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# PLANNING AND MANAGEMENT OF NATIONAL HIGHWAYS

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**Abstract** - Planning with respect to road construction takes into the account of present and near uses of the transportation system to satisfy maximum service with a minimum of financial and environmental cost. The main objective of the initial phase of road network development is to establish specific goals and prescriptions for road network development along with the more general location needs the route planning phase is the time to calculate environmental and economic settlement and should set the stages for the remainder of the road development process.

The national highway development program me (NHDP) in India is carried out by a national highway authority of India (NHAI). In India as well as in the whole world transport system plays very important role in the development of country as an economic way and in the other ways also such as development of agriculture and industries. It also helps us to reduce poverty by creating employment. Faster roads in India without sacrifices the safety are great achievement in development of highways also reduce the environmental pollution

***Key Words***: **(planning and management), national highway**,

## 1. INTRODUCTION

Highways serve national and public needs by providing transportation links which reduce the cost of moving people and goods This reduction in transportation costs encourages the use of highways stimulates economic growth and the development of natural resources New or better roads and expansion of rural road systems are needed for accessing these untapped reserves Because resources are always limited and many groups compete for them objective procedures are needed to establish warrants for the allocation of such resources

The Project Highway shall be planned as a "partially access controlled highway" where access to the highway shall be provided only at pre-determined locations from service roads through properly designed entry exit ramps and or from interchanges. In doing so, the concessionaire shall take measures to overcome the physical and operational constraints and plan, design and construct the Project Highway using appropriate methods, management techniques and technologies.

In the highway transportation sector there is direct competition for funds to.

**(a)** Reduce traffic congestion in cities

(**b)** Improve road links connecting major population areas.

(**c)** Create an effective rural road system

An objective economic analysis procedure is needed to assist administrators in determining an investment policy which will optimize the use of such funds these procedures can be quantified in planning models.

## 2. Development and Planning

Planning in compare of the road construction takes into the account of present and near uses of the transportation system to satisfy maximum service with a minimum of financial cost. The main objective of the initial phase of road network development is to establish specific achievement and prescriptions for road network development along with the more general location needs the network planning phase is the time to calculate environmental settlement and should set the stages for the remainder of the road development process.

Highway planning phase includes. Assessment of road length required for area Preparation of master plan showing the phasing of plan.

- Study of Economics
- Study of Finance
- Traffic and road use studies
- study Engineering

## 3. Pavement quality control

Quality controls first step is to judge and act on the basis of facts. Facts are data such as length. Time and fraction defective and sales amount. View Backed by data are more likened to include personal opinions. Data volume has nothing to do with accuracy of judgment. Data without context or incorrect data are not only invalid but sometimes harmful as well. It is necessary to know the nature of that data and that proper data be picked as well.

• **Target value**. It is the aim set for a certain material characteristic. As a minimum it should conform to standards and be achievable.

• **Variability**. This describes how much a process varies from item-to item (or location-to-location). QC is normally performed by the Contractor. Process Control is latest word. As a quality control program consists. • Actions and considerations necessary to assess production and construction processes.

• Setting the end product target value and controlling variability. In order for a quality control

Program to be effective it should:

• Base actions and decisions on measurable results.

• Be statistically valid

## 4 Planning traffic volume:

The volume Used for several transportation analyses Functional classification of roads Design of geometric characteristics of highway number of lane. To the Capacity analysis Development of programs related to traffic operations Development of parking role.

There for planning designing and start of transportation system. The first and foremost requirement is volume. Volume to simply the number of vehicles passing a section of a roadway. Expressing traffic volume as number of vehicles passing a given section of road or traffic lane per unit. Will be inappropriate several types of vehicles with widely varying static and dynamic characteristics are comprise in the traffic. The problem of measuring volume of such heterogeneous traffic has been addressed by converting the different types of vehicles into equivalent passenger cars and expressing the volume in terms of Passenger Car Unit (PCU) per hour.

The interaction between moving vehicles under such as traffic condition is highly complied. Again volume is not constant. It increases with time. So a continuous method of two calculating volume is a matter of great importance for smooth function of transportation system. If volume data is consume find on a continuous basis then the transportation.

## 5. MASTER STRING

The Allows the projection of points from a reference onto adjacent strings. This ensure that the all the base elements points are included and align as would normally occur when using MX Design options. Export the required Open Roads elements to an MX model using Export to Native function.

