventh Plan	1988/89 to 1992/93	
8	Eight Plan	1993/94 to 1997/98	
9	Ninth Plan	1998/99 to 2002/03	Prepared, Not approved

Review of the Eighth Five-Year Plan

The Eighth Five Year Plan was not successful in achieving the objectives of economic growth, macroeconomic stability, structural reform and social change. There was an increasing strain on the road system, particularly north-south corridor, N-5, the dualisation of which could not be completed. Nor could be the completion of Indus Highway (N-55) achieved. The 6-lane, 371 km, long, Lahore – Islamabad Motorway was completed. Induction of private sector in roads did not materialize.

Review of the Non-Plan Period 1998/99 to 1999/2000

With end of the Eighth Plan in 1997-98, the country entered another non-plan period after the seventies. This review is therefore based on the Annual Plans 1998-99 and 1999-2000. The period of Annual Plan 1998-99 witnessed political instability, the impact of economic sanctions following the nuclear tests and a serious recession. In 1999-2000, a wide ranging agenda of reform was put in place with two main objectives: strengthening of economic base and reducing poverty.

Three-Year Development Programme

As the ninth five-year plan was not launched the Government of Pakistan approved a mid-term plan called "Three Year Development Programme 2000-2003" for the period 2000-01 to 2002-03 and it was decided that instead of the 'Detailed Annual Plan' published after the budget, a 'Three Year Development Programme' will be brought out in October every year. In addition to the mid term plan the Annual Plan, as a part of the Budget will continue to be prepared and published with the budget documents in June every year. In Pakistan development year starts from 1st July of Christians year. Other than the Annual PSDP provinces also prepare their Annual development plans under their annual budget.

The mid term plan[10] reflected the comprehensive agenda of General Pervez Musharraf 's government and based on following features:-

- Revival of the economy
- Reduce the fiscal and current accounts deficits
- Efficient and good governance
- A balanced and just approach towards all provinces
- Devolution of Power

Related to the Transport and Communications sector the three year programme addressed some issues as follows:-

- The declining trend of Railways
- The fare structure of Railways
- The road density still needed to be improved
- The rapid deterioration of existing road network due to lack of maintenance and excessive overloading by trucks
- Need to develop improved port infrastructure and operations through provision of dedicated terminals and deepening of navigation channels and rationalization of port tariffs

[10] Three Year Development Programme 2000-03, GOP, Planning Commission

Keeping in view the above mentioned issues in the sector an allocation of Rs. 67.08 billion including Rs. 8.53 billion for Provincial roads is envisaged for the public investment through budget for three year period.

The break up is given in the following table:-

Table – 33 Budgetary Investments 2000-2003

Sub - Sector	Ministry / Division	Allocation in Rs. Billion
Pakistan Railways	Railways Division	11.050
National Highways	Communications Division	45.200
Ports	Communications Division	0.129
Special Communications Organizations	Communications Division	0.335
Pakistan Post Office	Communications Division	0.048
National Transport Research Centre	Communications Division	0.038
Pakistan Telecommunications Authority	Telecommunications Division	1.536
Trade & Transport Facilitation Project	Commerce Division	0.175
Pakistan Meteorological	M/o Defense	.002
Total (Federal)		**58.513**
Provincial Road	Provinces	8.530
Grand Total (Federal+ Provincial)		**67.043**

For the year 2001-2002 the federal government earmarked an amount of Rs. 15,614.22 million for the Communications division to run its annual PSDP, in it National Highway Authority shares 15,060.850 million. Also for the year 2002-2003 the amount earmarked for the Communications division is Rs. 15,673.90 million and for National Highway Authority is 15,139.20 million.

Table – 34 present the development plan of NHA. An investment of Rs. 45.2 billion is proposed for the National Highways Programme for the Three Years Programme period. Major works include completion of on-going work on construction of Peshawar – Islamabad Motorway, Dualization of the National Highway N-5 and Up-gradation of Indus Highway N-55 Phase-III including Kohat tunnel. Also provision has been made for the construction of Makran Coastal Highway, Lyari Expressway, Karachi Northern Bypass, Pindi Bhattian – Faisalabad motorway, Islamabad – Muree Expressway and other National Highway projects.

Table - 34

National Highway Authority Five Year Investment Plan (2001 – 2006)

Sl.No	Name of Scheme	Cost(Throw-forward)	PSDP Allocation in Rs. Million for					Total Five Year Allocation (Rs.Million)
		Total	2001-02	2002-03	2003-4	2004-5	2005-06	2001-6
1	2	3	4	5	6	7	8	9
1) On going								
1	Indus Highway Project	14382(631)	600	31	0	0	0	631
2	Kohat Tunnel and Access roads	6411(3369	1700	984	685	0	0	3369
3	Fourth Highway Project	7875(58)	25	33	0	0	0	58
4	National Highway Improvement Program (WB)	8000(7400)	200	400	500	600	700	2400
5	Hala-Moro	2400(934)	750	100	84	0	0	934
6	Moro-Baberlo	4820(502)	100	150	252	0	0	502
7	Baberlo-Ubaro	3370(50)	50	0	0	0	0	50
8	Ubaro-Rahim Yar Khan	2055(200)	200	0	0	0	0	200
9	Rahim Yar Khan-Bahawalpur ACW (168 km)	7000(6434)	600	650	650	650	700	3250
10	Multan-Mianchannu	3500(43)	20	23	0	0	0	43
11	Okara-Lahore	3888(20)	20	0	0	0	0	20
12	Kharian-Rawalpindi	4890(150)	150	0	0	0	0	150
13	Chablat-Nowshera	2916(917)	400	517	0	0	0	917
14	Lahore-Islamabad Motorway (M-2)	39000(177)	100	77	0	0	0	177
15	Islamabad-Peshawar (M-1)	43740(32416)	1500	1750	1800	2070	2660	9780
16	N-40 Quetta-Dalbandin-Taftan	2760(26)	25	1	0	0	0	26
17	Improvement of KKH (N-35)	552(152)	152	0	0	0	0	152
18	Abbottabad-Barian-Nathiagali	1247(100)	100	0	0	0	0	100
19	Tall Parachinar Road Tari Mengal	545(12)	12	0	0	0	0	12
20	Ratodero-Shahdadkot-Khuzdar Road	1274(75)	75	0	0	0	0	75
21	Manshera-Naran-Jalkhad Road	3821(2412)	600	950	862	0	0	2412
22	N-50 Quetta-Qilla Saifullah-Zhob-DI Khan	2906(2525)	250	525	800	600	550	2725
23	Improvement of N-70 Qilla Saifullah-DG Khan-Multan	2934(2734)	200	550	1000	984	0	2734
24	Imrpovement of N-65 Dera Allah Yar-Nutal-Sibi	1359(1134)	400	450	284	0	0	1134
25	Construction/Replacment of existing steel Bridges and Causeways	112(89)	89	0	0	0	0	89
26	Bharakhu-Satra Mile	155(12)	12	0	0	0	0	12
27	Feasibility studies	700(558)	20	40	50	446	0	556
(NEW)								
28	Pindi Bhatian-Faisalabad (M-3)	3250	1000	1250	1300	1450	0	5000
29	Faisalabad-Multan (M-4)	10000	0	0	0	400	1800	2200
30	Makran Coastal Road	12000	2000	1500	1625	1625	1650	8400
31	Lyari Bypass	2000	500	500	500	500	0	2000
32	Karachi Northern Bypass	4500	500	750	950	1000	1150	4350
33	Islamabad-Muzafarabad Road	4097	350	400	450	450	475	2125
34	Northern Areas Road	1000	600	400	0	0	0	1000
35	Indus Highway Project Phase-III	6000	0	625	650	675	700	2650
36	Multan-DG Khan-Sakhi Sarwar (N-70) (160 km)	1920	0	420	450	500	550	1920
37	Gawadar-Turbat-Panjgoor-Naushki	1907	0	0	0	716	1193	1909
38	Nowshera-Chakdara-Dir-Chitral (N-45 (309 km)	3090	0	0	0	300	350	650
39	Kuchlac-Zohab (316 km)	2529	0	500	750	800	479	2529
40	Chenab Bridge at Sher Shah	500	0	300	200	0	0	500
41	2nd Bridge on Indus at Ghazi Ghat	500	0	300	200	0	0	500
	Total (NHA)	242891	13300	14176	14042	13766	12957	68241

1.6.2 Major investment projects on roads

Major Project	Executing Agency
• Islamabad-Peshawar (M-1)	NHA
• Pindi Bhatian-Faisalabad (M-3)	NHA
• Faisalabad-Multan (M-4)	NHA
• National Highway Improvement Program (N-5)	NHA
• Indus Highway Project & Kohat Tunnel (N-55)	NHA
• Coastal Highway (N-10)	NHA
• Karachi Northern Bypass	NHA
• Lyari Expressway	NHA
• Kuchlac-Zohab (316 km)	NHA
• Multan-DG Khan-Sakhi Sarwar (N-70) (160 km)	NHA
• ADB Assisted Rural Access Roads Project	MELG&RD
• Japanese Assisted Rural Access Roads Project	MELG&RD
• Rural Access Roads (FMR)	MELG&RD

1.6.3 Major Issues & Future Strategies related to roads in Pakistan

1. Road transport sector contributes to Government revenues by way of taxes and duties on production and import of vehicles, parts, tyres, tubes, petroleum and its products, fees on ownership and operation of vehicles, etc. Whereas Railways, Ports and Civil Aviation have integrated services, responsible for their own income and expenditure, road transport falls in the realm of public goods. The Government, as a public utility, provides Road infrastructure, whosoever, owner of a vehicle can use the road free of cost with a few exceptions where tolls are charged. It is in this sector that a comparison of revenues and expenditure is of significance. A recent study carried out by the Government indicated that expenditure incurred by the government on construction and maintenance of roads is about 63 percent of the taxes and duties paid by the road user. Details are as follows:

Table – 35 Road Users Revenue and Expenditure (Million Rs.)

Description	Source	1991-92	1992-93	1993-94	1994-95	1995-96
Revenues	Federal	15866	16697	29397	27475	34449
	Provincial	1620	1575	1610	2298	2374
	Total	17486	18272	31007	29773	36823
Expenditure	Federal	6251	10449	10894	12221	16870
	Provincial	4998	5697	4325	6326	6330
	Total	11249	16146	15219	18547	23200
	% of revenues	64.3	88.4	49.1	62.3	63.0

Source: National Highway Authority, Road User Charges/Road Fund Study, Part I, Wilbur Smith Associates [Table 3-1]

Observing the above situation, Government may increase its expenditures in the roads sub-sector.

