

No. RW/RD/33047/4/86/NH(Std.)

Dated the 30th June, 1987

To

1. The Chief Engineers of States & Union Territories PWDs dealing with National Highways and other Centrally Financed Roads.
2. The Director General (Works), Central PWD.
3. The Director General Border Roads.

Subject : Introduction of new techniques in the construction of Highway Bridges.

It has been observed that a number of highway bridge projects are getting delayed thus resulting not only in time over-runs but cost over-runs also. Delay in timely completion of a project can be due to several reasons. One of the most important reasons is delay in completion of the foundations due to difficulty in sinking of wells and the others can be related to adoption of old techniques for the construction of bridges, some of which are time consuming.

1.1 It is suggested that for early completion of sinking of wells, the use of higher capacity cranes (for grabbing the soil) may be adopted, wherever feasible.

Further, since well foundations are quite costly and time consuming, the bridge projects should be so planned as to have the minimum number of well foundations keeping in view other relevant factors.

1.2 For expeditious completion and achieving better quality in the execution of the bridge projects, the following techniques may be adopted :

(i) Use of concrete batching and mixing plant as well as concrete pumps at project site.

(ii) Use of large diameter bored piles in place of traditional well foundations, wherever feasible, subject to the stipulation that in alluvial stratum prone to scour in rivers/streams the same shall not be adopted. For cast-in-situ bored piles, use of steel liner should always be made as otherwise the fullness of the cross section of the pile is doubtful.

1.3 Further, the use of elastomeric expansion joints and POT/PTFE bearings may be encouraged for major bridges, wherever feasible.

2. It is suggested that the contents of this circular may please be brought to the notice of the field staff for information and guidance.

---