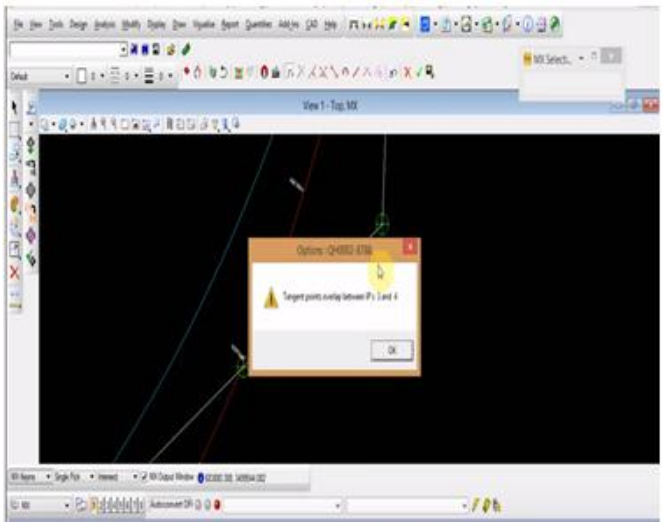

**Fig -1**: MASTER STRING

Select the Associate MX Strings and select the open Roads feature element that are the Feature strings, the prompt will say select a MX String Right click when you have selected the required open Roads feature elements to continue.

## 6. CARRIGEWAY DESING:

Use the main Master string as the reference string and make the left and right offsets wide enough to cut the service roads. If required.

Draw the sections in plan to add gaps in the cross sections to remove the link between left edge of main road and right edge of left service road, and right edge of main to left edge of right service road.

My intention is to show all main carriageway cross section and Service road cross sections in single cross section.

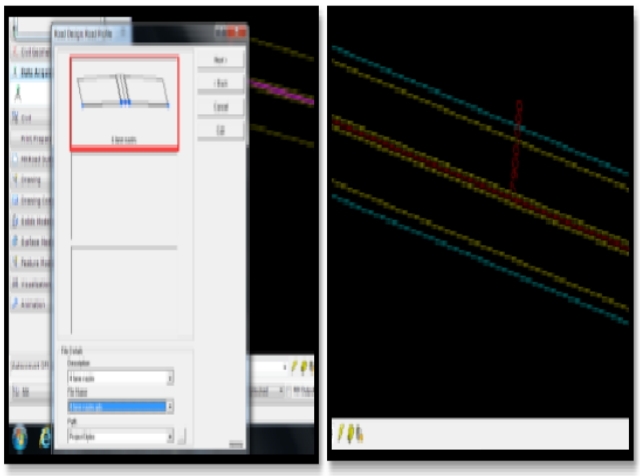

Fig2 carriageway design

**7. Vertical profile:**

After I finish with my horizontal alignment, I can start my vertical profile from quick alignment and it works ok.
But after I correct my horizontal alignment aim not able to go into vertical profile again.
It has happened to me many times. The only way is to start a fresh design again leading me to wastage of time.

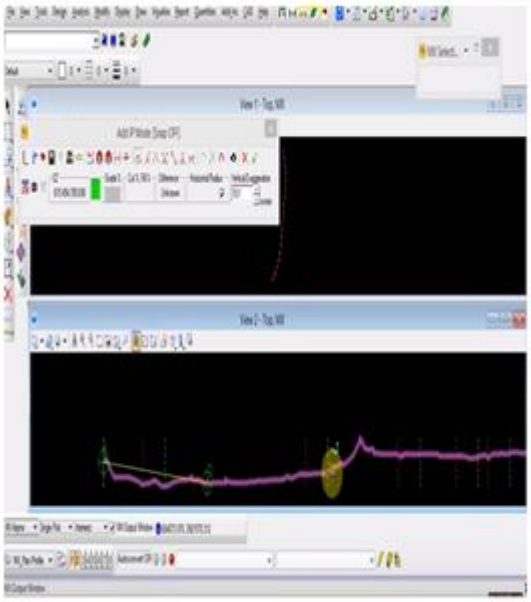

Fig3. Vertical profile

## 8. Road Management System

The States should institute simple Road Management System compare modules Such as a road information pavement and bridge management environmental &, traffic information, social information. Special Needs and Strategies for the North East Region. Roads are the principal modes of transport in the NE Region.

Road transport would be over 95 percent in the total movement by surface the Region transport in. The riding quality of main roads is generally fair to and condition poor. The case of State Highways and position in Major District Roads. Only about 15 percent of the state highways can be said to be to carry the legally structurally adequate permissible single axle load. Due to the states have not been able to provide strengthening financial constraints overlays in any significant manner. To From safety consideration, several sections of single-lane roads need to be widened to two lanes of carriageway. The states may need support to undertake of special programmed on the lines of National Highways. It needs to be recognized that construction cost per KM is maximum whereas possibility of private financing is minimal and resources available.

## CONCLUSIONS

According to my knowledge and research related to my work brings me to a close decision. That strict enforceable highway and planning and management, improved for cement as well as education planning and management focusing on sustainability are some of the appropriate strategies that this study to be among the approaches that can be adopted to promote uptake to management. Education training and research right from the lower school systems and to institutions of higher learning would produce management focused post graduates who will easily embrace sustainability concepts in their projects.

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