2. Pakistan's public road network of 249,959 km includes 8,500 km of National Highways. Overall 55% of the public road network is paved, whereas, National Highways are 100% paved. While National and Provincial Roads are adequate in extent though not in quality, Rural Access Roads (District Council) are inadequate in both the extent and quality to serve the needs of rural areas, where more than 70 % of the country's population lives. All-weather roads serve less than 30% of rural population. It is therefore greatly demanded to accelerate rural access roads programme.

3. Due to excessive axle load level, improper quality control and inadequate maintenance, the present road network in the country is deteriorating at an extraordinary pace. The bulk of investment in the road sector is being made for new construction (mega project). The NHA have tendered out and started execution of a large number of road projects without any plan and resources management for their maintenance. As a consequence, over the years, the road network has deteriorated beyond reprieve. At present, the maintenance grant is only 25% of the requirement creating a huge maintenance backlog. Similarly, provincial road departments are also facing great difficulties in maintaining their roads. Observing the situation a Dedicated Road Maintenance Fund is the need of the time, based on modern Roads Management System. NHA has recently created a Maintenance Fund comprising of Toll receipts and grants from the Government.

4. Another crucial issue is the non-availability of high degree professionalism in the departments responsible for road planning, design, construction and maintenance. High priority should be assigned to human resource development in the field.

5. Procedures for the tendering, award of contract, and construction supervision of road projects should be made more transparent. A proper road database should be established by the Provincial and the Federal road agencies for all kinds of information relating to roads i.e. their classification, condition, traffic volumes, development and maintenance expenditures etc.

6. Efforts made in the past for the induction of private sector in the field of road development and preservation has not been fruitful. The Government should encourage private participation in the road maintenance and construction.

7. It should be mandatory for the concerned departments at both Federal and Provincial levels to make a provision for at least 1 percent of the new construction in their annual budget to be devoted to research about the subject.

8. To ensure that road transport is not over-burdened in future, the government has to encourage other modes of transport, particularly railways through modernization of the exhibiting railway infrastructure.

9. Road accidents are a world wide problem, and result in over 1 million people killed and 10-15 million crippled or injured every year according to the WHO " World Health Report 1999". About 75% of these road deaths occur in developing countries, although they have 32% of all motor vehicles. In Asia-Pacific region alone, it is estimated that over 400,000 people are killed annually by road accidents and several million injured. Similarly, it is estimated that, in 1999, in Pakistan some 7000 people were killed and 140,000 were injured. Studies carried out in the country mention some of the reasons for such alarming situations as (a) inadequate coordination in the implementation of safety countermeasures (b) inadequate efforts to improve hazardous locations or for safety-conscious planning (c) insufficient technical and financial recourses to tackle the problem. In order to cope the problem it is needed that there should be a) A National Road Safety Council with adequate technical support b) Set up an effective computerized accident database, with a uniform accident reporting form.

2. Regulations and Standards

2.1 Traffic Regulation for Transporting Goods by Trucks/ Trailers

The Government of Pakistan, Law division has promulgated an Ordinance No. XL of 2000, in September 2000 to provide for safe driving on the National Highways. Chapter III of the ordinance titled "Registration of Road Vehicle" covers the registration requirement of the vehicles for National Highways. Articles 32, 33 and 34 specially apply to registration of transport vehicle and attached as Appendix – B for reference.

2.1.1 Maximum Permissible Gross Weight & Axle Load

Chapter V of the said ordinance titled as "Control of Traffic" is dealt with the modalities developed for the control of traffic. It covers the topics like:

- No fault accident compensation insurance
- Limits of speed
- Limits of weight and limitation on use
- Power to have vehicle weighed

Under article **43, Chapter V**, it is stated that:

(1) No transport vehicle shall be driven in such a state that the total weight of the vehicle and its load including the weight of any trailer drawn by the vehicle and the load carried thereon or in such state that weight carried on any axle of the vehicle or trailer exceeds the limits specified in the sixth Schedule (Figure –10).

(2) The Government may prescribe conditions for the issue of permits for heavy transport vehicles and may prohibit or restrict the use of such vehicles in area or route within the area.

(3) Except as may be otherwise prescribed, no person shall drive, or cause or allow to be driven, on a national highway any road vehicle which is not fitted with pneumatic tyres or fails to carry reflective emergency warning triangles signs.

(4) No person shall drive or cause or allow to be driven on a national highway any motor vehicle or trailer: -

a. The unladen weight of which exceeded the unladen weight specified in the certificate of registration:

b. The laden weight of which exceeds the maximum laden weight specified in the certificate of registration; or

c. Any axle weight which exceeds the maximum axle weight specified for that axle in the certificate of registration.

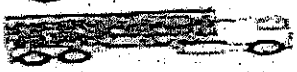
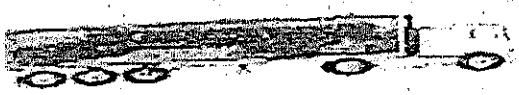
(5) Where the driver, or person in charge, of a motor vehicle or trailer, drives it in contravention of sub-sections (2), (3), (4) and not the owner, the court adjudicating the matter may, on proper evidence, presumes that the offence was committed with the knowledge, or under the orders, of the owner of the motor vehicle or trailer.

Figure – 10 The Sixth Schedule of Ordinance No XL of 2000

THE SIXTH SCHEDULE

[See section 43(1)]

SINGLE, TANDEM, TRIDEM-AXLE LOAD AND GROSS VEHICLE WEIGHT AND TYRE PRESSURE LIMITS

TRUCK TYPES		Maximum Gross Weight(Tons)
	1.2	17.5
	1.22	27.5
	1.2-2	29.5
	1.2-22	39.5
	1.22-2	39.5
	1.22-22	49.5
	1.2-2-2	41.5
	1.2-2-22	51.5
	1.22-2-2	51.5
	1.22-2-22	61.5
	1.2-222	48.5
	1.22-222	58.5

Axle Load Limits for Single Axle = 12 tons, Tandem Axle = 22 tons, Tridem Axle = 31 tons, Front Axle = 5.5 tons, [illegible] for Rear Axles = 120 psi, Front Axle = 100 psi

2.1.2 Agencies in concern with issuing Registration

In the ordinance No. XL of 2000 for the safe driving on the national highways, chapter III titled **Registration of Road Vehicles** has mentioned " No person shall drive any road vehicle and no owner of a road vehicle shall cause or permit the vehicle to be driven on any national highway for the purpose of carrying passengers or goods unless the vehicle is registered in accordance with this Chapter and the vehicle carries a registration mark displayed in the prescribed manner".

Also section 19 titled as "**Registration where to be made**" mentions that Subject to the provisions of sections 21, 35 and 36, every owner of a road vehicle shall cause the vehicle to be registered by the **registering authority of the district** unless the Government establishes such an authority by notification, in which he has his residence or place of business or in which the vehicle normally kept. Nearly every district of the country has a vehicle registration authority. Section 20 titled as " **Registration how to be made**" mentions about the procedure of vehicle registration adopted by the regional registration authorities.

Section 33 of the ordinance titled " Special particulars to be recorded on registration of transport vehicles" mentions that a registering authority, when registering a transport vehicle other than a motor-cab, shall enter in the record of registration and shall also enter in the certificate of registration of the vehicle the following particulars, namely: -

1. the unladen weight of the vehicle;
2. the number, nature and size of the tyres attached to each wheel;
3. the laden weight of the vehicle and the axle weights pertaining to the several axles thereof, determined in accordance with the load ratings approved by the **Provincial Transport Authority**;
4. if the vehicle is used or adopted to be used for the carriage of passengers solely, or in addition to goods, the number of passengers for whom accommodation is provided.

2.2 Technical Standards

Before independence in 1947 there were almost no standard specifications for road construction in the region. Roads were constructed merely on the basis of the judgment and experience of the Engineer in charge. However, in the sixties the first international highway was constructed in the country with aid of foreign consultants and contractor. Afterwards, major National Highways in the country were constructed on the basis of AASHTO standards. Even today roads in Pakistan and provincial roads particularly have not been developed according to any fixed standards.

In order to ensure and maintain the expected function on the road network, the appropriate design standard should be applied to each classified road in accordance with defined function. For the above reason, NHA constituted a committee to examine and lay down standard classification, standard construction specifications for roads in Pakistan in 1992. It proposed six categories for Geometric Design of roads in Pakistan.

2.2.1 Functional Classification

The classification of the roads in the country mostly adopted by administrative jurisdiction grouping such as National Highways, Provincial roads or District Council roads. It should be understood that each function category of road has several types of geometric standards, since the classified road usually extends for distances with sections having different service features due to physical conditions, economic activities, and traffic flow. However, recent study projects conducted in the subject have developed a functional classification in the country and are summarized as follows;

(1) Motorways Expressway (4-6 lanes)
(2) Primary Highway (4 lanes)
(3) Secondary Highway (2 lanes)
(4) Minor Collection Roads (2 lanes)
(5) Feeder (single lane)

2.2.2 Geometric Design Standards

Geometric standards of different classifications of roads in the country have been derived on the basis of Highway Capacity Manual (TRB 1985), where different Pakistanese traffic characteristics were accommodated into the USA ones. NTRC has analysed the capacities of different classes of roads in its study titled "**Planning Standards for Roads in Pakistan**" (NTRC-157, 1992). Also under the JICA study in 1994 capacities for different classes of roads in Pakistan are analyzed as follows: -

Table –36 Standard Road Capacity by Road Classification

Roads Classification	Lane per Carriageway	Volume /day in PCU
Motorway/Expressway Access Control	4 - 6	86000 – 130,000
Primary Highways	4 lane divided	75,000
Secondary Highway	2 lane hard Shoulders	19,000
Minor Collector Roads	2 lane soft shoulders	16,000
Feeder Roads	Single lane	3,200

On the basis of the above mentioned road capacities, principle design standards for roads were drafted and agreed by the NHA committee in February, 1992 and are given below:-

