

MANAGEMENT OF CONSTRUCTION OF ROAD IN RURAL AREA

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ABSTRACT :

Rural Road connectivity is a key component of rural development, since it promotes access to economic and social services, thereby generating increased agricultural productivity, non agriculture employment as well as non-agricultural productivity, which in turn expands rural growth opportunities and real income through which poverty can be reduced. This goal can be achieved by improvements in planning for construction activities involved in construction of rural roads. This paper revealed the development in the construction management system on fast track construction using different research models and technologies. This literature review will definitely help to improve construction activities involved in construction roads.

Key Words: Management of rural road, quality control , maintenance

INTRODUCTION :

Rural connectivity is being focused for the growth of economy, agricultural development and employment generation to rural people. About 740 million people of India live in rural area. India is having about 2.65 million km of road under rural road category out of total road network of 3.3 million km according to a statistic of Indian road network of National Highways Authority of India. Efforts are going on by central government and state government through different program like Pradhan Mantri Gram Sadak Yojana (PMGSY) to improve road access to rural people. Still about 40 percent of village people of the country are not connected by all weather roads.

Rural Road connectivity is a key component of rural development, since it promotes access to economic and social services, thereby generating increased agricultural productivity, non agriculture employment as well as non-agricultural productivity, which in turn expands rural growth opportunities and real income through which poverty can be reduced. India has an extensive road network of 4.24 million km, the second largest in the world. Rural roads consist over 85 percent of the road network and keeping them in serviceable condition is important to the agricultural growth and affording means of access to millions of rural people to social facilities viz. medical, education as also to market, so its need to improvement better construction activities during road construction such as proper road management system. Road Management System consists of several stages, starting from data collection and storage, ending to maintenance planning and budgeting. In network level surveys, it is used to justify an optimal maintenance strategy.

RELATED WORK :

Literature survey related Management of Construction of Concrete Road in Rural Area. Technical articles published in the proceedings and other journals have been referred to understand the status of each work undertaken. It has been noted that many researches and academicians have worked Management of Construction of Concrete Road in Rural Area.

- .1) “Road To Effective Project Management”,By Kevin J. Walsh, *et.al* (2011) studied that to determine what skills and traits make effective project managers was conducted. A questionnaire was developed and distributed across the country to office managers of an engineering organization involved in the transportation field. Conclusions are drawn from the tabulated results and recommendations are offered. The problem of project managers becoming "bogged down" and running out of time and money is evident from the survey. An effective project manager needs to delegate and maintain control of the project. One type of delegation can be achieved through a job enrichment program. The report also contains other development techniques that can help build a successful and effective project manager.
- 2) “Rural Road Preventive Maintenance with Microsurfacing” By Rajiv kumar, (2012), In this paper describes the construction process of wearing course of pavement through Microsurfacing which reduces the both direct and indirect cost and experience of Microsurfacing at IIT-Guwahati approaching road.
- 3) “Materials Management Practices in the Construction Industry” Daniel M. Vargas *et al* (2014) present that in which the purpose was to identify materials management techniques that reflect current and emerging practices in the capital projects industry .Surveys, interviews, and case studies involving 54 organizations were used to accomplish this purpose. The study clearly shows a dramatic increase in the maturity, formality, and systematic approach to materials management

AIM AND OBJECTIVES :

The objectives of the present study are to provide the guidelines in implementing and incorporating construction management practices to minimize adverse construction impacts associated with rural road projects under the Rural Roads Sector. It aims to establish standards of management of construction activities in rural road. The spirit and the objective of the study is to provide good all-weather road connectivity to unconnected Habitations. To provide all weather access to all Growth Centers, all Union Parishads Complexes, most of the rural markets and other service delivery centers of the rural areas. To improve rural accessibility for facilitating agricultural production and marketing of different products.

METHODOLOGY:

The data of this research was collected from different sources. Literature and theoretical reviews have been taken from books, articles and papers to describe main concepts about road management system in construction project. The main methods are descriptive, explanatory and quantitative. In description, it starts by providing information about the current situation on the field of the construction industry. The quantitative works done by collecting data from field / Site. Also collecting data by some questionnaires from the case study. Experiences shared by supervisor engineers, managers, in tackling problems at various levels in these projects put forth during planning stage of a new project helps in over viewing the project and identifying the expected expert judgments. Management

/ planning for construction activities involved in construction road such as contract management, material management, management for quality assurances & quality control, maintenance management etc.

Quality Assurance in Rural Road :

This Quality Assurance Quality Control Manual is prepared for adequate work at site. It is based on Various Quality Assurance practices, PWD specifications, requirement of the tender document for test of materials, Field/laboratory testing and relevant IS: codes. This will provide a base document outlining policy, procedure, responsibilities, compliance acceptance criteria and documentation for carrying out tasks related to inspection, testing and reporting on various materials, items involved for the satisfactory completion of the work. In all cases however, it is important to understand that the contract documents including the technical specifications are the basis for execution of the construction. Quality Assurance Quality Control (QA/QC) Manual provides a guide lines for supervision of construction project. A QA/QC Manual establishes a standard guideline for enabling supervisory staff to check different activities of construction in respect of technical specifications. Quality assurance plan serve as a road map to supervisory staff to ensure quality of project works.

Maintenance Management Of Rural Roads :

Maintenance of roads should be considered a part of the overall road asset management system. Asset Management may be defined as minimizing the life cycle cost of managing deteriorating road facilities, including construction costs, while maintaining the level of service provided to road users with limited financial and human resources, maintaining the existing road assets in good condition, and clearly explaining these activities to the public. The asset management process includes the maintenance, renewal and up-grading of existing assets; the creation of new assets and the disposal of surplus assets . However, surplus assets are usually not observed in rural roads sectors in India where there is tremendous demand for the construction of new roads.

Computer Requirements (Software) :

Normally, the most efficient and flexible structure for highway management system software is one which is modularised, with integration achieved through a common data bank. This modular structure must reflect the manual operation of the highway management process when broken down into functions and tasks. Many proprietary systems lack this modularity and are only available as complete system, with a resulting loss in flexibility and ability to match the physical management structure. With modular software, the highway *information system*, or data bank, provides the back-bone of the management system. This comprises the network referencing system around which is built an inventory of the network. This provides the framework within which all information about, or associated with, the network is stored and retrieved. The software for this must be flexible enough to accommodate future changes and growth

CONCLUSION :

Management in construction of rural roads required application of Knowledge, Skills, and Experience at various stages. However manager has to face various challenges like Design Issues, Constructability Issues, Long lead material Issues, Inter Contractor Coordination Issues, Engineering Issues, Safety Issues, etc. To improve rural

accessibility for facilitating agricultural production and marketing of different products. Suggesting the report for construction of concrete road for particular village.

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