GREEN RATING OF HIGHWAYS

The concept of green encompasses the mechanism of conserving, enhancing and managing the quality and quantity of natural resources. Getting green in other words is getting conducive to nature. Green highway is the one which is designed, constructed and maintained with the ultimate aim of conserving, enhancing and managing the quality and quantity of natural resources. The degree of green interventions, however may differ from project to project as technologies required depend on their economic feasibility, technical knowhow and availability of means to make use of a technology.

Green rating of highways refers to rating of various components of highways in terms of their environment friendliness. The rating is being introduced to encourage a qualitative assessment of environmental sustainability of highways.

Our country has voluntarily committed in Conference of Parties (COP-21) to reduce the carbon emission intensity of its GDP by 30 to 35 percent by 2030 from 2005 level. Road Transportation is one amongst the major carbon emission contributing sectors. Our country has more than 2.5 lakhs km of NH’s, and SH’s network spread all over the country that leaves behind its environmental footprint (including carbon footprint) during construction, maintenance and operation.

USA has established a number of green rating systems including “Green Roads” developed in 2010 for Green rating of Highways. At present, there is no such system in India that can quantify the environmental footprint of upcoming and ongoing projects.

The Guidelines for Green Rating of Highways has been recently formulated by Indian Roads Congress to help all stakeholders in identifying the degree of greener interventions to be made or already made in a green field or existing road project. These guidelines will help produce a rating for the reductions in environmental footprint of highway projects and hence enable the road authorities towards assessing the contribution of the main highways in achieving the commitment in COP-21.

All the stakeholders can use the rating system in making scientific and qualitative assessment of various alternatives studied for a particular highway project in terms of their environmental friendliness. The rating system will provide a scale for determining the index of environment friendliness of a highway project also leading to adoption of environment friendly practices in road projects. Apart from financial and technical feasibility, environmental feasibility should also become an integral part of decision making. Highway projects should be evaluated based on their own project specific conditions.

These green rating guidelines for highways have been developed with an attempt to overcome the major limitations of the present rating systems, which lack objectiveness in the criteria selection.
and weighting process considering existing environmental legislations in India and overall Indian perspective.

Green rating takes account of environment friendly, innovative techniques such as recycling of materials, use of renewable resources use of soil stabilizers for stabilizing in situ soils, warm mix technology, construction and demolition waste etc. that have just started to come into practice in the country. The system has 13 mandatory Qualifying Criteria (QC) and 7 Evaluating Criteria (EC) with 24 sub-criteria. Mandatory qualifying criteria are the bare minimum requirements for rating a project while Evaluation Criteria are based on various parameters related to environment that needs to be quantified for all the alternatives of a particular project.

IRC is shortly going to release this document as IRC:SP: 122-2019 entitled “Guidelines for Green Rating of Highways”. These guidelines will mark the beginning of adopting the green rating approach for evaluating roads and highways. Green ratings once provided to projects can be used for green financing by floating green bonds in the market. It can also be used for providing various incentives for projects using sustainable/environment friendly / low carbon technology in the project.

IRC would welcome any feedback/ difficulties faced in use of these Guidelines so that further improvements in Guidelines can be carried out.

(Sanjay Kumar Nirmal)
Secretary General

- The proper use of science is not to conquer nature but to live in it. - Barry Commoner
- Plans to protect air and water, wilderness and wildlife are in fact plans to protect man. - Stewart Udall
- Conservation is a state of harmony between men and land. - Aldo Leopold
- Sustainability is about ecology, economy and equity.- Ralph Bicknese
A CASE FOR AVOIDABLE DISPUTES

Item Rate Contract was the preferred mode of Contract till the implementation of EPC mode of Contract and NHDP Phase I and North South East West Corridor Projects were executed on Item Rate Contract/Fidic. The projects were successfully completed with minimum disputes and Change of Scope/variations although these projects were also got delayed to some extent for want of Land Acquisition and delay in utility shifting. While changing the Contract forms from Item Rate to EPC, it was believed that there would be least disputes and change of scope. However, in practice, it is observed that the numbers of disputes on account of delays in meeting obligation of the Authority of Land Acquisition/Forest Clearance etc have increased and claims being preferred by the Contractors have also increased manifold.

There are disputes in Change in Scope sometimes just because of lack of proper interpretation of the Contract clause, as envisaged in the Contract. These issues need high priority and attention of all stakeholders. There is a greater need of involvement of the field Officers of the executing agencies in close association with the DPR Consultants to verify the site conditions as brought out in Schedules of the EPC Contract and the actual conditions. More often a complete reliance on the DPR Consultant, leads to dispute and claims, who fails to appreciate the exact requirement of site specially with respect to improvement of junctions, need of vehicular underpasses, extent and scope of slope protection specially in hilly areas, the pre-conditions as envisaged in the EPC Contract w.r.t Land Acquisition and Forest Clearance which has to be met in any case before the Appointed Date.

In most of cases, in the past, the availability of RoW in terms of percentage only was given without clearly defining the work front available in length and also the continuity of stretches. This has resulted in number of cases where although 80 percent RoW has been said to be handed over to the Contractor, work front availability is quite low even less than 50 percent, the reason being every kms of the stretch is encumbered for want of Land Acquisition/Forest Clearance in a small patches, thereby making it difficult for the Contractor to mobilise the sources and execute the work leading to dispute. This becomes further accentuated where payment terms under Schedule H cannot be met because continuous stretch of that specific length which qualifies for payment under Schedule H is not available.

The need of hour is to take care of these issues in all right earnest by all stakeholders specially the client to expeditiously complete the project under EPC contract besides pre-ampt avoidable disputes.

(I.K. Pandey)