Table – 37 Geometric Design Standards For Pakistan

Design Classification	Number of Lanes	Design Speed (km/hr)	Traffic Volume (pcu/Day)	Level of Service	V/C Ratio	Carriageway Width (m)	Lane Width (m)	Shoulder Width (m)	Formation Width (m)	ROW (Min) (m)	Type of Pavement
Motorway/ Expressway	4	F: 120 H: 110 M: 90	80,000	C	0.70	7.30	3.65	3.00	29.6	80	AC Or PC
Primary Highway	4	F: 110 H: 100 M: 80	60,000	C	0.70	7.30	3.65	3.00	27.6	67	AC
Secondary Highway	2	F: 100 H: 80 M: 60	34,000	C	0.70	7.30	3.65	3.00	15.3	67	AC/TST
Minor Collector Roads	2	F: 80 H: 60 M: 50	20,000	C	0.70	6.00	3.00	3.00	14.0	67	AC/TST
Feeder Roads	1	F: 65 H: 50 M: 50	3,500	D	0.85	3.65	3.65	2.00	9.7	30	TST/ST

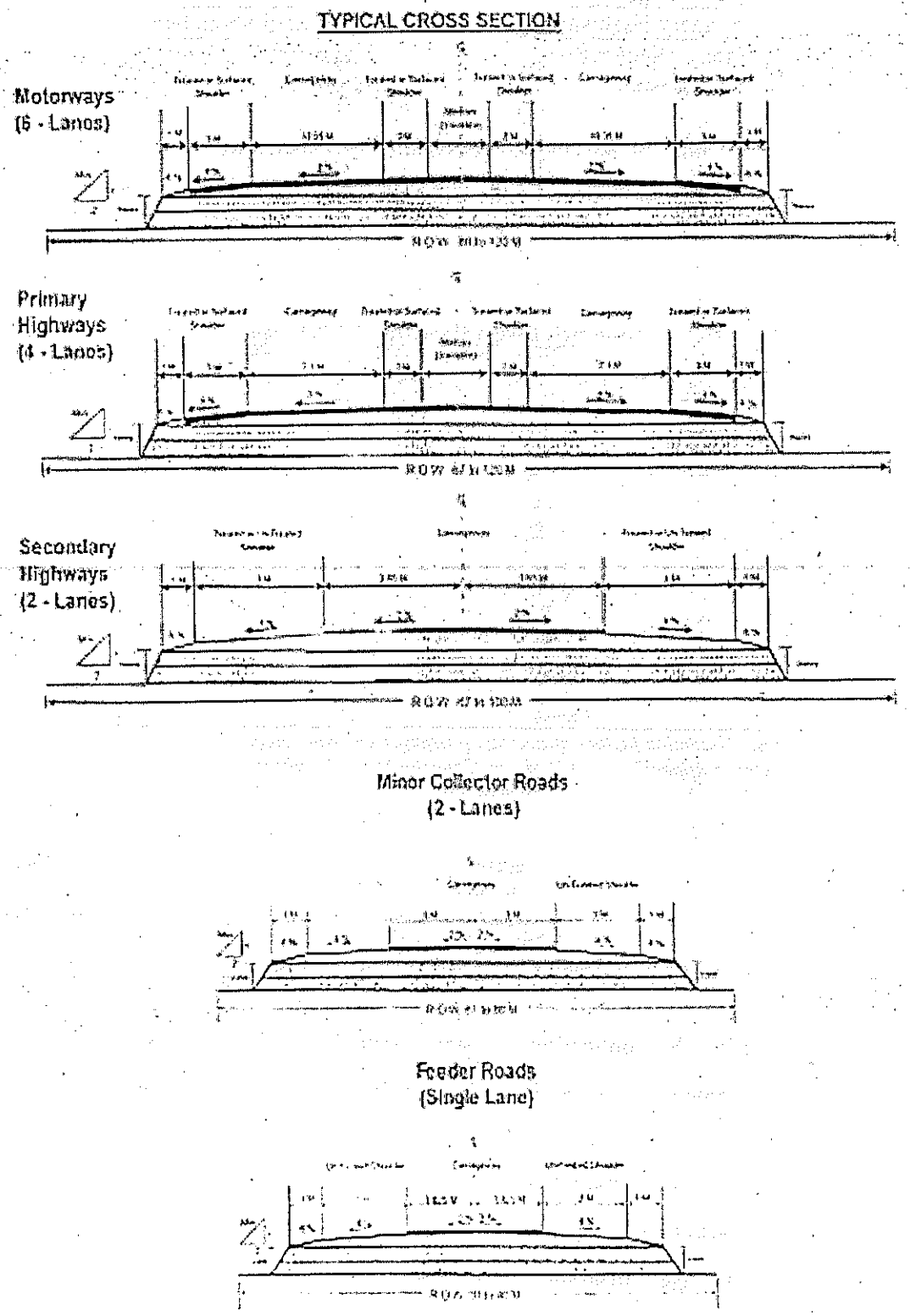
Notes: Guideline factors of average passenger car equivalents of trucks and buses are as follows [Adjustment Factors in Appendix (3) of Highway Capacity Manual, 1985]: -
Flat area 3.0 Hilly area 4.0 Mountainous area 6.0

Abbreviation
F: Flat area
H: Hilly area
M: Mountainous area
ROW: Right of way
AC: Asphalt Concrete
PC: Portland cement
TST: Triple Surface Treatment
ST: Single Surface Treatment

Source: Standards for Roads in Pakistan (NHA's Committee, 1992)

In reality, the application of these standards is limited to new construction and large-scale improvements because of physical, socio-economic and budgetary constraints. However, it is desirable that a road that falls into one category has a uniform standard throughout its length. There will be difficulty if the entire network is improved following the standardization in a short period of time since it requires huge sum of money. Moreover, the provincial road network has different road types and no functional classification has yet been adopted/standardized.

Typical cross sections for the five road classifications adopted by the NHA are given in here under:



2.2.3 Pavement Design Standards

Pavements of roads in Pakistan are designed on the basis of the AASHTO GUIDE for Design of Pavements Structures 1986. Pavements for motorways are designed for a design life of 20 years, and all other roads are designed for a design life of 10 years. Equivalent standard axles (ESAL) are one of the two principal factors i.e. Cumulative ESAL and sub-grade CBR, in determining the pavement structure. ESALs are to be calculated by conversion of axles expected to be plied on the pavement in design period, to a standard 18,000 lbs (8.165 ton) axle. The pavement are designed and constructed to last for a certain life period having several physical, structural & functional specifications.

Unfortunately, in our country, most of these pavements fail prematurely either because of poor quality control, inadequate estimation of axle loads, extreme environment and loading conditions and poor analysis of material properties. As a result, investments made are mostly wasted and adequate benefits cannot be derived. Therefore there is an urgent need to develop/ calibrate the pavement design methods for Pakistan's local conditions keeping in view the extra ordinary over loading by trucks and the very high pavement temperatures.

For dealing with the above mentioned issues, the Road Research Wing of NTRC has been working since last 10 years and more than 50 research studies encompassing Control of Axle Load, Pavement Evaluation, Materials and Traffic related aspects have been carried out. However, due to restrained financial resources of NTRC, the scope of these studies remained limited.

To address the problem at country level, different seminars and discussion sessions were held in NHA and NTRC and were attended by all concerned including consultants, contractors, stakeholders, professional forums, universities and public sector organizations. As a result of these efforts, a consensus was developed that an indigenous Pavement Design Guide based on "PAKISTAN ROAD TEST (PRT)" should be developed by construction of trial sections and monitoring their long-term performance. Based on the performance of these trial sections, the most suited design should be adopted for the pavement design in the country for different categories of traffic suiting to different climatic conditions. Now in this regard a detail proposal is under the consideration of M/o Science & Technology for financing the research project. It is expected that the results from the " PAKISTAN ROAD TEST (PRT)"

would be available within a period of five years and approximately 100 test sections of 50 meters each would be constructed, totaling to a length of 5 kilometer.

2.2.4 Bridge Design Standards

For the design of bridges ACI Code and particular specifications called as " **West Pakistan Design Code of 1967**" is employed in the design. Loading AA is considered for the design of bridges in general. Cross-section of bridges generally constructed in Pakistan along with clearances is given in Figure 11 and 12.

Figure – 11 Cross Section of a Fly-over Bridge

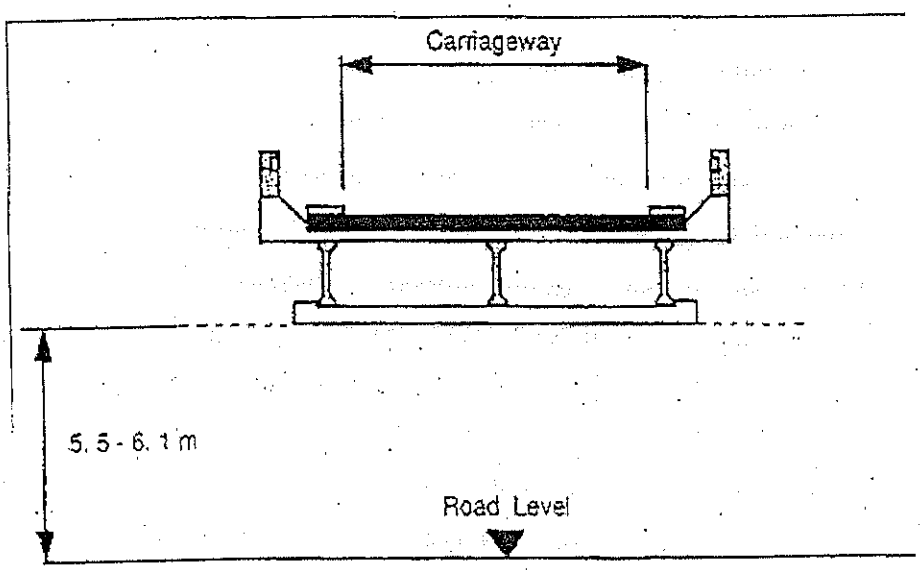
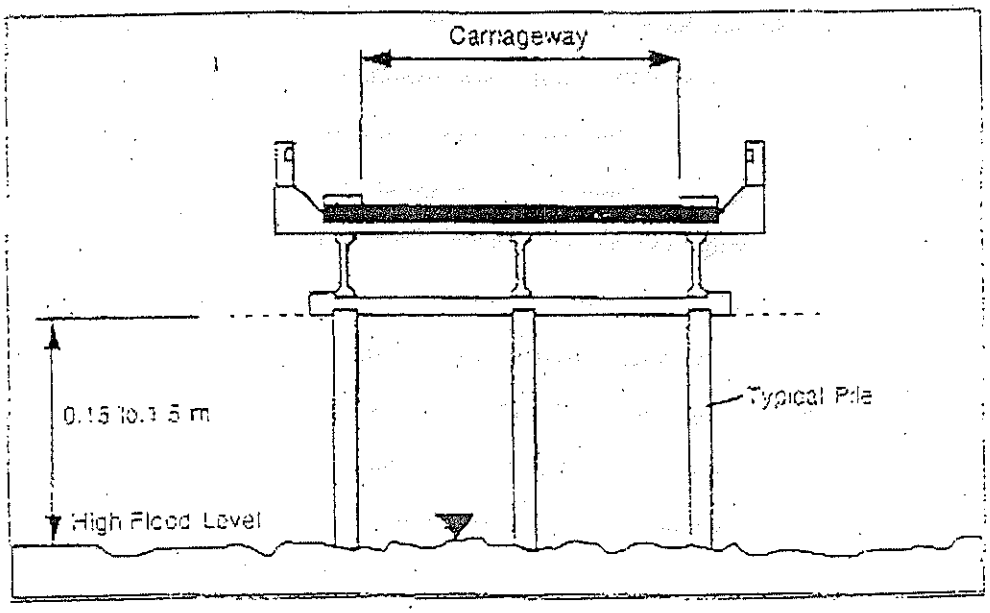


