

LOCAL ROADS BRIDGE PROGRAMME (LRBP)

TERMS OF REFERENCE

Bridge Design Engineer

Education and Experience:

An engineer, preferably with a Masters Degree or equivalent in structural/bridge engineering, with minimum 7 years' experience. The candidate must have capability to design bridge as well as guide bridge construction with various alternative materials and structural arrangements. He should have designed independently at least five major bridges of different types such as motorable arch, truss, pre-stressed girders, compact, pre-fabricated bridges etc. Experience in designing and implementing bridge rehabilitation is required. Experience of planning & monitoring geo-technical and hydraulic investigations for the bridges and interpreting the findings thereof will be an added advantage. S/he shall have very good written and spoken English. Bridge construction experience is also must in addition to design.

Terms of Reference:

Under the guidance and supervision of the Team Leader/Deputy Team Leader, the Bridge Design Engineer will be responsible for all technical designs, planning, monitoring, supervision, quality control and capacity building. S/He shall review the bridge designs and other works conducted through consultants. At the same time s/he shall be able to properly steer any type of bridge construction supervision from foundation up to superstructure. S/he will coach/supervise and manage a group of Bridge Engineers to undertake review consultants' reports on soil investigation, hydrological investigation, and detailed engineering surveys. S/he has to carry out the detail structural design work of each component of a bridge structure e.g. foundation, sub-structure, super-structures including the design of secondary works of bridge bearing, expansion joints, approach roads, wing walls etc. In detail, the Bridge Design Engineer with the help of the team of Bridge Engineers shall carry out following tasks:

- Prepare Concept Design drawings, selection of span length, type and material based on Soil and Hydrological investigation.
- Prepare detailed working drawings good for construction, prepared in international standard using AutoCAD (or other popular softwares), containing all details required for execution of the project;
- Check Bill of Quantities and estimate prepared by consultants;
- Monitor, supervise and coach bridge engineers and assistant engineers at district levels as required.
- Prepare Motorable Bridge Strategies, Policies, Norms and Standards and if required develop ToRs for consultants/experts for preparing Motorable Bridge Strategies, Technical Standards and Norms in close coordination with the other specialists from the programme team.
- Closely liaise with the consultants for providing feedback and share learning from the programme to be reflected in the strategies, standards and norms
- Prepare plans and programmes to share the Motorable Bridge Strategies, Norms and Standards with the district and national level stakeholders for their feedbacks
- Have the strategies, norms and standards endorsed by the government for replication and further scaling up.

Required social/behavioral competence are:

- analytical and conceptual skills.
- intercultural skills and sensitive to gender and social inclusion.
- communication skills.
- ability to work in team.
- willingness to travel in rural/remote areas