

## 1.2 HIGHWAY DEVELOPMENT IN INDIA

India has embarked on a rapid pace of road development since after late 1990s by giving a high priority to highway development. The National Highway Development Programme (NHDP) was the first major programme launched in 1997 to develop a large highway network across the country. The Public Private Partnerships (PPP) was adopted as a means of road and highway development in India starting from 2001, given the larger challenges and the need for leveraging private investments into the sector. India had a network of roads in the ancient times.

### **Ancient Times:**

The excavation of the Mohen-Jodaro and Harappa civilization shows the traces of the roads in the ancient Indian times, in a period of 35th to 25th B.C. Aryan Period and Road Construction: There are various scriptures available, which speak about the road development in India in the Aryan period. "Arthashastra" written by the prime minister of the Chandra Gupta Mourya, discusses the rules laid down for the depth of the road construction for different purposes in the 4th century. Emperor Ashoka has improved the quality of the roads in India for the traveller's, in his ruling period i.e. 5th century A.D.

### **Mughal period and Road construction:**

The Mughal and Pathans improved the quality of the roads in India. Sher Shah Suri is still remembered for the construction of the Grand Trunk Road(GT Road) from Bangladesh India to Kabul in Afghanistan. 19th Century and Road Construction in India: After the fall of the Mughal Empire in India in 19th century the Britishers participated in the road construction for the military and administrative purposes. The work was carried out by the British Military Engineers.

Railway was introduced later but the existing roads were metalled and bridges were provided. Dalhousie in the mid of 19th century introduced the public works department (PWD), which still runs the various public works in

India. Later after the introduction of the railways in India the attention was shifted to the railway's construction.

***Jayakar committee:*** The committee was formed by the both chambers of the Indian Legislature in the year 1927 to examine the roads in the India and ways of their development. The number of vehicles on the Indian roads increased after the first world war, so it was felt necessary to develop a good network of the roads in India.

Indian Road development committee was formed in the year 1927, with M.R. Jayakar as its chairman.

The committee submitted its report in the year 1928, and made some important recommendations:

1. The road development in India should be considered a national interest, because it is out of control of the local bodies.
2. An extra tax should be put on the petrol consumers to develop a road development fund, called the Central Road Fund. Road development to be under union control.
4. A semi-official body should be formed to technical ideas, knowledge from the various parts of the country and to act as an advisory body on various aspects of roads. (IRC constituted)
5. A research organisation should be organised to carry out the research and development work. (CRRI constituted).

As a result of these recommendations a Central Road Fund (CRF) was formed by the year 1929, a semi-official body called Indian Roads Congress was formed in 1934 and the Central Roads Research Institute was started in 1950.

#### **Central Road Fund (1929):**

Central Road Fund was formed in the year 1929, extra money 2.64 paisa per litter of the petrol, was charged from all the petrol buyer in the country. This fund was kept separate for the use in the road development in India. About

20% of the fund was kept to be used for the expenses of the administrative meetings and the research work of the highways of the national importance in the country. The rest of the 80% of the funds were distributed among the provinces at that time, according to their road users, for the development of the roads by the state governments.

**Indian Roads Congress (1934):**

A semi-government organisation named, Indian Roads Congress was formed in the year December 1934, and was registered in the year 1937 under the registration act. Function of the IRC was to act as a forum for the regular pooling of the technical knowledge and know how, from the various parts of the country. IRC performed the various planning, and also it has become the most important agency to provide the standards and the specifications for the road construction in the country.

**Motor vehicle act (1939):**

The increased numbers of vehicle on the Indian roads demanded for the rules and regulations. The motor vehicle act was passed in 1939, which laid down the rules for the road users and also for the identity of the vehicles. It is still running in the country in almost same way as it was at that time.

**Central Road Research Institute (1951):**

A series of laboratories, known as the Central Science and Industrial Research Centre situated at Delhi, contains the research centre for the research work of the road construction in India, it is known as the Central Road Research Institute. The main function of the CRRI is to do the research work for the road construction and to provide the consultation services for the state government also. They designed Bump indicator

**First 20-years road plan (Nagpur Road Plan-1943 to 1963):**

The first 20 years road network plan was prepared in the meeting of the Chief Engineers from the various parts of the country at the Nagpur, in 1943, which is also known as the Nagpur Road plan. It classified the Indian roads according to their location and purpose, and also it laid down a target for a

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density of road network of 16 km per 100 sq. Km in the country at the end of the 20 years road network in the year 1963. After the starting of the 5 years plans in the year 1951, the first two 5 years plans also contributed to the target set by the first 20 years plan of the Nagpur.