Figure – 12 Cross Section of a Typical River Bridge



2.2.5 General Specifications for Road Materials and Construction

Specifications are the connecting link between the design plans for a highway and its construction process. The specifications are used to describe in writing the work to be done. It is concise description in measurable terms of the materials, methods, tolerances, processes, method of measurement, payment and other requirements involved in each item making up a complete engineering work. The intent of specifications is that when combined with plans, the builder should be able to proceed with construction without further instructions; however, it is still the ultimate goal.

The specifications of most highway agencies are made up of ***standard (general) specifications*** and ***special provisions***. Standard specifications are the general directions, provisions and requirements that apply to all projects. Special provisions are specific clauses setting forth conditions or requirements that are unique to a project and are supplemental to or modify the standard specifications.

National Highway Authority had developed General specifications for road materials and workmanship, in 1991 for their projects and these general specifications were revised in 1998. However, still there is enough scope of the modification as it contains certain items that cause the disputes among the stakeholders. Other than the general specifications NHA also formed special provision for some of the projects.

2.3 Guidelines for Road Signs & Markings

Traffic Signs, Signals and Road Markings are essential elements of highway engineering required for guiding the motorist with speed and safety. They apportion the right-of-way at points of conflict and provide information with regard to traffic conditions prevailing ahead to enable the driver to take timely action to avoid meeting with any hazard.

The need for uniform standards for traffic control devices to be followed by all the countries of the world has been felt for a long time. Recognizing that International uniformity of road signs, signals, and road markings is necessary in order to facilitate international road traffic and to increase road safety. various international agencies have been making efforts in this regard. The first international convention relating to traffic was concluded in 1926 under the auspices of the League of Nations. Subsequently, another Convention on Unification of Road

Signs and Signals was adopted in 1931 through the efforts made by the League of Nations. By 1949, it was however, felt that 1931 Convention had become obsolete and needed updating. Consequently, the first United Nation Convention on Road Signs and Signals was adopted at Geneva in 1949.

2.3.1 Ratification of Convention

Government of Pakistan has adopted the international signs recommended by the convention on 16th April 1979. An ordinance was issued by the President on that, giving the new signs the necessary legal cover. The Convention was formally ratified by the Government of Pakistan on 5th August 1979 and the instrument of ratification deposited with the Secretary General of the United Nations on 14th January 1981.

The Ministry of Communications, Government of Pakistan prepared a Highway Code for the drivers at first step, in which the U.N Signs as per Geneva Convention of 1968 were incorporated and given legal cover. Following this, a Manual of "**Signs, Signals and Road Markings**" was prepared by National Transport Research Centre of Pakistan and is mostly adopted in the country for the design of Signs, Signals and Road Markings. For National and Provincial road network three types of signs are used namely; **1) Warning Signs, 2) Regulatory Signs, 3) Informative Signs.**

United Nation Convention on Road Signs and Signals

The purpose of United Nation Conference on Road Signs and Signals convened at Vienna from 7th October to 8th November 1968 was to amplify and amend the 1949 Convention to bring it up-to date with rapid technological advancements and socio-economic changes taken place in the intervening period. The Conference had before it for use as a basis for discussion, a draft Convention on Road Signs and Signals; prepared by the Secretary-General. On the basis of its deliberations, the Conference prepared and opened for signature a Convention on Road Signs and Signals.

Obligations of the Contracting Parties:
The contracting agencies to Convention are required to:

a) Accept the agreed system of road signs, signals, symbols and road markings and adopt it as soon as possible. Where this Convention prescribes a sign, symbol or marking for signifying a certain rule for conveying certain information to road-users, the Contracting Parties undertake, not to use any other sign, symbol or marking for signifying that rule or conveying that

information. But where this Convention does not prescribe a sign, symbol or marking for signifying a certain rule or conveying certain information to road-users, it shall be open to the Contracting Parties to use for these purposes any sign, symbol or marking they wish, provided that such sign, symbol or marking is not assigned a different meaning in this Convention and provided that it conforms to the system prescribed by this Convention.

b) With a view to improving traffic control techniques, and having regard to the usefulness of carrying out experiments before proposing amendment to this Convention, it shall be open to Contracting Parties to derogate from the provisions of this Convention for experimental purposes and temporarily, on certain sections of road.

c) Replace or supplement, not later than four years from the date of entry into force of this convention in their territories, any sign, symbol, installation or marking which although it has the characteristics of a sign, symbol, installation or marking belonging to the system prescribed by this Convention, is used with a different meaning from that assigned to it in this Convention.

d) Replace, within fifteen years from the date of entry into force of this Convention in their territories, any sign, symbol, installation or marking which does not conform to the system prescribed in this Convention. During this period, in order to familiarize road-users with the system prescribed in this Convention, previous signs and symbols may be retained beside those prescribed in this Convention.

e) Nothing in this Convention is to be construed as requiring the Contracting Parties to adopt all types of sign and marking prescribed in this Convention. On the contrary, Contracting Parties are free to limit the number of types of signs or marking they adopt to what is strictly necessary.

f) The contracting parties shall not affix to a sign, to its support or to any other traffic control device anything not related to the purpose of such sign or device. If, however, Contracting Parties or sub-divisions thereof, authorize a non-profit-making association to install informative signs, they may permit the emblem of that association to appear on the sign or on its support provided this does not make it less easy to understand the sign.

g) It shall be prohibited to install any notice, marking or device which might be confused with signs or other traffic control devices, might render them less visible or effect, or might dazzle road-users or distract their attention in a way prejudicial to traffic safety.

h) The Contracting Parties shall differentiate between the signs in the following manner:-

i) Danger Warning Signs:- These signs are intended to warn road-users of a danger on the road and to inform them of its nature:

ii) Regulatory Signs:- These signs are intended to inform road-users of special obligations, restrictions or prohibitions with which they must comply; they are sub-divided into:-

- Priority Signs
- Prohibitory Signs
- Mandatory Signs

iii) Informative Signs:- These signs are intended to guide road-users while they are traveling or to provide them with other information which may be useful; they are sub-divided into:-

- Advance Signs;
- Direction Signs;
- Road identification Signs;
- Place identification Signs;
- Confirmatory Signs;
- Service Signs;
- Other Information Signs;

i) Where this Convention allows choice between several signs or several symbols;

i) Contracting Parties undertake to adopt only one of such signs or symbols for the whole of their territories;

ii) Contracting Parties shall endeavour to reach regional agreements on the same choice;

j) The Convention requires that the signs shall be so placed that the drivers for whom they are intended can recognize them easily and in time. They shall normally be placed on the side of the road appropriate to the direction of traffic; they may, however, be placed or repeated above the carriageway. Any sign placed on the side of the road appropriate to the direction of traffic shall be repeated above or on the other side of the carriageway if local conditions are such that it might not be seen in time by the drivers for whom it is intended.

k) All signs shall apply to the road-users for whom they intended over the whole width of the carriageway open to traffic. However, signs may be made to apply to only one or to several lanes of the carriageway when lanes are defined by longitudinal markings.

l) Where in the opinion of competent authorities a sign would be in-effective if placed on the side of a road with separated carriageway, it may be placed on the dividing strip and in this case need not be repeated on the side.

m) The Convention recommended that domestic legislation should provided:-

i) That signs shall be so placed they do not obstruct vehicular traffic on the carriageway, and, if placed on the sides, obstruct pedestrians as

little as possible. The difference in level between the carriageway on the side where a sign is placed and the lower edge of the sign shall be as uniform as possible for signs of the same class on the same route;

ii) That the dimensions of sign panels shall be such that the sign is easily visible for a distance and can be easily understood by a period approaching it, subject to the provisions of sub-paragraph (iii) of this paragraph, these dimensions shall be adapted to the normal speed of vehicles.

iii) That the dimensions of danger warning signs and of regulatory signs shall be standardized in the territory of each contracting party. As a general rule, there shall be four sizes for each type of sign, small, normal, large and very large. Small signs shall be used where conditions do not permit the use of normal signs or where traffic can only move slowly; they may also be used to repeat a preceding sign. Large signs shall be used on very wide roads carrying high-speed traffic. Very large signs shall be used on roads carrying very high-speed traffic.

n) The Convention also recommends that domestic legislation should provide that in order to make them more visible and legible at night, road signs, in particular danger warning signs and regulatory signs other than those regulating standing and parking in lighted streets of built up areas, shall be lighted or equipped with reflecting material or reflecting devices, provided that this does not result in road-users being dazzled.

o) Nothing in this Convention shall prohibit the use, for conveying information, warnings or rules applying only at certain times or on certain days, of signs which are visible only when the information they convey is relevant.

p) In order to facilitate international understanding of signs, the system of signs and signals prescribed in this Convention is based on the use of shapes and color characteristics of each class of sign and, wherever possible, on the use of graphic symbols rather than inscriptions. Where contracting parties consider it necessary to modify the symbols prescribed, the modification made shall not alter their essential characteristics.

q) The Convention does not prohibit the addition, in order to facilitate the interpretation of signs, of an inscription in a rectangular panel below the sign or in a rectangular panel containing the sign. Such an inscription may also be placed on the sign itself, if this does not make the sign more difficult to understand for drivers who cannot understand the inscription.

r) Where the competent authorities consider it advisable to make the meaning of a sign or symbol more explicit or, in the case of regulatory signs, to limit their application to certain categories of road-users or certain periods, and where it would not be possible to convey the necessary information by an additional symbol, an inscription shall be placed below the sign in a rectangular panel, though such inscriptions may be replaced or supplemented by one or more symbols placed in the same panel.

s) The inscriptions referred to shall be in the national language or in one or more of the national languages, and also, if the contracting party concerned considered it advisable, in other languages, in particular official languages of the United Nation.

