

No. NHIII/P/31/77

Dated the 10th January 1985

To

The Secretary, Public Works Department and Chief Engineers of State PWDs & Union Territories dealing with National Highways & other Centrally Financed Roads, D.G. Works, CPWD, and D.G.B.R.

Subject : Bridge works costing more than Rs 10 lakhs each on National Highways and under other Centrally Financed Schemes—modified procedure for submission of detailed estimates of cost thereof

With a view to improving the quality of preparation of bridge projects, detailed guidelines have been issued by the Ministry from time to time. In this connection, the following important Circular letters may kindly be referred to :—

- (i) PL-10 (48)/69 dated 15.9.69
- (ii) PL-2 (1)/70 dated 18.1.71
- (iii) NHIII/P/31/77 dated 31.5.78

It may kindly be noted that complete and adequate surveys and sub-soil investigations are the most important pre-requisites for the proper preparation of a bridge project.

2. A number of instances have come to the notice of the Ministry where detailed estimates for bridge projects have been furnished without ensuring the supply of all the requisite technical inputs as outlined in the above mentioned guidelines. This has resulted in avoidable back references to the concerned PWDs and has thus led to a great deal of delay in the sanction of the projects.

3. In order to ensure that the quality of project preparation improves and the time taken for the scrutiny of detailed estimates relating to bridges in the Roads Wing is substantially reduced, it has been decided to adopt the modified procedure as outlined hereunder for the submission of detailed estimates for bridge works costing more than Rs 10 lakhs each.

- (a) In the first instance, the State PWD will furnish a Technical Appraisal Note indicating the proposal in brief, various alternatives considered to arrive at the most suitable one from the view point of economy and technical feasibility, important technical parameters etc. and concrete recommendations of the State Chief Engineer. A suggested format for the Technical Appraisal Note is enclosed here with. This may be suitably modified/elaborated depending upon the type of project.
- (b) The above mentioned Technical Appraisal Note will be examined in the Ministry and approval for all the relevant technical parameters will be conveyed to the State PWD to enable them to prepare the detailed cost estimate on the basis of the latest Schedule of Rates.
- (c) The detailed project estimate prepared on the basis of the approved technical parameters will then be furnished to the Ministry for getting the financial sanction.

3. It is hoped that the modified procedure outlined above will help in the adoption of technically sound and economically viable alternatives and also cut down delays in the sanction of detailed cost estimates. Incidentally, it will also help the officers of the Roads Wing to make adequate provisions in the Budget Estimates for new works likely to be sanctioned.

5. It is requested that suitable instructions may kindly be issued to all concerned to follow the modified procedure mentioned in para 3 above for the submission of detailed estimates relating to bridge works costing more than Rs 10 lakhs each.

Enclosure to letter No. NHIII/P/31/77 dated 10.1.85

Technical Appraisal Note relating to bridge works costing more than Rs 10 lakhs each on National Highways and under other Centrally Financed Schemes

1. Name of the Project.
2. Proposal in brief indicating the existing position and the improvement desired such as construction of a new bridge, reconstruction of an existing weak and narrow bridge, widening of an existing bridge, construction of protective works etc.
3. Site Plan (if the type of crossing is not a right angled one, the angle of skew crossing must be indicated on the drawing). Before finalising the site, if more than one site has been considered, merits and demerits of various alternatives may be indicated.
4. Position of land acquisition, if required, for the construction of the bridge and its approaches.
5. Detailed Hydraulic particulars as stipulated in Annexures I & II of the Ministry's Circular letter No. PL-2 (1)/70 dated 18.1.71. In addition to other items, these must include the following :—
 - (a) Three cross sections of the river/stream, one at the proposed site and other two at 300 m. u/s and 300 m. d/s.
 - (b) A longitudinal section of the river/stream (for determining the bed slope) indicating the H.F.L. also.
 - (c) Calculations regarding discharge worked out by different methods (viz. empirical formula and area velocity method etc.) and concrete recommendations regarding design discharge.
 - (d) Calculations accompanied by definite recommendations regarding proposed waterway alongwith the span arrangements, type and depth of foundations keeping in view the design discharge and the expected scour.
 - (e) Proposed deck level of the bridge taking into account the vertical clearance required for the design discharge and the type of proposed superstructure.
 - (f) Values of soil parameters (silt factor, C, and safe bearing capacity of soil at the proposed foundation level) based on subsoil investigations.
6. Detailed plan showing alignment of approach roads.
7. Broad features of the proposed protective works, if any, alongwith plan and cross-sections.
8. Whether any model studies have been carried out (alongwith results there of) or are proposed to be carried out.
9. Any other relevant data for proper technical appreciation of the proposal.