2.3.2 Manual of Signs, Signals and Road Marking

Categories of Road Signs: There are three main categories of road signs:-

i. Warning Signs.
ii. Regulatory Signs.
iii. Informatory Signs.

Sub Categories of Road Signs: Following are the sub categories of road signs:-

i **Warning Signs.**

- There is no sub category of warning signs.

ii **Regulatory Signs**

- Priority Signs
- Prohibitory Signs
- Mandatory Signs

iii **Informatory Signs**

- Advance direction Signs
- Direction Signs
- Route Identification Signs
- Place Identification Signs
- Confirmatory Signs
- Distance Signs

Standardization of Signs: Road signs are standardized by fixing the standard requirements in the following areas:-

1) Shape 2) Colour 3) Size 4) Legend 5) Illumination

Shapes:

Warning Signs:

- Equilateral Triangle with round corners
- One end pointing upward
- Additional panel

Regulatory Signs:

- Round Discs
- Additional Panel

Informatory Signs

- Rectangular with round corners
- Square with round corners
- Rectangular with arrow pointing end (s)

Colour:

Warning Signs: Warning signs will be of same colour for Motorway and National Highways.

- White background with red border
- Block symbols and words
- Red background for danger warning sign only

Regulatory Signs: Regulatory signs will be of same colour for Motorway and National Highways

- White background with red border
- Black symbols and words
- Black diagonal lines and border for end of restrictions
- Red diagonal bars for prohibition
- Red and black arrows for priority signs.

Informatory Signs for Motorways

- Green background
- White words and symbols
- Red diagonal bars (Where applicable)

Informatory Signs for Highways

- Blue background
- White border
- Black symbols on white interior with blue background for services
- Red diagonal bars (Where applicable)

Sizes:

- Warning Signs: Warning signs will have same size i.e. 120 c.m equilateral triangular for Motorway and National Highways.

- Regulatory Signs: Regulatory signs will have same size i.e. 120 c.m diameter for Motorway and National Highways.

- Informatory Signs:
  No standardized size
  Larger size for motorways
  Size determined by:
  - Legibility
  - Speed
  - Messages
  - Location
  - Sub-category

Legends:

- Brief Word Messages
- Proper symbol designs
- Appropriate lettering size
- Spacing between letters
- Abbreviations kept minimum
- Languages (Urdu, English)

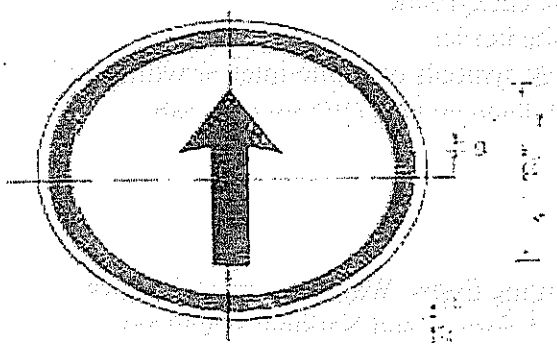
- Khate -E-Nastaleeq for Urdu
- Proper placement of arrows on information signs

Illumination

- Lettering and background colour
- High ambient & background light
- Reflective at night
- Unfavorable weather

Figure – 13 **An example of Regulatory Sign Specifications from Manual**

PROCEED STRAIGHT AHEAD ONLY SIGN
(R - 36)



LEGEND DIMENSION (cm)

PARTS	SIGN SIZE				
	60 cm	75 cm	90 cm	105 cm	120 cm

Figure –14 Direction Sign used on Motorway

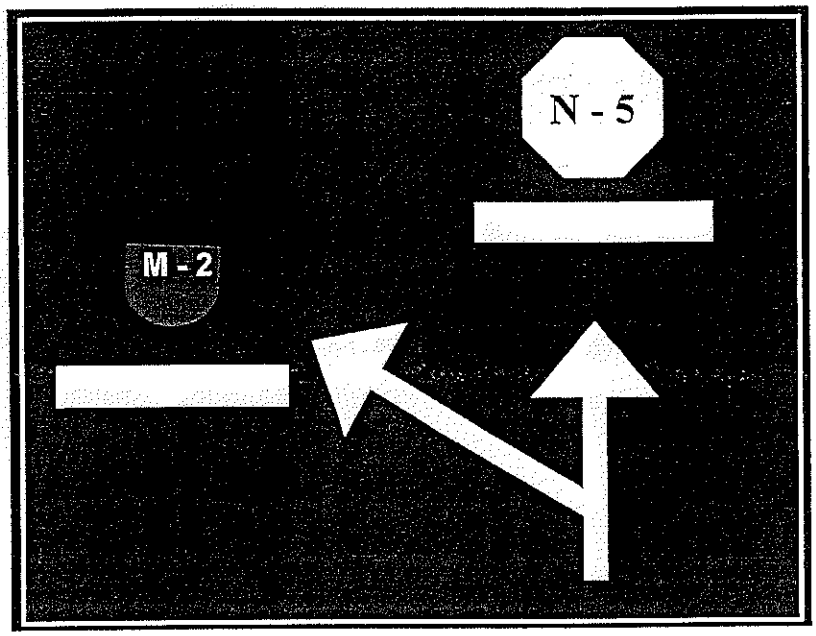
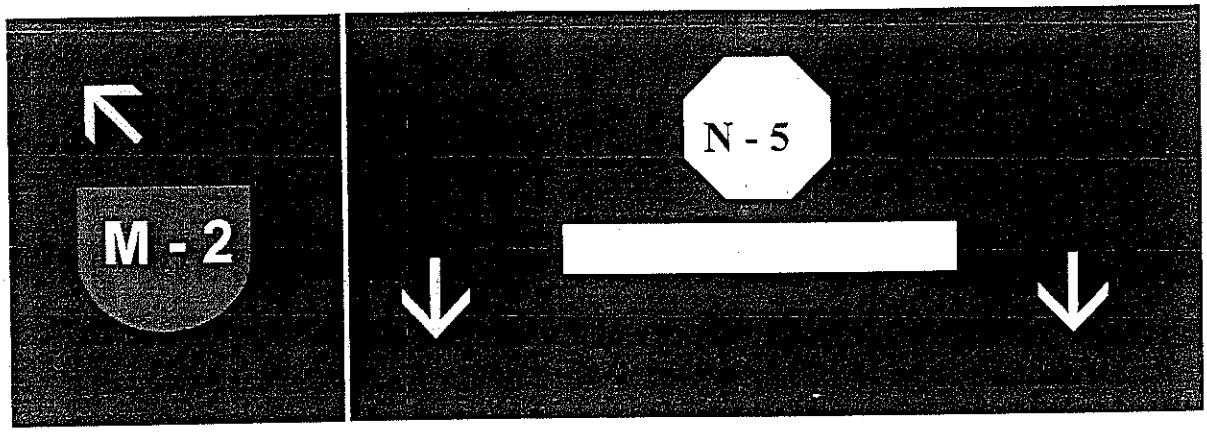


Figure – 15 Overhead Signs at Motorway



Signals

Traffic signals include traffic control signals, beacons, lane-use control signals, draw bridge signals, emergency traffic control signals and train approach signals. The manual referred above also cover the design and standardization of signals in the country.

Road Markings

Marking have definite and important functions to perform in a proper scheme of traffic control. Pavement marking can be divided into two categories namely Longitudinal Pavement Markings and Transverse Pavement Markings. Manual referred above deals in very detail about the design of Pavement Marking. Abstract of the manual is attached at Appendix-B.

3. *International Traffic Flow*

At the moment, international traffic movements on roads are minimal in volume. International instabilities in neighboring countries especially on our Eastern boundaries (India) have discouraged movements crossing the borders, while economy in land locked (CAS) countries has not diversified and yet to accelerate import/ export as well as movement of passengers.

In the long run, Central Asian States (CAS) with a total population of 52 million is certain to develop and diversify their economy, that will result an increase in export/import of these countries with Pakistan, as well as Gulf States and South-East Asian countries through ports of Bandar Abbas, Gwadar, Karachi as well as Qasim.

3.1 Border Crossing Procedures and Formalities adopted

Information given below is for Pakistan – Afghanistan border at Torkham	
1. Opening day and hours of border crossing point	365 days a year from 7:00 am to 6:00 pm (PST).
2. Border crossing procedures/ formalities at border crossing points	
a) Procedures/formalities adopted for border crossing passenger allowed to cross the border	
In case the passengers should be identified such as:	
• Every passenger holding necessary documents is allowed	Yes
• Foreigners are not allowed	Foreigners holding necessary documents are allowed (including home department permit for border crossing)
• Only residents around the border crossing point are allowed	Yes, if they posses special rahdari passes issued by the political authority – Khyber agency
• Etc.	Diplomats with necessary documents are allowed.
Border crossing procedure should also be	

identified respectively:	
• By car	Foreigners are allowed having valid visa and special permit.
• By bus	Special road permit from Pak Consulate Jalalabad to cross the border. During May/June 2001 four coaches have been allowed with special permits
• On foot	Yes
• Etc.	No.
b) Procedure/formalities adopted for border crossing freight traffic. The following concern should be in particular referred:	
• Every truck holding necessary documents is allowed to cross border	Trucks carrying goods or empty can cross the border with permits issued by the Political Authority (under Afghan traffic in transit Agreement). Pakistani traders are carrying wheat, sugar, ghee etc. on permission from the Political Authorities, Khyber Agency
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business. Daily use items allowed only.
Border crossing procedure should also be identified respectively:	
• Every truck holding necessary documents is allowed to cross border	Yes
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business purpose. Daily use items allowed only.

c) Procedure/formalities adopted for border crossing vehicle allowed to cross border Type of vehicle to cross the border should also be identified respectively:	
• Every vehicle with necessary documents is allowed to cross the border	No.
• Only certain type of vehicles are allowed to cross the border	Trucks and Cars allowed to cross the border with necessary documents.
• Only trucks are allowed to cross the border only upto the custom check point	Trucks are allowed to cross the border with necessary documents (even beyond custom point).
• No vehicle in other country is allowed to cross the border	Trucks are allowed to cross the border with necessary documents.
d) Average necessary duration to clear the immigration and custom check (A copy of forms required to be filled in when crossing the border needs to be attached)	For Cars 5-10 minutes For Bus 2 minutes/passenger For Truck at least 20 minutes/truck
3. Bilateral and multilateral agreements/ international conventions governing international traffic	
a) Agreements for passenger traffic	None
b) Agreement for freight traffic (A copy of bilateral and multilateral agreements needs to be attached)	Agreement for traffic in transit, copy attached
c) Bilateral and multilateral agreements under consideration	None.
d) Status of accession to 7 conventions in ESCAP resolution 48/11 (Annex-3)	Pakistan has accession to UN Conventions on Road Traffic (1968) and on Road Signs and Signals (1968). Afghanistan has accession to none of the UN conventions.
4. Statistics of border crossing situation by each border crossing: a) Number of people crossing the border each year	72,000/year
b) Volume of goods crossing the border by each year (quantity,	About 3000 x 365 ton per year

border by each year, (quantity, value)	
c) Number of vehicles crossing the border by year (by vehicle type)	Trucks About 75000 / year (2-axle, tri-axle and multi-axle) Car About 7300/year Coaches 1460/year (allowed with special permits)
5. Major problems connected with promotion and facilitation of international road transport	Poor Road condition
6. Formalization of AH Action concerning ESCAP regional agreement on AH required to be forwarded by ESCAP.	

Information given below is for Pakistan – Afghanistan border at Chaman	
1. Opening day and hours of border crossing point	365 days a year from 7:00 am to 6:00 pm (PST).
2.Border crossing procedures/ formalities at border crossing points a) Procedures/formalities adopted for border crossing passenger allowed to cross the border	
In case the passengers should be identified such as:	
• Every passenger holding necessary documents is allowed	Yes
• Foreigners are not allowed	Foreigners holding necessary documents are allowed (including home department permit for border crossing)
• Only residents around the border crossing point are allowed	Yes, if they posses special rahdari passes issued by the political authority – Khyber agency
• Etc.	Diplomats with necessary documents are allowed.
Border crossing procedure should also be identified respectively:	
• By car	Foreigners are allowed having valid visa and special permit.
• By bus	–
• On foot	Yes
• Etc.	-
b) Procedure/formalities adopted for border crossing freight traffic. The following concern should be in particular referred:	
• Every truck holding necessary documents is allowed to cross border	Trucks carrying goods or empty can cross the border with permits issued by the Political Authority (under Afghan Trade Agreement). Pakistani traders are carrying wheat, sugar, ghee etc. on permission from the Political Authorities. Khyber Agency

• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business. Daily use items allowed only.
Border crossing procedure should also be identified respectively:	
• Every truck holding necessary documents is allowed to cross border	Yes
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business purpose. Daily use items allowed only.
c) Procedure/formalities adopted for border crossing vehicle allowed to cross border	
Type of vehicle to cross the border should also be identified respectively:	
• Every vehicle with necessary documents is allowed to cross the border	No.
• Only certain type of vehicles are allowed to cross the border	Trucks and Cars allowed to cross the border with necessary documents.
• Only trucks are allowed to cross the border only up to the custom check point	Trucks are allowed to cross the border with necessary documents.
• No vehicle in other country is allowed to cross the border	Trucks are allowed to cross the border with necessary documents.
d) Average necessary duration to clear the immigration and custom check (A copy	For Cars 5-10 minutes For Bus 2 minutes/passenger

of forms required to be filled in when crossing the border needs to be attached)	For Truck at least 20 minutes/truck
3. Bilateral and multilateral agreements/ international conventions governing international traffic	
a) Agreements for passenger traffic	None
b) Agreement for freight traffic (A copy of bilateral and multilateral agreements needs to be attached)	Agreement for the traffic in transit, copy attached
c) Bilateral and multilateral agreements under consideration	None.
d) Status of accession to 7 conventions in ESCAP resolution 48/11 (Annex-3)	Pakistan has accession to UN Conventions on Road Traffic (1968) and on Road Signs and Signals (1968). Afghanistan has accession to none of the UN conventions.
4. Statistics of border crossing situation by each border crossing:	
a) Number of people crossing the border each year	72,000/year
b) Volume of goods crossing the border by each year (quantity, value)	About 3000 x 365 ton per year
c) Number of vehicles crossing the border by year (by vehicle type)	Trucks About 75000 / year (2-axle, tri-axle and multi-axle) Car About 7300/year Coaches 1460/year (allowed with special permits)
5. Major problems connected with promotion and facilitation of international road transport	Road condition
6. Formalization of AH Action concerning ESCAP regional agreement on AH required to be forwarded by ESCAP.	

Information given below is for Pakistan – India border at Wahga	
1. Opening day and hours of border crossing point	365 days a year from 9:30 am to 3:30 pm (Pakistan Standard Time). Any time for Diplomats.
2. Border crossing procedures/ formalities at border crossing points	
a) Procedures/formalities adopted for border crossing passenger allowed to cross the border	
In case the passengers should be identified such as:	
• Every passenger holding necessary documents is allowed	Yes, passengers with necessary documents in Lahore – Delhi - Lahore bus can cross the border (Bus service is suspended now a days)
• Foreigners are not allowed	Foreigners (other then Indians and Pakistanis) holding necessary documents are allowed from 9:30 am to 3:30 pm (PST)
• Only residents around the border crossing point are allowed	Residents around border crossing point are not allowed.
• Etc.	Diplomats (including Indian & Pakistanis) with necessary documents are allowed.
Border crossing procedure should also be identified respectively:	
• By car	Yes, Cars with foreigners holding necessary documents (e.g. Caret-de-passage) are allowed
• By bus	Only Lahore-Delhi-Lahore Buses by Pakistan Tourism Development Corporation and Delhi Transport Corporation under Governments agreement are allowed (suspended now a days)
• On foot	Only foreigners can cross on foot with necessary documents.
• Etc.	Diplomats may cross on foot with necessary documents

b) Procedure/formalities adopted for border crossing freight traffic. The following concern should be in particular referred:	
• Every truck holding necessary documents is allowed to cross border	Trucks are (normally) not allowed to cross.
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	Yes, transshipment of goods requires loading/ un-loading.
• Goods carried by people are allowed to cross the border	Goods carried by foreigners are allowed with necessary documents.
Border crossing procedure should also be identified respectively:	
• Every truck holding necessary documents is allowed to cross border	Trucks are (normally) not allowed to cross.
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	Yes, transshipment of goods requires loading un-loading.
• Goods carried by people are allowed to cross the border	Goods carried by foreigners are allowed with necessary documents
c) Procedure/formalities adopted for border crossing freight traffic.	
Type of vehicle to cross the border should also be identified respectively:	
• Every vehicle with necessary documents is allowed to cross the border	Not every type of vehicle is allowed to cross border.
• Only certain type of vehicles are allowed to cross the border	Trucks (as special case as stated above) are allowed.
• Only trucks are allowed to cross the border upto the custom check point	Trucks (as special case as stated above) are allowed.

• No vehicle in other country is allowed to cross the border	No vehicle of each other country except the specified buses (suspended now a days).
d) Average necessary duration to the clear the immigration and custom check (A copy of forms required to be filled in when crossing the border needs to be attached)	Average time for Immigration and Custom clearance is one minute per passenger of the Bus on Pakistan side but a little more on other side.
3. Bilateral and multilateral agreements/ international conventions governing international traffic	
a) Agreements for passenger traffic	Copy of agreement for Lahore-Delhi-Lahore Bus service is attached.
b) Agreement for freight traffic (A copy of bilateral and multilateral agreements needs to be attached)	There is no agreement for freight traffic between two countries.
c) Bilateral and multilateral agreements under consideration	Presently there is no other agreement under consideration.
d) Status of accession to 7 conventions in ESCAP resolution 48/11 (Annex-3)	Pakistan has accession to UN Conventions on Road Traffic (1968) and on Road Signs and Signals (1968). India has accession to Convention on Road Signs and Signals (1968).
4. Statistics of border crossing situation by each border crossing:	
a. Number of people crossing the border each year	32,625 people crossed the border during the year 2000.
b. Volume of goods crossing the border by each year (quantity, value)	Volume of goods crossing the border is (normally) nil except personal baggage of the passengers of bus service.
c. Number of vehicles crossing the border by year (by vehicle type)	Four buses per week from either side make 416 buses per year crossing the border in addition to it, some 357-transport vehicles of foreigners crossed the border in year 2000.
5. Major problems connected with promotion and facilitation of international road transport	Long journey between the two major cities of Lahore and Delhi, lack of

6. Formalization of AH Action concerning ESCAP regional agreement on AH required to be forwarded by ESCAP.	frequent public transport and restriction on residents across the border to cross it. Two countries do not have accessions to all conventions in ESCAP resolution 48/11

Information given below is for Pakistan – Iran border at Taftan	
1. Opening day and hours of border crossing point	365 days a year from sunrise to sunset.
2. Border crossing procedures/ formalities at border crossing points	
a) Procedures/formalities adopted for border crossing passenger allowed to cross the border	
In case the passengers should be identified such as:	
• Every passenger holding necessary documents is allowed	Yes,
• Foreigners are not allowed	Foreigners having valid Passport of his own country and necessary documents are allowed (including home department permit for border crossing)
• Only residents around the border crossing point are allowed	No
• Etc.	Diplomats with necessary documents are allowed.
Border crossing procedure should also be identified respectively:	
• By car	Yes, provided having valid documents for observance of Customs as well as Immigrations formalities and any means under the law and procedures.
• By bus	Yes
• On foot	No
• Etc.	Diplomats with necessary documents are allowed
b) Procedure/formalities adopted for border crossing freight traffic. The following concern should be in particular referred:	
• Every truck holding necessary documents is allowed to cross border	Yes

• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business. Daily use items allowed only
Border crossing procedure should also be identified respectively:	
• Every truck holding necessary documents is allowed to cross border	Yes
• It is required to load/unload goods at certain area near the border because trucks of other country are not allowed to enter the country	No transshipment is required as the same vehicle carries the goods to the other country.
• Goods carried by people are allowed to cross the border	Not for business. Daily use items allowed only
c) Procedure/formalities adopted for border crossing freight traffic.	
Type of vehicle to cross the border should also be identified respectively:	
• Every vehicle with necessary documents is allowed to cross the border	Yes
• Only certain type of vehicles are allowed to cross the border	No, every vehicle having valid documents are allowed
• Only trucks are allowed to cross the border up to the custom check point	Trucks are allowed to cross the border (with necessary documents) beyond certain check point..
• No vehicle in other country is allowed to cross the border	Yes, transshipment of goods requires loading/ un-loading.
d) Average necessary duration to the clear the immigration and custom check (A copy of forms required to be filled in when crossing the border needs to be attached)	For Cars 5 minutes For Bus 1-2 minutes/ passenger For Truck at least 20 minutes/truck

3. Bilateral and multilateral agreements/ international conventions governing international traffic	
a) Agreements for passenger traffic	Bilateral Agreement for Goods extended for passengers (copy attached)
b) Agreement for freight traffic (A copy of bilateral and multilateral agreements needs to be attached)	Bilateral Agreement on Road Transport of Goods between Pakistan and Iran (copy attached)
c) Bilateral and multilateral agreements under consideration	ECO Transit Transport Framework Agreement ratified by Pakistan (Copy enclosed)
d) Status of accession to 7 conventions in ESCAP resolution 48/11 (Annex-3)	Pakistan has accession to UN Conventions on Road Traffic (1968) and on Road Signed (1968)
4. Statistics of border crossing situation by each border crossing:	
a) Number of people crossing the border each year	**Pakistanis** Incoming 35823 Outgoing 42500; **Foreigners** Incoming 5722 Outgoing 8512
b) Volume of goods crossing the border by each year (quantity, value)	Significant (exact figure not readily available)
c. Number of vehicles crossing the border by year (by vehicle type)	Significant (exact figure not readily available)
5. Major problems connected with promotion and facilitation of international road transport	Implementation of ECO Transit Transport Framework Agreement is awaiting implementation pending ratification by a couple of countries.
6. Formalization of AH	
Action concerning ESCAP regional agreement on AH required to be forwarded by ESCAP.	

4. *Road Numbering System For National Highways*

Civilization in the sub-continent is five thousand years old and so are the roads. Excavation of Mohen-jo-Daro, one of the principal cities of Indus valley civilization (4000 B.C.), has revealed that the then people were adept in the art of road construction. Although the inter-city commercial and trade routes have not yet been fully traced out, the lay-out of the city itself, its 30` - 40` wide paved streets with remarkable brick covered drainage on both sides, dividing the city into oblong blocks 1200` X (600` - 900`) shows that it was no chance growth. Similarly, by 6th century B.C. (Buddha era), recognized trade routes covered most of the Northern India[11].

Among many routes the main route was the one that ran from Ganges port, not very far from modern Calcutta, up the river, past Banaras to Kausambi, where one of its branches went to Vidise and Ujjayini. From Kausambi, the main trunk road passed along the south bank of river Jumna to Mathura, Delhi and crossed the land of five rivers Punjab by mean of boat-bridges to the northern city of Taksasila (Taxila), from where it continued up the Kabul Valley into Central Asia and served as trade route with Roman Empire. Though the course of route has varied somewhat through the centuries, this always has been the main artery of Northern India.

During Mauryan Empire this road was marked with milestones and was provided with rest houses, shade trees and wells for drinking water at regular intervals throughout its length, a practice followed by the coming dynasties such as Guptas, Lodhis, Tughlaks, Suris and Mughals. During the sixteenth century, Sher Shah Suri in his short rule of India made an earnest effort to build roads in the sub-continent. Of his four great roads, one ran from Sonargan in Bengal to Peshawar via Agra, Delhi and Lahore. The others joined Agra with Jodhpur; Agra with Mandi and Lahore with Multan. The present Grand Trunk Road runs on the exact alignment of Sher Shah's route. Mughals in general persuade the policy of Sher Shah and took great interest in building roads in the region.

In the early period of British rule the matters related to roads did not advance very fast. It was after 1839, when the Government of India decided to connect Calcutta with Delhi by an all weather road suitable for wheeled traffic with bridges over small streams and boat bridges

[11] "Highway Needs of Peshawar Valley Region" by Mohammed Sadiq Swati

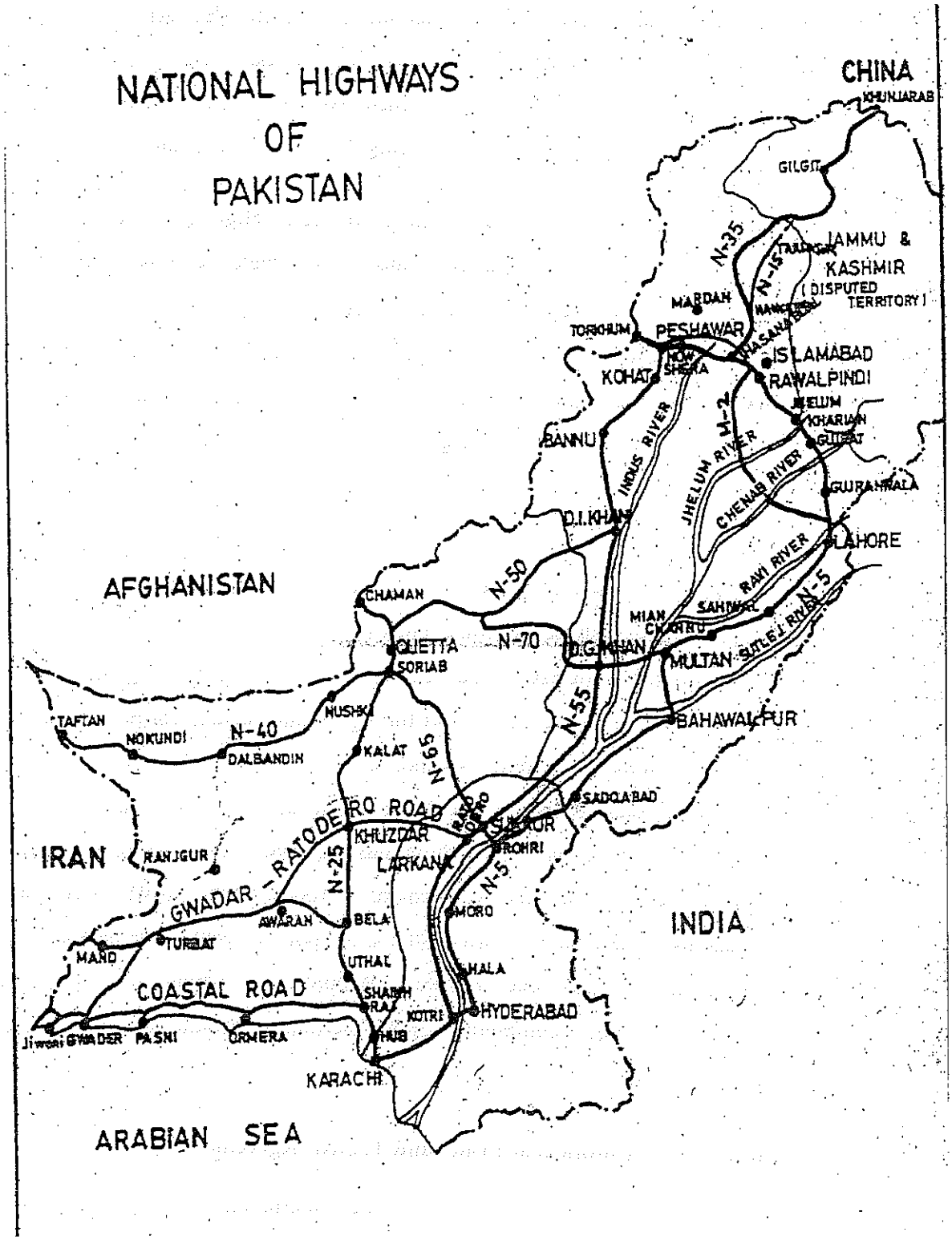
over large rivers, it was the time when the highway system in a modern sense started in the region. The Lord Napier in 1844-45 constituted the first department in Punjab for carrying out civil works including roads. Afterwards such departments were created in all provinces of the country. By 1947 when partition took place West Pakistan had 49,959 km roads of which only 9,759 km were metalled or high type. A six years programme was launched in 1949 added 10,000 km of new roads by 1956-57.

Till 1977, roads were provincial subject in Pakistan and mostly controlled by the provincial Communications & Works departments. In January 1978, Federal Government assumed the responsibility of seven main provincial routes and declared them as National Highways. In 1978 the Federal Government formed National Highway Board (NHB) for the management of these newly designated National Highways in the country. At that time in order to facilitate identification / reference in records and computer processing, NHB needed a road reference numbers for its network. By reaching 1991 the National Highway Board was converted in to an autonomous body called National Highway Authority (NHA) responsible for maintenance and development of National Highways as well as Motorways in the country.

The referencing system for the National Highways had been derived on the basis of **North - South** orientation of the country. The historical **North-South** route called **Grand Trunk Road (Torkham - Karachi)** was assigned the first number as **N-5** with the understanding that it will be the first **National Highway** running in the **North-South** direction of the country connecting major cities of the country like Peshawar, Rawalpindi, Lahore, Multan, Hyderabad and Karachi. While, the other **National Highways** in the **North-South** direction of the country will be numbered by an odd derivative of five starting with alphabet **"N"**, designating National Highway. Examples are **N-15, N-25, N-35** etc.

It was also distinguished in the referencing system that the **National Highways** running in the **East-West** dimensions of the country will be numbered by an even derivative of five i.e. 10, 20, 30, 40 etc. starting with alphabet "N", designating National Highway. Examples are **N-10, N-20, N-40** etc. On the basis of this road referencing system, up till now, twelve (12) National routes have been marked in the country as briefed in Table – 8 and show in Figure - 16. Motorway network supplements the National Highway network of the country with alphabet "M" placed before the numbering.

Figure – 16 National Highways in Pakistan



5. *Other Information*

5.1 Asian Highway promotional activities

Pakistan has always taken very active participation at different forces created by the Economic and Social Commission for Asia and the Pacific (ESCAP) and in recent years it has contributed to many ESCAP projects like, Asian Land Transport Infrastructure Development (ALTID) (Top 5 priorities), Sustainable Road Maintenance (Top 5 priorities), Promotion of Multimodel, Infrastructure pricing, Facilitation of Inland transport etc.

So far under the ALTID project, identification of Asian Highways (AH) in the country has been completed. Also the information related to the National Roads identified as Asian Highways, have also been added to AH database and AH maps. However, the concept can only be fully materialized by the development and construction of national roads to such extent that they could accommodate future international transport demand.

In order to achieve these objectives the government's priorities are as follows:

1) Up-grade infrastructure, where required and remove bottlenecks.
2) Work towards regional inter-model effectiveness through integrated development plan.
3) Improve trade facilitation at entry points.
4) Up-grade domestic legal environment to improve legislation for seamless transportation for movement through modes across border as well as accede to international transport conventions.

In recent years, substantial improvement in road infrastructure has taken place in Pakistan, which has significantly reduced travel time, has improved safety and roadside services. This investment can easily handle the requirement of future traffic growth. Pakistan's plans to improve trade facilitation have shown results at the ports as well as the land entry points with Islamic Republic of Iran and People's Republic of China. The plans are under implementation and upon completion; trade facilitation would be close to international standards.

5.2 Bilateral & Multilateral Trade and Transit Agreements

Pakistan reiterates its commitment to promote international transportation and improve transport facilities. In this regard Pakistan has under gone several bilateral and multilateral transit transportation agreements with its neighboring and regional countries.

5.2.1 Transit Transport Framework Agreement between ECO member countries

Considering the importance of adequate transit trade traffic arrangements for regional and international trade and for economic progress of the land locked countries, the TTFA was signed on 9th May, 1998 by all the ECO member states except Uzbekistan. Its protocol was signed, except by Turkmenistan and Uzbekistan on 27-28 April 2000 at Islamabad during 3rd ECO Ministerial Conference in Pakistan.

As per Article 43 of the TTFA, the Agreement shall enter into force six months after the Government of six ECO states of which at least one is a coastal state have acceded to it by depositing the instruments of ratification. The Government of Pakistan has approved the ratification of TTFA vide Cabinet decision dated the 27th September 2000. As per the summary of the Cabinet dated the 30th August 2000, the TTFA has been ratified by two member states i.e. Azerbaijan and Tajikistan. However, in the MAPS Seminar on the role of Government in development of International Corridors in Tehran from 29th – 31st January 2001, it has been mentioned that four member states including Pakistan have ratified the agreement. Iran was urged to ratify the TTFA.

5.2.2 Agreement between Government of the Islamic Republic of Pakistan and the Government of the Republic of India for regulation of Bus Service between Lahore and New Delhi

At Islamabad on 17th February, 1999 an agreement had been signed between the Government of Islamic Republic of Pakistan and the Government of the Republic of India, having agreed to explore possibilities of expansion and promotion of vehicular traffic between two countries on the basis of mutual advantage and reciprocity and with a view to strengthen interaction between the people of the two countries on the basis of common interests, by operating a passenger bus service between Lahore and New Delhi.

5.2.3 Quadrilateral Agreement on Traffic in Transit among the Governments of Pakistan, China, Kyrgyzstan, Kazakhstan

The four countries signed an agreement on 9th March 1995 for traffic in transit amongst the contracting states. With a view to implement the Agreement, the regulations agreed upon the Contracting Parties were signed on 24th November 1998 along with the Protocol on establishing the system of International Road Transit Permit among the Contracting Parties.

The Agreement for Traffic in Transit shall remain valid for a period of 5 years. Thereafter it shall be automatically renewed for a further period of 5 years unless either contracting party

gives termination notice to other six months before the expiry of the five years period. The implementation Regulation shall enter into force upon the date of signing. The period of validity of the Implementation Regulations is the same as that of the "Agreement for Traffic in Transit" among the Contracting Parties. With a view to operationalise the agreement, the member countries could not decide the number of permits to be issued by each member country in their meeting held on 25-26th March 1999 in China. Pakistan is perusing the member states to agree on the issue.

5.2.4 Agreement on Bilateral Road Transportation of Goods and Passengers between the Governments Islamic Republic of Pakistan & Islamic Republic of Iran

In 1987, an agreement between the Government of Islamic Republic of Pakistan and the Government of Islamic Republic of Iran had been signed to facilitate the transportation of goods by road between the two countries. A protocol on the agreement was signed in 1992 to include transportation of passenger vehicles in the agreement.

The main purpose and objectives of the agreement and its Annexes is as follows:-

I. To facilitate the movement of goods, luggage and passengers through the respective territories of the two countries and provide all necessary facilities for transit transport;

II. To ensure the safety of goods, luggage and passengers and avoidance of unnecessary delays during the transit traffic through territories of the Contracting parties; and

III. To cooperate and coordinate the efforts of the Contracting Parties to avoid the incidence of customs frauds and tax evasion and harmonizing necessary administrative affairs dealing with transit trade.

5.2.5 Agreement Between the Government of Islamic Republic of Pakistan and Government of Kingdom of Afghanistan for regulation of traffic in transit (1965)

The Government of Islamic Republic of Pakistan and the Government of the Kingdom of Afghanistan being desirous of strengthening the economic ties between their two countries on a mutually advantageous basis, improving the facilities now available for transit trade, and removing the difficulties in the movement of goods through the two countries, and having

taken into consideration the present volume and future development of transit trade signed the Agreement in 1965.

The Contracting Parties undertake in accordance with the provisions of this Agreement to grant and guarantee to each other the freedom of transit to and from their territories. No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination or any other circumstances relating to the ownership of goods, of vessels or of other means of transport.

Goods including baggage, and vessels and other means of transport shall be deemed to be in transit across the territory of a Contracting Party, when the passage across such territory with or without transshipment, warehousing, breaking bulk or change in the mode of transport, is only a portion of a complete journey beginning and terminating beyond the frontier of the Contracting Party across whose territory the traffic passes. Traffic of this nature is termed in this Agreement 'Traffic in Transit'.

The transit routes shall be:

1. Peshawar – Torkham and vice versa
2. Chaman – Spin Baldak and vice versa

Additional routes may be agreed between the Contracting Parties from time to time. Goods moving via these routes shall be provided by the Contracting Party concerned at their posts.

No Customs duties, taxes, dues or charges of any kind whether national, provincial or municipal regardless to their names and purposes, shall be levied on traffic in transit except charges for transportation or those commensurate with the administrative expenses entailed by traffic in transit or with the cost of services rendered.

With a view to achieving simplification of existing Customs practices and procedures, the Contracting parties agree to adopt at points of entry and exit the procedures laid down in the Annex to this Agreement.

Without prejudice to the generality of the provisions contained in Article-III, the Government of the Islamic Republic of Pakistan shall earmark sheds and open spaces in the Karachi Port area, to be known as Afghan Transit Area, for the goods in transit to and from Afghanistan. For hazardous and awkward goods separate arrangements for storage will be made as indicated in the Annex.

The two Contracting Parties, recognizing the importance of the Kabul – Torkham – Peshawar transit route, have decided to examine all matters pertinent to the development of this route, including further consideration of the railway from Landi-Kotal to Torkham.

The Government of the Islamic Republic of Pakistan undertakes to meet in full the requirement of wagons for transit traffic on both Karachi – Spin Baldak and Peshawar – Karachi routes.

Each Contracting Party shall appoint Liaison Officers to look into the working of this Agreement, and to refer, for expeditious solution, to the appropriate authorities of their own country and to the Liaison Officers of the other country, any question arising from the case of this Agreement. The Liaison Officers will meet as often as necessary and in any case not less than once in six months and the Contracting Parties shall provide them with the necessary facilities.

The Contracting Parties agree that railway freight, port and other dues shall be subject to the most sympathetic consideration and shall be no less favorable than those imposed by either Party on goods owned by its own nationals.

Nothing to this agreement shall be construed to prevent the adoption and enforcement by either party of measures necessary to protect public morals, human, animal or plant life or Health and for the security of its own territory.

5.3 Institutional Arrangements

Transport is a combination of heterogeneous activities. Therefore, for operational cohesion, transport related functions in the country are managed by different Government Departments, as follows.

1. Roads	Communications Division of the Ministry of Communications and Railways, is responsible for National Highways, Motorways and strategic roads through the National Highway Authority
	Provincial Communications and Works Departments are responsible for Provincial Highways through the Provincial Highways Departments.
	District Authorities, Local Bodies, Municipalities and Cantonments also construct and maintain roads in their respective jurisdiction.
	Ministry of Local Government and Rural Development coordinates Rural Access Roads programme.
2. Railways	Railway Division of the Ministry of Communications and Railways is responsible for all aspects of Railway operations.
3. Civil Aviation	Civil Aviation Division of the Ministry of Defense looks after airports and airlines.
4. Ports & Shipping	Communications Division of the Ministry of Communications and Railways, looks after Ports and Shipping through the Director General Ports and Shipping.
5. Road Transport	Transport Departments of Provincial Governments look after the road transport through their Provincial and Regional Transport Authorities. Road transport across the country is the responsibility of Communications division of Ministry of Communications and Railways.

Organizational chart related to Communications Division is attached at Appendix-B.

Asian Highways Contact Point

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5.4 Asian Highways Database

The development of Asian Highway database was initiated in 1995. It now encompasses details of the Asian Highway network within 26 member countries. It was distributed to the member countries and some of its basic information has been posted on the Asian Highway web page.

The Asian Highway web page (**http://www.unescap.org/tctd/ah/index.htm**) currently contains some key information on the Asian Highway and the database. Since ESCAP included recently some information from Asian Highway database as well as Asian Highway related publications in a downloadable format, Internet users have increasingly visited the web page. Web pages containing information and files related to Asian Highway, country data, tourism along the Asian Highway, and Asian Highway study on the Northern Corridor were among the most frequently visited pages with more than 4,000 requests per months.

Cooperative arrangement between the secretariat and member countries for periodic maintenance and updating of the AH Database is essential to maintain its usefulness and practical value to the users. The countries could provide the information about the status of AH routes periodically to the Secretariat to facilitate updating. As a next step, it is proposed to install the Asian Highway Database on the AH web page. The user will have access to the AH Database through the Internet. At regional level the Asian Highway web page has been experienced as an essential means to disseminate information, therefore the next proposed step is to include and update information in the web page. It is planned to update and extend the information on places of tourist attraction along the AH routes with photographs, transit facilities, visa requirements and restriction on international borders. To maintain relevant information on the web page a continuous cooperation between the countries and ESCAP is important for the updating process. Further steps could include to provide links at the web page to Asian Highway related national, sub regional and international organizations and to offer all relevant Asian Highway reports and maps in a downloadable format, as far as it can be supported by the available facilities of ESCAP.